Chirano Gold Mine International Cyanide Management Code Recertification Audit

Summary Audit Report

Chirano Gold Mine Limited

Prepared by:

SLR Consulting (Africa) Proprietary Limited

Suite 1 - Building D, Monte Circle, 178 Montecasino Boulevard, Fourways, Johannesburg, Gauteng, 2191

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Project Manager	Ed Perry
Project Manager Email	eperry@slrconsulting.com
Author	Ed Perry
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Basis of Report

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1.0 Summary Audit Report for Gold Mining Operations

Name of Cyanide User Facility:	Chirano Gold Mine
Name of Cyanide User Facility Owner:	Asante Gold Corporation
Name of Cyanide User Facility Operator:	Chirano Gold Mine Limited (CGML)
Name of Responsible Manager:	Margaret Aniawu-Asumakah
Address:	P.O. Box 57, Bibiani Western Region Ghana
Country:	Ghana
Telephone:	+233 302 786079
E-mail:	margaret.asumakah@chiranogold.com

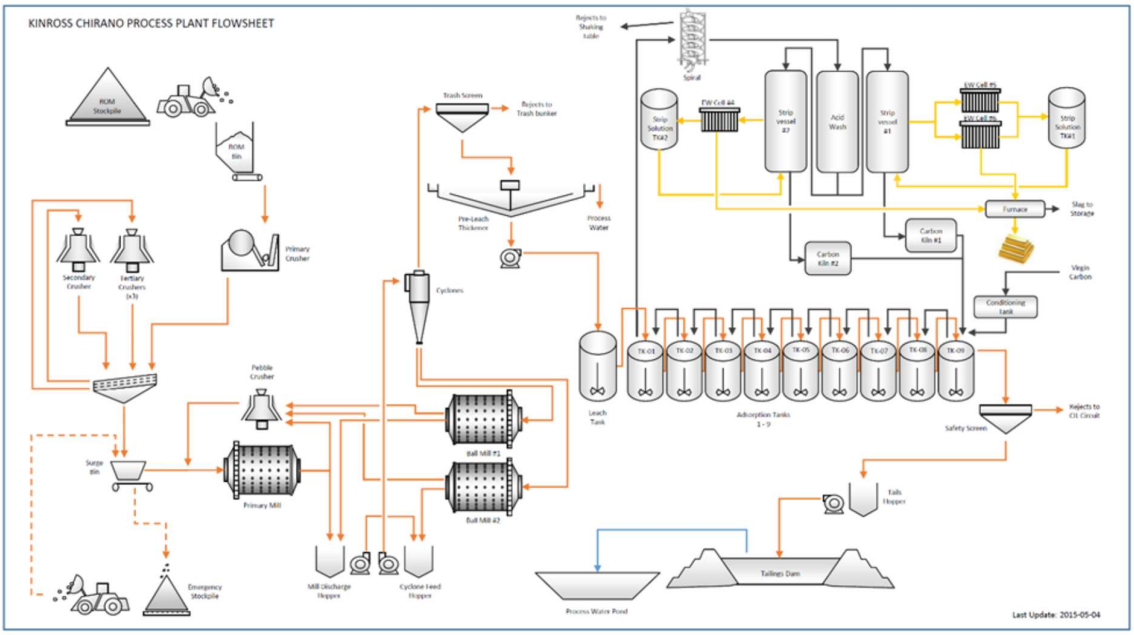
2.0 Location and description of operation

The Chirano Gold Mine (Chirano) is located in southwestern Ghana, approximately 100 kilometres southwest of the city of Kumasi. The mine lies within the Bibiani gold belt and consists of several conventional open pit mining sites as well as underground workings. Ore is transported to a centrally located Processing Plant, where it is crushed and milled before undergoing conventional carbon in leach (CIL) processing.

The Chirano Process Plant (the Plant) is comprised of the following circuits:

- Primary crushing of run-of-mine (ROM) material in open circuit;
- Secondary and Tertiary crushing in closed circuit with screening;
- Mill feed surge bin with an overflow feed to an emergency stockpile for reclaiming when necessary;
- Open circuit primary ball mill operating with two parallel secondary ball mills in a closed circuit with cyclones;
- In-circuit crushing of the primary mill scats;
- Trash screening and thickening of cyclone overflow before leaching;
- Gold leaching in a single pre-leach tank followed by nine CIL tanks;
- Two Zadra elution circuits with dedicated acid wash columns and regeneration kilns;
- Gold room where gold is recovered in electrowinning cells; and
- Carbon screening of the CIL tails followed by disposal of tailings to a Tailings Storage Facility (TSF).

The figure below shows the overall flow of the Chirano Process Plant.



Crushing:

Ore from the shafts and pits are transported with trucks to the ROM pad and tipped onto stockpiles. Front-end loaders reclaim the material from the stockpiles which is tipped into a ROM bin.

Ore is fed directly to a jaw crusher followed by screening, secondary and tertiary crushing stages.

Milling:

The milling circuit is configured into an open-circuit ball mill, with a scat crushing circuit, and two secondary ball mills operating in closed circuit.

Secondary Mill discharge is pumped to the cyclone classification circuit. The cyclone overflow is thickened in the pre-leach thickening circuit. Thickener underflow is transferred to the CIL Circuit pre-leach tank.

CIL Circuit:

The CIL circuit comprises a single mechanically agitated, pre-oxidation tank, followed by nine carbon adsorption stages. The tailings slurry gravitates from stage 1 to 9 through inter-stage screening in each tank exiting from CIL tank 9 by gravity over a carbon safety screen, to recover any carbon particles that escape through the inter-tank screen. The screened tailings flow into the tailings hopper and are then pumped to the TSF.

Tailings Disposal

The CIL tailings are discharged with a final cyanide concentration of less than 50 mg/l of Weak Acid Dissociable (WAD) Cyanide at the TSF spigot.

The current Plant operating parameters result in no need for cyanide detoxification of the CIL tailings as the WAD cyanide values are generally below the 50 mg/l compliance standard.

Supernatant TSF water is recovered via a barge pump and recycled to the Plant as process water. This water has a WAD cyanide concentration below 0.5 mg/l and therefore does not cause any part of the milling circuit to be classified as a cyanide facility.

Chirano has operated three tailings storage facilities, TSF 1, TSF 1 North Extension (NE), and TSF 2 and TSF 1 South Extension (SE). TSF 2 was filled to its full capacity and decommissioned for rehabilitation and closure in 2017. TSF 1 was reactivated after a 7 m raise (referred to as Stage 7) and was completed in the third quarter of 2018. But has since been decommissioned. TSF 1 NE was constructed in 2017 and has again been decommissioned. CGML received the relevant authorisation so construct another tailings facility (TSF 1 South Extension) to provide additional tailings storage capacity to support future operations. TSF 1 SE (the TSF) was completed in the third quarter of 2021 and is the TSF currently used.

Sodium Cyanide

Sodium cyanide is delivered as dry briquettes in 1 tonne boxes and added manually via a hoist and bag-breaking system into the mixing tank. Raw water is used to prepare a 20% (weight / volume concentration) solution with pH greater than 10.5 in a 35 m^3 mixing tank. The prepared cyanide solution is pumped from the mixing tank to a 35 m^3 storage tank, from where it is distributed by a dosing pump. There is a dedicated cyanide spillage pump.

Process Water and Plant Run-off

CIL Plant bund overflow and thickener bund overflow are contained in the 1200 m^3 event pond, from where it is pumped to the Plant process water dam.

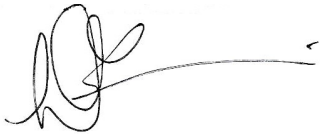
The 4000 m^3 process water dam collects decant return water, pre-leach thickener overflow water, and the overflow from the raw dam. The process water recirculation is undertaken by means of a duty/standby pumping arrangement. There is a standby process water pond which is used alternatively when the operating process water pond is cleaned to remove the accumulated silt.

SUMMARY AUDIT REPORT

Auditors Findings

Chirano Gold Mine is:	☒ **in full compliance with**	**The International Cyanide Management Code**
	☐ in substantial compliance with	
	☐ not in compliance with	

Audit Company:	SLR Consulting (Africa) (Pty) Ltd
Audit Team Leader:	Ed Perry, Lead Auditor
Email:	eperry@slrconsulting.com
Mine Technical Auditor	Dawie Viljoen



Chirano Gold Mine
Name of Facility

Signature of Mine Technical Auditor

January 2024
Date

COMPLIANCE STATEMENT

Chirano Gold Mine, Ghana has not experienced any cyanide incidents or compliance issues during the previous three year audit cycle.

NAME OF OTHER AUDITORS

Dawie Viljoen

DATES OF AUDIT

The Re-certification Audit was undertaken between 9 July 2023 to 13 July 2023.

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 (ICMI) and that all members of the audit team meet the applicable criteria established by the International Cyanide Management 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 Mining Operations Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

Chirano Gold Mine
Name of Facility

Signature of Lead Auditor

January 2024
Date

The “International Cyanide Management Code for The Manufacture, Transport, And Use Of Cyanide In The Production Of Gold and Silver” (the Code) was developed by a multi-stakeholder Steering Committee under the guidance of the United Nations Environmental Program (UNEP) and the then, International Council on Metals and the Environment.

