ASANKO GOLD MINE ICMI CERTIFICATION AUDIT – SUMMARY AUDIT REPORT

Asanko Gold Mine

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1 SUMMARY AUDIT REPORT FOR GOLD MINING OPERATIONS

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2 LOCATION AND DESCRIPTION OF OPERATION

The Asanko Gold Mine is located 40 km north-west of Obuasi and 50 km south-west of the Ashanti region capital Kumasi, in Ghana. Following the conclusion of a 50/50 Joint Venture transaction with a subsidiary of Gold Fields on 31 July 2018, Asanko Gold holds a 45% economic interest in the Asanko Gold Mine (AGM) and gold exploration tenements on both the Asankrangwa and Sefwi Gold Belts in the Republic of Ghana, West Africa. The ownership structure of the joint venture is 45% Asanko Gold, 45% Gold Fields with the remaining 10% held by the Government of Ghana as a free-carried equity interest.

The AGM concessions, the Obotan and Esaase project areas, are located in the Amansie West District of the Ashanti Region of Ghana. The AGM is a multi-deposit complex with two main deposits, Nkran and Esaase, eight satellite deposits and a carbon-in-leach (CIL) processing plant with a current operating capacity of five million four hundred thousand tonnes per annum (Mtpa). Operations successfully commenced in January 2016 following an 18-month construction period.

The AGM includes the following:

- Conventional open pit gold mining from the current Nkran, Esaase, Akwasiso and future Abore, Asuadai and Adubiaso reserves.
- Mining will be completed in just over eight years ramping up over the first three years to a peak of 60 Mtpa of ore and waste in 2022 to 2024
- A Measured and Indicated Mineral Resource of 2.3 Mt at 0.76 g/t gold (57 kilo-ounces or koz) and 61.7 Mt at 1.74 g/t gold (3,447 koz), respectively

- The Measured and Indicated Resources are inclusive of Proven and Probable Mineral Reserve totalling 2.3 Mt at 0.76 g/t gold (57 koz) and 51.1 Mt at 1.41 g/t gold (2,320 koz), respectively
- Additional Inferred Mineral Resources of 7.0 Mt at 1.59 g/t gold (357 koz)
- The metallurgical process plant, currently in full operation, is a combination gravity/CIL circuit operating at a throughput of circa 5.4 Mtpa dry ore feed. The tailings are processed through a cyanide destruction facility before pumped to the Tailings Storage Facility (TSF).
- Including existing Run of Mine (ROM) stockpiles of 2.3 Mt, the processing plant will be in operation for 10 years.
- The process plant will process an average of 5.4 Mtpa of ore over the life of the mine.
- Gold production is an average of 245,000 oz per annum for the first seven years. Thereafter gold production tapers off as lower-grade run of mine stockpiles are fed into the plant to augment ore from depleted mining operations.

The Asanko processing plant is based on a typical single stage crushing, Semi -Autogenous Grinding (SAG) and Semi -Autogenous Ball Mill Crushing Circuit (SABC) followed by a CIL plant. The flow sheet includes a single stage jaw crusher that can either feed onto a live stockpile directly onto an open circuit SAG, complete with pebble crusher, and ball milling unit in closed circuit with classification cyclones. Process solutions i.e. solution with a concentration of 0.5 mg/L Weak Acid Dissociable (WAD) cyanide or greater is not used within the milling circuit. An Intensive Leach Reactor is utilised to treat a portion of the cyclone underflow stream to recover coarse free gold from the recirculating load.

The milled product will gravitate to a pre-leach thickener, via a trash removal screen. Thickener underflow will be pumped directly to a pre-oxidation stage followed by a seven stage CIL Plant. Leached gold will adsorb onto the activated carbon, which flows counter-current to the gold bearing slurry. Loaded carbon is directed to the elution circuit after which the gold is recovered from the pregnant solution through electrowinning. Electrowon gold is recovered using water jet sprays after which it is dried and smelted.

The Asanko Gold Mine has one downstream TSF serving the entire mine operation, designed to store a total of 95 million metric tonnes (MMT) over the life-of-mine, with the ability to expand to 120 MMT. In 2019, 8 MMT of material were deposited in the TSF.

Approximately 2,600 people are employed at the mine. 99% of the total workforce are Ghanaians, of which around 53% are from local communities.

SUMMARY AUDIT REPORT

AUDITORS FINDINGS

Asanko Gold Plant 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
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COMPLIANCE STATEMENT

This is the first certification audit of Asanko Gold Mine (AGM) since becoming a signatory to the International Cyanide Management Code. AGM has not experienced any significant cyanide incidents since becoming a signatory.

NAME OF OTHER AUDITORS

Marie Schlechter, ICMI pre-certified Mine Technical Specialist

DATES OF AUDIT

The Certification Audit was undertaken between 23 November 2020 and 26 November 2020.

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 (ICMC) 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.

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 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

Asanko Gold Mine		15 June 2021
Name of Facility	Signature of Lead Auditor	Date

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

ENCOURAGE RESPONSIBLE CYANIDE MANUFACTURING BY PURCHASING FROM MANUFACTURERS THAT OPERATE IN A SAFE AND ENVIRONMENTALLY PROTECTIVE MANNER

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 1.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Standard of Practice 1.1; to purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment.

The following contract exists for the supply of solid cyanide to the Mine. Contract No. KRGLC 197-15 Rev 4.0 Addendum No. 4 to Consignment Stock Agreement for the Supply of Sodium Cyanide between Asanko Gold Ghana Limited and Nowata Limited. This states in Section A Clause 29 that Sodium Cyanide supplied by the supplier shall be produced by Australian Gold Reagents Pty Ltd (AGR) of Australia.

AGR were first certified on 9 October 2007 and their latest recertification was on 22 September 2020.

PRINCIPLE 2 – TRANSPORTATION

PROTECT COMMUNITIES AND THE ENVIRONMENT DURING CYANIDE TRANSPORT

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

Contract No. KRGLC 404-20 to Contract for cyanide In-Country Logistics Services between Asanko Gold Ghana Limited and Stellar Logistics Limited includes the following:

a) Packaging as required by the United Nations for international shipments and by the political jurisdiction(s) the shipment will pass through.

b) Labelling in languages necessary to identify the material in the political jurisdiction(s) the shipment will pass through, and as required by these jurisdiction(s) and by the United Nations (for international shipments).

Contract No. KRGLC 197-15 Rev 4.0 Addendum No. 4 to Consignment Stock Agreement for the Supply of Sodium Cyanide between Asanko Gold Ghana Limited and Nowata Limited includes the following:

c) Addition of colorant dye to high strength liquid cyanide prior to delivery at the mining operation, and addition of colorant dye to solid cyanide prior to or at the time of mixing

d) Storage prior to shipment.

e) Evaluation and selection of routes, including community involvement.

f) Storage and security at ports of entry.

g) Interim loading, storage and unloading during shipment.

h) Transport to the operation.

i) Unloading at the operation.

j) Safety and maintenance of the means of transportation (e.g. aircraft, vessels, trains, etc.) throughout transport.

k) Task and safety training for transporters and handlers throughout transport.

l) Security throughout transport.

m) Emergency response throughout transport.

The written agreement specifies that designated responsibilities extend to any subcontractors used by the producer, distributor, transporter or the operation for transportation related activities.

Contract No. KRGLC 197-15 Rev 4.0 Addendum No. 4 to Consignment Stock Agreement for the Supply of Sodium Cyanide between Asanko Gold Ghana Limited and Nowata Limited includes the following; Section 1.2 Section A - Conditions of Contract, ii) Clause 3 (w); in addition to the above the supplier shall specify the designated responsibilities extended to any subcontractors used by the producer, AGR, distributor or the operation for transportation related activities.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 2.2**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The operations contract with the solid cyanide supplier requiring that the transporters be certified under the Code.

Contract No. KRGLC 404-20 to Contract for Cyanide In-Country Logistics Services between Asanko Gold Ghana Limited and Stellar Logistics Limited Section 2.2 ICMI Certification of Transporter "The contractor shall demonstrate that they are certified under the ICMI Code".

Stellar Logistics was first certified on 01 November 2012 and last certified on 9 August 2018.

