# Gold Mining Operations Summary Audit Report

for

Anglo Gold Ashanti Ltd/
Córrego do Sitio 1 Facility.

March 2018

Prepared by NCABrasil Expert Auditors Ltd.

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This summary audit report contains 30 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:

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

- 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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Córrego do Sítio 1		24/05/2018
Name of Mine	Signature of Lead Auditor	Date

Name of Mine: Córrego do Sítio 1

Name of Mine Owner: Anglo Gold Ashanti Ltd. Name of Mine Operator: Anglo Gold Ashanti Ltd. Name of Responsible Manager: Guilherme Costa Peixoto Address: Fazenda Cristina s/n, Distrito de Brumal.

35960-000, Santa Bárbara, MG.

State/Province: Minas Gerais.

Country: Brasil.

Telephone: (55+31) 3832-9790 Fax: (55+31) 3589-2322

E-Mail: GCPeixoto@anglogoldashanti.com.br

Location detail and description of operation:

The operation is located 20Km of the Santa Bárbara town, Minas Gerais State. It is a typical open pit/underground mine operation with a heap leach facility and a hydrometallurgical plant (CIC). The operation main activities are:

#### 1. Introduction:

The Córrego do Sitio 1 plant uses one distinct process for the production of gold, for oxide ore treatment. The heap leaching process is used to treat oxide ore. A description of the operation process is given below:

#### 2 - Heap Leaching Process:

This encompasses the operations of Crushing, Leaching, Adsorption, Desorption / Electrolysis and Effluent Neutralization.

#### 3. Crushing:

The ROM ore (Run of Mine) is trucked to the metallurgical plant yard. A loader dumps the ore in a hopper, which feeds a 3 ½ "-diameter primary jaw crusher. The material is transported by conveyor belt TC01 to the two-deck vibrating screen (Simplex), with the first deck being 1" and the second deck ¾"; the oversize returns to the hammer mill for secondary by conveyor belt TC02, and the undersize (product of crushing) follows by conveyor belt TC03.

After passing through the scale, but still in conveyor belt TC03, the screw conveyor adds cement at a rate of 6 to 10 kg/t, which varies depending on the existing amount of clay/fine in the ore. The finer the ore, the more cement must be added.

Water is added into the agglomeration drum until the material reaches approximately 15% moisture. The water with cement forms the agglomerates (ore pellets), which are arranged in heaps to facilitate the percolation of the leaching solution.

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#### 4. Leaching:

After agglomeration, the ore is again transported by belt conveyor; while in an impermeable area a 20% concentration of NaCN strip solution (dye colored) is added, as the purpose of the pre-curing stage is to provide for an increased rate of gold extraction. The ore is arranged in heaps, each about 80 m long, 40 m wide, and 3 m high, stacked at an angle of repose of 38°. After the heap has been arranged, a 72-hour precure interval has to elapse before the heap leaching process can start. The heap is leached by a Sodium Cyanide solution at 200 ppm, with an average flow of 11 l/h/m², while pH is maintained above 11. This solution is sprayed over the top of the heaps from sprinklers set up in distribution lines consisting of a 4" PAD master pipe and 1½" PVC tubes. After leaching and percolation take place, the solution with solubilized gold drains out of the heap and is directed to the launders according to its content as described below. Launder 1: pregnant solution with an average content of 3.5 g / t; launder 2: barren solution with an average content of 0.44g/t, and launder 3: rainwater.

#### 5. Adsorption - Pregnant Solution:

The "pregnant" solution, or higher content solution, is directed to launder 01 and discharged into tank TQ 06; then it is pumped at a 45 m3/h flow rate and put in direct contact with activated carbon (CIC – Carbon-in-Column), in 5 columns (two circuits), each with capacity of 750 kg of carbon. The solution that feeds the columns is called ALAD (Portuguese acronym for adsorption feed) and the solution leaving the column is called SAAD (Portuguese acronym for adsorption discharge). It is important to monitor the content retained in carbon during the adsorption process. Dispersant for calcium is added into the columns feed by a measuring pump to prevent scaling of calcium carbonate on the carbon. After the solution percolates through the columns, the adsorption discharge flows by gravity into tank TQ 04 to make up with 200 ppm cyanide and return to the leaching heaps. Once charged, the first adsorption column carbon is transferred by an injector pump injector to a desorption (elution) column while the second column carbon is transferred to the first column and so on with the columns in series.

#### 5.1 Barren Solution:

The so called "barren solution", or low content solution, is directed to tank TQ 03 where it goes though its own adsorption column; the solution in the tank is re-circulated in the column until the carbon becomes charged; the elution of this carbon is made in Elution Tanks TE 01 and TE 02, and then follows the same circuit as the pregnant solution.

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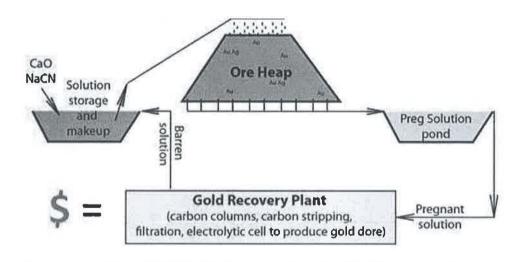
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#### 6. Desorption / Electrolysis:

The solution for the desorption process is prepared in Desorption Tank TD 02, with a concentration of 1% sodium hydroxide at 95° C; it is then pumped to elution columns TE 01 and TE 02, each one with a capacity of 1500 kg of carbon, where the deposited gold is removed and then directed by gravity to buffer tank TD 01. The solution that results from desorption (ALCU) feeds the tub by gravity with average flow of 6.5 m3/h, where the gold is recovered by electro-deposition; the discharge solution (SACU) remains in a closed circuit, re-circulating through desorption tank TD 02, Elution Tank TE, 01 TD and tub, until the recovery of gold in the laden solution is completed.

