

SUMMARY AUDIT REPORT

Gold Mining Operations

Summary Audit Report

for

Anglo Gold Ashanti Ltd/

Córrego do Sítio 2 Facility.

October 2017

Prepared by NCABrasil Expert Auditors Ltd.

www.globalsheq.com

This summary audit report contains 41 pages

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SUMMARY AUDIT REPORT FOR GOLD MINING OPERATIONS

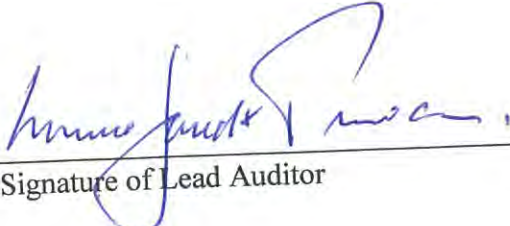
Instructions

1. The basis for the finding and/or statement of deficiencies for each Standard of Practice should be summarized in this Summary Audit Report. This should be done in a few sentences or a paragraph.
2. The name of the mine operation, lead auditor signature and date of the audit must be inserted on the bottom of each page of this Summary Audit Report. The lead auditor's signature at the bottom of the attestation on page 3 must be certified by notarization or equivalent.
3. An operation that is in substantial compliance must submit a Corrective Action Plan with the Summary Audit Report.
4. The Summary Audit Report and Corrective Action Plan, if appropriate, with all required signatures must be submitted in hard copy to:

ICMI
1400 I Street, NW, Suite 550.
Washington, DC, 20005, USA.
Tel: +1-202-495-4020.

5. The submittal must be accompanied with 1) a letter from the owner or authorized representative which grants the ICMI permission to post the Summary Audit Report on the Code Website, and 2) a completed Auditor Credentials Form. The letter and lead auditor's signature on the Auditor Credentials Form must be certified by notarization or equivalent.
6. Action will not be taken on certification based on the Summary Audit Report until the application form for a Code signatory and the required fees are received by ICMI from the applicable gold mining company.
7. The description of the operations should include sufficient information to describe the scope and complexity of the gold mining operation and gold recovery process.

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Name of Mine: Córrego do Sítio 2.

Name of Mine Owner: Anglo Gold Ashanti Ltd.

Name of Mine Operator: Córrego do Sítio 2.

Name of Responsible Manager: Guilherme Costa Peixoto (Production Manager)

Address: Fazenda São Bento s/n, 35960-000, Santa Bárbara, MG, Brasil.

State/Province: Minas Gerais

Country: Brasil

Telephone: +5531- 38329790 (Production Manager)

Fax: not applicable

E-Mail: GCPeixoto@anglogoldashanti.com.br

Location detail and description of operation:

1. BRIEF OF THE PROCESS:

To the sulfide ore processing that comes from Mine Córrego do Sítio 1 it was used all the Metallurgical Plant infrastructure located in Mine Córrego do Sítio 2 from former São Bento Mining. It should be noted that the hydrometallurgical process made since the beginning of its operation in CDSII plant was not changed, making only punctual equipment replacements aiming the optimization and modernization of the process, such as:

- Installation of a primary (jaw crusher) and secondary crusher (conical HP300) replacing the existing shut, what will reduce the ROM ore size before going to the storage silo and later to the milling.
- Installation of a ball mill to be transferred from the Queiróz plant to CDS2 plant to an existing milling area.
- Installation of a new autoclave and its peripherals replacing the existing autoclaves with efficiency increase in the sulfur oxidation process.

In the specific case of the sulfide ore of underground Mine Córrego do Sítio 1 and 2, that will be benefited and concentrated in the Sulfide Plant, the process route comprehends basically the following steps:

Main operations:

- Crushing (primary and secondary)
- Milling (primary – semi-autogenously and secondary – balls)
- Gravimetric
- Sulfide flotation
- Thickening

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- Acidification
- Oxidation under pressure
- Washing of oxidized pulp
- CIL Leaching
- Elution
- Electroplating

Auxiliary operations:

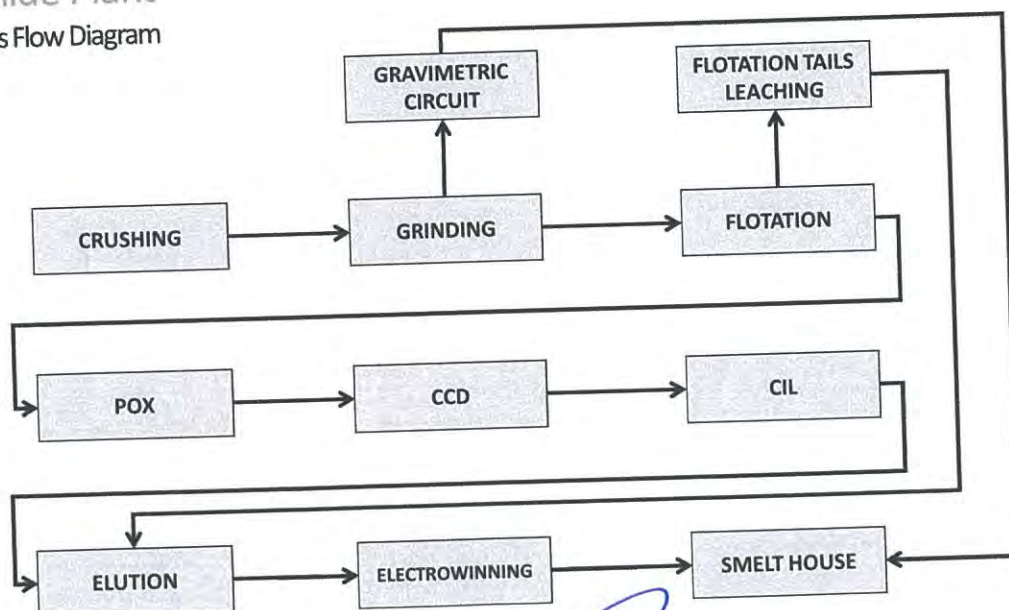
- Rejections deposition in dam
- Coal regeneration
- Neutralization of acid solution
- Dam water treatment
- Water capture and treatment

The ore processing in Sulfide Plant has as a final product the Gravimetric concentrate rich in gold from the gravimetric area and the Cathode (steel wool enriched with gold), from the electrolysis area, and these two products are sent to foundry, located at Queiróz Plant in Nova Lima, to be cast and refined for further transformation into gold bars. Following, it is presented a flow chart illustrating the beneficiation process of the Metallurgical Plant of Mine Córrego do Sítio2.

GENERAL FLOW CHART CORREGO DO SITIO PLANT

Sulphide Plant

Process Flow Diagram



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2. CRUSHING:

The ROM material is carried by trucks through an internal road for about 5 km to the crushing yard of Metallurgical Plant of Córrego do Sítio 2. The ROM is fed in the crusher of the primary jaw crusher with scalp grill, by a loader. The retained material on the grid is fragmented by a mobile hydraulic breaker. Like this, all the material that does not go through the grill screen is broken to feed the crusher.

The grill undersize passes through the feeder hopper in a feeding rate controlled by a vibrating feeder to feed the equipment.

The primary crusher is the jaw S crusher type. The crusher product is moved by a vibrating belt with metal extractor and downloaded in a vibrating sieve with three decks that has in the last one an opening of 19 mm (3/4").

The sieve oversize is fed in an HP 300 conic crusher, while the undersize is transported by belt until the milling storage silo. The secondary crusher product returns as a rolling load to the sieve feeding.

3. MILLING/GRAVIMETRY:

The crushed product came from the silo is stocked in the ore silo that feeds the semi-autogenously primary mill through the transporter belt. The feed rate of the mill is controlled by belt feeders that are installed in the two silo ducts. In the mill feeding is added water to adjust the mill ideal density and copper sulphate to activate the sulfide particles that later will be concentrated in the flotation process. The mill has approximately the dimensions of 3.6 x 3.6 m, with the power on the pinion shaft in the order of 522 kW and capacity to 700 kt/a.

The primary mill product passes by a vibrating sieve to take off pieces of body grinder and particles out of specification returned as rolling load to the same mill, through a bucket elevator. The undersize is downloaded in the cyclone feeding box, where is added water to suit the cyclone feeding concentration to 34% of solids. This same box receives the discharge of the secondary mills installed in the rolling load and the gravimetric concentrator tail.

