JÚLIO MONTEIRO AUDITORES DA QUALIDADE JM aQ

RIO DE JANEIRO, BRAZIL

INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE
Gold Mining Operations
Summary Audit Report

For The
International Cyanide Management Code
Anglo Gold Ashanti – Unit Serra Grande Operation – Crixás / GO, Brazil

www.cyanidecode.org

April 2019

Lead Auditor Signature

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Lead Auditor Signature

INTRODUCTION

Information on the audited operation

Name of Mine: Serra Grande Operation
Name of Mine Owner: Anglo Gold Ashanti Ltd.
Name of Mine Operator: Anglo Gold Ashanti Ltd.
Name of Responsible Manager: Rogerio Carvalho da Costa (Sustenability and Administration Manager)
Address: Rodovia GO 336, Km 97 Crixás
Zip Code 76510-000
State/Province: Goiás
Country: Brazil
Telephone: 55 62 3365-7113
Fax: 55 62 3365-7125
Email: RCCosta@anglogoldashanti.com.br

Aspects of the location and description of the operation:

The Serra Grande Operation mining facility is located on Highway GO 336, Km 97 Crixás - Goiás State, Brazil.

The leaching area of Serra Grande Operation comprises 16 tanks; such tanks are provided with mechanical stirring by means of propeller-type stirrers and stirring by compressed air injection. Leaching is divided into two stages: pre-liming and cyanidation.

The Pre-liming process takes place in tanks 1, 2 and 3 and consists in preparing the slurry for Cyanidation, which is initiated in tank 4.
Lime addition, already initiated during milling is repeated in tank 1 of the leaching area. The pH is control at approximated 10:5 at 2:00 hour interval by analyses made by a pH meter and being correct according to the result of the analysis.
Hydrogen Peroxide is also added in those tanks in order to increase the concentration of dissolved oxygen on the slurry, a very important reagent to the cyanidation reaction. The contact time in the pre-liming is approximately 4 hours.

Cyanidation takes place in tanks - 4 to 21. Sodium cyanide solution is added to tank 4. Free cyanide concentration in this tank is approximately 400 ppm.
In tanks 5 to 21, the slurry is constantly stirrer with the reagents. The free cyanide concentration and the pH values decrease gradually from tank to tank and controlled in the last tank at 100 ppm of free cyanide and pH 10. Oxygen is dissolved in the slurry ranges from 10 to 16 ppm and is essential for a perfect solubilization. It participates actively in the reaction. The contact time in the cyanidation is approximately 24 hours.

The filtering circuit is dividing into two stages: primary and secondary filtering.

The primary filtering circuit is supply with the cyanided slurry from the leaching area. During the primary filtering process, the cake (solid) deposited along the cylindrical body of the filter is washed using barren solution from the precipitation and discharged, then, the solution is absorbed into the filters. Next, the cake from the primary filtering is sent to a primary re-slurring tank, whereas the filtrate (gold-bearing solution) is pump to a receiving tank.

From the primary re-slurring tank, the slurry is pump to the secondary filters, starting the secondary filtering. As in the primary filtering, the process is repeat and two products are obtain: a gold-bearing solution (filtrated), which is pumped into a second re-slurring tank and the final solid waste from the process, which is fed to a secondary re-slurring tank in which it is re-slurring to a 50% solids concentration and pumped to the Tailing Dam.

The gold precipitation from the gold-bearing solution is the Merrill Crowe process, which consists in clarification and de-aeration of the gold-bearing solution before the gold precipitation with zinc powder and subsequent separation of the precipitate in press filters. The gold-bearing solution from the filtering is supply to two hopper clarifiers, for the first clarification stage. Next, it goes through the second clarification stage, which consists of filtering through sheet filters, minimizing the amount of solid particles still present in the solution. After the clarification, the oxygen contain in the gold bearing solution is removed by two de-aerators.

The zinc powder is added to the solution by means of a dosage screw and a cone interconnected to the de-aerated solution. The obtained precipitate is send to the smelting plant.

SUMMARY AUDIT REPORT

FOR CYANIDE GOLD MINNING OPERATIONS

Auditor's Findings

This Operation is:

X in full compliance with the ICMI

□ in substantial compliance

□ not in compliance

No significant cyanide incidents or exposures and releases were note as occurring during the 3 years cycle audit period.

Audit Company: JMAQ – JULIO MONTEIRO AUDITORES DA QUALIDADE Ltda.
Auditor Team Leader: Julio César Macedo Monteiro
2nd. Auditor: Marcelo Vieira Monteiro
E-mail: jmaq@ig.com.br
Date(s) of Audit: April 09 to 11 / 2019

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 conduct in a professional manner in accordance with the International Cyanide Management Code Verification Protocol for Cyanide Transportation Operations and using standard and accepted practices for health, safety and environmental audits.