The Code is a voluntary industry programme for gold and silver mining companies, and companies involved with the production and transport of cyanide to gold and silver mining companies; it focuses exclusively on the safe management of cyanide. Companies that adopt the Code must have their operations, which manufacture cyanide, transport cyanide or use cyanide to recover gold and silver, audited by an independent third party to determine the status of the Code’s implementation. Those operations that meet the Code’s requirements can be certified and are able to use a unique trademark symbol, which identifies the company as a certified operation. Audit results are made public to inform stakeholders of the status of cyanide management practices at the certified operation.

The objective of the Code is to improve the management of cyanide used in gold and silver mining and assist in the protection of human health and the reduction of environmental impacts (refer to www.cyanidecode.org). The Code is managed by the ICMI.

Principle 1 – Production and Purchase

Encourage responsible cyanide manufacturing by purchasing from manufacturers that operate in a safe and environmental protective manner.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 1.1**

☐ not in compliance with

Summarise the basis for the findings/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.

Chirano purchases cyanide from a supplier that is manufactured at a facility that is certified as being in compliance with the Code.

Chirano receives solid sodium cyanide briquets in 1 tonne boxes packed into sea containers from Cyanco International LLC (Cyanco), who are their sole supplier since the last re-certification audit.

Cyanco International's Houston Production Plant was initially certified in March 2013 and was recently re-certified on 28 April 2023.

Principle 2 – Transportation

Protect communities and the environment during cyanide transport

Standard of practice 2.1: Require that cyanide is safely managed through the entire transportation and delivery process from the production facility to the mine by use of certified transport with clear lines of responsibility for safety, security, release prevention, training and emergency response.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 2.1**

☐ not in compliance with

Summarise the basis for the findings/deficiencies identified.

The operation is in full compliance with Standard of Practice 2.1 requiring that cyanide is safely managed through the entire transportation ad delivery process from the production facility to the mine by use of certified transport with clear lines of responsibility for safety, security, release prevention, training and emergency response.

Solid cyanide briquettes are received from Cyanco in the United States from where they are shipped to the Port of Tema, Ghana and then transported by road to the mine using Vehrad Transport and Haulage Limited (Vehrad).

The operation has chain of custody records or other documentation identifying all transporters and supply chains responsible for transporting cyanide from the producer to the operation. The relevant Bill of Lading and Waybills were observed by the auditors.

Cyanco North America Rail and Truck Supply Chain was first certified in April 2011 and was most recently re-certified on 27 July 2022 covering transport to the relevant port in the United States.

Cyanco Global Ocean Supply Chain was first certified in March 2013 and was most recently re-certified on 27 July 2022. This includes the Port of Tema, Ghana.

Vehrad was first certified in July 2008 and most recently recertified on 23 September 2021.

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.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 3.1**

☐ not in compliance with

Summarise the basis for the findings/deficiencies identified.

The operation is in full compliance with 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.

Facilities for unloading, storing and mixing cyanide have been designed and constructed by Lycopodium in accordance with cyanide producers' guidelines, applicable jurisdictional rules and/or other sound and accepted engineering practices for these facilities.

It was verified during the site audit that the cyanide box store, cyanide mixing and storage tanks, are located in the Plant, an access controlled part of the mine away from people and surface waters.

The Mine uses cyanide briquettes delivered in sea containers, which are unloaded by forklift and packed in the cyanide box store.

There are systems in place to prevent the overfilling of cyanide storage tanks, and the systems are tested and maintained on a routine basis. The cyanide mixing and dosing tanks are equipped with level measurement devices. The mixing tank water is added via an automatic valve controlled by the Supervisory Control and Data Acquisition (SCADA) system.

It was reported that the mixing tank level is interlocked with the water feed valve, and the water valve shuts down when the tank is 80% full. This was confirmed on the SCADA in the control room. It was confirmed that the level measurement and interlocks form part of the Planned Maintenance System.

Cyanide mixing and storage tanks are located on concrete or other surfaces that can prevent seepage to subsurface. The cyanide mixing and dosing tanks civil foundation drawing indicates a 150 mm thick concrete slab underneath the tank's steel base.

Secondary containments for cyanide storage and mixing tanks are constructed of materials that provide a competent barrier to leakage. The cyanide mixing and dosing tanks are located inside a concrete bund, which is equipped with a sump pump. The bunds appeared to be good condition.

The sump pump delivery can be routed to the leach or the cyanide mixing tank, depending on the strength of the cyanide spillage. The secondary containment is not sufficient to contain the cyanide tank, and any overflow is routed to the CIL secondary containment, which is sufficient, constructed of concrete, and in good condition.

The cyanide boxes are stored in a shed under a roof. The store is equipped with a concrete floor, walls on the sides and a hump to prevent water from entering the store and to contain any spillage. The empty cyanide boxes and packing materials are also stored under a roof.

Both the cyanide box store as well as the empty box store are fitted with diamond mesh gates in front to allow for adequate ventilation.

The cyanide mixing tank box breaker acts as a ventilation opening during loading operations The cyanide storage tank is equipped with a goose neck ventilation pipe on the top of the tank, as well as an overflow pipe.

It was confirmed that the cyanide box store as well as the cyanide mixing and dosing facility is placed inside an area with access control, locked with double locks, and a key control book for issuing the keys. The cyanide mixing and dosing tank area is also locked with a key control book in place.

The cyanide box and empty box stores are separated by concrete walls. Bulk bags of sodium hydroxide, which is compatible with sodium cyanide, are stored in an adjacent area.

The cyanide mixing and dosing facility is separated from the bunded hydrochloric acid facility by the diesel tanks bund, and drains into the CIL bund in case of the cyanide mixing area bund overflowing.

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.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 3.2**

☐ not in compliance with

Summarise the basis for the findings/deficiencies identified.

The operation is in full compliance with 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.

Procedures are in place and implemented to manage empty cyanide containers including the following.

Standard Operating Procedure (SOP) Cyanide Mixing CM/PP/01-01, 5 January 2023;

SOP Issuing of Sodium Cyanide for Mixing CM/PCN- 03, 3 February 2023;

SOP Off-loading a container from lowbed CM/PP/01-06, 20 January 2023; and

SOP Destuffing boxed cyanide from sea containers at Plant CM/PCN-02, 4 December 2022.

SOP Cyanide Mixing CM/PP/01-01, 5 January 2023, Section 27 details the empty cyanide box action including retuning the box to the warehouse, from where the transport operator will remove the empty boxes at the time of the next delivery. Section 24 details the rinsing of the polypropylene bags three times with raw water while positioned over the mixing tank splitter.

It was confirmed during the site inspections that the empty cyanide boxes and packaging materials are stored in a separate locked store. The empty boxes are removed by the transportation contractor Vehrad to their facility in Tema for incineration.

The operation has developed and implemented plans or procedures to prevent exposures and releases during cyanide unloading and mixing activities including the following.

SOP Destuffing boxed cyanide from sea containers at Plant CM/PCN-02, December 2022, details how the boxes of cyanide are unloaded from the sea containers and stored in the cyanide box store. This states that the cyanide boxes are to be stored a maximum of two high. This was confirmed by the auditors at the time of the site visit.

SOP 05-CP/CN Handling dry solid cyanide spills inside the cyanide mixing tank bunded area, and SOP 06-CP/CN Handling dry solid cyanide spills outside a bunded area, describe the timely cleanup of solid cyanide.

SOP Issuing of Sodium Cyanide for Mixing CM/PCN-03, and SOP Cyanide Mixing CM/PP/01-01 describe the process of taking the cyanide boxes from the store to the cyanide mixing tank and loading them into the tank. This includes the operation and maintenance of

all hoses, valves and couplings. This also provides for the safe manual mixing of solid cyanide by requiring appropriate personal protective equipment and having a second individual observe from a safe area, which was confirmed during the site visit.

Any spillage of liquid sodium will be treated as an emergency and managed in accordance with CGML Combined Emergency Response Plan for 2023 HSE-HS-E16.01 (CGML CERP) Section 8.8.4.1 Minor Cyanide / Other Chemical Release.

Red dye is included in the Cyanco cyanide delivered to the Mine and therefore the addition of colorant dye is not required.

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.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 4.1**

☐ not in compliance with

Summarise the basis for the findings/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 operation has written management and operating plans or procedures that have been developed for cyanide facilities including unloading, mixing and storage facilities, process plants, and tailings impoundments. The Plant uses 20 cyanide related and 14 environmental procedures covering the cyanide facilities, including an operations manual for the TSF.

The operation's plans or procedures identify and account for the assumptions and parameters on which the facility design was based and any applicable regulatory requirements as necessary to prevent or control cyanide releases and exposures consistent with applicable requirements, which includes the following.

SOP Tailings WAD Cyanide Monitoring and Management CP-CN/011, July 2023. Section 2 Management of WAD cyanide in spigots tailings: details the actions to be taken if WAD cyanide concentrations in spigoted tailings exceeds 40 ppm.

SOP Cyanide Mixing CM/PP/01-01 January 2023 includes that the pH must be 10.5 before adding the solid cyanide to the mixing tank. The leach feed pH is controlled to 10.5 by the automatic addition of lime from a silo positioned over the mill feed belt, with the lime addition controlled by the on-line pH meter in the leach tank.