The operation has chain of custody records identifying all elements of the supply chain (producer, transporter, interim storage facilities) that handle the cyanide brought to its site, and all transporters are certified in compliance with the Code.

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 this Finding/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 DRA (global engineering company) in accordance with applicable jurisdictional rules, sound and accepted engineering practices, and industry standards for these facilities. The Functional Specification and Control Philosophy for Asanko Gold Mine Project - Reagents (inc. tables showing Description, Equipment No. Action, Operator Control). Dated 23 July 2015, Reve C was observed by the auditors.

It was observed that the unloading, storage areas for solid and liquid cyanide is located away from people and surface waters. The facilities are located inside the security-controlled area of the Plant. The solid cyanide storage area, mixing and liquid cyanide storage areas are inside locked fences inside the plant.

The Plant only receives solid cyanide in wooden boxes.

Both the cyanide mixing tank and the cyanide storage tank is fitted with a high level alarm at 90%. It is also fitted with an automatic shut off valve at 90%. The Control Room Operator controls the process of filling the tanks during the prefilling, top-up after mixing and transfer of the mixed cyanide from the mixing tank to the cyanide dosing tank from the Control Room. They can observe the tank levels and can stop the process if the automatic shut-off valve malfunctions. Routine testing of the of the tank level alarm instrumentation is part of the planned maintenance system.

It was observed during the site assessment that the cyanide mixing and storage tanks are located on concrete, with solid concrete bases, within a concrete bunded area that can prevent seepage to the subsurface.

The secondary containments for cyanide storage and mixing tanks are constructed of concrete and sealed that is a competent barrier to leakage. It was observed that the cyanide storage and mixing tanks are fitted with ventilation pipes at the top of the tanks and are located in an open air environment.

The solid cyanide warehouse has a roof, solid sides, concrete floor and concrete hump at the entrance to prevent any rainwater from entering the warehouse and fitted with ventilation slots to prevent the build up of hydrogen cyanide gas. The boxes are also equipped with pallets to prevent any contact with water during storage. The solid cyanide warehouse is located within a high security area, with access control and security patrols. The storage shed is triple locked with keys held by the Security officer, Warehouse Supervisor, and Process Plant Supervisor. The cyanide is stored separately from incompatible materials.

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 this Finding/Deficiencies Identified:

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

The following procedures is in place and implemented to prevent empty cyanide containers from being used for any purpose other than holding cyanide.

Observed: Disposal of Empty Cyanide Boxes Standard Operating Procedure (SOP) -AGM/PROC-OPTNS/SOP/09/009, Rev 02, 18 October 2020

The solid cyanide is delivered in wooded boxes with an inner plastic bag. The inner bags that contain the cyanide briquettes is hosed down as part of the mixing event with the water going in the cyanide mixing tank after the briquettes have been loaded.

The cyanide bags are placed inside the cyanide boxes before they are taken by Stellar to the Ghanaian Environmental Protection Agency authorised incinerator at Africhem, Tarkwa.

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

Cyanide Mixing Safe Operating Procedure - AGM/PROC-OPTS/SOP/09/003, Rev02, 18 October 2020 describes the operating of valves during the cyanide mixing process under Section 5.0 Procedure and describes the clean-up after mixing, to ensure no briquettes are left behind and how the 2nd person doubles up as a buddy with the emergency response team in the mixing area.

Cyanide offloading SOP - AGM/PROC-OPTS/SOP/09/001, Rev 02, 18 October 2020 describes the safe off-loading of the boxes from the sea container and limits the stacking of boxes to three high in the storage area.

Dry NaCN Clean-up and Decontamination - AGM/PROC-OPTS/SOP/09/008, Rev 01, 18 October 2020 describes the clean-up of spilled cyanide during mixing event and the duties of the buddy.

Working on Cyanide Pumps, Pipes and Valves - AGM/PROC-OPTS/SOP/09/010, Rev 02, 18 October 2020 describes the duties of a 2nd individual during maintenance of cyanide pumps, valves and pipelines.

These procedures require appropriate personal protective equipment during cyanide unloading and mixing activities.

The dye is added at source by the solid cyanide producer.

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 this Finding/Deficiencies Identified:

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

Written management and operating plans or procedures have been developed for cyanide facilities including unloading, mixing and storage facilities, and tailings impoundments include the following.

TSF Operations, Maintenance and Surveillance Manual, Knight Piesold, date June 30, 2020

The Plant has 23 cyanide procedures.

The operation has a number of procedures identifying assumptions and parameters for design and operation of the cyanide facilities.

The TSF Operations Manual states the following: Section 1.3 Design Objectives includes Provision of storage capacity for a 72-hour recurrence, interval 1 in 100 years rainstorm event; and Table 1.1 includes Design Parameters, Freeboard above maximum deposited tailings solids level 0.5 m, and above maximum design storm-water storage 1.0 m.

The Control Room SCADA shows that the pH in the Mixing Tank must be between 10.5-11.0 before the solid cyanide is added.

Procedure Sodium Cyanide Transfer Storage Tank to The Pre-Oxidation Tank - AGM/PROC-OPTNS/SOP/09/022, 18 October 2020, Rev 2, states that pH in the tanks should be above 10.5.

Procedure Managing Weak Acid Dissociable (WAD) Cyanide Above 50ppm - AGM/PROC-OPTNS/SOP/09/00, 7 February 2020, Rev00 states "ensure WAD cyanide results are below 50 mg/l".

AGM is operating with a number of inspections and checklists, as well as preventive maintenance activities describing the standards and practices necessary for the sound operation of the cyanide facilities, including the specific measures needed for compliance with the Code including the following.

Inspections of tailings pipeline and the Tailings Storage Facility (TSF) on a daily basis including deposition and wildlife mortality.

Weekly Inspections include tailings delivery pipeline; tailings deposition; supernatant pond; water return pipelines; embankments (including signs of seepage), and surface water diversions.

Quarterly inspections are undertaken by an independent engineering company, Glocal Engineering Limited. The purpose of the audits are to provide an independent professional report on the status of the TSF for the attention of the Ghana Environmental Protection Agency (EPA). It involved a review of features of the existing TSF as well as current operating, maintenance, and development regimes and responsibilities in fulfilment of environmental permit conditions stipulated by the EPA. The reports are signed by Richard Akoto, Project Director Glocal (M.Eng., Dipl.-Ing).

Annual inspections are undertaken by Glocal Engineering Limited. The report highlights findings of inspections conducted at the TSF during the year as the Glocal team of auditors conducted third party independent reviews and inspections of the facility throughout 2019. The report contains operational and management observations and findings, stability risk inspections and environmental monitoring evaluations during the year. Reports are signed by Richard Akoto, Project Director Glocal (M.Eng., Dipl.-Ing).

The following monthly inspections are conducted and were observed for the plant operational areas:

- Cyanide Mixing Facility Inspection Checklist
- Carbon in Leach (CIL) Area Inspection Checklist (PPE, fire extinguishers, Oxy Viva, fixed and personal hydrogen cyanide (HCN) monitors, etc)
- Reagent Storage Area Inspection (emergency equipment, gas monitors, signs, containers in good condition, MSDS, etc.
- Process Plant Inspection Checklist (including cyanide mixing facility.
- Assay Laboratory Inspection (Cyanide awareness & Emergency Response, safety showers).
- Tailings Storage Facility Inspection Checklist (General safety, embankment wall monitoring).
- Daily Cyanide Mixing Safety Checklist - PM 003.
- Monthly Planned Cyanide Facility Inspection.
- Monthly Planned Cyanide-in-Leach Area Safety Inspections.
- Monthly Planned Reagent Storage Area Safety Inspections.

Monthly Health and Safety Inspections of the Plant includes; safety signs, oxygen pack, presence of Emergency Response Team during mixing, emergency showers and eye washes, cyanide monitors, condition of bund wall, and training.

Monthly inspections of the TSF include: training, PPE, condition of TSF embankments, signage, and first aid.

The operation has a procedure to identify when changes in a site's processes or operating practices may increase the potential for the release of cyanide and to incorporate the necessary release prevention measures.

The Change Management Procedure - AGM/SHS/P08/003, Rev 02, 20 May 2020 covers any change to equipment, software, procedures or process that may introduce hazard's to health, safety, or affect operational efficiency of the Mine that has not been covered by a full risk assessment.