Name and Signature

ICMI Lead Auditor - Julio C. M. Monteiro

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Reconheço por SEMELHANÇA a firma de: JULIO CESAR MACEDO MONTEIRO
Niterói, 17/07/2019. R$7,73 17209C32
Em test da Verdade. Conf. por:
VALDI JOSE DO NASCIMENTO- Escrevente autorizado-Mat. 94/3004
EDCJ40063 - ECB Consulte em www3.tjrj.jus.br/sitepublico
089540 AB03
Valdi José do Nascimento
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Matrícula nº 94/3004

Lead Auditor Signature

Verification Protocol

1 PRODUCTION:

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

1.1 STANDARD OF PRACTICE1.1: *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.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 1.1

□ Not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation changed the supply contract from CyPlus GmbH / Wesseling to Proquigel Química S.A. an International Cyanide Management Institute (ICMI) Signatory Company.

After Proquigel Quimica S.A. had, their certification confirmed by ICMI, Serra Grande Operation signed the Agreement. MSG / 050 /13 with Proquigel Química S.A. on 29 October - 2013 and held 2 contract amendments: Contracts Nr. MSG/I 050/13 dated December 18, 2014 and MSG/050/13 II dated September 22, 2015.

Evidence of new Sodium Cyanide Acquisition Contract;

Contract: agreement for the supply of sodium cyanide

Producer: autralian gold reagents pty ltd - Australia business number abn93 009140121 (Supplier number) and Mineração Serra Grande - Registration number:

Contract number: 4600008581 (MSG SAP number).

Date: September 01/2017 at august, 30/2020

2 TRANSPORTATION:

Protect communities and the environment during cyanide transport.

2.1 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 ICMI

The operation is □ in substantial compliance with Standard Practice 2.1

□ Not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Objective evidence of Transportation Contract between MSG and Niquini Carrier.

Contract Number: MSG. 00006232.16

Signed: December 29, 2015.

Evidence of 2º. Addendum

Number: MSG.4600006232.16 - II Addendum Term

Signed: May 18, 2018

Objective evidences: Rotograms, NF's of Product Delivery, Checklist for Cargo Vehicles, Emergency Response Plan (Basic), Emergency Plan (Sodium Cyanide Transport Situations).

In the previous contract, which was the provider CyPlus, sodium cyanide carrier (solid) was Niquini Transportes also certified in compliance with the ICMI.

Niquini Cariier collects the solid sodium cyanide directly from the Port of Santos, that arrives by the sea (vessel transportation), through chain of custody of Australian Gold Reagents Pty ltd - Australia.

Product delivery is done directly within the MSG Operation and the storage is made under appropriated conditions that fully meet the requirements established by the ICMI Protocol (Practice 3 – Handling and Storage of Sodium Cyanide).

Serra Grande Operation receiving responsibilities are clearly defined according to applicable legal requirements. The Operation has the unloading responsibilities, which made according the specific Procedures PN 0619 – Work Instruction - Control of Sodium Cyanide Delivery and Internal Transportation and PE 0276 – Sodium solid cyanide unloading from iso bags to the storage area. All trucks are inspected for safety and warehouse upon arrival in the operation. Were highlighted specific records (CheckLists) from January, 30/2019 and 28/2019 – Sodium Cyanide Solid

20x1ton (IBC) with 20.000Kg total. Also reviewed the NF. 000027228 from march, 22/2019 receiving documentation and receiving inspection CheckList.

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

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 2.2

□ Not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Objective evidence of a Transportation Contract between MSG and Niquini Carrier.

Contract Number: MSG. 00006232.16

Signed: December 29, 2015.

Evidence of 2º. Addendum

Number: MSG.4600006232.16 - II Addendum Term

Signed: May 18, 2018

Objective evidences: Rotograms, NF's of Product Delivery, Checklist for Cargo Vehicles, Emergency Response Plan (Basic), Emergency Plan (Sodium Cyanide Transport Situations).

http://cyanidecode.org/

Transportation Agreement between MSG and Transporte Niquini was reviewed during the audit.
Contract Number: MSG. 00006232.16
Signed: December 29, 2015.
Addendum #2
Number: MSG.4600006232.16 - II Addendum Term
Signed: May 18, 2018
Objective evidences: Rotograms, NF's of Product Delivery, Checklist for Cargo Vehicles, Emergency Response Plan (Basic), Emergency Plan (Sodium Cyanide Transport Situations).
This contract is supported by some procedures to implement incoming inspections, such as PN 0619 – Work Instruction - Control of Cyanide Delivery and Internal Transportation, Procedure PE 0276 - Sodium cyanide unloading from iso bags to the warehouse. Reviewed the Agreement MSG #4600006232.16.

3 HANDLING AND STORAGE:

Protect workers and the environment during cyanide handling and storage.