TSF 1 SE Operations Maintenance and Surveillance (OMS) Manual August 2022 states that the freeboard must be 1.5 m.

The operation has plans and procedures that describe the standard practices necessary for the safe and environmentally sound operation of the facility including the specific measures needed for compliance with the Code, such as inspections and preventive maintenance activities.

The operation inspects the following at unloading, storage, mixing and process areas, including tanks, secondary containments, leak detection systems, pipelines, pumps, valves, and ponds. Any problems identified by facility monitoring or inspection will instigate a work order being raise to rectify the problem as part of the maintenance process.

Various checklists were observed including the following; daily cyanide mixing, CIL prestart, thickener, job startup, cyanide handling, leach tank monitoring ports, process and settling ponds, and the Events Ponds. The TSF is inspected on a daily, monthly, and annual basis. The operation undertakes thickness testing of the tanks on an annual basis.

This demonstrates that the operation inspects the cyanide facilities on an established frequency sufficient to ensure and document that they are functioning within design parameters.

The inspection reports and checklists identify the specific items to be observed and include the date of the inspection, the name of the inspector, and any observed deficiencies, the corrective actions are documented, and the records are retained.

The operation implements procedures to review proposed changes to production processes, operating practices, or cyanide facilities to determine if they may increase the potential for cyanide releases and worker exposures, and incorporate any measures necessary to protect worker health and safety and the environment as detailed in Chirano Gold Mines Limited Change Management Procedure dated April 2022. The Change Request Form is signed by each Head of Department as applicable to the specific change e.g. if the change gives rise to any environmental or health and safety issues the Heads of these Departments will need to sign the form. Environmental and health and safety personnel review any proposed cyanide related process changes and modifications, prior to implementation, in order to identify any potential environmental, health and safety issues.

The operation has cyanide management contingency procedures for non-standard operating situations that may present a potential for cyanide exposures and releases. The TSF was designed for a 1:100 year 24 hour storm event and the current freeboard will accommodate this event without a risk for overtopping.

A Plant shutdown is done monthly lasting a day with various procedures controlling this process, which are applicable to short and long term cessation of operations. These include the following;

- SOP Circuit shutdown CM/PP/40-03, February 2023;
- SOP Tails shutdown CM/PP/40-24, March 2023;
- SOP Mill start up CM/PP/20-2;
- SOP Circuit start up procedures CM/PP/40-02, February 2023; and
- SOP CM/PP/40-08 Power failure, February 2023.

The operation’s contingency procedures as detailed above account for how cyanide would be safely managed during short-term and long-term shutdowns or cessations in operation. This includes the management of any cyanide on site, including solid cyanide (which would remain in the dedicated storage area), and cyanide solution within tanks, vessels, pipelines, ponds and impoundments.

A preventive maintenance program is implemented and activities documented to ensure that equipment and devices function as necessary for safe cyanide management.

The TSF is equipped with an underliner leak detection / drainage layer. The Events Ponds are also equipped with a leak detection layer.

The Events Ponds secondary containment inspection sheets include inspection of the minimum freeboard of 1.5 m, pumps, dead birds, bottom of pond clean, leak detection layer, and cyanide analyses. The TSF daily inspections includes the leak detection layer.

The Plant uses the Oracle JD Edwards planned maintenance software. The maintenance software was observed and specific entries for cyanide pipelines, cyanide pumps, and cyanide hoist, were observed. All items are inspected weekly and monthly.

The operation has the necessary emergency power resources to operate pumps and other equipment to prevent unintentional releases and exposures in the event its primary source of power is interrupted. The Mine is equipped with 10 Gensets, which are used as standby power. The maintenance of the Gensets is included in the planned maintenance system.

Any flow back from the Plant during a power outage is directed to the Events Ponds, which are kept empty. The material in the Events Ponds is pumped to the TSF via the tailings hopper, which is powered by the emergency power generation.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 4.2**

☐ not in compliance with

Summarise the basis for the findings/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.

The operation implements a program to evaluate cyanide use in the Plant and adjust the addition rate to minimize its use.

Chirano Mine conducts bottle roll tests monthly and weekly on composites to the feed to the CIL. Bottle roll tests as well as diagnostic leach tests are conducted on the opencast as well as the underground feed sources as appropriate. The optimal reagent parameters including cyanide addition is determined from the results of the tests as well as the source mix fed to the Plant.

The log sheet includes a target free cyanide concentration in Leach 1, and this is adjusted by the Metallurgical Superintendent as required based on the tests undertaken.

The feed rate of reagent strength cyanide is currently controlled manually and adjusted as per the free cyanide values from the TAC 1000 and manual titrations to maintain the free cyanide levels as per the parameter set in the log sheet.

In addition, the Plant uses a separate on-line WAD 1000-S cyanide analyser in conjunction with hourly WAD cyanide titrations to determine the WAD cyanide values in the leach.

SOP CIL Operations CM/PP/40-04, February 2023 details the adjustments to be undertaken.

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

The operation is	☒ **in full compliance with**	**Standard of Practice 4.3**
	☐ in substantial compliance with	
	☐ not in compliance with	

Summarise the basis for the findings/deficiencies identified.

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

The operation has developed a comprehensive, probabilistic water balance. The Chirano Gold Mine Water Balance includes the Plant and TSF. The daily precipitation records together with 75 years of historic rainfall records are employed by the water balance to model the uncertainty and variability in the prediction of precipitation patterns, including the ability to consider the frequency and distribution of precipitation events along with extremes and seasonal variations.

The water balance considers the information detailed below in a reasonable manner and as appropriate for the facilities and the environment, including the quality of existing precipitation and evaporation data as representing actual site conditions.

The auditors confirmed that the TSF water balance considers tailings deposition rates, annual precipitation (the Environmental Department keeps detail records of daily precipitation), run on from the valley TSF including a 12 % infiltration factor, interstitial water, return water to the Plant, evaporation, and underdrain water returned to TSF.

There is no significant seepage from the TSF as it is fitted with a clay layer designed to minimise seepage as well as underdrains recovering solution back to the TSF. Ghana is in a subtropical region of Africa and no freezing and thawing occurs. The TSF freeboard and spillway was designed to accommodate the 1:100 year 24 hour storm event.

Historic rainfall data is available and used to predict how much rainfall is expected for the upcoming periods. The Mine is equipped with 10 on-site generators (Gensets) that produces sufficient power to run the process Plant including the return water pumps at the TSF decant.

The TSF is equipped with vibrating Piezometers with the data downloaded daily. The quarterly TSF inspection and reports by the Engineer of Record reviews the Piezometer readings and makes recommendations regarding TSF operating parameters as appropriate, this was confirmed in the review of the quarterly reports.

The Events Pond No.1 is able to discharge to the environment during abnormal rainfall events, which happens infrequently. The pond contents are sampled and only released if found below the Ghanaian Environmental Protection Agency (EPA) standard of 1 mg/l total cyanide.

However, in order to be compliant with the International Cyanide Management Code (ICMC) the operation ensures that the concentration of WAD cyanide is below 0.5 mg/l and the concentration of free cyanide is below 0.022 mg/l for any discharge to surface water.

The total cyanide measured on a sample from the Events Pond No.1 on 25 June 2023 prior to discharge was less than 0.003 mg/l.

Ponds and impoundments are designed and operated with adequate freeboard above the maximum design storage capacity determined to be necessary from water balance calculations.

TSF 1 SE Operations Maintenance and Surveillance (OMS) Manual Rev A Aug 3, 2022. Section 3.10.12 spillways storm management states that the TSF 1 SE has been designed for the 1:100 year 24 hour storm event. The total minimum freeboard required is 1.5 m below the invert of the spillway, which has been prescribed by the EPA operational permit for the facility.

The Events Ponds inspection sheets for 2020 - 2023 included a minimum freeboard of 1.5 m, although the Events Ponds are normally kept empty to accommodate storm events.

The operation's operating procedures incorporate inspection and monitoring activities as necessary to implement the water balance and prevent overtopping of ponds and impoundments and unplanned discharge of cyanide solutions to the environment.

TSF inspections are conducted daily, monthly, and quarterly, including monitoring freeboard. Storm water diversions are inspected as part of the quarterly TSF inspections by a Team including the Environmental Department.

The process Plant conducts inspections daily, which include process water, settling, and event ponds.

The operation measures precipitation, comparing the results to design assumptions and revising operating practices as necessary.

Precipitation is measured and recorded daily by the Environmental Department and the results compared to predicted analyses.

The quarterly Engineer of Record report includes freeboard and phreatic levels and may revise operating instructions and parameters for safe operation of the TSF.

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 the findings/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 operation does not have any open water where it is necessary to implemented measures to restrict access by wildlife and livestock as the WAD cyanide does not exceed 50 mg/l.

The operation can demonstrate that the cyanide concentration in open water at the TSF, leach facility and solution ponds does not exceed 50 mg/l WAD cyanide.

The operation measures the WAD cyanide concentrations at the TSF spigot. The results since the last recertification audit were observed. One exceedance was recorded in March 2022 of 54.9 mg/l.