#### 7. Neutralization of effluents to be discharged:

This operation occurs during the rainy season, when the volume of tanks 03 and 05 exceed 50% of their capacity (in accordance with water balance management procedure). The tank TQ 03 solution is pumped to tank TQ 01 via TQ 02 where the following reagents are measured: hydrogen peroxide, sulfuric acid, copper sulfate and ferrous sulfate. Once neutralized, the solution is discharged after being monitored by the accountable team members and after the authorization of the operation manager.



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## Auditor's Finding

cont .		
This	operation	15

X in full compliance

☐ in substantial compliance \*(see below)
☐ not in compliance

with the International Cyanide Management Code.

Being a re-certification audit, it was observed (as far as I could observe) that during the third certification period (2015~2018), there weren't any significant cyanide incidents requiring reporting to ICMI, or any incidents that required public disclosure or reporting under Standard of Practice 9.3.3.

\* 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: NCABrasil Expert Auditors Ltd. (www.globalsheq.com)

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: 05~23/March/2018 (on-site) and 23~24/May/2018 (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.

<u>Standard of Practice 1.1:</u> 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.

X in full compliance with

The operation is: 
\[ \substantial \text{ in substantial compliance with } \]

Standard of Practice 1.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The contract signed by the operation with Australian Gold Reagents (AGR), # 4600002812, dated 25/02/2014, still valid, clearly addresses that the solid cyanide shall be produced by a certified AGR facility. AGR has just one plant, at Kwinana/ Australia, which is currently certified by ICMI, in accordance with ICMI website information. In the last three years, the operation only bought solid NaCN from AGR Australia Pty, in accordance with the reviewed purchasing documentation. All original requirements reviewed during the last recertification audit, remains the same. The contract is applicable for all Anglo Gold Ashanti Operations, in Brazil and abroad.

The operation does not purchase NaCN from independent 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.

X in full compliance with

The operation is: 
\[ \square \text{in substantial compliance with} \]

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 the operation and the producer (AGR Australia Pty) and the producer with the transporters (AGR Australia Pty. supply chain and Niquini Transportes in Brazil), that general and specific responsibilities are clearly addressed on both of them. Also observed that the AGR Australia Pty. supply chain and Niquini Transportes Ltd. are certified cyanide transporters under the Code.

AGR Australia Pty. already provides the solid NaCN with dye colorant.

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The solid cyanide boxes are transported into sea containers, specifically designed for this purpose, fully labeled according international and Brazilian road transportation laws, and the necessary safety, health and environmental information in Portuguese. The cyanide is transported through an asphalted route, previously selected, in common agreement, by the operation, the producer and the transporter. A risk assessment of the selected route was evidenced. The transportation route can not be changed without the authorization of the operation. The cyanide is transported straight from the Santos port (Brasil) to the operation, without any kind of interim storage.

The operation established a cyanide reception procedure, in order to verify the truck condition (and maintenance) and permits, the driver permits and qualifications, the emergency responses resources (including emergency contacts) and the cyanide transportation documentation. This procedure was evidenced to be implemented during the field audit.

Standard of Practice 2.2. Require that of

Require that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide

management.

X in full compliance with

The operation is: 

in substantial compliance with

Standard of Practice 2.2

☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

As previously mentioned, the solid cyanide is transported into the operation by an ICMI certified transporter (AGR Australia Pty. supply chain (consignor) and Niquini Transportes), which have specific cyanide related emergency response plans. The solid cyanide is transported straight from the Santos port to the operation, without any interim storage or changing of transporter. The solid 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 Pty. supply chain (consignor) and Niquini Transportes) are ICMI certified, according to the ICMI website information.

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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.

X in full compliance with

The operation is: 
\[ \substantial \text{ in substantial compliance with } \]

Standard of Practice 3.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified: (Due to the sensitivity of security issues regarding storage of cyanide, no descriptions of substantial or non-compliance with this aspect of the Standard of Practice should be provided.)

The receiving, storage and preparation area remains the same since 2007. This area was constructed in accordance with Brazilian engineering procedures as evidenced in the first certification audit. It was evidenced that this area was adequately maintained in the last years and was found in perfect order in this opportunity.

The operation replaced the two tanks (preparation and distribution of NaCN solution), by new ones. The cyanide preparation tank has a HCN sensor, pH sensor and level sensor (all calibrated). After preparing, the solution is transferred to another tank, which is equipped with a calibrated level sensor. All level sensors are connected to an alarm system.

The cyanide unloading area was constructed in a restricted area, where only authorized and qualified personnel are allowed to go in, under roof, with a drainage system, on concreted floor, and away from surface waters and people, as evidenced during the field audit.

The warehouse and preparation area are provided with HCN sensors. The unloading operation is performed by qualified operators. All the necessary safety procedures are documented in work instructions as well as the handling instructions. The operators have also portable HCN sensors, during the unloading and preparation activities. The unloading, preparation and storage areas are naturally ventilated and, in the event of any cyanide leakage, these areas are concreted and the recovering of the solid cyanide is easy. The preparation and distribution tanks are inside a secondary containment.

The cyanide storage area (warehouse) is isolated and apart from other storage areas and specifically assigned to store only solid cyanide. It was evidenced that they are well maintained, clearly signed, clean and ordered. Food and tobacco products are not allowed in these areas.