The pulp is pumped by centrifugal type pulp pumps to a hydro-cyclone bank. The hydro-cyclone classifies the material into thick and thin portions, where the underflow represented by the thick portion is sent to two ball mills of 3.5 x 3.5 m and another of 2.44 x 3.9 m and to two gravimetric concentrators Knelson CD30 e XD30 that receive around 25% of the cyclone underflow flow.

The gravimetric concentrate is processed by two vibrating tables to produce the gravitational gold concentrate for subsequent treatment. The table tail returns to the milling circuit.

The hydro-cyclones overflow (with granulometry aimed P90 of 74 µm) is pumped to a thickening step. The goal of this step is thicken the material to a percentage of solids between 45 and 50 % to ulterior floatation step feeding.

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The thickener overflow water is re-circulated, if necessary, to the thickener feeding to assist in the feeding density control to keep the feeding density low and increase the flocculants efficiency. The excess water is pumped to a re-circulated water tank of the concentration and grinding area.

The flocculants is added in the thickener feeding to help the sedimentation and improve the limpidity of the thickener overflow. The thickener underflow is pumped to two conditioner tanks installed in series in which are added: copper sulfate (CuSO_4) that has the function of activating the sulfite minerals; collector mix (SIBX + C5460) used as collector and frothier F650.

4. FLOTATION:

The goal of the flotation are is to separate sulfite minerals, mainly the arseno-pyrite, from the gangue to form the concentrate.

Most of the gold is associated to sulfides, so separating the sulfite minerals of the gangue it concentrates the gold to a later treatment.

The pulp will be fed in the conditioner tank where it is added some chemical products including:

- CuSO_4 (copper sulfate) – to activate the sulfite minerals.
- SIBX + C5460 (collector mix) – used to collect sulfite minerals.
- F650 (frothier) – transports collected minerals.

The reagents may be pumped to the Rougher flotation cells arranged in a smart cells battery and a conventional cells battery. Scavenger flotation arranged in a conventional cells battery and cleaner flotation arranged in a smart cells bank and a conventional cells bank.

The simplified scheme of the flotation circuit configuration is presented in the picture below.

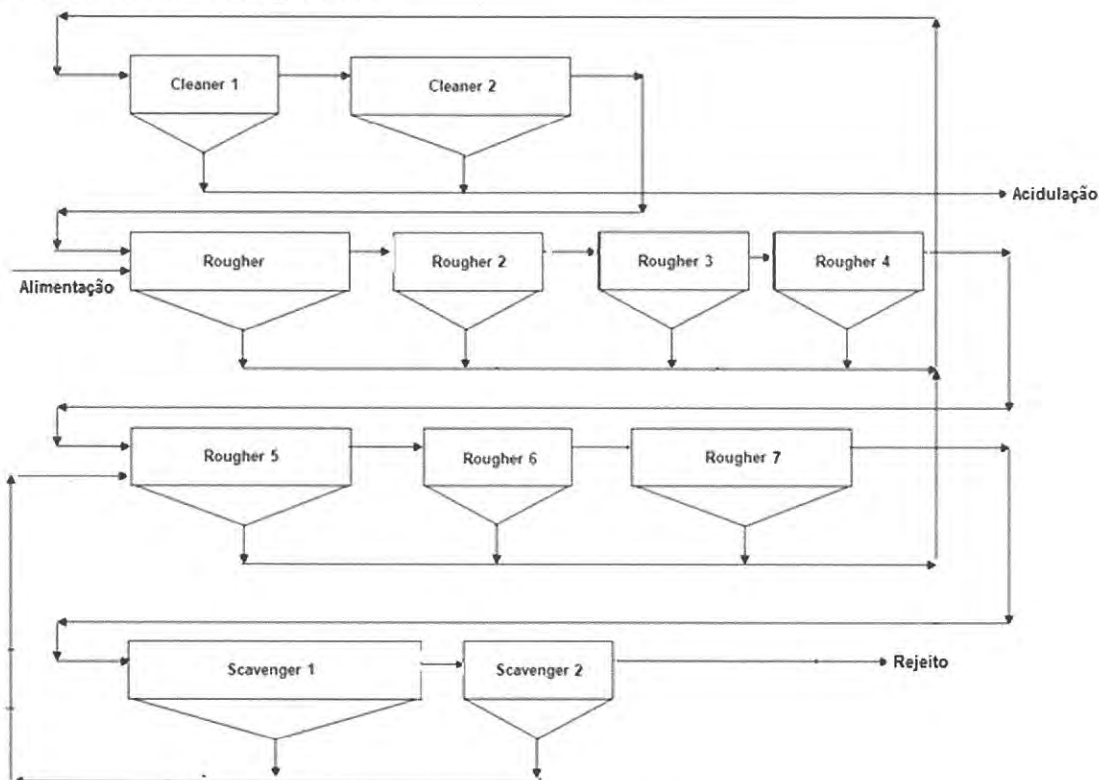
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Flotation circuit configuration



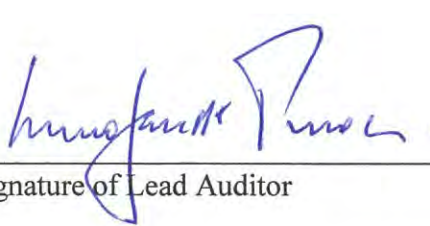
The rougher flotation concentrate is removed and will feed the cleaner flotation circuit that consists in 3 smart cells and 2 conventional cells.

The existing system of preparing and distributing reagents will stay and will have addition points in the entire rougher flotation circuit, promoting needed versatility to the circuit to attend the new production.

Nowadays, it is being used the mill initially projected to concentrate re-milling, milling the scavenger first cell feeding. The goal is to achieve the maximum release rate of the sulfides present and lower the gold content in the tail.

The flotation tail is pumped to a tail duct towards to the tail dam.

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5. CONCENTRATED THICKENER:

The final concentrate of the flotation circuit is pumped to the concentrate thickener. The thickener has a diameter of 20 and thick the concentrate to approximately 50% of mass solids before it is pumped to the acidification area.

The overflow water of the concentrate thickener follows by gravity to the thickener water transfer tank when it is pumped to the tank of re-circulated water from the concentrated area, or may be re-circulated, if necessary, in the thickener feeding. This recirculation has the function of helping the density control of its own feeding, in order to keep the feeding density low and also to the flocculants dilution.

The flocculants is added in the concentrate thickener feeding system to improve the sedimentation and is provided by the automatic flocculants preparation system.

After the concentrate thickening, the material is transferred to 2 concentrate storage lung tanks.

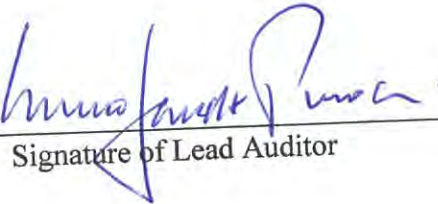
6. ACIDIFICATION:

In the acidification circuit, calcium, iron and magnesium carbonates in the concentrate react with sulfuric acid and will decompose to the maximum. The acidification circuit consists in two acidification tanks and associated pumps. The concentrate pulp is pumped from the storage tanks to the first from the acidification tanks. Carbonates in the concentrate solids will react with the sulfuric acid, forming metallic sulfates and carbon dioxide.

The sulfuric acid is provided directly by the sulfuric acid tank to the acidification tank 01 and right after the material is transferred to tank 02 to finish the reaction.

The pulp of the acidification tank 02 is pumped to the autoclave feeding tank in a percentage of solids between 45 and 50 %.

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7. OXIDATION UNDER PRESSURE (POX) – AUTOCLAVE:

In the oxidation under pressure circuit, sulfite minerals are oxidized in high temperatures and pressure to increase the gold recovery in the cyanidation circuit. The oxidation under pressure circuit consists in a autoclave feeding tank, autoclave, flash tank, conditioner tank, gas washer, water system and pumps associated.

The flotation concentrate acidulated stocked in the autoclave feeding tank is pumped in a controlled rate to feed the autoclave.

The oxygen is injected in the autoclave to oxidize sulfides contained in the concentrate. Cooling water is used to control the temperature in the autoclave. To the start-up, steam in a high pressure received from the battery limits is injected in each compartment to heat the autoclave.