SOP Tailings WAD Cyanide Monitoring and Management CP-CN/011 July 2023, Section 2 Management of WAD cyanide in spigots tailings, details the actions to be undertaken If WAD CN concentrations in spigoted tailings exceeds 40 ppm.

Maintaining a WAD cyanide concentration of 50 mg/l or less in open water is effective in preventing significant wildlife mortalities.

The TSF and Plant are inspected for wildlife mortalities on a daily basis. No wildlife mortalities were recorded since the previous recertification audit.

There is no heap leach on site.

Standard of practice 4.5: Implement measures to protect fish and wildlife from direct and 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 the findings/deficiencies identified.

The operation is in full compliance with Standard 4.5 to implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.

The Events Pond No 1. is able to discharge to the environment during abnormal rainfall events, which happens infrequently. The pond contents are sampled and only released if found below the EPA standards of 1 mg/l total cyanide.

However, in order to be compliant with the ICMC the operation ensures that the concentration of WAD cyanide is below 0.5 mg/l and the concentration of free cyanide is below 0.022 mg/l.

The total cyanide measured on a sample from the Events Pond No.1 on 25 June 2023 prior to discharge was less than 0.005 mg/l. The Events Ponds are normally kept empty to accommodate a storm event.

The Ghanian Environmental Protection Agency (EPA) does not define any mixing zones with regards to discharges to surface water.

The operation monitors the discharge to the surface water prior to it being discharged, which happens infrequently due to an excess of stormwater.

In addition, there is a monitoring point where the discharge from the Event Pond No.1 enters the local Suraw River. Monitoring at this location was observed from 25 January 2022 to 25 March 2023 and all concentrations of WAD and free cyanide were below detection limit of 0.005 mg/l.

There are no known indirect discharges to surface water. All of the monitoring of surface water downstream of the operation between 25 January 2022 and 25 March 2023 was observed to be below the detection limit of 0.005 mg/l for free cyanide.

No seepage from the operation has caused cyanide concentrations in surface water to rise above levels protective of beneficial use. The Ghanaian EPA standard for surface water is 0.6 mg/l total cyanide. All of the surface water results between 25 January 2022 and 25 March 2023 showed the concentration of WAD and free cyanide to be below the detection limit of 0.005 mg/l.

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 the findings/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.

The operation implements specific water management and other measures to manage seepage in order to protect the beneficial use of groundwater beneath and / or immediately down gradient of the operation. This includes the following:

Lining of the TSF with either a High Density Polyethylene (HDPE) or clay liner;

Installation of underliner leak detection / drainage layer;

Lining of tailings and return water pipelines trench with HDPE; and

Lining of event ponds with double layer of HDPE and a leak detection layer between.

The operation monitors for cyanide in groundwater downgradient of the site and can demonstrate that concentrations of WAD cyanide (or other species of cyanide for which there is a numerical standard established by the applicable jurisdiction) in groundwater at compliance points below or downgradient of the facility are at or below levels that are protective of identified beneficial uses of the groundwater.

The beneficial uses of groundwater downgradient of the facility are likely to include the provision of drinking water and water for livestock as this is obtained via wells abstracting water from the local groundwater.

No seepage from the operation has caused the concentration of groundwater to rise above levels protective of beneficial use.

The Ghanaian EPA standard for groundwater is 0.6 mg/l total cyanide. All of the groundwater results between 25 January 2022 and 25 March 2023 showed the concentration to below the detection limit of 0.005 mg/l WAD and total cyanide.

Mill tailings are not used as underground backfill.

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

The operation is	☒ **in full compliance with**	**Standard of Practice 4.7**
	☐ in substantial compliance with	
	☐ not in compliance with	

Summarise the basis for the findings/deficiencies identified.

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

Spill prevention or containment measures are provided for all unloading, storage, mixing and process solution tanks.

The CIL tanks are on ring beams and their foundations are equipped with leak detection pipes. The pipes are inspected weekly. The leach tanks monitoring ports inspection sheet including leach and adsorption tanks for 2021, 2022 and 2023 showed no leaks.

The reagents area foundations and slab arrangements are detailed in drawing 3010-C-401 rev 1 indicating a 150 mm thick concrete slab underneath the tanks' steel base.

The leach, CIL, tailings hopper, thickener and cyanide solution tanks are all located in interlinked concrete bunds in order to contain any spillages. The concrete bunds are linked to the Events Ponds.

The largest storage tank is the leach tank at 3 200 m^3. Total bund volume is 217 m^3. The two Events Ponds both have a volume of 2 205 m^3 each, giving a total of 4 627 m^3. In the event of a tank failure tailings from the Events Ponds will be pumped to the TSF via the tailings hopper. The inter-linked bunds are connected to the Events Ponds by concrete lined channels that prevent seepage. Backup power generators ensure that the pumps are always operational.

Procedures are in place and being implemented to prevent discharge to the environment of any cyanide solution or cyanide contaminated water that is collected in a secondary containment area. The only location where a discharge to the environment may happen is from the Events Pond. Prior to a discharge, the liquid is tested to ensure this is within legal standards. The total cyanide measured on a sample from the Events Pond No.1 on 25 June 2023 prior to discharge was less than 0.005 mg/l.

All bunds are equipped with sumps and automated pumps and any spillage is returned to the process or the TSF. There are no cyanide process tanks without secondary containment.

Spill prevention or containment measures are provided for all process solution pipelines to collect leaks and prevent releases to the environment. The cyanide dosing pipelines run across concrete bunds which act as secondary containment for the lines. Tailings pipelines are contained within HDPE lined trenches. There are no areas where cyanide pipelines present a risk to surface water.

Cyanide tanks and pipelines are constructed of materials that are compatible with cyanide and high pH conditions. The cyanide mixing and dosing tanks are constructed of mild steel. The dosing ring main line as well as the transfer line between the mixing and dosing tank are constructed of HDPE. Stainless steel valves are used. The dosing system's pipes are made of stainless steel and HDPE. The Plant's tanks and pipes are made of mild steel.

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.

The operation is

☒ in full compliance with

☐ in substantial compliance with **Standard of Practice 4.8**

☐ not in compliance with

Summarise the basis for the findings/deficiencies identified.

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.

Quality assurance and quality control programs were implemented during construction and substantial modification of all cyanide facilities.

Cyanide Mixing and Storage Tanks

The cyanide mixing and storage tanks were replaced as per the original Lycopodium design specifications in 2014. The new tanks were inspected by Bureau Veritas Ghana Ltd including the following.

Visual examination report of cyanide mixing tank weld seams no 1 report issued on 3 February 2014, signed by Simon Acquah.

Visual examination report of cyanide storage tank weld seams no 2, report issued on 3 February 2014, signed by Simon Acquah; and

Magnetic particle examination report for cyanide mixing and storage tanks 3 February 2014; and Structural Steel fabrication checklist for cyanide mixing and storage tank 6 February 2014.

Tailings Facility

TSF 1 SE was completed in the third quarter of 2021.

The auditors observed the following QA/QC documents with regards to the construction of the TSF.

- Knight Piesold Tailings Storage Facility 1 South Extension Detailed Design Report April 2021, which includes the detailed designs of the following:
    - Basin Preparation;
    - Access Roads;
    - Groundwater Drainage;
    - Groundwater Sump;
    - Tailings Underdrainage System;
    - Embankments;
    - Emergency Spillway;

  - Decan System;
  - Stormwater Diversion Channel; and
  - Monitoring Instrumentation.

- Knight Piesold Tailings Storage Facility 1 South Extension Construction As-Built Report August 2023, which include the following;
  - Scope of Construction;
  - Construction Equipment;
  - Construction Materials' Specification;
  - Construction Supervision and QA/QC (including material sources, borrow materials testing, test results and compaction of fills);
  - Design Changes; and
  - Construction Audit by Third Party Engineer.

Quality control and quality assurance programs have addressed the suitability of materials and adequacy of soil compaction for the construction of the TSF 1 SE as detailed in Knight Piesold Tailings Storage Facility 1 South Extension Construction As-Built Report August 2023.

Quality control and quality assurance records been retained for the cyanide mixing and storage tanks, and the TSF 1 SE. No other quality control quality assurance records have been retained and therefore the other cyanide facilities are covered by the documentation detailed below.

An appropriately qualified person reviewed cyanide facility construction and provided documentation that the facility has been built as proposed and approved. The inspections were signed by the engineer Ing Simon Acquah on behalf of Bureau Veritas Ghana Ltd.

The Knight Piesold Tailings Storage Facility 1 South Extension Construction As-Built Report August 2023, was signed off by; Emmauel Adinku, Resident Engineer / Project Manager, and Ama Nketiah, Principal Engineer / Regional Manager.

Where there is no available quality control and quality assurance documentation or as-built certification for cyanide facility construction, an appropriately qualified person inspected those facilities and issued a report concluding that their continued operation within established parameters will protect against cyanide exposures and releases, including the following.

Structural report on structural integrity audit for Plant - Inspection and Engineers dated 10 June 2020 signed by Ing Simon Andoh Acquah.

CIL tanks corrosion inspection report signed by Baffoa Annane Emmanual, Reliability Engineer, dated 1 to 5 August 2020.