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Standard of Practice 3.2: Operate unloading, storage and mixing facilities using inspections,

preventive maintenance and contingency plans to prevent or contain

releases and control and respond to worker exposures.

X in full compliance with

□ not in compliance with

The operation is: 

in substantial compliance with

Standard of Practice 3.2

Summarize the basis for this Finding/Deficiencies Identified:

The operation uses solid sodium cyanide (dye colored briquettes) which is brought to the operation in sea containers, specifically designated for this purpose, which are returned to the cyanide producer (AGR Australia Pty) just after the unloading activity is concluded, by the cyanide transporter (Niquini Transportes). Before departing the operation, the truck is verified to be in conformance, without any kind of leakage and completely empty and clean. The empty cyanide containers (big-bags) are washed, decontaminated, dried and sent to thermal destruction at a certified supplier. All cyanide containers are washed, decontaminated and dried in a specific installation available for this activity. After that, the decontaminated containers are sent to thermal destruction at a qualified supplier (by the Brazilian local EPA) for this kind of activity. The effluent of this activity returns to the process (pool # 5) were the potential residual cyanide is destroyed. Wooden boxes are dismantled and also sent to for thermal destruction, at the same qualified supplier.

The unloading activity is performed in accordance with documented work instructions, specifically developed by the operation after identifying and evaluating the risks related to the activity. The risk evaluation of the activity is performed in a structured way. Cyanide boxes are pilled in three (max).

The unloading operators are trained and qualified to perform that activity.

Records of such trainings as well as field interviews demonstrated that the operators are prepared to perform the unloading, storage and mixing activities. The required PPEs (personal protective equipment) for the unloading, storage and mixing activities are clearly defined in the work instructions and were evidenced to be used during the field audit. The unloading, storage and mixing activities are monitored and always performed by two operators.

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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.

X in full compliance with

The operation is:

☐ 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. The design parameters such as freeboard, leaching flow rate, pH, CNt (total cyanide) content in process effluents, instrumentation alarm levels, tank alarm levels among others, are clearly addressed at the documented management and operational procedures and instructions. In both cases, it is clear the inspection frequencies are adequate to confirm that the operation is functioning in accordance within the design parameters.

The operation defined and implemented a site inspection program, performed on a daily basis, just afterevery shift change, and also a comprehensive preventive maintenance program, focused on the operationinstallations (pumping & piping systems, tanks, pools and generator back-up system). During the field audit, it was evidenced that these installations are in good condition and well maintained. Also observed that the plant is dry without any kind of leakage or spill. The operation did design, document and implement a change management procedure (PN-0003(0)), where a SHE risk evaluation is performed before the proposed configuration change be approved.

The operation did develop, document and implement a specific emergency response plan (PN-0134(13)) considering all potential cyanide related emergency scenarios, including upset in the water balance (considering even the cessetion of the operation), any deviation from design and operational criteria (e.g. pH, freeboard, leaching solution concentration and flow, among others). Reviewed inspection records for TQ-0695-01 (new cyanide solution preparation) and TQ-0695-02 (new cyanide solution distribution), both including the inspection of secondary containment and drainage system. Also reviewed the inspection records of solution pools TQ-01 to TQ-07. During the field audit, it was evidenced that these installations are in good shape and well maintained. Also reviewed the inspections made at are 0638 (CIC + elution). Was evidenced, during the field audit, that the leaching system is well maintained, the drainage system is covered with a net and in good condition. The pumping system is inspected and maintained in a structured way. Was evidenced during the audit that these installations are in good shape. It was not observed any leakage at these systems and the plant was dry. Being part of the water balance monitoring system, all solution containing tanks (open water) are inspected on a daily basis, every shift turn, in order to verify the available freeboard and other aspects such as fauna fatalities and pumping system.

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It was evidenced that all inspection activities are recorded, including date, shift, name of the inspector, installation being inspected, conforming/non-conforming aspects. Any non-conforming aspects are recorded and communicated to the maintenance process in order to fix the identified non-conformity. Verified that corrective maintenance activities were very low during 2016, 2017 and 2018, concluding that the preventive maintenance program is effective. Was evidenced that the operation has a back-up generator (TAG # 0632-GE-01/ 440kVA), which is maintained and tested on a weekly basis (maintenance plan # 10008225). Reviewed maintenance and testing work orders # OT101243849, OT101220946, OT101202607 and OT100797683. Also evidenced the generator installation during the field audit.

Standard of Practice 4.2:	Introduce management and operating systems to minimize cyanide us thereby limiting concentrations of cyanide in mill tailings.	
The operation is:	☐ in full compliance with ☐ in substantial compliance with ☐ not in compliance with X not subject to	Standard of Practice 4.2

Summarize the basis for this Finding/Deficiencies Identified:

Although the operation do not add cyanide solution during the crushing (there is no milling) and having a proactive approach, 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 quality. The operation performs cyanidation tests (column leaching/ bottle leaching testing) in order to determine the best ratio between cyanide addition and gold recovery. Since 2007, the operation updated the metallurgical study in order to confirm the ratio between cyanide consumption and gold recovery. The consumption of cyanide is decreasing since 2008, although the gold production has raised. The cyanide solution is applied in the beginning of the pile formation (pre-cure) and during the leaching process. The cyanide consumption is monitored on a regular basis (monthly). In the beginning of the year, the operation establishes a cyanide consumption plan where, in accordance with the mineral quality and prior tests results, the maximum cyanide consumption is defined for each month.

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Standard of Practice 4.3:

Implement a comprehensive water management program to protect against

unintentional releases.