A sealing water system provides de-mineralized water to the agitator mechanical seals of the autoclave.

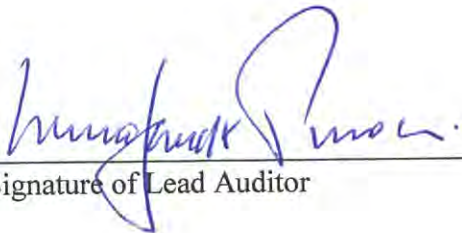
Pulp oxidized in the autoclave is unloaded under atmosphere pressure in the flash tank. Flash tank pulp falls in the conditioner tank, that works between 87°C and 97°C. Conditioner tank pulp is pumped to the countercurrent decantation washing circuit. Autoclave steam and gases, flash tank and conditioner tank are directed to the gas washer. Washed gases are unloaded to the atmosphere.

8. WASHING OF OXIDIZED PULP:

In the washing circuit, the solids of the autoclave discharge are separated from the solution and washed to take off acids and metals. The washing circuit consists in thickener, overflow tank and associated pumps.

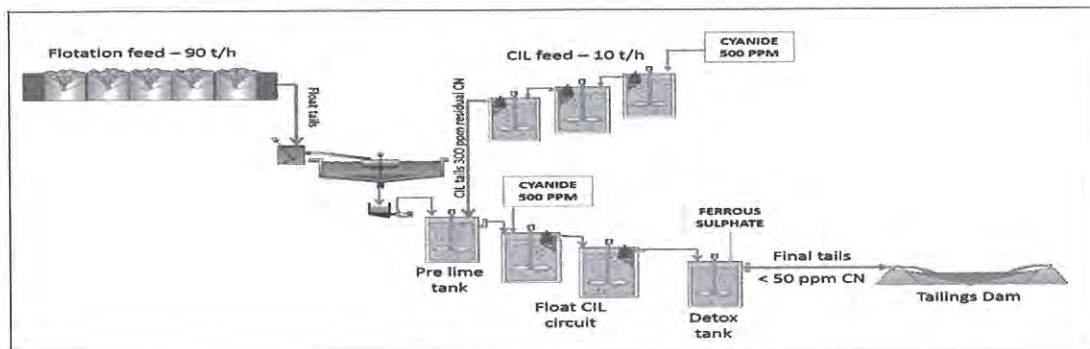
The oxidized pulp from the POX circuit is pumped to the washing thickener where the pulp is re-pulped about 10% of solids per process water. The pulp is thickened up to 45% of solids using specific flocculants, then pumped to the pre-lime tank of the CIL circuit. The overflow is directed to the acid solution tank and then pumped to the neutralization circuit.

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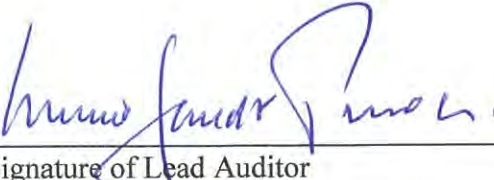
12.COAL ELUTION AND REGENERATION:

The elution circuit of this plant uses the AARL system (Anglo American Research Laboratory) and is projected to work in a single phase. The circuit includes an acid washing tank and a simple elution column among other associated equipment such as heaters, tanks and filters.

The washed charged coal is transferred from the first adsorption tank through the charged coal sieve to the charged coal tank. Next goes through the thin coal sieve. Concentrate hydrochloric acid and raw water are pumped to the tank to obtain a nominal hydrochloric acid solution of 3% (in mass) that will be added to the acid washing tank. The charged coal is then submitted to the acid wash during 30 to 60 minutes to remove the inorganic materials, mainly the calcium and the magnesium, of the coal. At the end of the washing period, raw water is added to the tank where it is taken at the sump and sent to the CIL tanks at the adsorption circuit and, next, to the tail tank, while the coal follows to the elution cycle.

The coal is then submitted to the elution cycle to remove the gold from the charged coal. Caustic soda and raw water are simultaneously pumped to the column forming the elution concentrate with nominal concentrate of 2% (in mass) caustic soda. This pre-wash solution circulates for about 80 minutes to obtain an elution temperature of 120°C to solubilize the adsorption gold and to pre-heat the coal layer. The gold is then desorbed of the coal through the raw water pumping at 120°C in the column which will be directed to the charged elution tank to the subsequent gold recovery by electrolysis.

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The heating of the elution solution that comes from the tank happens by its passage through the electric heaters. The elution cycle is ended with the coal cooling phase when raw water is pumped in the column to cool the coal and the column to typically 70°C. At the discretion of the operator, the coal may be transferred to the coal regenerating oven or to the coal cooling tank, from where it will then be pumped to the final adsorption tank at the CIL circuit.

The coal that is sent to the regenerating oven first goes through a dewatering sieve to drain the transport water from the coal pulp. The partially drained coal goes through a coal feeding hopper where it will occur the additional drain. The drained coal then passes by a pre-dryer that will heat the coal up to about 100°C to take off the interstitial water attached inside the coal pores.

A thread feeder takes off the coal from the pre-dryer and conducts it to the oven with a controlled flow rate.

The pattern horizontal rotating oven operates under a reduction atmosphere of 750°C and is used to the coal regeneration. To avoid the coal burn, the barrel of the oven is sealed to block the oxygen entrance. The electric heating is used to enable the appropriate temperature. As long as the coal temperature raises from 100°C to above 700°C, organic and inorganic contaminants of the coal pores decompose, resulting in a coal with necessary characteristics to its reuse. The coal moves to an inferior part of the barrel by shovels installed at the internal surface of the barrel. The last barrel section has water jets to cool the coal to about 300°C before its introduction in the cooling tank. The coal is transferred from the cooling tank to the final adsorption tank at the CIL circuit by the discharged coal dewatering sieve in batches as required.

13.ELECTROWINNING :

The charged product created at the gold elution cycle is submitted to the electroplating to recover the gold. The solution is pumped from the electrolytic tank by pumps to two electrolytic cells where the gold is deposited in steel wool cathodes. After going through the electrolytic cell, the solution returns by gravity to the electrolytic tank. The electrolysis cycle continues during a nominal period of 16 hours, depending on the quantity of contained gold. At the end of the cycle, which is generally defined as the solution content being under 5 ppm, the solution is pumped to the SACU tank that has activated coal, to adsorption of the electrolysis residual gold. The SACU gold elution is made about twice a month depending of its charging.

Periodically six of the charged cathodes are removed from the electrolysis cells and transferred to the gold chamber. The charged steel wool is previously stored to a safe transportation and later refinement and commercialization.

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14. WATER DAM TREATMENT:

The dam overflow is re-circulated to treat the residual cyanide and metals to ulterior discard in the river.

Nowadays it is used a circuit that has an activated coal filter, hydrogen peroxide dosage and sedimentation in decantation basin.

The dam solution is pumped to the activated coal filter to remove the metals in solution. In the filter exit it is added hydrogen peroxide at a controlled rate to discount the cyanide and to precipitate the copper salts. The solution is then destined to the decantation basin where are deposited the reaction residues and periodically are drained to the tail dam. The basin treated overflow is discarded in the river.

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Auditor's Finding

This operation is:

- ☒ in full compliance
- ☐ in substantial compliance *(see below)
- ☐ not in compliance

with the International Cyanide Management Code.

* The Corrective Action Plan to bring an operation in substantial compliance into full compliance must be enclosed with this Summary Audit Report. The plan must be fully implemented within one year of the date of this audit.

Audit Company: NCA Brasil Expert Auditors Ltd. (A subsidiary of GlobalSHEQ)

Audit Team Leader: Celso Sandt Pessoa

E-mail: celsopessoa@ncabrasil.com.br (ICMI qualified lead auditor and TEA)

Names and Signatures of Other Auditors: none

Date(s) of Audit:

22~31/May/2017 (on-site)

07~11/Aug/ 2017 (on-site)

23~24/Oct/2017 (on-site)

13~14/Nov/2017 (off-site)

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

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

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1. PRODUCTION: *Encourage responsible cyanide manufacturing by purchasing from manufacturers who 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.*

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 1.1
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced, that is clearly required in the operation's contract for purchase, that the sodium cyanide shall be produced at a facility that has been certified as being in conformance with the Cyanide Code as well as transported by ICMI certified transporters. Reviewed the contract between Anglo Gold Ashanti and AGR (Australian Gold Reagents).