3.1 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 ICMI

The operation is □ in substantial compliance with Standard Practice 3.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Observed that the facilities for unloading, storing and mixing cyanide were design and constructed in accordance with Brazilian Engineering Practices. Sampled some examples like as built drawings and engineering specifications for the warehouse. No relevant changes to the original reception and preparation area were observed related to the solid cyanide discharge area. During the audit showed that this area are well maintained and provided with concrete floor and a tilt to the truck parking, as well with a natural ventilation system. During the field audit was observe storage monitoring of solid cyanide with due compliance with the established operating procedures, including proper training of those responsible.

Observed, during the field audit, that unloading and storage areas for solid cyanide is located away from the operation routine, in an specific and designed area. The access to this area is limited to qualified operators and all the doors are locked. During the field audit that the area is far from surface waters, not being a risk for that. The entire area has a concrete floor and the solid cyanide is stored under roof top.

Serra Grande currently does not use liquid cyanide; however, it maintains all facilities and the area with a concrete floor, constructed in accordance with Brazilian engineering practices. It is located away from water courses and has appropriated drainage and secondary containing system and structures.

During the field audit and reviewing engineering documentation, those secondary containments for cyanide preparation and distribution tanks were constructed in accordance to Brazilian Engineering Standards and were constructed with HDPE (high-density polyethylene) membrane and concrete, offering an effective barrier to seepage. Cyanide preparation and distribution tanks are located inside these

contained areas, as observed in the field audit. Also observed that those areas are maintained in a good manner and kept dry.

The access to the storage area is restricted to Operators, trained and authorized. The entire storage area has containment basins, reinforced concrete floor and was waterproof with specified product "Sikagard 62" characterized as an epoxy coating. No incompatible materials are stored in the warehouse or in the area. Food, beverages, open flames and smoking are not allowed in these areas. The area has signs as restrictions established. In these areas, there are emergency shower, eyewash and emergency cabinets equipped with intervention to supply kits in case of emergency, for example oxygen bottles, specific EPPs and Emergency Kit.

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 the ICMI

The operation is □ in substantial compliance with Standard Practice 3.2

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Empty NaCN boxes and iso bags are neutralized and washed before being discharge to final destination (coprocessing destruction). The washing solution returns to the solution tanks. During the field audit it was reviewed the Procedure PP-000314 - Solution preparation and sodium cyanide handling. Serra Grande Operation does not use cyanide drums. Empty NaCN big bags are neutralized and washed before being discharge to final destination (coprocessing destruction). The washing solution returns to the solution tanks. During the field audit it was reviewed the Procedure PE0207 - Solution preparation and sodium cyanide handling. Prior to the coprocessing, the decontaminated big-bags are sent to a qualified supplier – Ecoblend, properly licensed by the Goiás State local EPA.
The Serra Grande Operation has implemented specific Procedures PE 0207 - Solution preparation and handling of HCN, PE-0217 - Receiving, storage and delivery of sodium cyanide and, PN 0619 - Delivery control and internal cyanide transport related to NaCN boxes handling and lifting. Adequate device to enable handling without rupturing or puncturing was evidenced (fork-lifters and cranes).
Evidences were available showing that the pile limit is 3 boxes.
Evidences were available showing that the Serra Grande Operation prevents exposures and releases during cyanide mixing activities. The operation has operational procedures for Mixing that states the care and controls to avoid

spills and the procedure for neutralization of recipients that establish the controls for avoiding spill from residual cyanide in the bags. The Workers have to proceed cleaning three times each bag. All containment basins have pumps for reclaimed any contained spill back to the tanks. The residual cyanide that is not pump is neutralize and pumped for the lime tank and them for CIL circuit. Washing systems (low-pressure eye-washers and showers) are available at preparation area for the workers protection. It was not evidenced any kind of spills during the audit.
Although the cyanide preparation is automated, adequate PPEs are available for personnel authorized to prepare NaCN solution (it is mandatory to use them during all unloading oparations). They have portable calibrated HCN detectors and the Control Room Operators also monitor HCN through others HCN permanent detectors.
During the audit, auditors were followed up by the process of mixing and observed that the two Operators are properly trained for the operation. All steps of procedure PP 0207 have been satisfactorily fulfilled.

4 OPERATIONS:

Manage cyanide process solutions and waste streams to protect human health and the environment.

4.1 STANDARD OF PRACTICE 4.1: *IMPLEMENT MANAGEMENT AND OPERATING SYSTEMS DESIGNED TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT INCLUDING CONTINGENCY PLANNING AND INSPECTION AND PREVENTIVE MAINTENANCE PROCEDURES.*

X in full compliance with the ICMI

The operation is ☐ in substantial compliance with Standard Practice 4.1

☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Serra Grande Operation has documentes and implemented operational procedures and maintained an EHS management system in order to manage its EHS risks, including those related to the use of cyanide. Evidenced several operational procedures clearly defining process criteria, PPEs and pre-activity inspections. Some of these reviewed procedures were: PE 0268 - Starting and stopping the leaching area, PN 0619 - Delivery control and internal cyanide transport, PE 0217 Corrective actions to cyanide spill, PN 0610 - Emergency action plan for cyanide, among others in the last revison.