Structural Integrity Action Report IE/2020/SA/CM001 includes columns for deviation, action, who, when, revised, and done. All actions were indicated as green under the done column.

Inspectors and Engineers non-destructive testing (NDT) inspections report on Plant CIL tanks 20 June 2022 - tests include the cyanide mixing, storage tanks, leach, and CIL tanks. No actions were required.

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

The operation is

☒ in full compliance with

☐ in substantial compliance with **Standard of Practice 4.9**

☐ not in compliance with

Summarise the basis for the findings/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 i.e. Environmental Monitoring Plan CH-ENV-EMP-01, 15 March 2022, which includes surface and groundwater monitoring activities. Wildlife monitoring is part of the daily inspections by the TSF personnel.

The sampling and analytical procedures have been developed by an appropriately qualified person, Eric Coffie - Senior Environmental Officer (Monitoring and Compliance). He has an MSc. In Environmental Science, a BSc in Laboratory Technology, and a Laboratory Technician's Diploma. In addition, he has a Health, Safety and Environment (HSE) Superintendent Competence Certificate, a Mine Rescue Certification, a Senior HSE Office Competence, and a Nebosh International Diploma. He has over 15 years experience, with 12 of them being at Chirano Mine.

The Environmental Monitoring Plan includes procedures specifying how and where samples should be taken, sample preservation techniques, chain of custody procedures, shipping instructions, cyanide species to be analysed and quality assurance and quality control requirements for cyanide analysis.

Sampling conditions are documented in a fieldwork notebook, including weather, livestock/wildlife activity, anthropogenic influences, etc., as observed by the auditors.

Monitoring is undertaken at frequencies that adequately characterise the medium being monitored, and identify changes in a timely manner. Groundwater and surface water are monitored on a monthly basis. Wildlife inspections are undertaken on a daily basis by the TSF personnel. Total cyanide is monitored in any stormwater being discharged to the environment prior to it being discharged. WAD cyanide analysis is currently undertaken on a daily basis to determine the concentrations at the discharge point to the tailings storage facility.

Principle 5 – Decommissioning

Protect communities and the environment from cyanide through development and implementation of decommissioning plans for cyanide facilities.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 5.1**

☐ not in compliance with

Summarise the basis for the findings/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 developed written procedures to effectively decommission cyanide facilities at the cessation of operations including Cyanide Facility Decommissioning /Closure and Post Closure Land Use Plan dated 1 June 2023 signed off by the General Manager.

This plan adequately addresses decommissioning which is that aspect of closure that addresses the cyanide remaining on site upon cessation of production activities and prepares the site for its closure and post closure period.

The plan includes an implementation schedule for decommissioning activities. The scheduled cashflow table dated 31 Jan 2023, includes 6 monthly activities and cashflows within the decommissioning plan.

The operation reviews its decommissioning procedures for cyanide facilities during the life of the operation and revises them as needed. The decommissioning plan is updated every two years.

Standard of practice 5.2: Establish a financial 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 the findings/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.

The operation has developed an estimate of the cost to fully fund third party implementation of the cyanide-related decommissioning measures identified in its site decommissioning / closure plan as detailed in Cyanide Facility Decommissioning /Closure and Post Closure Land Use Plan dated 1 June 2023 signed off by the General Manager. In addition, there is a scheduled cashflow table dated 31 January 2023, which includes 6 monthly activities and cashflows within the decommissioning plan.

The decommissioning /closure plan, including the cost estimate, is updated every two years with the latest version being dated 1 June 2023.

The operation 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 / closure plan. Ghanaian legislation required the financial mechanism to be 80% bank/insurance guarantee and 20% cash.

The auditors observed the following; Societe Generale Ghana Certificate of balance and bank guarantee (Chartered Bank Ghana Limited). The certificate of balance is sufficient to fund the cyanide related decommissioning / detoxification components of the closure plan.

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 the findings/deficiencies identified.

The operation is in full compliance with Standard of Practice 6.1 to identify potential cyanide exposure scenarios and take measures 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, including the following:

- SOP Cyanide Mixing CM/PP/01-01, January 2023;
- SOP CIL Operations CM/PP/40-04, February 2023;
- SOP Issuing of Sodium Cyanide for Mixing CM/PCN-03 February 2023;
- TSF 1 SE Operations Maintenance and Surveillance (OMS) Manual Rev A Aug 3, 2022;
- SOP Process Plant Confined Space Entry Procedure CM/PP/CSE-001 17 July 2022; and
- SOP Decontamination of Cyanide Mixing Tanks, Storage Tanks and all Cyanide Related Equipment CM/PP/01-02 March 2020.

The procedures require, where necessary, the use of personal protective equipment and address pre-work inspections.

The new Stop Look Assess Manage (SLAM) risk assessment system is used as part of pre-work assessment for every task. The auditors observed field level risk assessment by Gabriel Tetteh at the Events Pond dated 13 Jun 2023.

It was also confirmed that the procedures specified the Personal Protective Equipment (PPE) that is required, in addition to the signage around the Plant.

The operation solicits and actively considers worker input in developing and evaluating health and safety procedures.

Workers raise issues through toolbox meetings, field level engagement, and hazard correction meetings. In addition, there are General Manager meetings for, Head of Departments (HODs) and Contractors.

Cyanide incidents from other sites are shared in the Critical Risk Management Chirano Deep Dive Review Cyanide Handling. The presentations regarding this document undertaken in 2022 and 2023 were observed by the auditors.

Feedback from workers and the hazards corrected are recorded including date, equipment and location, the works order no and the responsible person.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 6.2**

☐ not in compliance with

Summarise the basis for the findings/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.

The operation has determined the appropriate pH for limiting the evolution of hydrogen cyanide (HCN) gas during mixing and production activities. SOP Cyanide Mixing CM/PP/01, 5 January 2023 states the pH needs to be 10.5 before adding the solid cyanide to the tank.

The leach feed pH is controlled to 10.5 by the automatic addition of lime from a silo positioned over the mill feed belt, with the lime addition controlled by the on-line pH meter in the leach tank.

The operation has identified areas and activities where workers may be exposed to hydrogen cyanide gas or cyanide dust in excess of 10 parts per million (ppm) (11 mg/m3) on an instantaneous basis and 4.7 parts per million (ppm) 5 mg/m3) continuously over an 8-hour period, as cyanide and require the use of appropriate personal protective equipment in these areas or when performing these activities.

The hot spots have been identified in the Hot Spot Assessment Flow Diagram: Potential Cyanide Exposure Map.

The facility uses monitoring devices in process areas and for activities involving the management of cyanide to confirm that workers are not exposed to hydrogen cyanide gas or cyanide dust exceeding 10 parts per million (ppm) on an instantaneous basis and 4.7 parts per million (ppm) continuously over an 8-hour period, as cyanide

Fixed monitors are installed at potential hot spots including the warehouse, mixing and storage area, CIL, and tailings area, with first alarm at 4.7 ppm, and second alarm at 10.0 ppm.

Eight Personal HCN monitors are used at the following areas: cyanide storage area, mixing area, top of CIL, and during maintenance on cyanide equipment. Personal monitors are alarmed with the first alarm at 4.7 ppm and the second alarm at 10.0 ppm.

Monitoring is also undertaken using personal monitors in the event that abnormal operations may result in HCN gas release.

Induction training includes that if any alarm is sounded, the area must be evacuated. This will happen at 4.7 ppm first alarm. The alarm is investigated by the Safety Department before giving clearance to re-enter.

Hydrogen cyanide monitoring equipment is maintained, tested and calibrated as directed by the manufacturer, and records are retained for at least three years. Fixed monitors are calibrated monthly internally and annually by the external supplier. Personal monitors are calibrated quarterly by the external supplier.

Warning signs have been placed where cyanide is used advising workers that cyanide is present, of any necessary personal protective equipment that must be worn, and that smoking, open flames, eating and drinking are not allowed.

The signage is placed at all of the identified hotspots, which includes the warehouse, mixing and storage area, CIL, and tailings area.

It was confirmed during the observation of a cyanide mixing operation that red dye is included with the briquettes and therefore dyes the high strength cyanide solution in the mixing tank for clear identification.

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 they are maintained, inspected and tested on a regular basis.

Unloading, storage, mixing and process tanks and piping containing cyanide are identified to alert workers of their contents, and the direction of cyanide flow in pipes is designated. Cyanide tanks are colour coded red with a purple stripe as per the Ghanaian Minerals Commission requirements. There are appropriate labels and direction signage on the high strength cyanide solution pipelines. There are appropriate labels and direction on the TSF tailings and return water pipelines.

Safety Data Sheets, first aid procedures and other informational materials on cyanide safety is in the language of the workforce and available in areas where cyanide is managed. English is the official language on the Mine. The SDS for solid cyanide is in English from Cyanco and is available at the cyanide store and mixing area. Cyanide first aid procedures are communicated during cyanide training.

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 need of revising. Chirano Mines uses a formal SOP -HS-P-04, 20 January 2023 General Incident Report and Investigation. The SOP is used to investigate all incidents including environmental and injuries.

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 the findings/deficiencies identified.

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

The operation has water, oxygen, a resuscitator, antidote kits and a radio, telephone, alarm system or other means of communications or emergency notification readily available for use at cyanide unloading, storage and mixing locations and elsewhere in the Plant.