The procedure describes the responsibilities and accountabilities of the General manager - Operation, Heads of Department, Manager Safety, Health and Security, Unit Manager/Sectional Supervisors, Employees, and

describes the procedure to follow. includes the Responsibility / Accountability Matrix for Change Management i.e., Level (1-4) Impact, Action, and associated responsibility. Describes the procedure to follow for Documenting the Change. Describes the process to follow in the event of an Emergency Change Management.

There are a number of procedures in place for contingencies situations such as upset in TSF water balance, temporary closure, or when inspections or monitoring identifies a problem, and the following procedures were reviewed.

The TSF Operating Manual details the actions to be taken in the event of an upset in the water balance in Section 6.0 Supernatant Pond/ Water Management including variance from Design Parameters, and Potential Problems.

When inspections identify a problem, they are communicated to Engineering who raise a job order. The TSF Operating Manual Section 6.4 deals with Plant Shut-Downs. Procedure for shut down of plant is detailed in Shutdown Maintenance Management Procedure AMG/ENG/P/05/006. The operation's procedures for plant shutdowns account for longer term temporary closure or cessation of operations if required.

The operation inspects cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters. The TSF is monitored on a daily, weekly, quarterly and annual basis. The cyanide mixing area is monitored on a daily and monthly basis. The planned maintenance system schedules inspection of cyanide facilities on a set frequency, i.e., daily, weekly, monthly, etc. depended on the type of equipment.

Inspection of tanks are included as part of the planned maintenance with thickness testing being undertaken annually. Inspections have been undertaken on the integrity of the CIL Tanks.

Any water in the bund area flows to a sump which is equipped with a pump for the water to be pumped back into the process. The Daily Cyanide Mixing Safety Checklist includes a check that water has not collected in the cyanide mixing bund area. The monthly checklist for the Cyanide Mixing Facility includes; a visual inspection of the integrity of the bund, and leakages around the valves, pumps and tanks.

Plant Operator Daily Checklist includes; leakages from pumps and sump pumps, and leakage on pipes. Weekly Inspections include; tailings delivery pipeline, tailings deposition, supernatant pond, and, water return pipelines.

Inspection of TSF is undertaken on a daily, weekly and quarterly basis as detailed above. Freeboard was stated as being sufficient within these reports. A Heap Leach is not present on site.

The inspections are documented, including the date of the inspection, the name of the inspector, and any observed deficiencies; the nature and date of corrective actions and records are retained.

Preventative maintenance programs are implemented, and activities documented to ensure that equipment and devices function as necessary for safe cyanide management.

The Plant has a preventative maintenance program called Delta that is a piece of software used solely for this process.

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 being interrupted.

When the power is interrupted the back-up generator kicks in to keep the critical parts of the Plant operational as required. The power can be directed to where it is needed. The Plant will maintain a steady state with no releases. The cyanide pipeline has a non-return valve and will remain in the pipeline in the event of a power

failure. The generators are inspected daily and undergo a service every 250 hours that is part of the planned maintenance system. In addition, the generator is inspected prior to every plant shut down.

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 this Finding/Deficiencies Identified:

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

The operation conducts a program to determine appropriate cyanide addition rates in the mill and evaluate and adjust addition rates as necessary when ore types or processing practices change cyanide requirements.

The operation conducts monthly test on cyanide amenability of the ore using weekly composite samples. Daily simulations on plant conditions against 100 ppm, 150 ppm, 200 ppm, and 250 ppm to ensure that the setpoint is at the optimal level and minimal cyanide is exiting with the tails.

Laboratory Test Work Cyanide Optimization Test November 2020, states that optimum cyanide consumption was achieved at 200 ppm addition rate generating a residual cyanide of 127 ppm and achieving a recovery of 92.2%. It was however decided to keep the setpoint at the current level of 140 ppm free cyanide and rather increase the oxygen into the pre-oxidation tank. The Plant aims to achieve above a 90% recovery rate with as little cyanide addition as possible.

Cyanide Optimisation in the Leach Tanks AGM/PROC-OPTNS/SOP/09/022, Rev 00, 18 November2020 procedure provides a safe work procedure for use when running test works to optimise cyanide consumption so as to provide data for input to the processing plant. The procedure describes the process to conduct bottle roll tests, submit liquor samples, the residue cakes for residual gold analysis, and to titrate the residual cyanide at each concentration.

The operation has evaluated various control strategies for cyanide addition. Two hourly cyanide titrations are undertaken on all the tanks with a level of less than 95 ppm WAD cyanide aimed for in the residual tank. If the concentration of WAD cyanide in the residual tank goes above 90 ppm and the gold recovery is above 90% then the set point for the Tac 1000 can be reduced.

The operation has implemented a strategy to control its cyanide addition. Due to the nature of the ore, it is necessary to add oxygen to all of the CIL tanks. The concentration of cyanide added is highly dependent on the level of oxygen that is added such that any cessation in oxygen addition will show up in the manual titrations preventing an optimal setpoint from being achieved. The Plant currently has 3 oxygen plants producing 14 tonnes/ day. Since the implementation of the 3rd oxygen plant (2018) the set point for the cyanide used has been able to be reduced, 220 down to 140 free cyanide. A TAC 1000 (automated cyanide analyser) is used to control the cyanide addition in the Pre-Oxidation Tank.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 4.3**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation developed a comprehensive, probabilistic water balance. The water balance was produced by DHI on behalf of KELI Engineering Consultancy using GoldSim. The GoldSim software was developed to create probabilistic models. The model accounts for the present and future water supply available to the processing plant, and functions as a decision making tool for TSF management.

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

- The rates at which solutions are applied to tailings that are deposited into tailings storage facilities.
- A design storm duration and storm return interval that provides a sufficient degree of probability that overtopping of the pond or impoundment can be prevented during the operational life of the facility.
- The quality of existing precipitation and evaporation data in representing actual site conditions.
- The amount of precipitation entering a pond or impoundment resulting from surface runoff from the up-gradient watershed, including adjustments as necessary to account for differences in elevation and for infiltration of the runoff into the ground.
- Solution losses in addition to evaporation, such as the capacity of the decant, drainage and recycling systems, and allowable seepage to the subsurface.
- The effects of potential power outages or pump and other equipment failures or the emergency removal of water from a facility.
- Other aspects of facility design that can affect water balance, such as the assumed phreatic surface in a tailings storage facility.

There are no direct discharges to surface water and the effects of freezing and thawing are not applicable.

The operating procedures incorporate inspection of all ponds and impoundments, and monitoring activities to implement the water balance and prevent overtopping of ponds and impoundments and unplanned discharge of cyanide solutions to the environment.

Ponds and impoundments are designed and operated with adequate freeboard above the maximum design storage capacity determined to be necessary from water balance calculations. The TSF is operated with a freeboard of 1.00 m.

The operation measures precipitation compares the results to design assumptions and revises operating practices as necessary. Data on precipitation and evaporation was obtained from the Ghana Meteorological Agency as well as data from the Environmental Department of the mine. Climatic data considered in the model include those obtained from stations located to the west, east and south of the project area within approximately 50km radius of the site. A good and representative historical record of the project area was obtained. The site

has installed a new self-recording/reporting weather station, which provides on-going data for the water balance.

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

The operation is

- ☒ **in full compliance with**
- ☐ **in substantial compliance with** **Standard of Practice 4.4**
- ☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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 has implemented measures to maintain the WAD cyanide levels in all open waters below 50 mg/l. The TSF is fenced to prevent local cattle and wildlife from accessing the open water.

Managing Weak Acid Dissociable (WAD) Cyanide Above 50ppm - AGM/PROC-OPTNS/SOP/09/00, 7 February 2020, Rev00 states that WAD samples are taken at least weekly from the TSF, although at this time the operation is taking daily samples.

WAD cyanide monitoring is conducted at the spigot, decant of the TSF and sediment control dam 1.

The operation demonstrated that the cyanide concentration in open water at the TSFs does not exceed 50 mg/l WAD cyanide daily sampling results were observed from 01 January 2021 to 22 February 2021 for the TSF and Sediment Control Dams showing all WAD cyanide levels were below 50 mg/l.