During the audit, the auditors reviewed the Operation Room with Monitoring Panel and Level Control of the tanks (Max. 80%), Double Check with Line and Storage Screen sensors were monitored. In case of gases formation, there are alarms and established actions. The cyanide transfer is performed from 12/12 hours from the Storage Tank to the Dosing Tank, so there is no cyanide in the line during the entire time of the operation.

The Serra Grande Operation have documented operational procedures that describe the standard practices necessary for the safe and environmentally sound operation of the facility such as inspections and preventive maintenance activities. It was reviewed during the audit some documented procedures such as PE 0207 - Solution preparation and sodium cyanide handling, PE 0272 - Operation of the processing circuit and effluents, water balance and maintenance, and others related.

Maintenance plans (predictive and preventive) and inspection routines were established and implemented; as well, the records are kept at the SAP/R3 system. In general terms, was evidence in the field audit, that the operation installations are well maintained.

Documented the procedure PN 0003 - Change management and new projects were revised in the last revision. The change management procedure is adequately implemented. Evidenced the change evaluation form EL 5.42m and the case related

to the Process Change - Activated Carbon Project (CIL) and the respective PGR - Risk Management Program.
The Serra Grande Operation has many cyanides related emergency plan covering any potential incident involving cyanide. The Emergency Plan resulted from risk evaluation and considering all potential cyanide related emergency scenarios, including upset in the water balance (considering even the cessation of the operation), any deviation from design and operational criteria (e.g.: pH, freeboard, leaching solution concentration and flow, among others). During the audit, it was reviewed the PN 0594 – PAEBM - Dam Emergency action plan of the mining dam.
It was checked that the maintenance process is developed and implemented specific checklists to perform routine inspections (inspection routes) and measurements at tanks (thickness, corrosion and leakage) and process plant installations such as secondary containments, drainage system and locks.
Reviewed Thecnical Report - Reinforced Concrete Structures, Nov. 30, 2017 - (CREA GO 1103 - D) - "Structural Set in Good Condition". Also reviewed the Data Record - Tank Inspection No. 5295TA01A from Dec. 11, 2018.
There are no leach pads or ponds at the Serra Grande Operation.
It´s included in inspection routes, covering the cyanide circuit at the operation. Was also evidenced that the operation installed height indicators (green, yellow and red freeboard marks) indicating the designed freeboard for the effluent storage facility in order to facilitate the freeboard visual inspection (150 meters from the Dam crest in relation to the lake beach).
Standby generators systems are in place and included at the Preventive maintenance plan. Tests (system function and operation) are performed every 15 days.
The Audit Team considers that the inspections are carrying out in sufficient frequency to ensure and document its operation within the designed parameters.
Observed that the Inspectors were trained on the fulfillment for inspections records. All records were dated, signed by the Inspectors, and retained.
Also developed inspection checklists and inspection records, all dated and signed by the inspector. In the event of non-conformity, a corrective maintenance order is issue to fix the problem. Records examples: Area Inspection Reports from 2018 and 2019 were reviewed, as well Area Inspection Forms carried out for the years 2018 and 2019.

4.2 STANDARD OF PRACTICE 4.2: *INTRODUCE MANAGEMENT AND OPERATING SYSTEMS TO MINIMIZE CYANIDE USE, THEREBY LIMITING CONCENTRATIONS OF CYANIDE IN MILL TAILINGS.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 4.2

□ not in compliance with

Lead Auditor Signature

Summarize the basis for this Finding/Deficiencies Identified:

Cyanidation tests are usually performed in order to identify opportunities to reduce the cyanide consumption. The laboratory is responsible for the tests to determine the adequate cyanide addition rate in the leaching process. Serra Grande Operation monitors the cyanide consumption on a daily basis. A cyanide automatic dispenser (5236TAC01 – TAC 1000) device is in place. This automatic device has a set point control. Serra Grande Operation has an operational system for efficient controls of cyanide addition based on the gold concentrations. It was evidence the Reagent Consumption sheet – GME with the following results related to cyanide:
Unit: Kg/Ton treated: 2015 = 0,41; 2016 = 0,39; 2017 = 0,38 and 2018 = 0,39.