X in full compliance with

The operation is:

☐ in substantial compliance with

Standard of Practice 4.3

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

During 2007, the operation designed, documented and implemented a probabilistic water balance management procedure (dated 30/07/2007). Since then, the water balance management system did not suffer any major change and the management procedure remains the same. During 2018, the operation, in conjunction with an expert engineering company, is reviewing its water balance model. This activity is planned to be concluded by the end of June 2018. The water balance is monitored on a daily basis, considering the results obtained through six installed hydrometer (water intake), water precipitation (rain intake), evaporation rate, process solution and effluent pools content (freeboard). Usually, the operation operates on a closed circuit, re-circulating effluents & solutions and without direct or indirect discharge to surface waters. It was evidenced that the operation also monitors potential seepage down gradient of the leaching plant, through piezometers, but the monitoring results showed that there is no seepage and this aspect is not relevant to the water balance management (see 4.6 and 4.9). The operation only discharges process effluents, after neutralization, on surface waters during the raining season, and only if necessary. (see 4.5). The obtained monitoring results are compared with that ones considered in the initial study (30/07/2007) in order to confirm that the probabilistic assumptions were correct, mainly focusing the rain precipitation. The water balance monitoring is monthly updated. Reviewed monitoring records from the last three years.

The operation inspects, on a daily basis, all the TSFs (process solution/effluent pools). Main TSFs (process solution pools) are # 3 (the biggest), # 4 and # 1. Freeboard for all three are calculated to be 1 meter, but there is an alarm system set at 80% of the volume, at TSF # 3. TSFs

#3, #4 and #1 are inter-connected.

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

☐ in substantial compliance with The operation is:

□ not in compliance with

Standard of Practice 4.4

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that the operation has six process solution and effluent pools and the ones (4 and 6 / process solutions) that have CNw (WAD cyanide) higher than 50ppm (pregnant solution and barren solution pools) are covered with nets in order to protect the wildlife to contact that surfaces). In the others four process effluent pools (1,2,3 and 5), the operation ensures CNw lower than 50ppm. Beyond these controls, all the heap leaching process plant is fenced, as evidenced in the field audit.

The operation defined, documented and implemented a monitoring program focused on open, surface and underground waters. Reviewed records of monitoring results performed during 2016, 2017 and 2018, related to process effluent pools 1,3 and 5 all showing that CNw is lower than 50ppm. Process effluent pool # 2 is used to neutralize effluent coming from process effluent pool #3 and discharged into process effluent pool #1. The operation implemented a daily inspection system, focused on the process effluent pools and, among other aspects that shall be inspected (available freeboard, for example), fauna mortality is verified. No cases of fauna mortality were evidenced since 2007, reinforcing that maintaining CNw lower than 50ppm is effective. The operation designed the adequate leaching piping configuration (piping matrix), composed of a main piping line of 4" and associated piping lines of 1,5". Wobbler type sprays were installed every 9 meters as well as a valve system. The maximum solution flow rate is 10 liters/hour/sq.meter. This configuration ensures that solution ponds will not occur (if they begin to occur, the solution flow rate is decreased) and there will not have overspray of solution off the heap liner. The wind speed is another aspect monitored by the operation, in order to ensure no overspray of the leaching solution. The heap leaching piles are monitored, from the control room, with the help of 180 degrees cameras. Confirmed during the field audit.

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

X in full compliance with

☐ in substantial compliance with Standard of Practice 4.5 The operation is:

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

During the rainy season (October to April), depending on the water balance, the operation may discharge the content of process effluent pool #1, after neutralization, on surface water. Before releasing the effluent, the operation monitor the cyanide content (CNt (total cyanide), CNw (WAD cyanide) and CNf(free cyanide)). Verified that the operation discharged the effluent to surface waters six times between 2016 and 2018. The highest CNf content, at TSF pool # 01, was 0.01 ppm (record dated 22/11/2017) and < 0.005 ppm at the mixing point (Conceição river).

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After discharging the effluent, the operation monitors the surface water quality, up and down stream of the mixing zone. Maximum CNf content was 0.005 ppm. The water is analyzed by an accredited laboratory, which is certified in accordance with ISO 17025 (as requested by the Brazilian environmental legislation) and in accordance with approved international analytical procedures.

The operation does not have indirect discharges to surface waters. The operation monitors on a regular basis, the quality of surface water just below the operation. Monitoring results showed that there is no contamination of the surface water. These monitoring results shall be communicated, on a quarterly basis, to the local Environmental Protection Agency/ EPA (FEAM). Records of these communications are kept by the operation.

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, 2017 and 2018 (results until February 2018) and communication records with local EPA, presenting the monitoring results.

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

X in full compliance with

The operation is:

in substantial compliance with

Standard of Practice 4.6

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified

Beyond the water management system, the operation installed piezometers down gradient of the operation in order to monitor potential seepage and also to monitor the underground water quality. It was observed, reviewing monitoring reports between 2016 and 2018, that there is no seepage. Evidenced that the values for CNt and CNw are below 0,005 ppm.

The operation monitors the underground water quality, through piezometers installed down gradient of the operation. It was evidenced, through monitoring reports, that the values of CNt and CNw are below 0.005 ppm.

The operation does not use mill tailings as backfill. The finished heap leaching pile, after neutralization, is disposed at a specific area, properly designed for this purpose, as observed during the field audit.

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Standard of Practice 4.7:	Provide spill prevention or containment measures for process tanks and pipelines.
	X in full compliance with

Standard of Practice 4.7

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation is:

The solid cyanide is received at a concreted area and stored inside a specific warehouse, which is locked.

The preparation area is also concreted, where there is a secondary containment for the preparation and distribution tanks. The access to the preparation area is also limited to the authorized plant operator.