Maintaining a WAD cyanide concentration of 50 mg/L or less in open water has been effective in preventing significant wildlife mortality.

Daily Plant Checklist and Daily TSF Inspections include the requirement to record any wildlife mortalities. One wildlife mortality was observed due to a bird being stuck in the slurry on the TSF.

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 this Finding/Deficiencies Identified:

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

There is no direct discharge to surface water. The closest river to the operation is approximately 10km from the operations.

Three Sediment Dams are located downstream of the TSF, Plant and Mining operations. These dams mainly capture stormwater and water will only be released from these dams to the environment if there is excess water, which has not happened to date.

Monthly monitoring is conducted in the Offin River downstream of the operations. The results were observed for January 2019 to September 2020 and were all below detection limit of 0.005 mg/l WAD cyanide. The results for the sediment control dams were all below the detection limit of 0.005 mg/l WAD cyanide.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 4.6**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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 has implemented specific water management measures to manage seepage to protect the beneficial uses of groundwater beneath and/or immediately down-gradient of the operation.

Specific measures at the TSF include the following:

- TSF is HDPE lined;
- Cut-off-trench beneath the upstream toe of the embankments;
- Underdrain collection system reports to an underdrain sump which is pumped back to the TSF;
- Groundwater collection system reports to a groundwater sump that is pumped back to the TSF; and
- Internal Embankment drains reporting to toe drain trench and subsequently to a sump that is pumped back to the TSF.

WAD cyanide concentrations (or other species of cyanide for which there is a numerical standard established by the applicable jurisdiction) in groundwater down-gradient of the facility are at or below levels that are protective of identified beneficial uses of groundwater. The seepage from the operation has not caused cyanide concentration of the ground water to exceed that necessary to protect its beneficial use. All groundwater monitoring results are below the detection limit of 0.005 mg/l WAD cyanide.

There is no underground mining or backfill.

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

The operation is

- ☒ **in full compliance with**
- ☐ **in substantial compliance with** **Standard of Practice 4.7**
- ☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

Spill prevention or containment measures are provided for all cyanide unloading, storage, mixing and process solution tanks. It was confirmed during the site inspection that all tanks (cyanide mixing, storage, CIL, Detox and residue, elution, process water tank) are located inside concrete bunds. The storage / mixing areas, CIL tanks and Intensive Leach Reactor (ILR) are all installed on concrete foundations and located inside bunds which are of adequate capacity. The auditors verified during the site inspections that the secondary containments (floors and bunds) are in adequate conditions for the purpose of holding any solutions.

Secondary containments for cyanide unloading, storage, mixing and process tanks are sized to hold a volume greater than that of the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event. The process water tank does not contain cyanide process solution.

Procedures are in place and being implemented to prevent discharge to the environment or any cyanide solution or cyanide-contaminated water that is collected in the secondary containment area. For the CIL mixing, storage and leaching facilities, all bunded areas are equipped with sumps and sump pumps for solution collection and preventing discharging into the environment. Any spills will be directed to the sumps and subsequently pumped to the CIL. The TSF Operating Manual states that any leakage collected in the underliner drain will be pumped back to the TSF.

Spill prevention or containment measures are provided for all cyanide process solution pipelines to collect leaks and prevent releases to the environment. The tailings pipe between the plant and the TSF is running inside a HDPE lined trench inside and outside the plant to the TSF. Daily inspections are conducted of the TSF tailings line as well as the return water line. Any spills drain back to a sediment pond 1, 2 or 4. The cyanide pipelines within the Plant are constructed of a mild steel pipe-in-pipe system draining back to the cyanide mixing sump in case of any leaks into the secondary containment pipe. The plant pipelines are inspected as per the schedules on the Delta preventative maintenance system. Together with inspections every shift.

During the site inspection, the auditors confirmed that there were no areas where the cyanide pipelines could present a risk to surface water and therefore no special protection needs are required.

Cyanide tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions. Cyanide tanks and pipelines within the plant are constructed of mild steel. The Tailings pipeline is constructed of HDPE. Both materials are compatible with cyanide and high pH conditions.

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 this Finding/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 control and quality assurance programs have been implemented during construction of all new cyanide facilities and modifications to existing facilities, including cyanide unloading, storage, mixing facilities and other cyanide facilities. The QA/QC documentation for the cyanide mixing facility was observed. Quality control and quality assurance records been retained for cyanide facilities.

Facilities for unloading, storing and mixing cyanide have been designed and constructed by the company DRA (global engineering company) The QA/QC documentation included the following; Functional Specification and Control Philosophy for Asanko Gold Mine Project - Reagents (inc. tables showing Description, Equipment No. Action, Operator Control). Dated 23 July 2015, Reve C.

TSF Stage 5 Raise was completed in October 2020, the QA/QC documentation was observed.

The quality control and quality assurance programs addressed the suitability of materials and adequacy of soil compaction for earthworks such as tank foundations and earthen liners, the installation of synthetic membrane liners used in TSFs, and for construction of cyanide storage and process tanks.

The operation has retained QA/QC records for all cyanide facilities.

An appropriately qualified person has inspected those elements of the facility involving cyanide and issued a report concluding that its continued operation within established parameters will protect against cyanide exposures and releases as detailed below.

The following assessments have been undertaken:

Non-destructive testing (NDT) Reports for Ball and SAG Mill Gearbox, Girth Gear Teeth and Tanks, Inspectors and Engineers Co. Ltd., 29 July 2020. Signed off by Stephen Norshie (Mechanical/NDT/ Equipment Inspector, includes NDE Level II in Ultrasonic Testing observed certificate dated 20 June 2017)

Ultrasonic flaw detection test conducted on gears of the Ball and SAG Mill Girth Gear Teeth, input, intermediate and output gears.

Thickness testing of Cyanide Dosing Tank, Cyanide Mixing Tank, Pre-oxidation Tank, Tailing Hopper Tank, CIL Tanks 01, 02,03, 04, 05, 06, 07.

Asanko Gold Ghana Limited, TSF Environmental Audit Report 3rd Annual Quarter 2020, Glocal Engineering Limited, signed off by Richard Akoto M.Eng, Dipl.Ing. Project Director (M.Eng Technische Universitat, Germany;

M.Eng Mine Env, McGill university, Canada; MSc. Environmental Science, York University, Canada; 20 years' experience).

2019 Annual TSF Safety and Technical Audit Report, Glocal Engineering, January 2020. signed by Richard Akoto.

Standard of Practice 4.9: **Implement monitoring programs to evaluate the effects of cyanide use on wildlife, 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 this Finding/Deficiencies Identified:

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

The operation has developed written standard procedures for monitoring activities including the following:

Groundwater Sampling - AGGL_ESOP 011, Rev 01, 21 July 2019. - document shows the step-by-step procedure for water quality sampling from monitoring boreholes.

TSF Water Sampling (Sampling at the Spigot, Decant and Seepage Sump) - AGGL_ESOP 035, Rev 01, 21 July 2019.

Surface Water Sampling - AGGL_ESOP 012, Rev 01, 12 August 2019 - document presents standard procedure relating to the sampling of surface waters, discharge streams from water systems, and water-formed deposits to obtain representative samples in an accurate and safe manner.

Sampling of Discharge Spigot at the TSF AGM/PROC-OPTNS/SOP-09-TSF012, Rev 0, 02 September 2020.

The sampling and analytical protocols were developed by appropriately qualified personnel. Water Sampling standard operating procedures (SOPs) were developed by Kwaben Adomako - trained Hydrogeologist (more than 30 years) and Daniel Twumasi - Trained Chemist (16 years)

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

The sampling points are indicated on two maps - Environmental Monitoring Boreholes Map (Environmental Monitoring Boreholes (AKG-TEN-0001, Rev 05, 28 Feb 2017) and Surface Water Monitoring Points map (AGM-ENV-001, Rev 005, 6 May 2016).

The procedures include the following information:

- Equipment apparatus list;
- Sampling method - including sample preservation;
- Monitoring of indicator parameters (turbidity, temp, conductivity, pH, Eh and dissolved oxygen.).
- Quality assurance / quality control.