AGR solid cyanide production plant in Australia is certified since 03/March/2005. Last recertification was on 03/ August/ 2017 (according to information available at ICMI website).

The gold mining operation does not buys any type of cyanide from distributors.

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.*

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 2.1
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced, reviewing the contracts and agreements among Anglo Gold Ashanti, AGR and Niquini Transportes (last certification was on 13/ June/ 2017) that the lines of responsibility for safety, security, release prevention, training and emergency response are clearly addressed. Both, producer and transporter, are certified under the Cyanide Code, as evidenced at ICMI website.

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 2.2
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that the sodium cyanide is transported into the operation by an ICMI certified transporter, which has itself specific cyanide related emergency response plans. The solid sodium cyanide is transported straight from the Santos port to the operation, without any interim storage or changing of transporter. The sodium cyanide documentation is verified in reception control at the operation, and is fully traceable to the producer, evidencing that all transport supply chain (AGR Australia Supply Chain and Niquini Transportes Ltd. in Brasil) are ICMI certified according to the ICMI website information.

3. HANDLING AND STORAGE: *Protect workers and the environment during cyanide 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

Summarize the basis for this Finding/Deficiencies Identified:

It was reviewed the reception, storage and cyanide solution preparation area, which was done in accordance with Brazilian Engineering Standards, by Onix Engenharia e Consultoria Ltda. It was also evidenced, during the field audit, those installations. It was reviewed also the last technical inspection performed in those installations, performed by HFL Engenharia e Projetos Ltda. The design and construction of those installations (the technical inspection was also performed in all hydro-metallurgy installations), were based on the Brazilian Technical Standards (NBRs) and Occupational Safety standards (NRs). The technical inspector concluded that the operational installations are in good conservation state and does not offer major risks to the human life and health and to the environment.

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Both areas were constructed on an specific assigned area (defined through a risk analysis process), which is away from people and surface waters. The entrance to such areas (they are locked) is restricted only to authorized and qualified personnel (operators and supervisors), as evidenced during the field audit. The audited operation only uses solid NaCN and the receiving area floor is fully concreted.

If any incident in the reception occurs, it is very simple to contain and recover the solid NaCN due to the concreted floor and the qualification of the plant operators. Emergency response procedures are in place if such kind of incident occurs.

It was evidenced during the field audit, that level indicators and level alarms (regularly calibrated) are available in both tanks, the preparation one and in the NaCN solution distribution tank. Both tanks are installed inside a secondary containment installations, with concrete walls and floor, and drainage and pumping systems. The secondary containment is fully concreted, as evidenced in the design documents and in the field audit. The storage warehouse was specifically designed and constructed for this purpose, with concreted floor and walls, under roof and very well ventilated, as evidenced in the design documentation and in the field audit. Only solid NaCN wooden boxes (the original boxes from the NaCN producers (AGR) are maintained) are stored in this warehouse, over pallets and with maximum of three boxes in each pile. All evidenced in the field audit and defined at operational procedures. All this area (reception, storage and preparation) is fenced and locked, and only authorized people are allowed to go into such area, and evidenced during the field audit.

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 3.2
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Empty NaCN big-bags are washed with water + caustic soda, then decontaminated in a specific container with a solution of water and ferrous sulphate, then dried and sent to incineration in a qualified, by the local EPA, supplier (ESSENCIS). Wooden boxes are also dismantled and sent to the same destination to be incinerated. All NaCN big-bags are decontaminated and sent to incineration. The decontamination solution is frequently changed and disposed in the solution preparation tank.

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All sea containers are inspected and cleaned (if necessary) by the preparation operators. An inspection record is retained and signed by the Niquini Transportes driver, as an evidence that he is receiving the container in adequate conditions and cleaned.

All receiving and mixing procedures were verified during the field audit. A cyanide solution batch preparation was witnessed. Critical valves are clearly identified, tagged and locked. All flanges are covered in order to mitigate any potential leakage or spill. A preventive maintenance program for such critical equipment and installations are in place. All cyanide wooden boxes are handled with a fork lifter and placed in a specific place under a lifting device, to be lifted to the preparation solution tank. This was evidenced during the field audit. In the event of any spills (or not), the secondary containment is washed after the solution preparation activity and the water is collected in the drainage system and returns to the preparation tank. This procedure was evidenced during the field audit. The preparation/ mixing process is automatic. Nevertheless, there are always two qualified operators performing this activity, fully equipped with adequate PPEs (tyvec overall, full mask, chemical gloves and boots, HCN detector) and a CCTV system is also available. All the activity is monitored from the production control room. All procedures were evidenced during the field audit.

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 utilizing contingency planning and inspection and preventive maintenance procedures.*

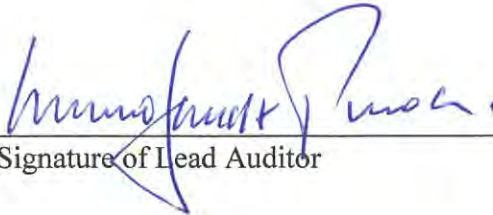
The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 4.1
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that the operation designed, documented, implemented and maintains a SHE management system in order to manage their SHE aspects, including cyanide.

All the operational and management procedures, were developed, reviewed and approved by authorized personnel and addresses, where applicable, design assumptions and outputs (as freeboard for the TSF, solution pH, flows) and regulatory (defined by the local EPA and by the Occupational Health & Safety Brazilian Standards (NRs) parameters (e.g: free (CNf) and WAD (CNw) cyanide content in effluents or tailings), and Brazilian legislation applicable to the TSF management. All these procedures were developed and implemented considering hazard identification and risk evaluation and are under the coordination of the PGR process (Risk Management Program).

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All sampled operational and management procedures were developed with the purpose to manage and operate the production plant and maintenance in a safe and environmentally sound manner. It was observed that the operation developed, documented and implemented a change management procedure (PD-000062(7)), where all proposed changes are reviewed by a multi-disciplinary team, that always includes the environmental and occupational health and safety processes, using a risk analysis approach to make decisions (accept or not the proposed change). All involved processes representatives must sign-off the change management request record, independent if the required change was accepted or not.

In the event of any up-set in the water balance the plant shuts-down and there is no input or output of liquid effluents into the system. In the event of any deviation of operational or monitoring procedures, contingency responses are addressed in the own procedures. In the event of a temporary closure or cessation of operations, the operation will manage the cyanide (in any type), in accordance with the decommissioning plan (refer to SoP 5.1). A temporary closure will be also managed through the change management procedure.

The operation also developed a complete emergency plan (refer to Principle #7), when contingency plans and measures are not effective to mitigate or control any problem occurred during the operation of the hydro-metallurgical process, including the TSF management. The operation defined and implemented a structured inspection plan, focusing the condition of the installations and equipments. It was evidenced that the process plant (hydro-metallurgy) is inspected on different frequencies, depending on the type of equipment or installation to be inspected. This could be weekly, monthly, quarterly, semester or annually. The defined inspections frequencies are in accordance with the OEM (Original Equipment Manufacturer) instructions, the Maintenance process experience and expertise with the equipments and installations and up to now are demonstrating to be adequate to maintain the operation operating in conformance with the design parameters. The TSF inspection plan establishes different frequencies, depending on the aspects to be inspected. The frequency may be daily, weekly, monthly and annually. The TSF inspection frequencies are defined in accordance with the TSF designer, the TSF Corporate management process and the operation experience with the activity and is demonstrating to be adequate to maintain the TSF operating in accordance with the design parameters.

The operation inspects all cyanide containing tanks (and respective secondary containment) every quarter (internal inspection) and annually, the operation contracts an external supplier to inspect the same tanks and their respective secondary containments. All inspection and maintenance (corrective and preventive) are managed through the SAP system.

Secondary containments, Pipelines and valves are inspected together with cyanide containing tanks. Pumps have their own inspection and maintenance procedures and instructions. Also, on a daily basis the TSF is inspected.

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The inspection results are recorded in a work order, addressing the obtained results, the inspector who did the inspection or the programmed maintenance, the date. In the event of any non-conformities, the SAP generates another corrective maintenance worker order.