☐ in substantial compliance with

Remains all the time locked, as evidenced during the field audit.

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 (see 4.1).

According to the water balance management, all process effluent (or solution) is re-circulated through the process plant. When the process effluent pool # 1 is full and it is not possible to re-circulate its content, then it is neutralized, monitored and then released to the Conceição river. This last procedure is not usual, and is only applicable during the rainy season, when necessary.

All process tanks have secondary containment, as observed during the field audit.

As observed during the field audit, all process solution and effluents pipelines have a secondary containment in order to prevent any leakage to impact the environment and the operators. The operation did a risk evaluation related to cyanide solution piping. All cyanide solution pipelines are far from surface waters (Conceição river).

There were no major changes in the installations since the last audit (a second circuit of adsorption columns was installed). All the tanks are made of carbon steel.

Process solution and effluent pools are made with HDPE. Piping is most of the cases are made of HDPE and also of carbon steel (smaller diameters). Reviewed engineering drawings and confirmed during field audit.

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The operation is:  □ in substantial compliance with □ not in complianc	Standard of Practice 4.8:	Implement quality control/quality assure cyanide facilities are constructed accesstandards and specifications.	
The operation didn't suffer any major change in its configuration since the certification audit. All the engineering documentation reviewed during the certification audit (2007) remains unchanged and were kept by the operation.  During the year of 2008, the operation passed through a technical inspection, performed by a Brazilian Engineering company (HFL Engenharia). The technical inspection was leaded by Mr. Helberth Francisco Lopes, a qualified engineer in accordance with Brazilian legislation (permit CREA/MG 87071D and authorization ART 50534942), which concluded that the installations remains adequate and were constructed in accordance with acceptable engineering standards. Reviewed technical inspection report dated 03/06/2008, issued by HFL Engenharia Ltd. It was evidenced that the operation installed two new tanks at area 0695 (NaCN preparation area, Tanks 0695-TQ-01 and 0695-TQ-02), as previously mentioned (refer to SoP 4.1). Reviewed QC/QA records (Gerfan Soluçoes Industriais Ltd databook).  Also evidenced that the operation installed 5 new adsorption columns which were inspected, commissioned and approved by a certified engineer (CREA-MG/194198-D/ART # 14201800000004558393).  Standard of Practice 4.9:  Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.  X in full compliance with  The operation did design, document and implement a general environmental monitoring plan as required by the local environmental protection agency.  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 an accredited laboratory which is certified in accordance with ISO 17025 by Inmetro (Brazilian accreditation agency). It was observed that the operation defined a sampling map throughout the plant, were each sampling point has an identification. T	The operation is:	☐ in substantial compliance with St	tandard of Practice 4.8
The operation is:  X in full compliance with  In substantial compliance with  Standard of Practice 4.9  In not in compliance with  Summarize the basis for this Finding/Deficiencies Identified:  The operation did design, document and implement a general environmental monitoring plan as required by the local environmental protection agency.  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 an accredited laboratory which is certified in accordance with ISO 17025 by Inmetro (Brazilian accreditation agency). It was observed that the operation defined a sampling map throughout the plant, were each sampling point has an identification. The content of CNt, CNw and CNf is always monitored, depending on the sampling point and the requirement defined at the environmental permit	The operation didn't suffer any major change in its configuration since the certification audit. All the engineering documentation reviewed during the certification audit (2007) remains unchanged and were kept by the operation.  During the year of 2008, the operation passed through a technical inspection, performed by a Brazilian Engineering company (HFL Engenharia). The technical inspection was leaded by Mr. Helberth Francisco Lopes, a qualified engineer in accordance with Brazilian legislation (permit CREA/MG 87071D and authorization ART 50534942), which concluded that the installations remains adequate and were constructed in accordance with acceptable engineering standards. Reviewed technical inspection report dated 03/06/2008, issued by HFL Engenharia Ltd. It was evidenced that the operation installed two new tanks at area 0695 (NaCN preparation area, Tanks 0695-TQ-01 and 0695-TQ-02), as previously mentioned (refer to SoP 4.1). Reviewed QC/QA records (Gerfan Soluçoes Industriais Ltd databook).  Also evidenced that the operation installed 5 new adsorption columns which were inspected, commissioned and approved by a certified engineer (CREA-MG/194198-D/		
The operation is:  In substantial compliance with  Summarize the basis for this Finding/Deficiencies Identified:  The operation did design, document and implement a general environmental monitoring plan as required by the local environmental protection agency.  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 an accredited laboratory which is certified in accordance with ISO 17025 by Inmetro (Brazilian accreditation agency). It was observed that the operation defined a sampling map throughout the plant, were each sampling point has an identification. The content of CNt, CNw and CNf is always monitored, depending on the sampling point and the requirement defined at the environmental permit	Standard of Practice 4.9:		
The operation did design, document and implement a general environmental monitoring plan as required by the local environmental protection agency.  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 an accredited laboratory which is certified in accordance with ISO 17025 by Inmetro (Brazilian accreditation agency). It was observed that the operation defined a sampling map throughout the plant, were each sampling point has an identification. The content of CNt, CNw and CNf is always monitored, depending on the sampling point and the requirement defined at the environmental nermit.	The operation is:	☐ in substantial compliance with S	tandard of Practice 4.9
required by the local environmental protection agency. 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 an accredited laboratory which is certified in accordance with ISO 17025 by Inmetro (Brazilian accreditation agency). It was observed that the operation defined a sampling map throughout the plant, were each sampling point has an identification. The content of CNt, CNw and CNf is always monitored, depending on the sampling point and the requirement defined at the environmental nermit.	Summarize the basis for th	is Finding/Deficiencies Identified:	
21/25/2010	required by the local environmental protection agency. 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 an accredited laboratory which is certified in accordance with ISO 17025 by Inmetro (Brazilian accreditation agency). It was observed that the operation defined a sampling map throughout the plant, were each sampling point has an identification. The content of CNt, CNw and CNf is always monitored, depending on the sampling point and the requirement defined at the environmental nermit.		
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All the sampling procedures were developed by qualified laboratory personnel and all the samples are collected by these persons. On a daily basis, during operational inspections, the monitoring is also focused on the observation of the fauna. No wildlife mortality was observed in the last three years.