Chain of custody and analysis requirements are recorded on an Excel spreadsheet document that will accompany the sample to the lab. This contains the sample id, matrix, date of sample, time of sample, type of container, total number of bottles per sample location, analysis required (incl. Cyanide species) and notes on preservation chemicals used.

Sampling conditions (e.g., weather, livestock/wildlife activity, anthropogenic influences, etc.) and procedures are documented in writing.

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The operation monitors for cyanide in surface water and groundwater as detailed below. There is no discharge to surface water. Groundwater is monitored in OEMB02 - Upstream of the operations, OEMB03s and OEMB03D - downstream of the operations, and for OEMB007 (downstream of plant and Sediment Control Dam 4 - Shallow Aquifer). All results were below the detection limit of 0.005 mg/l WAD cyanide.

The closest river to the operation is approximately 10km from the operations - Monthly monitoring is conducted in the Offin River (OffinDS)- all results were below the detection limit of 0.005 mg/l WAD cyanide.

The operation inspects for and records wildlife mortalities related to contact with and ingestion of cyanide solutions. The following procedure was observed, Wildlife Management at the Process Plant and Tailings Storage Facility - AGGL_ESOP 036 Rev 2, 07 December 2020. This requires that TSF operators should monitor for the presence of fauna/wildlife mortality on the TSF liners, in the pond and at the Plant during their shift and report any dead fauna immediately.

Monitoring is conducted at frequencies adequate to characterise the medium being monitored and to identify changes in a timely manner. Groundwater and Surface water monitoring is conducted monthly. Inspections for wildlife mortalities are conducted daily.

PRINCIPLE 5 – DECOMMISSIONING

MANAGE CYANIDE PROCESS SOLUTIONS AND WASTE STREAMS TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT

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

The operation is

☒ **in full compliance with**

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

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation has developed written procedures for the effective decommissioning of cyanide facilities at the cessation of operations including the following:

Reclamation Security Agreement between Ghana EPA and Asanko Gold Ghana Limited, signed 23 June 2020 by the Asanko Gold Mine Managing Director and the Executive Director of the EPA. Describes the Provisional Reclamation Plan / Reclamation Criteria and the Cost Estimate as described in the approved Environmental Impact Assessment.

Section 9 of Asanko Gold Ghana Limited, Environmental Management Plan (2020-2023) for the Obotan Gold Mine in the Amansie West & South Districts of the Ashanti Region, compiled by African Environmental Research & Consulting Company, November 2020 provides details on the Reclamation and Decommissioning Plan (High Level). It is only required that the mine submits a formal and detailed closure and rehabilitation plan two years before closure of the project. The plan includes an implementation schedule for decommissioning activities.

The Reclamation Security Agreement between Ghana EPA and Asanko Gold Ghana Limited, signed 23 June 2020 by the Asanko Gold Mine Managing Director and the Executive Director of the EPA, Table 1.1 Schedule 1 Reclamation rates - provides a breakdown of the Closure Components against the amount of rehabilitation fund to be spent from 2015 to 2027.

The decontamination and decommissioning plan will be revised / updated periodically. The Reclamation Security Agreement is updated and re-signed every 12 months. The Asanko Gold Mine Environmental Management Plan (EMP) is updated every 3 years.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 5.2**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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 as identified in the site's closure plan including the following:

Reclamation Security Agreement between Ghana EPA and Asanko Gold Ghana Limited, signed 23 June 2020 by the Asanko Gold Mine Managing Director and the Executive Director of the EPA, Table 1.1 Schedule 1 Reclamation rates - provides a breakdown of the Closure Components against the amount of rehabilitation fund to be spend from 2015 to 2027. Table 1.2 provides a summary of the Total amount required per Closure Component (Financial Provision required).

Letter from Ghana EPA dated 22 January 2020 regarding the posting of the Reclamation Bond stating the total liability. It is the auditors understanding that the EPA consults with the mine and an agreement is reached on the amount that should be posted as the bond.

The closure cost estimate is updated annually by MESA (local company) and reviewed by SRK Consulting.

AGM has an Bank Guarantee in place to make provision for the required closure costs. Bank Guarantee from Societe Generale Ghana, dated 20 November 2020 to the EPA states that a bank guarantee has been issued by order of Asanko Gold Ghana Limited.

PRINCIPLE 6 – WORKER SAFETY

PROTECT WORKERS' HEALTH AND SAFETY FROM EXPOSURE TO CYANIDE

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 6.1**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

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

The operation has developed 23 cyanide 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, which includes the following:

Cyanide Offloading AGM/PROC-OPTS/SOP/09/001, rev 2, 18 October 2020;

Cyanide First Aid AGM/PROC-OPTS/SOP/09/002, rev 2, 18 October 2020;

Cyanide Mixing AGM/PROC-OPTS/SOP/09/003, rev 2, 18 October 2020;

Working on Cyanide Pumps, Pipes and Valves - AGM/PROC-OPTNS/SOP/09/010, rev 2, 18 October 2020; and

Confined space Procedure - SHS04-05, Rev 02, 20 May 2020.

The procedures specify the required PPE as well as the tools required and pre-checks, where applicable.

The operation implements procedures to review proposed process and operational changes and modifications for their potential impacts on worker health and safety, and incorporate the necessary worker protection measures, which includes the following: Change Management Procedure - AGM/SHS/P08/003, Rev 02, 20 May 2020.

The Procedure covers any change to equipment, software, procedures or process that may introduce hazard's to health, safety or effect to operational efficiency of the Mine that has not been covered by a full risk assessment.

The Procedures describes the responsibilities and accountabilities of General Manager - Operation, Heads of Department, Manager Safety, Health and Security, Unit Manager/Sectional Supervisors, Employees. Describes the process to follow. including the Responsibility / Accountability Matrix for Change Management i.e., Level (1-4) Impact, Action, and associated Responsibility. The Procedure describes the process to follow for Documenting the Change and the process to follow in the event of an Emergency Change Management. Approval is provided by the Health and Safety Representative, Unit Manager, Head of the relevant Department (HoD Safety, HoD Environmental, and GM-Operation, as applicable).

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The operation solicits and actively considers worker input in developing and evaluating health and safety procedures. Each procedure has a Health and Safety Meeting Attendance Form attached to the back of the latest signed version of the procedure. The procedure is discussed with the employees after which they sign that they have attended the session. During the session, employees are provided with the opportunity to give input into the procedures.

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

The operation is

☒ **in full compliance with**

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

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation has determined the appropriate pH for limiting the evolution of HCN gas during mixing and production activities. The following procedure is followed, pH Determination Procedure, AGM/PROC-OPTNS/SOP/09/007, Rev 01, 18 October 2020. The procedure is used to verify the pH in the CN mixing tank. The Control Room Operator stated that caustic is added in the pre-mixing tank to get the pH between 10.5 and 11.

Where the potential exists for significant cyanide exposure, the operation uses ambient or personal monitoring devices to confirm that controls are adequate to limit worker exposure to HCN gas and sodium, calcium or potassium cyanide dust to 10 ppm on an instantaneous basis and 4.7 ppm continuously over an 8-hour period, as cyanide.

There are currently 6 fixed HCN monitors and 15 personal monitors. The fixed monitors are calibrated every 6 months as part of the planned maintenance system. The personal monitors are calibrated every 6 months by an external organisation.

The operation has identified areas and activities where workers may be exposed to cyanide in excess of 10 ppm on an instantaneous basis and 4.7 ppm continuously over an 8-hour period, and require use of personal protective equipment in these areas or when performing these activities.

Hydrogen Cyanide Gas Excursion Above 10 ppm, AGM/PROCP/09/122,Rev 01, 01 February 2017. The procedure states that if the level of HCN gas is above 4.7 ppm but below 10 ppm the worker must vacate the area after a maximum of 5 minutes. If the level is above 10 ppm the worker must vacate the area immediately. If work is required to be undertaken in an area where the level is above 10 ppm or in an area where the level is above 4.7 ppm and the work will take more than 5 minutes, self contained breathing apparatus (SCBA) must be worn.