4.3 STANDARD OF PRACTICE 4.3: *IMPLEMENT A COMPREHENSIVE WATER MANAGEMENT PROGRAM TO PROTECT AGAINST UNINTENTIONAL RELEASES.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 4.3

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Serra Grande Operation did develop a comprehensive and probabilistic water balance management system considering storm and rain history, incoming water, effluent discharge rate in the tailings dam and evaporation rates. There were not any major changes in water management system since the last recertification audit in 2015.
The TSF surface water is being adequately managed from the decant barge to the plant.
The TSF is being operated with a return water facility. There is a basin that receives the water from the internal drainage system of the dam and then pump it back to the pool.
The pond size is of no concern and it is in contact with the decant system and well away from the main embankment.
A comprehensive water balance for the TSF is maintained by the operating team where monthly figures are calculated and reported.
RETURN WATER FACILITIES AND WATER QUALITY
The TSF is being operated without a return water facility. There is a system with box and pumps to return the water to the dam
Water quality is monitored internally and data is analyzed/reported by environmental team. Some results of the piezometers at downstream of the dam are off the limits. This situation is being studied by the group of water resources specialists of Brazil and Americas.

The data rainfall collection system with consolidation of daily and monthly results was reviewd. Established 1 rainfall station and the data obtained are reviewed during the audit.
During the audit were reviewed the following data, among others:
- The construction of the river diversion channel is complete; erosion protection of this channel will also take place in 2018;
- Construction of the new spillway to 462 mamsl elevation is complete;
- The stage capacity curve for the TSF is shown below, indicating that the wall raise to 470 will have sufficient capacity to June 2022 and the current LOM plan to December 2031 indicates that the TSF will need to be raised to an elevation of 488mamsl. The detailed design to an elevation of 495mamsl has been complete by DAM;
- The measured total freeboard on 1/03/2018 was 5,2 metres (capacity and 3 meters limit);
- Internal drainage graph x lake level - 11/27/2015 till 3/27/2019;
- General Table of the period from 10/1989 until July / 2018 in relation to the production of tailings, solid, lake and backfill with updated data of 24258459, 98318487, 11380022 and 4304011Tons respectively;
There was not any incident related to water balance in the last 3 years.
The tailing dams are designed to contain a volume of three decamilenar rainfall events, each event with rainfall of 325 mm in a 24-hour period. The area used to absorb the volume of this rain in the dam reservoir is 1 meter between the normal 475 and 480 meters of water and the level of the spillway sill, so the dam fact have freeboard of 3 meters, supports the calculated volume.

It was checked the Dam Break Study (main scenarios related to piping and tile, revision RT-002-189-515-2090-00-B and the Basic Design for Dam closure held by the specialized company Golder for 475 and 480 meters elevations. Verified the Calendar 2018 for regular dam safety inspection held two times a month. Also are highlighted the 2019 year inspection semi-annual reports on the results of tailings and water quotas and freeboard found. They also evaluated the following documents:

- Regular Safety Inspection Report Tailings Dam – AA-000-BV-0098-992-RT-056 – BVP Engineering and the Declaration of stability condition (inspection on march, 2019) - lowest FOS obtained was 1,647;

Serra Grande Operation recycles over 80% of its wastewater reuse with the operation.

The qualitative and quantitative monitoring of surface water, groundwater, wastewater and drinking water are carrying out periodically by the Department of Environment. The water data used in the processing plants and data abstraction in the dam reservoirs are monitor by flowmeters installed on water mains and managed by the supervisory system of the plants, which allows processing and subsequent consolidation of the water balance of the project.

Serra Grande Operation does not have indirect discharges to surface waters. There was not any incident related to water balance in the last 3 years.

4.4 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 the ICMI

The operation is in substantial compliance with Standard Practice 4.4

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation adopts some practices to the protection of life. During the audit field, were evidenced access controls such as gates, fences, use of padlocks and warning signs on the perimeter avoiding the presence of livestock. The Serra Grande Operation assures CNw below 50ppm in all open waters. Monitoring results showed that these controls resulted in CNw below 50ppm. Reviewed the following records: Environmental Monitoring Plan 2019 (revision 01) with the EMN points - treated final effluent from the plant; back fill plant, PZ03 - downstream of the dam; CR01 (Open Pit); CR19 (process plant); PAK15 (monitoring well); PA06 (water catchment point); PPZ1 and 2 (downstream of the dam).
Serra Grande Operation implemented a monitoring system in the tailings dams. The monitoring results indicate that the WAD cyanide concentration has not exceeded 50 ppm since 2016 to 2019, according to Effluents and Water Monitoring spreadsheet.
It was evidenced that Serra Grande Operation developed, documented and implemented a specific procedure to investigate any cyanide related incident linked with the local fauna and flora. In the event of any dead animal found in tailing ponds or tailing dams, the dead animal shall be send to a veterinary in order to determine the causes that lead the death.
No evidences of mortality were observed during the audit of birds, other wildlife and livestock from adverse effects of cyanide process solutions.