The mine clinic has two Cyanokit antidotes and the Plant first aid room has one. All kits are stored as required by the manufacturer. The site visit confirmed the availability of Oxyviva medical oxygen sets at the CIL control room, cyanide store, cyanide mixing area, and first aid room.

First aid cabinets are in place at the cyanide store, first aid room and cyanide mixing area. Radios are used for notification of a cyanide emergency to the security control room, who will contact the clinic and the ambulance to respond.

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

Emergency response equipment are inspected monthly according to the various checklists.

The clinic orders the cyanide antidotes and manages the timely replacement of the Cyanokits using checklists. All kits were observed to be within their use by date.

The operation has developed specific written emergency response plans and procedures to respond to cyanide exposure including the following:

CGML Combined Emergency Response Plan for 2023 HSE-HS-E16.01 (CGML CERP);

Process Plant Emergence Response Plan, April 2023, ref C/PP/EP-ER-001 (PPERP); and

SOP Cyanide First Aid Training CM-FA-01.

The procedure for SOP Cyanide First Aid Training CM-FA-01 details the necessary response to cyanide exposure through ingestion, inhalation, and absorption through the skin and eyes.

The operation has its own on-site capability to provide first aid and medical assistance to workers exposed to cyanide.

The Mine has an on-site Medical Clinic available for cyanide emergencies. The Mine Medical Clinic was visited and the Medical Doctor and his staff were interviewed.

The Clinic has two ambulances and two doctors with trained paramedics to attend to cyanide emergencies. The clinic is equipped with a shower facility to decontaminate cyanide patients on arrival if required. The ambulance staff will respond to cyanide emergencies to the Plant wearing the appropriate PPE.

The clinic is equipped with medical oxygen and cyanide antidote kits. Three beds are available for cyanide emergencies which can be accommodated overnight before being transferred to the Bibiani Municipal Hospital. The cyanide treatment procedure from the manufacturers of the Cyanokit antidote is displayed and will be used in case of cyanide emergencies.

The operation has developed procedures to transport workers exposed to cyanide to locally available qualified off-site medical facilities, which includes the following.

SOP Plant Security Gate, Access Control Procedure, January 2023, Section 18 - Actions By Security Officers During Emergency, this details how ambulances must be allowed to enter the Plant without any impedance.

The operation has informed local medical facilities of the potential need to treat patients for cyanide exposure, and the operation is assured that the medical facility has adequate, qualified staff, equipment and expertise to respond to cyanide exposures.

A note from Ghana Health Services Bibiani Municipal Hospital dated 29 March 2023 re: Collaboration on Cyanide Contamination signed by Dr Akwasi Adu-Gyamfi Medical Superintendent is in place.

The Mine Clinic will treat cyanide patients in the first instance however if there are secondary complications, they will be transported to the Bibiani hospital by the ambulance from the Mine Clinic. A paramedic will accompany the patient and carry an additional Cyanokit.

In terms of the Ghana national medical protocols, the Clinic can call upon any municipal hospital as required.

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 the findings/deficiencies identified.

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

The operation developed Emergency Response Plans to address potential accidental releases of cyanide and cyanide exposure incidents. These include the following:

CGML Combined Emergency Response Plan for 2023 HSE-HS-E16.01 (CGML CERP); and

Process Plant Emergence Response Plan Dated April 2023 ref C/PP/EP-ER-001 (PPERP).

The Plans consider the potential cyanide failure scenarios appropriate for the operations site-specific environmental and operating circumstances including the following:

(CGML CERP) Section 8.8.4.4: Catastrophic release of hydrogen cyanide;

(CGML CERP) Sect 8.8.4.3: Transportation and Delivery of Cyanide;

SOP 05-CP/CN Handling dry solid cyanide spills inside the cyanide mixing tank bunded area;

SOP 06-CP/CN Handling dry solid cyanide spills outside a bunded area;

(CGML CERP) Section 8.8.4.1 Minor Cyanide / Other Chemical Release details the response to be undertaken in the event of a release of liquid cyanide.

(CGML CERP) Section 8.2: Structural Fires;

(CGML CERP) Section 8.8.4.6 Tanks and Pipelines (including valves);

(CGML CERP) Section 8.8.4.5 Overtopping of Ponds;

(CGML CERP) Section 8.11 Power Failure/ Outage (including pump failure). The Mine has 10 Gensets to provide emergency power; and

(CGML CERP) Section 8.11.8 Tailings Dam Failure, Uncontrolled Seepage from Tailings Dam, Tailings or Return Water Pipeline.

The operation does not have a cyanide treatment, destruction or recovery system.

Planning for response to transportation-related emergencies has considered the transportation route, physical and chemical form of the cyanide, method of transport, the condition of the road, and the design of the transport vehicle.

Vehrad Transport Emergency Response Plan covers transportation related emergencies up to the point of offloading in accordance with their certification as a cyanide transporter including, H20 Vehrad Transport Emergency Response Plan rev 06 dated 8 March 2023.

The emergency response plans include the following.

Specific response actions, as appropriate for the anticipated emergency situations, such as clearing site personnel and potentially affected communities from the area of exposure e.g. PPERP Section 2 Evacuation Responsibilities and Procedure.

The use of cyanide antidotes and first aid measures for cyanide exposure detailed in SOP Cyanide First Aid Training CM-FA-01.

Control of releases at their source, containment, assessment, mitigation, and future prevention of releases is included in (CGML CERP) Section 8.8.2 Authority and Responsibility.

Containment, assessment, mitigation, and future prevention of releases is also detailed in the following procedures.

SOP 05-CP/CN Handling dry solid cyanide spills inside the cyanide mixing tank bunded area; and

SOP 06-CP/CN Handling dry solid cyanide spills outside a bunded area.

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 the findings/deficiencies identified.

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

The operation has involved its workforce and stakeholders in the cyanide emergency response planning process.

The operation has identified the Ghana National Fire Service and Bibiani Municipal Hospital as having emergency response roles, and involved those entities in the cyanide emergency response planning process.

The operation engages in consultation or communication with stakeholders to keep the Emergency Response Plan current.

Communities are consulted with on an annual basis with a schedule is in place for 2023 / 2024 planning the engagements with the 7 communities closest to the Mine. The Ghana National Fire Department is consulted with on an annual basis when they come to the Mine to issue the annual fire certificate. The Bibiani Municipal Hospital is consulted with on an ad hoc basis often when training on cyanide treatment is required.

Ghana National Fire Service (NFS) comes to site for meetings and inspections regarding fire emergencies on an annual basis. A certificate was issued by the National Fire Certificate.

The auditors observed the Fire Certificate by the Ghana National Fire Service no 0021416 dated 14 November 2022.

The auditors observed a letter from the Ghana Health Services Bibiani Municipal Hospital dated 29 March 2023 re: Collaboration on Cyanide Contamination signed by Dr Akwasi Adu-Gyamfi Medical Superintendent.

The workforce has been involved through toolbox meetings, field level engagements, and hazard correction meetings. In addition, there are General Manager meetings for HOD's and Contractors.

Feedback from workers and hazards corrected are recorded including date, equipment and location, the works order no., and the responsible person. The auditors observed the relevant documents with the appropriate information from 11 August 2021 to 16 May 2023.

In addition, the workforce is an integral part of the mock drills with feedback being part of the emergency response planning process.

The operation made potentially affected communities aware of the nature of their risks associated with accidental cyanide releases and consulted with them directly or through community representatives regarding appropriate communications and response actions.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 7.3**

☐ not in compliance with

Summarise the basis for the findings/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 include the following:

CGML Combined Emergency Response Plan for 2023 HSE-HS-E16.01 (CGML CERP); and

Process Plant Emergence Response Plan Dated April 2023 ref C/PP/EP-ER-001 (PPERP);

The CGML CERP, Section 5.2 Emergency Management Organisation: states that the Emergency Response Executive Body is responsible for the response to all emergencies.

The list of Emergency Response Teams was observed during the site visit in the Process Plant Emergence Response Plan as the Incident Control Team Members and on notice boards in the cyanide storage area and in the Plant Control Room.

The PPERP, Section 3.10 Training; identifies the necessary training for Emergency Responders.

Call-out procedures and 24-hour contact information for the co-ordinators and response team members are detailed in the PPERP, Section 3.6 Communications, and 3.7 Emergency Contact Information. The information is also on the notice board in the Plant Control Room.

The auditors observed the letter of appointment as a Process Plant Area Emergency Response Team (ERT) Member (by Andrews Awini appointing Asieyie Albert Kofi dated 14 July 2021. The appointment details the duties of the ERT.

In addition, responsibilities are detailed in, the PPERP Section 1.1 Core Responsibilities, and CGML CERP, Section 6.0 General Responsibilities During Emergencies.

PPERP Section 3.7 Emergency Contact Information, includes a list of the emergency equipment. Emergency response equipment is inspected monthly according to various checklists.

The Ghana National Fire Service is listed in CGML CERP, Section 8.8.4.2 Major Cyanide, Caustic or Acid Release as one of the external contacts. The actions for the Fire Service and Municipal Hospital are detailed in this section under Key Actions and Responsibilities.