The monitoring frequency is defined by the local environmental protection agency and as required by the environmental permits. Depending on the environmental aspect, the frequencies can be daily, weekly, monthly or even once by semester. The monitoring frequencies are the same since the last recertification audit and are adequate to characterize the medium being monitored and, in the event of any changes in the environmental conditions, these changes are promptly identified.

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.

**X** in full compliance with

The operation is: 

☐ in substantial compliance with Standard of Practice 5.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation developed, documented and implemented a management procedure, focused on the management of the closure activities of the operation. It was evidenced that the operation updated the operation decommissioning and closure plan, which was developed by Golder Associates Ltd. (report dated January 2018). This updated decommissioning and closure plan was reviewed during this audit. The plan was developed and updated considering World Bank directives, ICMM directives, ICMI directives and Brazilian legislation (COPAM 127/08 and NRM 20) directives.

The mentioned decommissioning and closure plan, clearly describes the schedule to be followed during the decommissioning and closure activities, including activities (environmental monitoring) that shall be performed after the operation closure. The operation is planned to be closed-out on 2035.

In accordance with internal management procedures, the decommissioning and closure plan shall be reviewed and updated every three years. Reviewed plan was updated in January 2018.

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Standard of Practice 5.2:	Establish an assurance mechanism cap decommissioning activities.	pable of fully funding cyanide related	
The operation is:	X in full compliance with ☐ in substantial compliance with ☐ not in compliance with	Standard of Practice 5.2	
Summarize the basis for this Finding/Deficiencies Identified: The Golder Associated Ltd. report dated January 2018, identifies the required costs related to the implementation of the plan. The total amount was included in the "reclamation cost report" (dated 31/12/2017), which is annually updated. Reviewed values since 31/12/2015. The operation updates annually the costs related to the implementation of the decommissioning and closure plan. Reviewed reclamation cost reports from 2015, 2016 and 2017 (last updated on			
31/12/2017). 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, theoperation has also insurance certificates related to the operational risks. Annually the operation has its financial health audited by independent third part auditors. The last financial audit was performed by Ernst&Young, a legally established financial auditing company in Brazil (permit CRC-2SP015199/O-6). Last financial audit was related to the financial year ended 31/12/2017 and was led by Mr. Tomas L. A. Menezes, a qualified financial auditor (permit CRC- 1MG090648/ O-0). The financial audit was carried out in accordance with International Financial Report Standards (IRFS), which are acceptable either in Brazil and internationally. The financial auditreport clearly states that the operation has enough financial health to fund the implementation of the closure plan. The financial audit report was distributed to external stakeholders such as banks, Brazilian stock exchange, Brazilian Public Financial authorities. It is also available at <a href="https://www.anglogoldashanti.com">www.anglogoldashanti.com</a> , for public consultation.			
6. WORKER SAFETY:	Protect workers' health and safet	ty from exposure to cyanide.	
Standard of Practice 6.1:	Identify potential cyanide exposure necessary to eliminate, reduce or contr		
The operation is:	X in full compliance with ☐ in substantial compliance with ☐ not in compliance with	Standard of Practice 6.1	
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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 operational and management procedures for cyanide related activities. The risk identification and evaluation process is performed in a structured way and involves different stakeholders. The development of work instructions is performed in conjunction by these stakeholders (operators, supervisors, managers and SHE professionals). The required PPEs for each activity (unloading, leaching, maintenance, neutralization, work at confined spaces) are defined and addressed in the documented work instructions. In order to maintain the risk evaluation updated and, in consequence, the work instructions, the operations established a procedure to update them if any circumstance has changed or, at least, every two years. This procedure is part of the annual refreshing program for supervisors and operators. The high strength NaCN solution is dyed for clear identification in case of any leakage, as previously mentioned.

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.

X in full compliance with

The operation is: ☐ 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 pH is effectively controlled and monitored (through calibrated pHmeters) in the operation. Alarm systems are in place. Verified, during the field audit, that the usual pH value is around 12. The pH is controlled through the addition of caustic soda. The operation has fixed calibrated HCN detectors in the cyanide preparation and distribution tanking area and the operators also use portable calibrated HCN detectors. Both cases evidenced in the field audit. The fix and portable HCN detectors, are maintained and calibrated in accordance with a calibration management system, by the detectors manufacturers. Reviewed calibration records of all HCN detectors. It was evidenced during the field audit, that the operation premises (cyanide circuit) are richly signed, including the prohibition of drinking, eating and smoking in these areas. Auxiliary emergency installations/ equipments such as low pressure eye-washers and showers, fire extinguishers, were evidenced in the operation premises. Some of these auxiliary installations were tested during the audit and worked well.

Operators are always wearing the defined PPE to work in the process plant, including semi-facial masks with appropriate filter. At the preparation area, both operators are using complete PPE defined to the activity, including overall type A, full face masks, with positive air flow (main operator) and full face mask with appropriate filter for the observer (second operator). If the 4 ppm HCN alarm sounds, they must leave the area, and the emergency response team will be activated. Anyhow, the operation strictly controls the pH in all cyanide containing tanks in order to prevent the generation of HCN. During the field audit, it was not evidenced any case where HCN content was greater than 0 ppm, confirming the effectiveness of the defined operational control.