As previously mentioned, the operation defined a preventive maintenance plan for cyanide related facilities and critical equipments (mainly focused on the pumping system and the generator back- up system, such as tanks, piping, instrumentation (HCN detectors and alarms), pumps, valves, secondary containments, drainage systems. Inspections (into the maintenance scope) are performed in between preventive maintenance activities, beyond the daily operational inspection procedure, performed every shift (which is an input for corrective maintenance, when necessary). It is important to report that the operation has the redundancy approach for the pumping system, always with a second pump in stand-by status, as evidenced in the field audit.

The operation has a 150 KVA generator and is installing a second one, with 450 KVA. The actual one is maintained and tested on a weekly basis.

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

☒ in full compliance with

The operation is:

☐ in substantial compliance with Standard of Practice 4.2

☐ not in compliance with

☐ not subject to

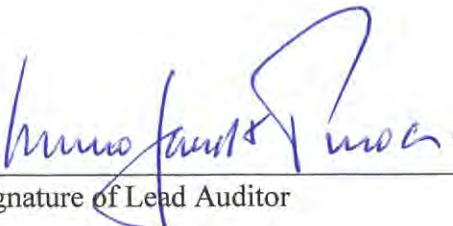
Summarize the basis for this Finding/Deficiencies Identified:

Although the operation does not add cyanide solution during the milling process, it designed, documented and implemented a cyanide consumption management model in order to evaluate and determine the best cyanide consumption rate, in accordance with the mineral ore quality.

The cyanide solution addition to the CIL process is a function of the available free cyanide at CIL tailings (rejects). Every four hours the free cyanide content at CIL tailings is determined and then the cyanide solution added to the process is adjusted. This is a "cyanide saver" process.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

The operation designed and implemented a water management system. In accordance with a Brazilian legislation (COPAM 87/ 2005), the operation performed an hydro-geological evaluation, performed by DAM Engineering Ltd. in August 2016, confirming that the water balance management system of the operation is adequate and the operation is well water balanced. The water balance management system is documented and defined at procedure PE-1341(0), and the system consider several aspects such as (but not limited to) new water intake, re-circulated water, mine dewatering, TSF bottom drainage, precipitation and evaporation. Most of these parameters are monitored on-line and on a monthly basis, a summary report is issued demonstrating the total water volume which is process and compares with the design value, which is 126.000.000 cubic meters. Just for information and as evidenced in the field audit, the operation has a meteorological station where, on a daily basis, it monitor the rain and evaporation rates, and compares with the design assumed values.

There is no leach pads at the operation, but the deposition rate (or flow) of tailings at TSF is monitored and considered in the water balance. A design storm duration and storm return interval was considered in the TSF design and monitored on a daily basis. The operation monitor, on a daily basis, the precipitation and evaporation rates, and compare the results with the values assumed in the design phase.

The TSF is equipped and surrounded by drainage channels and infiltration is not a relevant aspect, although it is monitored through piezometers down gradient of the TSF. Freezing and thawing are not considered in the water balance management due to the weather conditions at the operation site (tropical weather, where freezing conditions are almost impossible to happen).

Solution losses in addition to evaporation were considered in the water balance study, but their contribution the water balance were considered not relevant or critical to the water balance management due to the fact that the discharges to surface waters, when necessary, are controlled and monitored. The drainage systems are inspected on a regular basis and kept clean, and were designed in accordance with the design storm assumptions. The solids decant capacity is know and the TSF was designed in accordance with that. The TSF is managed in accordance with specific manuals developed in accordance with the TSF design assumptions. Due to the soil compaction and the permanent monitoring, through piezometers, it was observed that there is no seepage to subsurface. So, all aspects were considered in the water balance evaluation and are monitored, but their contribution to the water balance is not critical.

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The power outage was considered in the study, but the operation implemented back-up generators in order to mitigate the impact of this aspect.

The operation operates the TSF with an operational freeboard higher than that one established in the design, focusing the stability and safety of the TSF. It was evidenced, during the field audit, that the operation installed some freeboard datum poles, divided in three different zones (green=conforming, yellow=alert, red=nonconforming), in order to optimize the visual inspection of the available freeboard. The operation measures precipitation and evaporation, comparing the obtained values with those ones used in the initial probabilistic study. It was evidenced the evaporation and rain profile between 2013 and 2017.

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

Summarize the basis for this Finding/Deficiencies Identified:

All the process area (hydro-metallurgy) is fenced and the access is restricted to authorized employees, as evidenced in the field audit.

In accordance with the environmental permit issued by the local EPA, the operation monitors three different types of cyanide (total, free and WAD), depending on the sampling point, which are: 7001 (process plant effluent), 7002 (TSF bottom drain), 1006 (mixing point downstream of Conceição river). Reviewed the monitoring reports, prepared by SGS/ Geosol, an ISO 17025 accredited Laboratory, that performs all the sampling, custody and the analytical evaluation of them.

The maximum CNw value encountered was 0,07 mg/l, the maximum value for CNt was 0,050 mg/l and CNf was 0,020 mg/l, for sampling point 7001. The results demonstrate that the use of cyanide at process plant is optimized and the residual cyanide is adequately treated.

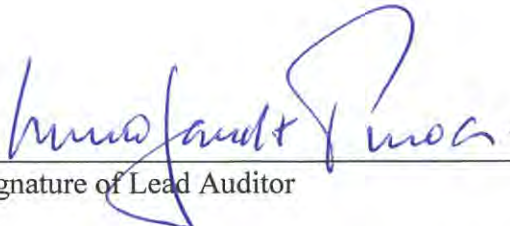
Maximum value for CNt was < 0,010 mg/l, for CNf was < 0,005mg/l and maximum value for CNw was < 0,010 mg/l for sampling point 7002.

Maximum CNw content was < 0,010 mg/l, maximum content of CNt was < 0,010 mg/l and for CNf was 0,005mg/l for sampling point 1006.

Reviewed records of TSF inspections and monitoring reports since 2012 and there is not any case of fauna/ wildlife mortality, evidencing that maintaining CNw below 50ppm is effective in preventing significant wildlife mortality. All the a.m results demonstrate that the use of cyanide at process plant is optimized and the residual cyanide is adequately treated.

The operation does not use the heap leaching process.

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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

Summarize the basis for this Finding/Deficiencies Identified:

The operation has direct discharge to open waters. Monitoring (sampling point 1006) results shows that CNw content is much below 0,5 mg/l. All analytical methods are according to Standard Methods for the Examination of Water and Waste Water (22nd edition/2012). All the SGS Geosol analytical procedures are certified in accordance with ISO 17025 standard (their certification was granted by Inmetro, according to the Brazilian legislation, certificate # CRL 0386).

It was not evidenced any indirect discharge to surface waters. The surface water quality is monitored on a regular basis and the results shall be informed to the local environmental protection agency/ EPA (FEAM). Reviewed monitoring records for 2016 and 2017 (results until September 2017) and communication records with local EPA, presenting the monitoring results. No nonconforming results were evidenced.

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 4.6
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation designed and implemented a ground water monitoring plan (# PLA-1602218), in accordance with the requirements addressed at its environmental permit, issued by the local EPA, the Brazilian standard NBR 15847-2010 and the Brazilian legislation CONAMA 396/2008. There are two sampling points (# 2010 and # 2011), down gradient of the process plant, where CNt and CNf are monitored.

All sampling, custody and analytical evaluation is performed by SGS Geosol, which is ISO 17025 certified (all analytical methods are in accordance with the Standard Methods for the Examination of Water and Waste Water (22nd edition). It is important to report that there is no specific value for any type of cyanide in the Brazilian legislation.

The operation monitors the underground water quality, through two monitoring points, specifically defined for this purpose. The maximum content for CNt was < 0,010 mg/l and for CNf < 0,005 mg/l for sampling point 2010 and the maximum content for CNt was < 0,010 mg/l and for CNf < 0,005 mg/l for sampling point 2011.

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Also evidenced that the operation monitor the ground water quality, down gradient of the TSF, through 19 piezometers. The maximum content for CNt was < 0,010 mg/l and for CNf < 0,005 mg/l.

The operation does not use mill tailings as backfill. The CDS2 mine production is still in the exploration phase. All ore comes from CDS1 operation (an ICMI certified gold mine operation). Any type of seepage was observed. The monitoring through piezometers clearly showed that. It was not evidenced, since 2012, any incident involving cyanide impacting surface or underground water.