4.5 STANDARD OF PRACTICE 4.5: *IMPLEMENT MEASURES TO PROTECT FISH AND WILDLIFE FROM DIRECT AND INDIRECT DISCHARGES OF CYANIDE PROCESS SOLUTIONS TO SURFACE WATER.*

X in full compliance with the ICMI

The operation is in substantial compliance with Standard Practice 4.5

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation has a direct discharge into surface waters but done only after treatment for correction of cyanide concentration levels, and should not exceed 0.5 mg/l WAD. The process effluent, after neutralization is only released to surface waters (das Almas Creek and after Vermelho River).

Serra Grande Operation does not have indirect discharges to surface waters.

Serra Grande Operation establishes a monitoring point, downgradient of the mixing zone, where the concentration of cyanide is monitor on daily basis its effluents in order to check if the cyanide concentration. The monitoring point is included in the Monitoring and Environmental Assessment Plan, which was reviewed and approved by the local EPA – Semad Goiás and according establish in the Serra Grande Operating Permission number 1463/2013 issue by Semad (local EPA). In case of CNw is higher than 0,022ppm the operation determines the CN contents in the sample using standards methods like SMEWW 22nd Edition – Methods 4500 – CN, A, B, C, D, E and I.

Reviewed monitoring results between January/2016 and March/2019. All results showing CNw under 0,005ppm.

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 ICMI

The operation is in substantial compliance with Standard Practice 4.6

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation installed several piezometers down gradient of the operation in order to monitor if this control is effective (HDPE membrane). Serra Grande Operation has several monitoring piezometers down gradient of the operation where cyanide total analyses are being performed with results below the quantification limit (quantification limit for the analyses is 0,005 mg/l). Monitoring piezometers are located in the area of the downstream of the tailing dam and in the hydrometallurgy area that are monitored and which present results in compliance with the Brazilian legal requirement for underground (drinkable) water

(not detected) – The legal requirement for drinkable water is 0,07 mg/l of total cyanide - Portaria Ministério da Saúde 2914.
All monitoring results for the piezometers located downstream the tailing dam presented results for total cyanide below the quantification limit. The beneficial use of the ground water is maintained. The following procedure was evidenced regarding the monitoring activities carried out: Environmental Monitoring Plan PN-0071, revision 05 (October, 16/2018).

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

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 4.7

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation trains its personnel to understand the color-coding of process solution pipelines. Serra Grande Operation use the International Code of Colors. In areas, they are also posted signs containing the color code.
The areas of cyanide tanks are surrounded by retaining walls and fences, built according to the specifications of engineering and according to Brazilian environmental laws. These areas were observed in the documentation and was confirmed that they are all concreted, with secondary containments (preparation, distribution, leaching, filtering and precipitation areas).
Pipes containing cyanide are seamless walls and inner lining. The tank containment basins are waterproof and with a storage capacity above the volume contained in the tank. Verified in the Acacia area the 4,5m³ tank with secondary containment basin of 8m³ capacity. The dosing sensors on the line - 236AY01 and 236AIT01 with online values of 390 and 378.5 ppm respectively were also checked.

Secondary containment areas reviewed and considered sufficient to retain the biggest tank volume.

Serra Grande Operation implemented a pumping system that is used to pump any effluent or after a rain that is contained in the secondary containments. All the effluent is pump back to the plant process. The plant also has a drainage system and treatment station.

The nearest intermittent stream from the plant is “Córrego das Almas” (approximately 10 meters away), this stream is tributary of the perennial river “Rio Vermelho” (approximately 700 meters away from the plant).

Pipes process solutions are protected at points where there may be risk of leakage. They are also held special preventive measures, such as: inspection planned periodic, predictive maintenance, and measuring thickness of pipes with ultrasound.

All process tanks are made of carbon steel (API 650 / API 653). All process pipelines are made of carbon steel or HDPE, according to engineering specifications (ASME code and Metals Handbook).

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.**

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 4.8

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidence that the Serra Grande Operation did implement a change management procedure – PN-0003 – Changes Management in order to ensure that all modifications to the existing facilities will be perform on a structured way. During the Audit were reviewed the documents: Memorial Descritivo de Processo nº. AA-106-AS-5200-100-MD-001, revision 2 – Basic Project for Activated Coal. Those documents have all details for QC/QA, presenting requirements as project design, as built and reviews.

All new installations (pipelines and process tanks) were design and constructed in accordance with Brazilian Engineering Standards. Checked during the audit all performed projects (design) of the facilities built (retention basins, tanks, pipes, pumps and others). The compatibility of the materials with cyanide was check and the adequacy of soil compaction was review.

Records related to incoming inspection of materials (welding, steel plates, HDPE membrane, carbon steel pipes and elbows), in process inspection (welding and soil compaction) and final inspection/commissioning records (hydrostatic tests, leak tests, NDT tests) were evidence and are kept by the operation.