PM 012, Weekly Plant Monitoring of Hydrogen Cyanide Gas (HCN) Checklist, monitors the HCN levels at the following locations; CIL Tanks; Tails Hopper Area; Cyanide Mixing and Dosing Areas; Carbon Safety Screen Area; Strip Solution Tank Area; Cyanide Storage Area; and Met Laboratory.

Readings are taken in two intervals namely, <2mins and >2 mins. The highest reading recorded for the period was 1.3ppm in the Tails Hopper Area and Carbon Safety Screen Area.

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

It was observed that the required warning signs has been placed in all areas where cyanide is present, which includes the following: cyanide offloading and storage area; cyanide mixing and storage tank area; Gekko x 2; CIL; TSF; and Electronwinning.

It was observed that the high strength solid cyanide is supplied from the manufacturer with red dye added.

It was observed that safety showers, low pressure eye wash stations and dry chemical powder fire extinguishers are located at strategic locations throughout the operations where cyanide is used. The fire extinguishers are inspected on a monthly basis and serviced annually.

There is a weekly inspection of the safety showers, this is undertaken as part of the Planned Maintenance process. Inspections of safety showers are undertaken prior to mixing events. Daily inspection of safety showers are also undertaken as per the Daily Cyanide Mixing Safety Checklist - PM 003.

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 designated pipes. This includes TSF and cyanide solution pipelines.

It was observed that the cyanide storage tank, mixing tank, and electrowinning tanks are colour coded as per colour coding chart (red with purple band). Cyanide strength pipes are indicated with a small purple band and flow direction is indicated with a small arrow. This was observed on all applicable pipes.

It was confirmed that MSDS and first aid procedures are available in English and Swahili in the areas where cyanide is managed.

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. The Incident Reporting and Investigation Procedure - AGM/SHS/P/08/013, Rev 02, 05 March 2020 describes the process to following when investigating all types of incidents.

An investigation includes details of; Investigation team; Incident description; details of damage / impact; photographs; risk rating; Incident Cause Analysis Method (ICAM) analysis; key findings; corrective actions; and report sign-off.

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

The operation is

- ☒ **in full compliance with**
- ☐ **in substantial compliance with** **Standard of Practice 6.3**
- ☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

It was confirmed that the operation has water, oxygen, available at unloading, storage and mixing locations and elsewhere in the plant.

The Operation has water and oxygen in the Control Room and at the top of the CIL. Oxygen, a resuscitator, Self Contained Breathing Apparatus (SCBA), antidote kit (Tripac), chemical suits, boots, full face masks with canisters are contained in the Emergency HazMat Trailer located near the cyanide mixing/ storage facility. Antidote kits (Tripac) (6) are also located at the mine clinic, which is located adjacent to the Plant compound. The Ambulance is present at each mixing event as part of the Emergency Response Team and contains oxygen, resuscitator, and a full set of PPE (suit, boots, full face mask with canister).

The Mine uses radios and cell phones for communication. The safety showers in the Plant including at the unloading, storage, and mixing locations are connected to an alarm system.

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

The operation undertakes monthly inspection of Hazmat trailer. This includes the First Aid Box, PPE, Oxygen (4), Fire Extinguisher (2), and Antidote Kit (Tripac). The oxygen on the top of the CIL and in the Control Room are inspected on a monthly basis.

The operation has developed specific written emergency response plans or procedures to respond to cyanide exposures. The following were observed: Cyanide First Aid safe operating procedure - AGM/PROC-OPTNS/SOP/09/002, Rev 2, 18 October 2020 details. The Procedure identifies the steps to be undertaken in the event of someone being exposed to cyanide. The First Aid Procedure is available online and in hard copy in the Hazmat Trailer. An abbreviated version is located as part of the signage at areas identified as cyanide hotspots e.g., offloading, mixing, storage, etc.

The mine has an on-site clinic fully equipped to handle cyanide emergencies. All plant workers are trained in cyanide first aid and form part of the response team. The plant responders will administer oxygen and put the worker under the shower for decontamination. The operation has an emergency response team and paramedic that will assist in the event of an emergency. There is a clinic located next to the plant with a Doctor present. First responders have been trained in First Aid.

The operation has a formalised agreement with the Komfo Anokye Teaching Hospital in Kumasi through their Health Insurer (AAR) for the evacuation of patients so that these providers are aware of the potential to treat patients for cyanide exposure. The operation is confident that the medical facility has adequate, qualified staff, equipment and expertise to respond to cyanide exposures.

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The operations has an on-site clinic that is staffed with a paramedic, doctor and nurse. The paramedic observes during mixing events and are therefore part of cyanide emergency management. The paramedic will stabilise a patient before they are transferred to the clinic for treatment by the doctor. The on-site clinic keeps 6 antidote kits.

Patients who need additional treatment are transported to the Komfo Anokye Teaching Hospital in Kumasi. This is part of the formalised arrangements for patients requiring tertiary care in this Region of Ghana. Prior to the transportation the hospital is informed of the condition of the patient etc. The hospital is the location of the National Accident and Emergency Centre and is a centre of excellence for sub-Saharan Africa.

Mock emergency drills are conducted periodically to test response procedures for various cyanide exposure scenarios, and lessons learned from the drills are incorporated into response planning. Mock Drills are performed on an annual basis. The mock drill undertaken in 2019 was to test the TSF partial embankment failure emergency response readiness. An additional mock drill was undertaken in 2019 to test the Emergency Response Team (ERT) and Plant First Responders readiness to a wet HCN incident due to a ruptured cyanide line. The Mock Drill undertaken in 2020 was for a man down at the top of the CIL.

PRINCIPLE 7 – EMERGENCY RESPONSE

PROTECT COMMUNITIES AND THE ENVIRONMENT THROUGH THE DEVELOPMENT OF EMERGENCY RESPONSE STRATEGIES AND CAPABILITIES

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 7.1**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation has developed an Emergency Response Plan to address potential accidental releases of cyanide including the following:

TSF Emergency Response Plan - AGM/SHS/P/08/037, Rev 2, 9 November 2020; and

Asanko Emergency Preparedness and Response Plan for 2020 Obotan Mine AGM/SHS/P/08/037, Rev 2, 10 November 2020.

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

- Catastrophic release of hydrogen cyanide from storage or process facilities;
- Transportation accidents;
- Releases during unloading and mixing;
- Releases during fires and explosions;
- Pipe, valve and tank ruptures (including tailings line and return water line failures);
- Overtopping of ponds and impoundments (including return water pond overflow);
- Power outages and pump failures;
- Uncontrolled seepage;
- Failure of cyanide treatment, destruction or recovery systems and
- Failure of tailings impoundments, and other cyanide facilities (including failure of the tailings storage facility).

Transport related emergencies outside the mine are the responsibility of Stellar as the transportation company.

Planning for response to transportation-related emergencies has considered transportation route(s), physical and chemical form of the cyanide, method of transport, the condition of the road/railway, and the design of the

transport vehicle. This is the responsibility of the Transportation Company Stellar as detailed within their procedures which were audited as part of their ICMI recertification.

The Plans describe specific response actions (as appropriate for the anticipated emergency situations) such as clearing site personnel and potentially affected communities from the area of exposure, use of cyanide antidotes and first aid measures for cyanide exposure, control of releases at their source, and containment, assessment, mitigation and future prevention of releases.

Emergency Response Plan Section 6.3.4 Media Relations details the communication with the media. The procedure for contacting potentially affected communities is included with each emergency scenario.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with Standard of Practice 7.2**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation has involved its workforce and stakeholders in the cyanide emergency response planning. It was observed that each procedure has a Health and Safety Meeting Attendance Form attached to the back of the latest signed version of the procedure. The procedure is discussed with the employees where after they sign that they have attended the session. During the session, employees are provided with the opportunity to give input into the procedures.

Communities are made aware of the risks through consultation detailed in 9.1. The nearest communities are 1.2 km upstream of the TSF and therefore would not be significantly affected in the event of an emergency. The Plant Emergency Response Plan (ERP) #9 Cyanide Spill includes the Community Affairs Manager communicating with local communities.

No local response agencies are involved in the emergency plan as the Emergency Response Team (ERT) and medical clinic is situated inside the mine security area, the on-site clinic and ERT are involved with the full cycle cyanide mock drills and de-briefing sessions following drills. Local response agencies do not have the training or equipment to assist in the event of an emergency.