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

Summarize the basis for this Finding/Deficiencies Identified:

The cyanide unloading, storage, mixing and process solution tanks areas were constructed in order to prevent that any process spill could impact the human life and the environment. All these areas were observed during the field audit (engineering documentation was also reviewed) and confirmed that these areas are concreted, with secondary containments (preparation and CIL tanking areas), providing a good barrier.

The secondary containment volume is 110% bigger than the biggest tank inside it, as observed at engineering records and during the field audit. This installation is provided with a pumping system, that allows the return of any leakage back to the tanks. The pumping system was included in the preventive maintenance program.

All process tanks have secondary containment, as observed during the field audit. Verified, during the field audit, that all cyanide process solution pipelines are provided with spill prevention systems (pipe into pipe or pipe over V profiles and flange covers), to collect leaks and prevent releases to the environment and to prevent the human life to be impacted also. Cyanide pipelines do not present a risk to surface water. The operation did a risk evaluation and this situation was not applicable, because all cyanide solution pipelines are far from surface waters.

All cyanide tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions (carbon steel (tanks) and stainless steel or HDPE (piping)).

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
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Summarize the basis for this Finding/Deficiencies Identified:

Quality control and quality assurance programs were implemented during construction of all new cyanide facilities and modifications to existing facilities. A Quality Assurance (QA) plan (# P1-08-01(0)), was developed by PAREX Engineering Ltd (constructor), covering the planning for construction, inspection and testing of this new installation (flotation tailings leaching). It was also reviewed the drilling and soil compaction reports, performed by Geotécnica Engineering Ltd. Quality control and quality assurance records were retained for cyanide facilities (only for the new installation (flotation tailings recovery facility)). Parex Engineering delivered a QA/QC data-book on the final acceptance, by the operation, of the new installations.

For the existing installations, the operation performed a third party technical inspection according to Brazilian standards. It was reviewed the reception, storage and cyanide solution preparation area, which was done in accordance with Brazilian Engineering Standards, by Onix Engenharia e Consultoria Ltda. It was also evidenced, during the field audit, those installations. It was reviewed also the last technical inspection performed in those installations, performed by HFL Engenharia e Projetos Ltd. The design and construction of those installations (the technical inspection was also performed in all hydro-metallurgy installations, were based on the Brazilian Technical Standards (NBR) and the Brazilian occupational safety standards (NRs).

The technical inspector concluded that the operational installations are in good conservation state and does not offer major risks to the human life and health and to the environment.

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 4.9
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation designed, documented, implemented and maintains an Environmental monitoring Plan, in accordance with the environmental permit issued by the local EPA (FEAM).

In accordance with Brazilian environmental legislation, an environmental monitoring shall be performed by certified laboratories, in accordance with ISO 17025 standard. It was evidenced that all environmental monitoring (open, surface and underground waters) are performed by SGS Geosol Laboratory, an ISO 17025 certified laboratory. As previously mentioned, SGS Geosol, an environmental laboratory services supplier, is certified in accordance with ISO 17025, where all their management system and analytical procedures are documented and certified by Inmetro Brazil. On the other hand, the operation also defined and documented, in the environmental monitoring plan, the system involving the environmental monitoring of the operation. Since 2012, the operation never evidenced wildlife mortalities in open and surface waters.

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There is a daily inspection on the TSF to observe wildlife mortalities. Wildlife mortality is also inspected, on a monthly basis, at Conceição river (surface water), in conjunction with the sampling activity for environmental monitoring. In the CIL area, there is an inspection routine, that includes the observation of fauna mortality, every shift. All interviewed personnel are aware that any evidenced wildlife mortality must be reported to the Environmental Management process.

The environmental monitoring frequencies are in accordance with the environmental permit issued by the local EPA (Environmental Protection Agency), and are demonstrating that are adequate to characterize the medium being monitored and to identify any changes in a timely manner.

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

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 5.1
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation contracted Golder Associates to prepare decommission procedures and plans. Reviewed Golder Associates Decommission and Closure plan (from October 2015), which addresses an implementation schedule for decommissioning activities, including the necessary resources and expected investment. Life of Mine (LoM) horizon is 2030, for underground activities. The plan is updated, at least, every two years. A new version of the plan was in progress during the audit, and will be concluded by the end of 2017.

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 5.2
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation contracted Golder Associates to prepare decommission procedures and plans. Reviewed Golder Associates Decommission and Closure plan (from October 2015), which addresses an implementation schedule for decommissioning activities, including the necessary resources and expected investment. Life of Mine (LoM) horizon is 2030, for underground activities. The plan is updated, at least, every two years. A new version of the plan was in progress during the audit, and will be concluded by the end of 2017.

The Brazilian Mining Legislation does not demand or establish any financial mechanism to be followed by the operation. The operation implemented a self-guarantee mechanism. Beyond this mechanism, the operation has also insurance certificates related to the operational risks.

Annually the operation has its financial health audited by independent third part auditors. The financial audit was carried out in accordance with International Financial Report Standards (IRFS), which are acceptable either in Brazil and internationally. The financial audit report clearly states that the operation has enough financial health to fund the implementation of the decommissioning and closure plan. The financial audit report was distributed to external stakeholders such as banks, Brazilian stock exchange chamber, Brazilian Public Financial authorities. The last financial audit was performed by Ernst & Young, dated 27/04/2017 (refer to 2016 financial year). Ernst & Young is an accredited financial auditing institution (accreditation # CRC-2SP0151199/F-6), according to the Brazilian Financial legislation. The audit was led by a certified financial auditor (register # CRC-1MG090648/O-0), according to the Brazilian Financial legislation.

Also reviewed the Annual Financial Statements of 2016 (corporate report for Anglo Gold Ashanti), dated 22/03/2017, also performed by Ernst & Young South Africa (signed by a registered auditor and chartered accountant). The audit conclusion was that the financial statements for the year ended 2016 comply, in all material aspects, with the Companies Act of South Africa (# 71/2008), the International Financial Reporting Standards and with the JSE Listing requirements. The Environmental Rehabilitation provisions, for all Anglo Gold Ashanti operations, are addressed in this report.

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6. WORKER SAFETY: *Protect workers' health and safety from exposure to cyanide.*

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 6.1
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation identified and evaluated all the SHE risks associated with the cyanide and in order to have the risks under control and mitigated, the operation defined, documented and implemented specific management and operational procedures for cyanide related activities. Operational and management documented procedures were reviewed and verified during the field audit. According to Brazilian Occupational Safety Standard NR-33 (confined space), the operation identified all confined space existing at areas 1635 (process plant/ preparation) and 1638 (process plant/ CIL) and retains a "confined space register", dated 04/04/2016. All the documented operational procedures address the required personnel protective equipment and pre-work inspections.

The operation documented and implemented a change management procedure in order to review the SHE risks linked with the proposed change.

The work force participates effectively in the risk identification and evaluation, and in the development of operational procedures. Annually, the operation programs and implement a refresh training session, where the operational procedures are reviewed by the operation team (process engineer, supervisors and operators) and, if applicable, updated.

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

Summarize the basis for this Finding/Deficiencies Identified:

The operation determined that the minimum pH value shall be equal or greater than 10,5.

The operation has fixed HCN detectors in the preparation tank area and the operators also use portable calibrated HCN detectors. Both cases evidenced in the field audit. Alarm level is set for 4,5 ppm (alarm 1), 8,0 ppm (to leave the area) and 10,0 ppm (alarm 2) HCN.

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It was evidenced that the operation defined, documented and implemented an operational control procedure, which describes in detail, the steps to be followed in the preparation of NaCN solution, beginning with the control of the pH at the preparation tank (water + soda), before adding solid NaCN briquettes. This activity is performed by a qualified operator, using adequate PPEs and observed by a second qualified operator, also using adequate PPEs, as evidenced in the field audit. It was observed a complete NaCN solution preparation activity.

The operation has fixed calibrated HCN detectors in the preparation tank area and the operator also use portable calibrated HCN detectors. Both cases evidenced in the field audit.

Beyond these controls, all the operators use adequate personal protective equipment.