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Also evidenced that that the operation implemented a fire extinguisher (CO2 (non acidic) and dry powder ones) management system, in order to maintain these auxiliary equipments under good operational condition. It was evidenced, during the field audit, that the operation installations (tanks, piping, valves, pumps, pools) are in good shape, the tanks and piping are adequately painted and signed, and the cyanide flow identified. Cyanide MSDS is also available (in Portuguese) at different places in the plant. It was evidenced that the operation has defined and implemented procedures to evaluate SHE incidents (real and potential).

Any cyanide related incident occurred in the plant, during the last three years, confirming that the cyanide management is effective.

Standard of Practice 6.3:

Develop and implement emergency response plans and procedures to

respond to worker exposure to cyanide.

X in full compliance with

The operation is:

☐ in substantial compliance with

Standard of Practice 6.3

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation has developed emergency procedures for that activities at the leaching plant and has an emergency care center (with medical assistance 24h per day), fully equipped with a resuscitator, one ambulance, antidote kits (cyanokit), telephone, radio, oxygen cylinders. These facilities were evidenced in the field audit. All the first aid equipments are effectively inspected by the local nurses, including the ambulance (which is ready to be used and was tested during the audit). Evidenced the inspection records. The antidotes are stored under controlled conditions. The operation qualified the local hospital (Nossa

Senhora das Mercês) as a complementary resource in the event of cyanide related emergencies. The transportation procedures between the operation and the local hospital are tested. It was evidenced that cyanide related emergency drills are effectively performed by the operation, including and involving the local Hospital team in the exercises. Evidenced 2016 and 2017 annual emergency simulation plan and related drills records.

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7. EMERGENCY RESPONSE Protect communities and the environment through the development of emergency response strategies and capabilities.

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

X in full compliance with

The operation is: 

in substantial compliance with Standard of Practice 7.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Evidenced Cyanide Response Plans, PN-0134(13) and PAEM (Medical Emergency Response Plan), 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 Australia Pty. and Niquini Transportes ones) as well as the specific procedures for each identified scenario. The above mentioned emergency plans describe specifically the response for all cyanide related emergencies (requirements 7.1.2a to 7.1.2j).

Cyanide related emergencies responses during external transportation to the operation are covered by the plan, in connection with the NaCN producer (AGR Australia Pty., international shipment) and NaCN transporter (Niquini Transportes, inside Brazil) ones, both ICMI certified, and the operation, that will have a support role in this scenario. The internal NaCN transportation is also covered by these emergency plan. The plans are specific to NaCN transportation by truck (transporting original sea containers) and to

the specified route between the Santos Port and the operation. The Niquini Transportes' plan refers to the support of WGRA, a qualified emergency responder.

The emergency plans clearly address specific responses to that situations, considering internal and external stakeholders. It was observed that, in the last three years, no cyanide related emergencies 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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Involve site personnel and stakeholders in the planning process.

Standard of Practice 7.2:

	X in full compliance with	
The operation is:	☐ in substantial compliance with	Standard of Practice 7.2
	□ not in compliance with	
The emergency response pla of each individual process (p coordination, among others) manager of the operation. T through training sessions, indemergency drills, the operation ones) in order to review the estakeholders, the operation of plan with community repress supplier, the cyanide transportes of the cyanide trans	Finding/Deficiencies Identified:  ns were developed based on the risk evaluation and was reviewed and approved by the content of the emergency plans were internally completed in the emergency drills. It was observed on performs specific meetings with the semergency plans and plan the emergency ommunicates and discuss, during specific entatives and also during the emergency of the local hospital, the local police and wed in the emergency planning, being directly differentiated and also participating in the least external emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords of such meetings are kept by the open content of the emergency drill involving ords.	nmental coordination, health occupational safety and health amunicated to the involved workforce of that before performing planned stakeholders (internal and external by drill. Focusing the external ic planned meetings, the emergency drill planning meeting. The cyanide and firefighters, the emergency ectly communicated about their elemergency drill planning and g cyanide transportation, performed
Standard of Practice 7.3:	Designate appropriate personnel and resources for emergency respon	, , ,
The operation is:	X in full compliance with  ☐ in substantial compliance with ☐ not in compliance with	Standard of Practice 7.3
Summarize the basis for this Finding/Deficiencies Identified:  The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Evidenced Cyanide related emergency plans (PN-0134(13) and PAEM (Medical Emergency Response Plan). Responsibilities and authorities are clearly defined and communicated to all involved stakeholders (internal and external). 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 committee organizational flowchart was also evidenced. The emergency brigade master list addresses all the necessary information about the brigade members, including contact details of internal and external stakeholders. Emergency coordinators were defined and refreshed trained annually during the planned drills and specifically in the emergency response plans.		
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The emergency response plans identify the required resources (hardware) that are necessary to each situation. The basic emergency response hardware is consisted of one ITU ambulance (complete equipped, daily tested and ready to be used), auxiliary equipment (PPEs) for the brigade members, such as chemical/flame resistant overall, chemical gloves, oxygen masks and cylinders, chemical masks. The AGR Australia Pty.'s emergency plan covers that situations outside the operation (during international transportation), in conjunction with Niquini Transportes (transport inside Brazil), both ICMI certified stakeholders.

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.