The nearest outside responders are a significant distance from the Plant and therefore would not be involved in any emergency.

Consultation with external stakeholders is not required as they are not involved in the event of an emergency. Consultation with local communities is maintained through the community relations officer.

All of the stakeholders involved in the Emergency Response Plan are within the mine and Plant and therefore consultation is undertaken through internal mechanisms such as monthly safety meetings.

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 this Finding/Deficiencies Identified:

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

The Emergency Response Plan includes cyanide related elements as follows:

It is stated in the Emergency Response Plan Section 5 Responsibilities and Accountabilities p8 that the General Manager Executive "assumes the role of Site Emergency Controller (SEC) and controls authority for any emergency event at Asanko Operations. Provides the necessary resources and equipment to carry out required emergency services as stated in this document." The response of the on-site clinic is included within each of the emergency response scenarios.

The Emergency Response Team is identified with the members on duty posted at the entrance to the Plant.

It is stated in the Plant Emergency Response Plan section 6.2.4 the Emergency Response Team will be trained and competent in the following: Fire Fighting – structural and wildfire; Vehicle Extrication; First Aid (First Responder); Vertical Rescue; Confined Space Rescue; Chemical Spill Management (HAZCHEM); and Breathing Apparatus. The Emergency Response Plan includes call out procedures.

Attachment 15 p62 of the Emergency Response Plan includes the Asanko Ghana Operations Emergency Contacts. Emergency Response Plan Section 6.2.2 Emergency Response Team Role details the responsibilities of the ERT. The emergency response equipment is listed in the checklist for the Hazmat trailer, which was observed as part of the monthly inspections.

The Operation has oxygen in the Control Room and at the top of the CIL. The Emergency Hazmat Trailer contains oxygen, a resuscitator, SCBA, antidote kit (Tripac), chemical suits, boots, full face masks with canisters, which is located near the cyanide mixing/ storage facility. The Ambulance is present at each mixing event as part of the Emergency Response Team and contains oxygen, resuscitator, and a full set of PPE (suit, boots, full face mask with canister). The oxygen and equipment in the Hazmat Trailer are inspected on a monthly basis.

Outside entities are not included in the ERP. No outside entities are included in the Emergency Response Plan due to the remote location of the Mine and Plant.

Standard of Practice 7.4: Develop procedures for internal and external emergency notification and 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 this Finding/Deficiencies Identified:

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

The Plan includes procedures and contact information for notifying management, regulatory agencies, and medical facilities of the cyanide emergency. Outside response agencies are not involved in a cyanide emergency. Attachment 15 p62 of the Emergency Response Plan includes the Asanko Ghana Operations Emergency Contacts; and Attachment 1 p45 of the ERP Site Emergency Profile includes contact details for External Services.

The Plan includes procedures and contact information for notifying potentially affected communities of the cyanide-related incident and any necessary response measures and for communications with the media.

Emergency Response Plan Section 6.3.4 Media Relations details the communication with the media. The procedures for contacting potentially affected communities is included with each emergency scenario.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 7.5**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The Plans describe specific remediation measures as appropriate for the likely cyanide release scenarios.

It is stated in the Plant ERP P31 #9 Cyanide Spill that the contaminated material will be scrapped and added back to the process or disposed of in the tailings dam. It also states that spill response equipment and PPE will be washed and decontaminated in an area that is fully contained. The wash water will be disposed of in the process plant or the tailings dam.

Dry NaCN Clean UP and Decontamination AGM/PROC-OPTNS/SOP/09/008, rev 02, 18 October 2020, and Wet Sodium Cyanide Spill Decontamination Procedure AGM/PROC-OPTS/SOP/09/018, rev 02, 18 October 2020 detail how solutions or solids are neutralised and recovered. The area will be remediated until results are <0.01 ppm WAD cyanide.

Wet Sodium Cyanide Spill Decontamination Procedure AGM/PROC-OPTS/SOP/09/018, rev 02, 18 October 2020 it is stated that the amount of detoxification material used should be approximately 20 kg Ferric Sulphate per kg Cyanide. The Ferric Sulphate is stored in the chemical storage area. The soil/sand contaminated with cyanide and Ferric Sulphate must be disposed of into the CIL Circuit. Perform cyanide test on the rinsate water to ensure that the decontamination process has been effective, continue to wash down until the rinsate water shows <0.01 ppm WAD cyanide.

The TSF and Plant have no discharges to surface water and are a significant distance from the nearest river and therefore any incident will not affect communities drinking water and an alternative supply will not be required. However, the Plant ERP #9 includes that the Environment/Community Affairs Managers are to determine if community water supplies are impacted and if required provision of an alternative water supply is undertaken until confirmed remediation has been completed.

The Wet Sodium Cyanide Spill Decontamination Procedure AGM/PROC-OPTS/SOP/09/018 states "ferrous sulphate, hydrogen peroxide, sodium hypochlorite or any other chemical shall not be used if there is a potential for impact on surface water."

The Plan addresses the potential need for environmental monitoring to identify the extent and effects of a cyanide release, and includes sampling methodologies, parameters and, where practical, possible sampling locations.

Wet Sodium Cyanide Spill Decontamination AGM/PROC-OPTS/SOP/09/018 Procedure rev 02, 18 October 2020 states that the Environment Department must be alerted to sample the area.

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 this Finding/Deficiencies Identified:

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

The operation reviews and evaluates the cyanide related elements of its ERPs for adequacy on a regular basis. It is stated in Section 6.4 of the Plant ERP that the Plan will be reviewed every 2 years, or in the event of a major change, as the result of a drill or incident. Section 6.10 of the TSF ERP states "this Emergency Plan shall be updated and reviewed every two years and when there is a significant change, shift, risk, or expansion within the operation". No such incident has occurred to date that would cause the ERP's to be reviewed.

Mock emergency drills are conducted periodically to test response procedures for various cyanide exposure scenarios, and lessons learned from the drills are incorporated into response planning.

Mock Drills are performed on an annual basis. The mock drill undertaken in 2019 was to test the TSF partial embankment failure emergency response readiness. An additional mock drill was undertaken in 2019 to test the ERT and Plant First Responders readiness to a wet HCN incident due to a ruptured cyanide line. The Mock Drill undertaken in 2020 was for a man down at the top of the CIL.

The Mock Drill reports include; scenario, purpose, sequence of events, incident debrief, positive outcomes, areas for improvement, drill pictures and corrective actions. Lessons learnt are incorporated into response planning through the corrective actions with the reports being signed off by the Safety, Health and Security Manager and the General Manager - Operations.

PRINCIPLE 8 – TRAINING

TRAIN WORKERS AND EMERGENCY RESPONSE PERSONNEL TO MANAGE CYANIDE IN A SAFE AND ENVIRONMENTALLY PROTECTIVE MANNER

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

The operation is

- ☒ **in full compliance with**
- ☐ **in substantial compliance with Standard of Practice 8.1**
- ☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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. All employees must attend induction at start of employment and then again after return from annual leave. The auditors observed the Cyanide Induction Training presentation. A test is written after completion of the cyanide induction training. 80% pass mark is required. A Plant Specific Induction log book is retained showing all the people who have gone through the induction, visitors and employees.

The Cyanide Induction Training is repeated after the employee returns from annual leave.

It was observed that records are kept electronically as well as hard copies in the employee files.

All cyanide induction training records are retained until the end of the life of the mine. Hard copies of training records were observed.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 8.2**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

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.

Employees working in areas where cyanide is present are trained annually by means of the Sodium Cyanide Awareness Training. A presentation on the Safe Handling of AGR Solid Sodium Cyanide forms part of the training and includes: Physical Properties; Cyanide Packaging; What to avoid to not create HCN Gas; Effects of Cyanide and First Aid; Modes of Exposure to Cyanide; Symptoms of Cyanide Poisoning; Emergency Response; Spills and Decontamination.

The operation trains workers to perform their normal production tasks through Standard Operating Procedure training sessions prior to them performing the tasks in the field. The subsequent test is written afterwards and an assessor makes a recommendation for further on the job training where required. Planned Task Observations (PTOs) are also undertaken on an annual basis.