As previously mentioned both, the fix and portable ones, are maintained and calibrated in accordance with a calibration management system, managed by the Occupational Safety Process. Reviewed the instruments and respective calibration records:

It was evidenced during the field audit that the signage is clear and effective, covering the presence of cyanide, that eating, drinking and smoking is not allowed and also open flames are prohibited.

All the required auxiliary installations, such as showers and eye-washers, were evidenced to be in place and operational. They were tested during the audit and worked properly. The operation has also implemented a system to manage all the fire extinguishers available at the plant. There are two types (CO2 for electrical installations and dry powder for the other ones) of fire extinguishers, identified through a specific number and the maintenance seals and stickers. It was evidenced the fire extinguishers master list, which is used to support the maintenance frequency, all managed by the Occupational Safety process.

All cyanide tanks and piping are clearly painted, identified and the flow direction clearly showed, as evidenced in the field audit.

It was evidenced that the operation implemented an emergency program inside the plant where all cyanide related information is available in Portuguese. This emergency program includes the safety information related to cyanide (MSDS), first aid procedure, alarm systems.

The operation has defined, documented (PD-000004(9)) and implemented a procedure to investigate and evaluate any kind of incidents or accidents. Up to now, any cyanide related incident/ accident has occurred.

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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

Summarize the basis for this Finding/Deficiencies Identified:

As evidenced in the field audit, the operation has water (low pressure eye-wash and showers, tested during the field audit and inspected on a monthly basis), oxygen bottles (monthly inspected), five resuscitator (EAD) (at the ambulatories (2) and the ambulances(3)), antidote kits (monthly inspected, including Cyanokit (Merck Santé France/ batch # 201404-02, valid by 30/11/2017), radio & telephone (tested during the audit), alarm system at receiving and storage areas as well as at the cyanide preparation area.

All first aid equipments and antidotes are monthly inspected. Reviewed records of inspections performed during 2017. During the field audit, it was observed that the antidote kits were within the valid dates. The inspection records are retained by the Medical Services process (ambulatory).

The operation did develop, document and implement a specific cyanide related emergency plan (refer to Principle 7). At the ambulatory it was evidenced a specific emergency procedure (RO-000300(5)), related to cyanide intoxication.

The operation has its own medical facility in order to respond any type of cyanide related intoxication. This facility, as observed in the field audit, has an ambulance (daily inspected and ready to be used (including full fuel tank)), oxygen bottles (monthly inspected), a resuscitator (monthly inspected and tested), radio and telephone (annex 2222), antidotes (monthly inspected). The workforce is composed by an Occupational Doctor (4h/ day and 5x/week) and four nurses (24h/day and 7x/week). All workforce is able to attend and respond any cyanide related emergency and intoxication, including first aid procedures and resuscitation. Reviewed refresh training records for the Doctor and one nurse.

The operation has developed and qualified the local hospital, Nossa Senhora das Mercês, located at Santa Bárbara town and a second option with the Barão de Cocais town (municipality hospital). The operation has its own ambulances (2), as previously mentioned, which is daily inspected and ready to be used. The first aid is always performed by the operation medical team (doctor and nurse).

As previously mentioned, the operation developed and qualified two local hospitals that could be used in cyanide related emergencies. Beyond the hospital infrastructure, the operation provided antidote kits to them and trained the hospital staff in the use of such antidotes. The antidotes are kept under controlled conditions and inspected, on a monthly basis, by the operation nurses. Reviewed inspection records performed during 2017. It was evidenced that the transportation procedure was tested during September 2017.

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It was evidenced that the operation developed and implemented an integrated (SHE) cyanide related emergency plan. All the interfaces of this plan were presented to external hospitals (drills as a training aspect), as part of their training, beyond other external stakeholders, like firefighters from Santa Barbara and Barão de Cocais municipalities. Last integrated drill was performed on 17/09/2017. Reviewed the related report and the opportunities of improvement detected. All addressed in a continuous improvement plan.

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

Summarize the basis for this Finding/Deficiencies Identified:

The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Evidenced Cyanide Response Plan, # PL-000015(13) (new identification is PN-0134(13)), encompassing cyanide emergency scenarios related to transport, unloading, operations and emergency brigade management. The plan clearly addresses the required resources, PPEs, communication channels and telephones (including AGR and Niquini ones) as well as the specific procedures for each identified scenario.

The above mentioned emergency plan describes specifically the response for all cyanide related emergencies.

Cyanide related emergencies responses during external transportation to the operation are covered by the plan, in connection with the NaCN producer (AGR) and NaCN transporter (Niquini) ones, both ICMI certified, and the operation, that will have a support role in this scenario. The internal NaCN transportation is also covered by this emergency plan. The plan is specific to solid NaCN transportation by truck (transporting original sea containers) and to the specified route between the Santos Port and the operation.

The emergency plans clearly addresses specific responses to that situations, considering internal and external stakeholders. It was not observed that, in the last years (since 2012), any type of cyanide related emergency has occurred in the operation and also in the cyanide transportation to the operation, demonstrating that the cyanide management in the operation is effective.

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 7.2
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities (local hospital), public authorities, emergency response suppliers, community representatives, the cyanide supplier and transporter. Before a training exercise (mock drill), the plan that will be simulated is discussed, again, with all the stakeholders (internal and external) that will participate in the training exercise.

When performing emergency drills, the operation invites specific stakeholders to participate in the drill. Last integrated drill including several stakeholders was conducted on 17-09-2017.

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

Summarize the basis for this Finding/Deficiencies Identified:

The emergency plan addresses primary and alternate emergency response coordinators who have explicit authority to commit the resources necessary to implement the plan.

The emergency response brigade members are voluntary and passed through a selection process (medical, theoretical and practical), to be assigned as a brigade member. The brigade members were trained and qualified before being assigned as emergency brigade members.

The emergency brigade master list addresses all the necessary information about the brigade members, including contact details of internal and external stakeholders. The emergency brigade organizational flowchart clearly defines the role of each member.

The emergency plan addresses all necessary emergency response equipment, including personal protection gear, available along transportation routes and/or on-site. The emergency response hardware is monthly inspected by the safety and health officers of the operation. The ambulance is daily inspected and tested. Records of such inspections were evidenced and found in place.

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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

Summarize the basis for this Finding/Deficiencies Identified:

The emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills.

Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan. The emergency communication loop is clearly defined and also contact information is available in the plan.

The contact information list was up dated on 04/ August/2017. Communication procedures with external media were found in place.

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

Summarize the basis for this Finding/Deficiencies Identified:

The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Evidenced Cyanide Emergency Plan PN-0134(13). Responsibilities and authorities are clearly defined and communicated to all involved stakeholders (internal and external). The emergency committee organizational flowchart was also evidenced.

Solid briquettes are recovered with the aid of cleaning devices and disposed into plastic bags (returned to plant and disposed into cyanide solution tanks). The solid NaCN is received and stored at specifically designed concreted areas, as previously mentioned. In the event of releases of solid NaCN directly on a non protected surface (soil), the soil shall be neutralized, after the recovery of NaCN briquettes, with the aid of specific chemicals products such as nitrogen peroxide solution. Neutralized soil samples shall be taken every 5 cm (in depth), in order to determine if the neutralization process was effective and the soil is cyanide free. Cyanide solutions are recovered with the aid of specific floor pumps, available inside the secondary containments and returned to the process tanks.

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Soils shall be neutralized with the aid of specific chemicals products (hydrogen peroxide solution, MgO solution or soda solution (for pH control). Neutralized soil is removed and disposed into plastic bags, returned to the plant and then forwarded to final disposal at a certified brown field area. Surface waters are monitored and no chemical products are allowed to neutralize the surface water.

Contaminated debris returns to the plant (into plastic bags), are neutralized and then are forwarded to the final disposition at a certified brown field area or sent to final disposition (incineration) on a qualified (by local EPA) supplier.

The operation has the responsibility (shared with the public authorities) to manage and provide drinking water to the affected stakeholders, in the event of any cyanide related emergencies into water supply resources (rivers).

Clearly the emergency plans state that these chemicals (sodium hypochlorite, ferrous sulfate and hydrogen peroxide) are not allowed to be used in surface water treatment. The operation emergency brigade does not have these kind of chemicals in their emergency response kit, as evidenced in the field audit.

The plan clearly defines the required monitoring procedures to be implemented in the event of soil and water potential contamination. An environmental monitoring plan is addressed at the emergency response plan.