The operation has confirmed that external entities with roles and responsibilities identified in the Emergency Response Plan are aware of their involvement and are included as necessary in mock drills or implementation exercises.

Ghana National Fire Service (NFS) come to site for meetings and inspections regarding Fire emergencies on an annual basis. A certificate was issued by the National Fire Certificate. The auditors observed the Fire Certificate by the Ghana National Fire Service no 0021416 dated 14 November 2022. The Fire Service was also involved in a mock drill in 2019.

The auditors observed a letter from the Ghana Health Services Bibiani Municipal Hospital dated 29 March 2023 re: Collaboration on Cyanide Contamination signed by Dr Akwasi Adu-Gyamfi Medical Superintendent.

Standard of practice 7.4: Develop procedure for internal and external emergency notification reporting.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 7.4**

☐ not in compliance with

Summarise the basis for the findings/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 Plans include procedures and contact information for notifying management, regulatory agencies, external response providers and medical facilities of the cyanide emergency.

CGML CERP, Section 5.4.3 Reporting and Emergency Situation to CGML'S Emergency Coordination Centre - details the procedures to contact the Mine's Emergency Response. This also includes emergency contact numbers for Regulatory Agencies, Fire Service and the Municipal Hospital.

The Plans include procedures and contact information for notifying potentially affected communities of the cyanide related incident and any necessary response measures and for communication with the media.

The CGML CERP covers communication with the media. Communication to the Media is only done through the Communication Manager.

CGML CERP states that the Environmental and Community Relations Manager in consultation with the General Manager will evaluate and take all necessary actions to ensure the Health and Safety of all residents downstream of the spill. The Environmental and Community Relations Manager is responsible for communicating with any affected communities.

The operation has a procedure for notifying the ICMI of any significant cyanide incidents, as defined in the ICMI's Definitions and Acronyms document. There have been no significant cyanide incidents since the previous recertification audit.

Technical regulations require the Mine to inform the Minerals Commission in case of any significant cyanide incidents:

SOP HS-B-04-01 General incident Reporting and Investigation Section 8.6 External Reporting includes the requirements for informing the International Cyanide Management Institute.

Standard of practice 7.5: Incorporate remediation measures and monitoring elements into response plans and 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 the findings/deficiencies identified.

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

The emergency response plans describe specific remediation measures as appropriate for the likely cyanide release scenarios, in the following documents:

SOP 05-CP/CN Handling dry solid cyanide spills inside the cyanide mixing tank bunded area;

SOP 06-CP/CN Handling dry solid cyanide spills outside a bunded area;

SOP 07 CP/CN Handling liquid cyanide spills outside a bunded area; and

SOP 07 CP/CN Handling liquid cyanide spills inside a bunded area.

CGML Combined Emergency Response Plan for 2023 HSE-HS-E16.01 Section 8.9.2 – Hydrogen Peroxide details the storage of Hydrogen Peroxide used to treat cyanide in cyanide spillages.

CH-ENV-SOP-32 Emergency Environmental Monitoring Procedure includes the sampling frequency and laboratory analyses to be undertaken in the event of a spill. The endpoint of remediation is determined on a case by case basis.

The management and/or disposal of spill clean-up debris is detail in Key Actions and Responsibilities in CGML CERP, Section 8.8.4.2 Major Cyanide, Caustic or Acid Release.

CGML CERP states that the Environmental and Community Relations Manager in consultation with the General Manager will evaluate and take all necessary actions to ensure the Health and Safety of all residents downstream of the spill. This includes the provision of alternative drinking water.

CGML CERP, Section 8.8.4.2 Major Cyanide, Caustic or Acid Release in Key Actions and Responsibilities states that the use of chemicals for neutralisation of cyanide spilled into water bodies to manage cyanide spills is prohibited".

The monitoring map shows the monitoring sampling locations for surface and groundwater, which would be used as possible sampling locations in the event of a release.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with Standard of Practice 7.6**

☐ **not in compliance with**

Summarise the basis for the findings/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 operation reviews and evaluates the cyanide related elements of its Emergency Response Plans for adequacy on a regular basis.

CGML CERP, Section 8.11.12 Review, states that the document is to be reviewed on a 2 yearly basis.

PPERP, Section 1.3, states the Plan needs to be reviewed every 2 years.

Mock cyanide emergency drills are conducted periodically. The emergency drill program includes the requirement to conduct drills simulating cyanide release scenarios appropriate for the operation. The ERT members are includes as part of the emergency drill. No outside agency is part of the emergency drill process. The on-site clinic is used in the first instance of a cyanide exposure and is part of the emergency drills. Bibiani Hospital is only used for any secondary complications. Similarly the on-site fire service are the primary responders in the event of a fire with the municipal fire department possibly providing a supportive role at the direction of the ERT.

SOP CM/PP/EP-EP-ER 002 Process Plant Emergency Response Drills and Evaluation, dated March 2023. The procedure requires at least one major drill during the year, which must cover cyanide exposure and treatment.

The following mock drill reports were observed.

Cyanide exposure mock drill report dated 11 June 2021. Scenario: a Plant mechanic, was working on a cyanide transfer pump when solution suspected to contain cyanide splashed on him. The drill report includes series of events, negative observations, recommendations, action plan covering responsible, target date and date completed.

Cyanide emergency condition mock drill dated 2 March 2023. Scenario includes a spill while transporting cyanide from Tema to the Mine - a cyanide container accidentally opened and a box of cyanide fell, rolled into the stream with some briquettes spilling on the access road.

Provisions are in place to evaluate and revise the Emergency Response Plans, as necessary, following mock drills and following an actual cyanide-related emergency requiring its implementation.

This is stated in Section 1.0 Introduction of the CGML CERP, Section 1 Introduction.

This is also stated in Section 1.0 Introduction of the PPERP.

SOP CM/PP/EP-EP-ER 002 Process Plant Emergency Response Drills and Evaluation, Section 2 Evaluation of Response to Drills states the Plans should be updated as required in response to mock drills. There have been no mock drills or actual emergencies within the last audit cycle that has required the Plans to be updated.

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 the findings/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. The operation trains all personnel who may encounter cyanide in cyanide hazard recognition.

General Plant Induction is given to everyone working on the Plant this includes the following; Chirano safety culture, Plant emergency call out procedures, Plant PPE requirements, Plant operations, critical risk controls, cyanide awareness, hot work and uncontrolled fire prevention, hazard identification and reporting, Asante golden rules, hazardous energy isolation requirement, and permit to work.

Plant specific cyanide induction/awareness training is given to everybody that works on the Plant. The induction is given to; Plant staff, TSF workers, security personnel, and contractors.

The auditors observed the attendance registers for the period since the previous audit. The topics include the following: aim of cyanide training; ICMC; what is cyanide; forms of cyanide; cyanide operation; cyanide on the mine site; cyanide safety; exposure routes to the body; effects of cyanide on the body; symptoms of cyanide poisoning; what to do in the event of cyanide exposure, cyanide transport, storage and use; cyanide spill management; and environmental management.

The auditors observed the training presentation including the above topics.

Cyanide hazard recognition refresher training is periodically conducted. Cyanide awareness training is refreshed once per year. Cyanide training records are retained. The training records are retained for three years in the training office, after which the records are archived.

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 the findings/deficiencies identified.

The operation is in full compliance with 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 trains workers to perform their normal production tasks, including unloading, mixing, production, and maintenance, with minimum risk to worker health and safety in a manner that prevents unplanned cyanide releases. The Plant trains workers using the SOP / Task Description, followed by a test with a pass mark of 80%.

The training elements necessary for each job involving cyanide management are identified in the training materials as the training materials for each job uses the SOP for the job.

Task training related to cyanide management activities is provided by an appropriately qualified person.

The Trainer, Osei Antwi Providence qualifications include Train the Trainer, Supervisory and Leadership Skills training certificate, Human Resources Management and Administration certificate. He has 15 years experience in Mining.

Workers are trained prior to working with cyanide. All employees on the Plant and the TSF have to undergo cyanide awareness training and job specific training prior to them being allowed to work with cyanide.

Refresher training on cyanide management is provided to ensure that employees continue to perform their jobs in a safe and environmentally protective manner. Cyanide induction refresher training is undertaken on an annual basis.

Work task refresher training is provided as required depending on the outcome of the Planned Task Observations (PTO), such that is the tasks as being undertaken adequately no refresher training is required.

The operation evaluates the effectiveness of cyanide training by testing and observation. Effectiveness of cyanide training is done through testing the individual against the SOP's.

Planned Task Observations (PTOs) are kept electronically on the INX InControl system. The person is physically observed undertaking the task using the SOP, any deviations and the person will be engaged and action taken.

Records are retained throughout an individual's employment documenting the training they have received and including the names of the employee and the trainer, the date of training, the topics covered, and how the employee demonstrated an understanding of the training materials.

Standard of practice 8.3: Train appropriate workers and personnel to respond to worker exposure 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 the findings/deficiencies identified.

The operation is in full compliance with Standard of Practice 8.3; train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide. All cyanide unloading, mixing, production and maintenance personnel are trained in the procedures to be followed if cyanide is released, including decontamination and first aid procedures.