It was observed that the training elements necessary for each job involving cyanide management are identified in the training matrix and that all modules required per category or worker are included in the training materials.

This includes Process Operations Staff and Process Maintenance Staff. The elements are split into Safety Training, Basic Technical Engineering, Mobile Equipment, Electrical, Mod1-3, and Management.

Appropriately qualified personnel provide task training related to cyanide management activities. The Training for personnel in the Plant that may come into contact with cyanide is undertaken by the ERT Team who are suitably qualified. This includes knowledge of the cyanide related tasks and experience in effective communication techniques.

All employees receive induction training before being allowed to start with their training in the sections under supervision. The worker is only allowed to work unsupervised with cyanide once assessed and signed off for each task by his supervisor. Employees receive Plant specific induction and training in SOPs prior to allowing them to work with cyanide. PTO's are used to assess competence.

Employees working in areas where cyanide is present are trained annually by means of the Sodium Cyanide Awareness Training. Training on SOPs are refreshed on a 12-monthly basis. The effectiveness of the training is evaluated by testing after the induction training. In addition, PTOs are conducted after the appropriate training has been received on the procedures.

Records are retained for at least 3 years for contractors and for the duration of employment for permanent employees. This was verified during review of the interviewees training records, which included 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 exposures and environmental releases of cyanide.**

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 8.3**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

All cyanide unloading, mixing, production, and maintenance personnel receive cyanide training and cyanide first aid training. The auditors observed training module Sodium Cyanide Training Manual as part of the training undertaken. All employees receive training on the cyanide procedures which includes liquid and solid cyanide spills, and response to cyanide releases.

All Plant personnel are trained in Emergency Response procedures by the ERT. The discussion of mock drills are conducted during the pre-shift meetings.

All cyanide unloading, mixing, production and maintenance workers trained in decontamination through being trained on the SOPs. The Plant personnel are trained as first responders by the paramedic who is part of the ERT.

Mock emergency drills are performed on an annual basis to test response procedures and for training purposes for various cyanide exposure scenarios, and lessons learned from the drills are incorporated into response planning.

Mock emergency drills are evaluated from a training perspective to determine if personnel have the knowledge and skills required for effective response. A meeting is held after the mock drill to evaluate the positive and negative aspects observed. Recommendations for corrective action, including required refresher training, are made.

The mock drill undertaken in 2019 was to test the TSF partial embankment failure emergency response readiness. An additional mock drill was undertaken in 2019 to test the ERT and Plant First Responders readiness to a wet HCN incident due to a ruptured cyanide line. The Mock Drill undertaken in 2020 was for a man down at the top of the CIL.

The Mock Drill reports include scenario, purpose, sequence of events, incident debrief, positive outcomes, areas for improvement, drill pictures and corrective actions. Lessons learnt are incorporated into response planning through the corrective actions with the reports being signed off by the Safety, Health and Security Manager and the General Manager - Operations.

Emergency Response Co-ordinators and members of the ERT are trained in the procedures included in the Emergency Response Plan regarding cyanide, including the use of necessary response equipment.

There are 5 members of the Emergency Response Team (3 on duty) and 3 Paramedics (1 on duty assisted by an Emergency Medical Technician (EMT) and First Responders (A, B, C Shifts with 4 members each, 6 members on the Day Shift) .

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Signature of Lead Auditor

15 June 2021 — Date

ERT receives General Hazardous Chemical Training including Cyanide, firefighting, extraction, rescue, SCBA use, rescue from heights, emergency evacuation, emergency reporting protocols, and Basic First Aid Training.

First Responders (operators on the Plant) receive Basic First Aid Training, Donning and Doffing of SCBA, and Basic Hazardous Chemical training including Cyanide. The Paramedics receives Advanced First Aid Training.

The community, local responders, and off-site medical providers do not form part of the Emergency Response Plan. People outside the mine are not involved in the Emergency Response Planning due to their lack of training and distance from the mine. Emergencies at the mine are attended by the Mine's emergency response team which includes fire fighters and a paramedic. The Mine has a clinic on site which will treat any incidents of cyanide poisoning. If necessary, individuals may be airlifted to Kumasi for further treatment.

Plant employees and ERT members receives annual refresher training including response to cyanide exposures and releases. Induction training is refreshed annually following annual leave. SOP training is undertaken every 12 months.

Records are retained for at least 3 years for contractors and for the duration of employment for permanent employees. This was verified during the review of the training records. The records include 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

ENGAGE IN PUBLIC CONSULTATION AND DISCLOSURE

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

The operation is

☒ **in full compliance with**

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

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The mine undertakes quarterly meetings with communities through the Community Development Committees (CDC). These meetings are open to the community. These are undertaken for 23 surrounding communities, with one CDC for each community. No meetings were held in 2020 due to COVID-19 restrictions. The next meeting is likely to be held in Q1 2021.

Community Consultative Committee (CCC) contains the hierarchy of community leaders from the 23 communities that must be consulted prior to meetings being held with the community. Quarterly meetings are undertaken with the CCC to discuss general issues related to the operations. Ad hoc meetings are also held at the request of the CCC. District Police Commander and Chairman of District Security Committee also attend the CCC meetings. CCC meetings were held in 2020 but did not specifically address any cyanide issues due to COVID-19 restrictions this year.

There are also Community Information Centres. The 23 communities have been split into 5 zones with one Information Centre per zone with a Liaison Officer (resident in the community). The Information Centres provides a point of contact in the community where stakeholders can communicate issues of concern.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with Standard of Practice 9.2**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

There are opportunities for the operation to interact with stakeholders and to provide them with information regarding cyanide management practices and procedures.

The mine undertakes quarterly meetings with communities through the Community Development Committees (CDC). These meetings are open to the community. These are undertaken for 23 surrounding communities, with one CDC for each community. No meetings were held in 2020 due to COVID-19 restrictions. The next meeting is likely to be held in Q1 2021.

Community Consultative Committee (CCC) contains the hierarchy of community leaders from the 23 communities that must be consulted prior to meetings being held with the community. Quarterly meetings are undertaken with the CCC to discuss general issues related to the operations. Ad hoc meetings are also held at the request of the CCC. District Police Commander and Chairman of District Security Committee also attend the CCC meetings. CCC meetings were held in 2020 but did not specifically address any cyanide issues due to COVID-19 restrictions this year.

There are also Community Information Centres. The 23 communities have been split into 5 zones with one Information Centre per zone with a Liaison Officer (resident in the community). The Information Centres provides a point of contact in the community where stakeholders can communicate issues of concern. In addition, on an annual basis there is a roadshow to communities along the route of the cyanide convoys. The route is split between Stellar and Asanko such that Asanko communicates with communities closer to the mine. The information sessions are verbal.

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

The operation is

☒ **in full compliance with**

☐ **in substantial compliance with** **Standard of Practice 9.3**

☐ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation has developed written descriptions of how their activities are conducted and how cyanide is managed. These descriptions are available to communities and other stakeholders.

A written description of the mining activities was produced and communicated at the first stakeholder meeting. This written description includes a section on Cyanide Awareness. Since then, an abridged version of this description have been provided at meetings. The description is in English as literate Ghanaians are able to read English.

The operation has disseminated information on cyanide in verbal form where a significant percentage of the local population is illiterate. All of the meetings with the CDC and CCC described in 9.1 are undertaken in the Local language. Information is provided in a verbal format.

The operation makes information publicly available on the following confirmed cyanide release or exposure incidents:

a) Cyanide exposure resulting in hospitalisation or fatality.
b) Cyanide releases off the mine site requiring response or remediation.
c) Cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment.
d) Cyanide releases on or off the mine site requiring reporting under applicable regulations.

When there is a crisis for any of the scenarios listed above a Crisis Management Committee is formed, which includes the Community Relations Manager. The Community Relations Manager under instruction from the committee will disseminated information to the communities regarding the incident. There would initially be a meeting with the CCC. There will also be an announcement through the Local Information Centres.

In addition, there will be the necessary regulatory disclosures to the Environmental Protection Agency and the Inspectorate of Mines who would undertake appropriate investigations and issue the relevant press releases.

There have been no such incidents since the Plant became operational in 2016.

Sustainability Report 2019 includes details of all incidents. The Sustainability Report is published on the company website.

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