Quality control, quality assurance or as built drawings was available for all parts of the facility using cyanide.

4.9 - ***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 ICMI

The operation is □ in substantial compliance with Standard Practice 4.9

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Evidences were available at the procedure Environmental Monitoring Plan, which list the monitoring stations, parameters, sampling frequency, sampling and preservation procedures, legal requirements such as conditions and contain means to implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

All sampling and analytical protocols were developed by qualified chemical laboratory technicians and are in accordance with "Standard Methods for the Examination of Water and Wastewater." The Environmental monitoring plan plan was also evidenced.

The procedure describes the monitoring station, parameters, sampling frequency, sampling and preservation procedures, shipping instructions, legal requirements such as conditions, and contains means to implement monitoring program. All environmental monitoring analyses are carried out by the internal laboratory and qualified third parties laboratories. The frequency of monitoring has been defined according with the conditions of environmental permits and risk assessment. Reviewed the Procedure for Environmental Monitoring – PN-071, revision 05 (October, 16/2018).

No cases of indirect discharge were evidenced. The monitoring results of process water to surface water and in surface and ground water down gradient of the site, clearly demonstrate that is not any cyanide related contamination.

An inspection program for wildlife mortalities exists. There is a vigilance program with daily inspections in the area of the dam to check the occurrence of wildlife mortality. There were no mortalities recorded. During the audit it was reviewed: GMAAR Hidrogeology and Water Resources Report from 2019 and PGA - Environmental Management Plan – DBO Engineering Ltda, held on September/2018.

The established frequency is in accordance with the Brazilian Environmental legislation and the SEMAD, Goiás State EPA (Environmental Protection Agency) permits, licenses and conditions.

The Audit Team considers that the inspections are carrying out in sufficient frequency and according the Brazilian Legislation and the Goiás State EPA (Environmental Protection Agency) permits to ensure and document its operation within the designed parameters.

5 DECOMMISSIONING:

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

5.1 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 ICMI

The operation is □ in substantial compliance with Standard Practice 5.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation developed, documented and implemented the Mine Closure Plan with update of 3 in 3 years focused on the management of the closure activities (decommissioning and restoration activities). It was evidence that the operation updated the operation decommissioning and closure plan that was developed by Golder Associates (Report RT-003-189-515-203900-B, held in december 2018). That updated decommissioning and Mining Plan Closing Conceptual SG - Crixás - GO was reviewed during this audit. The plan is under review to update on decommissioning of dams in relation to the revision of Brazilian legislation, specifically Resolution 4 of the National Mining Agency, issued in February / 2019.

The decommissioning and closure plan mentioned at 5.1.1. Clearly describe the schedule to be follow during the decommissioning and closure activities, including environmental monitoring that shall be performed after the operation closure. The operation is planned to be closed-out on 2031 Year. The study of contaminated areas of 2017 made by WSB - Water Services Brazil, suggests monitoring and plume pumping actions of detected contamination, but without evidence of sodium cyanide parameters outside the defined limits.

5.2 STANDARD OF PRACTICE 5.2: *ESTABLISH AN ASSURANCE MECHANISM CAPABLE OF FULLY FUNDING CYANIDE RELATED DECOMMISSIONING ACTIVITIES.*

X in full compliance with the ICMI

The operation is in substantial compliance with Standard Practice 5.2

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Golder Associates (RT-003-189-515-203900-B, DECEMBER/2018) for the updated decommissioning and Mining Plan Closing Conceptual SG - Crixás – GO, identifies the required costs related to the plan implementation and audited by a third-party company (EY – Ernst Young). The total amount was included in the reclamation cost report which is annually updated reviewed values until 2018 to 2031 (2041 plus 10 years).

Estimates of third-party costs for decommissioning are reviewed and updated (last up dated Dec. 2018).

Annually Serra Grande Operation has its financial health audited by independent third-party auditors. The last financial state audit was performed by Ernst & Young Independent Auditors a legally established financial auditing company in Brazil DF-MSG-2017-2016 (Ernst Young).

Last financial audit was related to the financial year ended December 31, 2017 and was carried out by Mr. Tomas L.A. Menezes, a qualified financial auditor representing the Ernest & Young Independent Auditors. The financial audit was carried out in accordance with International Financial Report Standards, which are acceptable either in Brazil and internationally. The financial audit report clearly states that the operation has financial health to fund the implementation of the closure plan. The financial audit report was published at the DOU/ GO that is a Brazilian Government daily newspaper specific for the Goiás State where the plant is located.

6 WORKER SAFETY:

Protect workers' health and safety from exposure to cyanide.

6.1 STANDARD OF PRACTICE 6.1: *IDENTIFY POTENTIAL CYANIDE EXPOSURE SCENARIOS AND TAKE MEASURES AS NECESSARY TO ELIMINATE, REDUCE AND CONTROL THEM.*

X in full compliance with the ICMI

The operation is in substantial compliance with Standard Practice 6.1

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation identified and evaluated all the SHE risks associated with the cyanide and in order to has the risks under control and mitigated. The Serra Grande Operation defined documented and implemented specific management and operational procedures for related activities.