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

Summarize the basis for this Finding/Deficiencies Identified:

The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Evidenced Cyanide Emergency Plan # PN-0134(13). The emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan. The emergency communication loop is clearly defined and also contact information is available in the plan. The plan is, at least, reviewed every two years (or before, depending on the results of the drill exercises).

Evidenced the 2016 and 2017 Annual Emergency Drill plan. Evidenced four emergency drills performed since 2016, involving NaCN intoxication during leaching process, NaCN transportation, HCN intoxication during cyanide solution preparation and TSF related emergency. Last one, involving external stakeholders, was conducted on 17/09/2017.

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After each emergency drill, the drill results are reviewed and discussed among the participants. The opportunities of improvement raise-up during the drill are considered as corrective or preventive actions and managed adequately. Reports related to the drills and their review were found in place.

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

Summarize the basis for this Finding/Deficiencies Identified:

The operation did design, document and implement an introductory training program which is applied to all new employees and contractors coming to work in the operation. This introductory training program scope is focused on general aspects of sodium cyanide, cyanide related risks, emergency situations related to cyanide and first aid procedures related to cyanide exposures. The operation implemented a refresh training program, which is applied for all employees and contractors at least, every three years (may be earlier). The content of the cyanide refresh training program is the same one of the introductory training.

Both introductory training program and refresh training program records are kept by the operation. Reviewed records dated February, May, August and September/ 2016 and April, May, July, October/2017 (introductory training) and refresh training records dated December 2016, February, March, June and December/2017 and April, May, July, September and October /2017. The training record is an assistance list with the date, instructor name, attendees name and signatures, training content and general perception about the attendees performance made by the instructor. During the field audit, it was evidenced that the employees are aware about the cyanide related risks.

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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

Summarize the basis for this Finding/Deficiencies Identified:

After the introductory training, all employees that will work directly with cyanide (operators, laboratory technicians, maintenance technicians, drivers) will pass through and "on the job training" which consists basically on the training in operational procedures and emergency procedures (40 hours). These operational training is provided by the operation supervisors and process engineers. After the on the job training, the employees will work under supervision during 45 days. After that, the employee is qualified (or not) to work alone.

The operational on the job training consists basically on the operational and emergency procedures. The training is divided in theory and practice. All the operational aspects are clearly identified in the training materials. Reviewed on the job training program for plant operator (CIL process), plant maintenance technician and laboratory technician.

Operational training is provided by supervisors and process engineers, during 40 hours. The on the job training is divided in several topics (depending on the function). Only after the trainee is approved in a specific topic, he is allowed to move forward to another topic. After 40 hours of operational training (theory and practice), the trainee will work during 45 days, under supervision. In the ending of this period, the trainee is qualified (or not) to work in the operation. Records of such operational on the job training are kept by the operation

All employees that works directly with cyanide are recycled in cyanide management, at least, every three years. In the event of any change in operational procedures, the involved persons, beyond participating in the changes proposal and review, are trained just after the changed procedure is approved. Refresh training program scope includes general cyanide knowledge and specific operational cyanide knowledge, as well as emergency response procedures. The operation verifies the effectiveness of the provided training (refresh one too) through testing and planned job observations.

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 8.3
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

All the plant personnel were trained in cyanide related emergencies. Annually, the employees are re-trained (refresh) in these procedures. Last refresh training was carried out on 22/09/2017. Records of such training were evidenced.

The emergency response brigade members are voluntary and passed through a selection process (medical, theoretical and practical), to be assigned as a brigade member. The brigade members were trained and qualified before being assigned as emergency brigade members.

Decontamination and first aid procedures are included in the emergency training scope. All brigade members are CIL operators.

The emergency response brigade members are voluntary and passed through a selection process (medical, theoretical and practical), to be assigned as a brigade member. The theoretical and practical training sessions include the training in the specific emergency response equipment, such as autonomous breathers, type A and B overalls, fire extinguishers, among others. The brigade members were trained and qualified before being assigned as emergency brigade members. All members were trained in the emergency procedure PN-0134(13). Last performed training was 22/09/2017.

Before the emergency simulation exercises, the emergency plan that will be simulated is again reviewed and discussed among the participants. Records of such briefing meetings were reviewed.

As previously mentioned (see Principle 7), the operation planned and implemented an emergency response exercise calendar. The performance of the emergency responders are observed (PJO/ Planned Job Observations) and reported. In the event of any identified opportunity of improvement, corrective and/ or preventive actions are defined and implemented, including the revision of the emergency plan (PN-0134 was found at revision 13, which means that it was updated thirteen times since its creation).

The operation retains all training records, as previously mentioned.

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9. DIALOGUE: Engage in public consultation and disclosure.

Standard of Practice 9.1: Provide stakeholders 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

Summarize the basis for this Finding/Deficiencies Identified:

The operation provide the opportunity for stakeholders to communicate issues of concern regarding the management of cyanide through a direct telephone line (0800 7271500). This telephone line is communicated to the stakeholders through newspaper, radio advertisement, leaflets and magnets distributed during specific and programmed meetings with stakeholders.

All callings are recorded by the operation. It was evidenced that this communication channel is used by the stakeholders, but none of the reviewed records was related to cyanide concerns. The operation also designed and implemented a communication program with all the communities potentially affected by the operation aspects, based on specific and planned meetings. This program is called "Boa Vizinhança (Good Neighborhood)", where the operation and communities representatives discuss several matters, such as environmental monitoring results, cyanide management, among others subjects. Records of such meetings are maintained by the operation and were reviewed during the audit. These meetings happen monthly.

Stakeholders also can communicate with the operation through specific email address (ARPublicas@anglogoldashanti.com.br) which is communicated to the public (internal and external) through the corporate newspaper "Boa Vizinhança" (external stakeholders) and "Da Hora". These newspapers are directly mailed to the stakeholders, every two months.

Another opportunity to internal stakeholders to communicate points of concerns related to cyanide management is through the daily safety dialogues and also through email.

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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

Summarize the basis for this Finding/Deficiencies Identified:

The operation implemented and maintains communication channels with stakeholders (internal & external) in order to dialogue with them. The "boa vizinhança" program is consisted by programmed meetings (monthly) with the community representatives, where several matters are discussed. Another program is related to the environmental monitoring with the representatives of surrounding communities. Monitoring results (surface waters and air quality) are documented and communicated in the meetings with the community (boa vizinhança). The operation also distribute, every two months, specifically designed newspaper (Boa Vizinhança) for external stakeholders and "Da Hora" for internal stakeholders. The operation contact information is available in all these types of media.

Another opportunity to dialogue with stakeholders, is through programmed meetings. Records of such meetings are kept by the operation. Unplanned meetings with public authorities are also used by the operation to dialogue with external stakeholders. Finally, the operation training programs, focused on cyanide management, are also used to dialogue with internal stakeholders (employees and contractors).

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

Summarize the basis for this Finding/Deficiencies Identified:

The operation designed, documented and made available a specific video presentation describing how the cyanide is managed and relevant information related to cyanide emergencies. This presentation is available for everybody. The newspaper "Da Hora" and "Boa Vizinhança", also addresses, on a regular basis, relevant information related to cyanide management, since the production until the destruction of the cyanide. All environmental monitoring results (surface waters and air quality) are documented in booklets and distributed to the communities representatives and also to public authorities (quarterly reports).

Although the local population, in most of the cases, is not illiterate, the operation disseminated, in verbal or visual form, information related to cyanide management at the operation (meetings with community representatives). Environmental monitoring results are followed by color signals were green is conforming, yellow is alert and red is non conforming.

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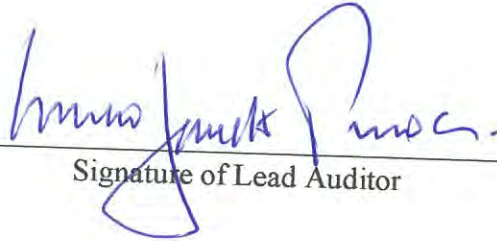
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The operation will also make information related to cyanide incidents public, through the corporate communication process, through press releases. It was evidenced that the corporate communication process documented and implemented communication procedures with the media (newspaper and television) and other stakeholders, mainly public authorities (environmental and labor related ones).

It is important to mention since the operation re-started in 2012, any type of incident involving cyanide had happen.

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