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, as observed in the last integrated emergency drill performed during September 2017. After the drills, a specific meeting involving all participants (internal and external) is conducted in order to review the emergency drill results and, when necessary, to improve the emergency plan. Records of these meeting are maintained by the operation and were reviewed during this audit

Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan. Was observed, for example, that the operation plan and performs quarterly meetings with community representatives. Records of such meeting are maintained by the operation and were reviewed in this opportunity. The operation emergency plan was found at revision # 13, demonstrating that the operation maintains the plan under continuous improvement.

Standard of Practice 7.4. Develop procedures for internal and external emergency notification and

reporting.

X in full compliance with

The operation is: 

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. Communication procedures with external media were found in place.

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Standard of Practice 7.5.	Incorporate	into	
Diunaura or I ractice 1.5.	mediporale	mu	

Incorporate into response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment

chemicals.

X in full compliance with

The operation is:

 $\square$  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 Plans (PN-0134(13) and PAEM). 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 soil shall be neutralized with the aid of specific chemicals products such as nitrogen peroxide solution or MgO solution (to control pH), and disposed back in the heap leaching pile. Cyanide solutions are recovered with the aid of specific pumps and returned to the leaching process pools.

Surface waters are monitored and no chemical products are allowed to neutralize the surface water.

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).

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.

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

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X in full compliance with

The operation is: 

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 Plans (PN-0134(13) and PAEM) .The emergency response plans were 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 specificstakeholders 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 simulation exercises).

Evidenced the 2016, 2017 and 2018 Annual Emergency Drill plan. Evidenced three emergency drills performed since 2016, involving NaCN intoxication during leaching process, NaCN transportation (in conjunction with Niquini Transportes and other external stakeholders), HCN intoxication during cyanide solution preparation.

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.

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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.

X in full compliance with

The operation is: 
\[ \square \text{in substantial compliance with} \]

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 programs 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 every three years. 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 related to initial and refresh trainings performed during 2016, 2017 and 2018. The training record is an assistance list with the date, instructor name, attendees name and signatures, training content and general perception about the attendees made by the instructor. During the field audit, it was evidenced that the employees are aware about the cyanide related risks.

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.

X in full compliance with

The operation is: 

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 an "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 (milling and leaching process), plant maintenance technician and laboratory technician.

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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, at the Human Resources process.

All employees that works directly with cyanide are recycled in cyanide management every three years (refresh training program).

The operation verifies the effectiveness of the provided training (refresh one too) through testing and planned job observations. Records of refresh trainings, tests and job observations are maintained.

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

X in full compliance with

The operation is: 
\[ \substantial \text{ in substantial compliance with } \]

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 retrained (refresh) in these procedures. 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 members were trained in the emergency procedure PN-0134 (13). Last performed training was 17/04/2018. Before the emergency drill 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 is observed 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(13) was found at revision 13), which means that it was updated thirteen times since its creation.

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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:	X in full compliance with ☐ in substantial compliance with ☐ not in compliance with	Standard of Practice 9.1
The operation provides the management of cyanide the communicated to the stake distributed during specific at All callings are recorded by the stakeholders, but none of designed and implemented at the operation aspects, based (Good Neighborhood)", who such as environmental monimeetings are maintained by quarterly. Stakeholders also can (comunicacao@anglogoldas through the corporate newsp	Finding/Deficiencies Identified: opportunity for stakeholders to communiough a direct telephone line (080 eholders through newspaper, radio and programmed meetings with stakeholders the operation. It was evidenced that the office the reviewed records was related to a communication program with all the on specific and planned meetings. The ere the operation and communities retoring results, cyanide management, and the operation and were reviewed dure communicate with the operation hanti.com.br) which is communicated apper "Boa Vizinhança" and the magazimunicate points of concerns related to so through email.	O 7271500). This telephone line is advertisement, leaflets and magnets ders. The operation also communities potentially affected by sprogram is called "Boa Vizinhança presentatives discuss several matters, mong others subjects. Records of such ing the audit. These meetings happen through specific email address to the public (internal and external) ine "Sintonia". Another opportunity to
Standard of Practice 9.2:	Initiate dialogue describing cyar responsively address identified concer	
The operation implemented external) in order to dialogumeetings (quarterly) with the	X in full compliance with  ☐ in substantial compliance with ☐ not in compliance with  Finding/Deficiencies Identified: d and maintains communication chance with them. The "Boa Vizinhança" ne community representatives, were see environmental monitoring with	program is consisted by programmed everal matters are discussed. Another
communities. Monitoring results (surface waters and air quality) are documented and communicated in the meetings with the community (Boa Vizinhança). The operation also distributes a specifically designed newspapers "Boa Vizinhança" and the magazine "Sintonia". The operation contact information is available in all these types of media.		
stakeholders. Records of sauthorities are also used by		on. Unplanned meetings with public al stakeholders. Finally, the operation
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Standard of Practice 9.3:

Make appropriate operational and environmental information regarding

cyanide available to stakeholders.

X in full compliance with

The operation is:

☐ 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 distributed specific booklets describing how the cyanide is managed and relevant information related to cyanide emergencies. This booklet is available for everybody. The newspaper "Boa Vizinhança" and the magazine "Sintonia", 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.

As previously mentioned, there were not any cyanide related incident at the operation or during the transportation. In the event of any type of incident, the operation implemented several communication channels, in order to attend public consultation.

The following contact information is available to the general public:

0800-7271500 (corporate communication)

0800-7038422 (denounces)

(55+31) 3832-9999 (operation)

Email: <a href="mailto:com.unicacao@anglogoldashanti.com.br">com.unicacao@anglogoldashanti.com.br</a> (corporate communication)

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).

Córrego do Sítio 1

Name of Mine

Signature of Lead Auditor

24/05/2018