Non-emergency response team members are trained as part of their induction to respond to emergency sirens by going to the emergency assembly point. They are also trained to call in emergencies.

ERT members are trained in the Emergency Response Plan.

Plant employees are trained by St Johns Ambulance in First Aid. The auditors observed the training schedule for the last three years.

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.

ERT members are trained in the Emergency Response Plan. It is mandatory for all ERT members to obtain first aid certification.

The auditors observed the Plant ERT training program for 2023 including hazardous chemical management and spill response, hazard identification and risk management, emergency rescue operations and self-contained breathing apparatus training, fire emergencies and rescue, first aid management, cyanide emergency response, confined space safety and rescue, and work at height safety rescue. The program included a list of 21 Plant ERT members.

The operation has made external responders, such as local fire brigades and emergency medical services familiar with those elements of the Emergency Response Plan related to cyanide.

Ghana National Fire Service (NFS) comes to site for meetings and inspections regarding Fire emergencies on an annual basis. A National Fire Certificate is issued annually by the National Fire Service. The auditors observed the Fire Certificate by the Ghana National Fire Service no 0021416 dated 14 November 2022. The Fire Service was also involved in a mock drill in 2019.

The auditors observed a letter from the Ghana Health Services Bibiani Municipal Hospital dated 29 March 2023 re: Collaboration on Cyanide Contamination signed by Dr Akwasi Adu-Gyamfi Medical Superintendent

Refresher training for ERT members and other Plant employees with regards to response to cyanide exposures and releases is undertaken on an annual basis.

Records are retained documenting the cyanide emergency response training, including the names of the employee and the trainer, the date of training, the topics covered, and how the employee demonstrated an understanding of the training materials.

Principle 9 – Dialogue and Disclosure

Engage in public consultation and disclosure.

Standard of practice 9.1: Promote dialogue with stakeholders regarding cyanide management and responsibility address identified concerns.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 9.1**

☐ not in compliance with

Summarise the basis for the findings/deficiencies identified.

The operation is in full compliance with Standard of Practice 9.1; provide stakeholders with the opportunity to communicate issues of concern. The operation provides stakeholders with information on its cyanide management practices and engages with them regarding their concerns.

The Community and Public Relations Department (CPRD) is responsible for dialogue and disclosure by engaging and consultation with the public and communities.

A presentation is given to the communities on a regular basis. The Chirano Gold Mines Stakeholders Cyanide Awareness Education presentation, which includes detailed information on cyanide, cyanide management, and the operations as well as the TSF. A schedule is in place planning the engagements with the 7 communities closest to the Mine.

Community Cyanide Sensitisation meetings were held from 24 February 2023 to 14 March 2023 and 2 June 2023 for Akoti, Etwebo, Kwawkrom, Sorno, Paboase, Lewerkrom, Kwanikrom, and NT Rentreso communities. The report on the meetings included the minutes, frequently asked questions, as well as the attendance registers.

Community members / representatives can come to the CPRD office on the Mine to raise or report any issues. Grievance records are recorded and kept electronically.

School visits to the mine are regularly arranged. This includes a proposed Field Trip to Asante Chirano for Geomatic Engineering Post Graduates.

Standard of practice 9.2: 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 9.2**

☐ not in compliance with

Summarise the basis for the findings/deficiencies identified.

The operation is in full compliance with Standard of Practice 9.2 to make appropriate operational and environmental information regarding cyanide available to stakeholders. The operation developed written descriptions of how their activities are conducted and how cyanide is managed.

A written description is available of how the mine activities are conducted and how cyanide is managed; Chirano Gold Mines Stakeholders Cyanide Awareness Education. This is available in English to the stakeholders during the meetings and at the offices.

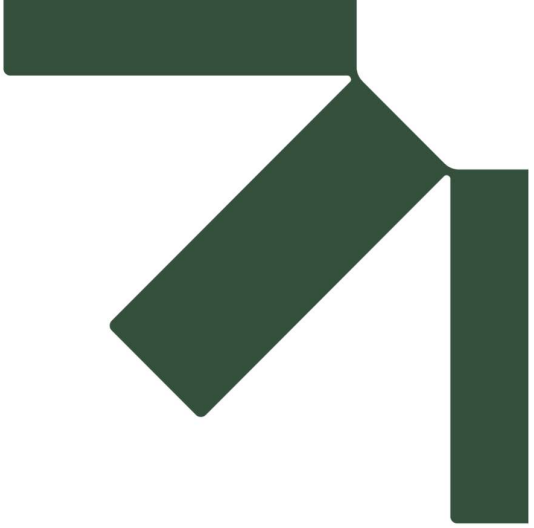
The operation has disseminated information on cyanide in verbal form where a significant percentage of the local population is illiterate. The presentations to the local communities are given in the local language of TWI to enable all attendees to understand the contents of the presentation. The operation makes information publicly available on confirmed cyanide release or exposure incidents including the following.

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

It is mandatory by Ghanaian law to report all incidents meeting the requirements of the Minerals Commission as detailed in the Minerals and Mining (Health Safety and Technical) regulations 2012, which include those listed above. The operation demonstrated to the auditors that there is a Ghanaian Chamber of Mines WhatsApp group, where information regarding incidents reported to the Chamber of Mines is disseminated i.e. including mines and public agencies.

The CGML CERP states that in the case of a workplace fatality the General Manager or his appointee shall report on an accident related to the operations in the Mine to the Chief Inspector of Mines and the Kumasi office of the Inspectorate Division of Minerals Commission (IDMC). These reports are available on request.

There have been no cyanide incidents since the previous recertification audit.



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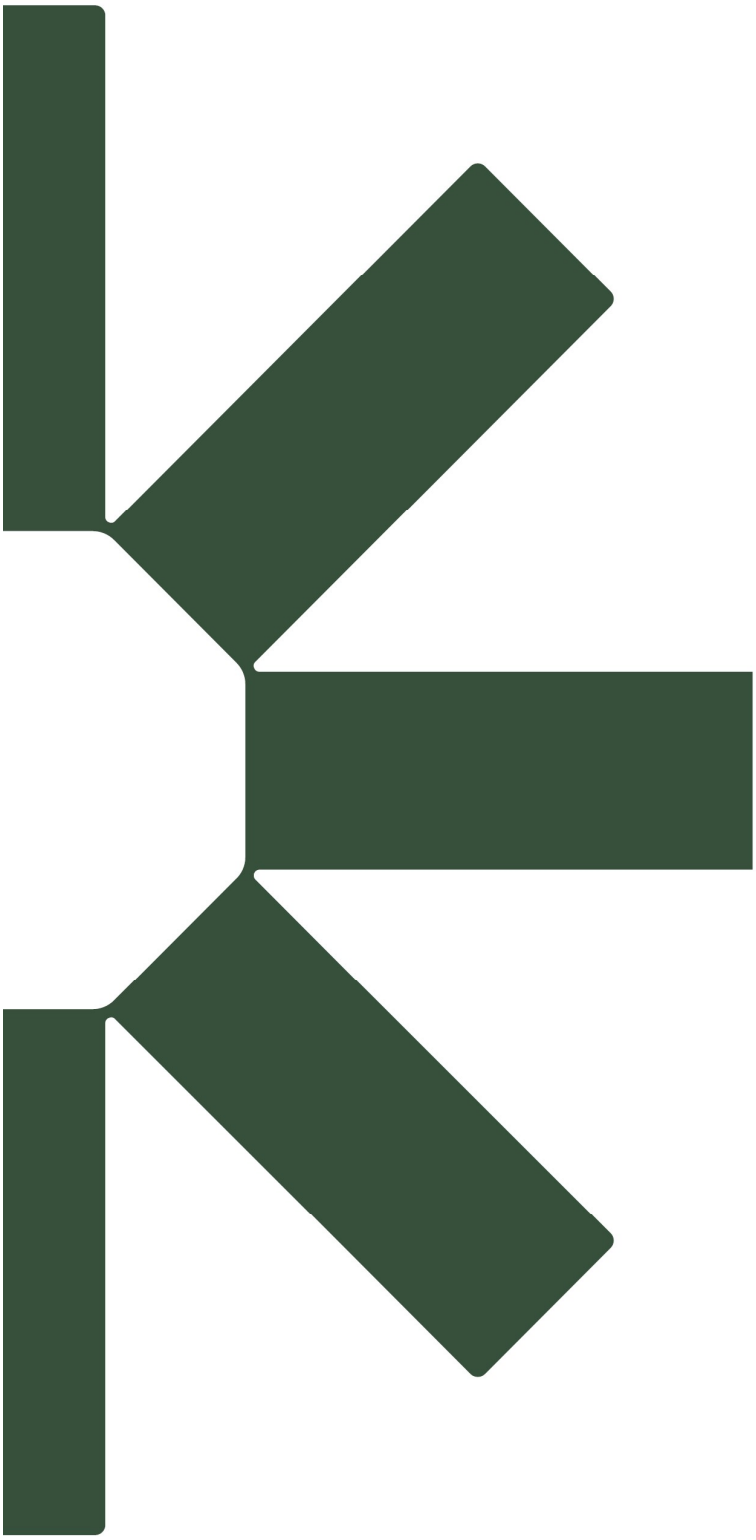

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