During the audit was verify the Plan for Disasters and Crises of SERRA GRANDE OPERATION BOX in the last revision, that determines the guidelines, actions and basic guidelines to follow in the various possible emergency scenarios, disasters and crises present in operation.

Serra Grande Operation retains documents and records in accordance with the control document matrix, using the requirements of the certified Integrated Management System in Safety, Health and Environment (OHSAS 18001 and ISO 14001).

It was observe that risk maps cover all activities. Besides, it noted that the Risks and Changes Management, procedure – PN 0003, in the last revision, is duly established, implemented and maintained.

Serra Grande Operation Employees participate effectively in the risk identification and evaluation and in the development of operational procedures. Attendance lists, in the procedures revisions were observe as well as personal interviews with the Operators and Supervisors, confirming that the operation workforce is full involved in the risk analysis and in the operational procedures developments and improvements.

Were evidenced in the field audit the procedure PN 0003 –Risks and Changes Management.

Were also found the following records: APR - Preliminary Risk Analysis, APT - Preliminary Analysis of Labor and PT - Permissions Work for Specific and Critical Risks, including all the cyanide operations risks.

6.2 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 ICMI

The operation is in substantial compliance with Standard Practice 6.2

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation determined that the minimum pH value should be equal or greater than 12. This value is address at the operational procedures for cyanide solution preparation. It also observed during field audit and interview with Operators.

The Operators use portable HCN sensors, which are previously calibrate against Brazilian or International Standards.

The PAC – Calibration Plan have been checked and the following monitoring device: #5233HC03, Data Sheet HCN 6809650
The maintenance reports and records are included at the SAP/R3 system – Maintenance Module
Serra Grande Operation does not have areas where concentration levels are above 10 ppm. The PN 1427 Response Action Plan Emergency, the latest version refers to the First Aid Manual (attached to the Emergency Plan for Sodium Cyanide. This document sets out standard procedures and practices in case of victims by contact with cyanide sodium (Item 1.5.) - Effects of Exposure hydrocyanic gas by concentration in ppm.

Meters are programmed to alert, starting at 4PPM. As control measures employees are directed to evacuate the area, regardless of working hours. Immediately they must report to the control room. The supervisor must trigger maintenance to find possible leaks. There is no authorization to return to the area until the leak has ceased or the cause has triggered the alert level. If maintenance employees have to go to the site for evaluation and correction, they must wear self-contained breathing apparatus and individual portable HCN monitor.
The areas for the development of the activities are properly identified and marked. Areas are observed risk maps. Personal Protective Equipments (PPEs), necessary for the development of the activities are clearly defined. Featured in during the audit field, the operators use the EPP's as indicated.

It was observed that in located at strategic locations throughout the Operation are showers, low-pressure eye wash stations and dry powder fire extinguishers, fume detectors, including at the specific tanks' areas. It was evidenced the fire extinguishers master list, which is used to support the maintenance frequency. Inspections and tests showers and eyewash stations are carried out monthly Technical Work Safety.

These safety equipments are maintained, inspected and tested on a regular basis.

Facilities of unload, storage, mixing and process tanks and piping are clearly with (International Paint Code), identified and the flow direction clearly showed. Serra Grande Operation trains its personnel to understand the color-coding of process

solution pipelines. Serra Grande Operation use the International Code of Colors. Areas are posted signs with the appropriated colors codes.
As provided in the training procedure in the integration process are dealt with prevention tools, Instructors learn on the color code, with an emphasis on cyanide solution pipes on the premises. In addition to the integration of training, there is a module targeted to Employees who deal directly with cyanide, which reinforces the issue of specific colors facilities and cyanide pipes.
Even as continuous improvement, the contents to the International Code of Colors, especially cyanide facilities is treated in training "on the job training" for Workers who will develop its activities in Metallurgical Plant.

Serra Grande Operation has Health Safety procedures and Environment - HSE and of these Procedures for Accident Investigation, which is valid for three years to review and if necessary may have the early review, either by audit demand, legal requirements, other decisions or strategies.
In case of incidents may be a need for revision of operational procedures applicable standard, in less time than the review defined by Procedure Document Control Management System.

Serra Grande Operation has defined, documented and implemented the Procedure – PN – 0012 - Incident Research and Learning, to investigate and evaluate any kind of incidents or accidents. It was not evidenced the occurrence of any cyanide related incident involving plant Operators in the last three years.

MSDS is in Portuguese language duly established documented, maintained and implemented at the required areas.

6.3 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 ICMI

The operation is ☐ in substantial compliance with Standard Practice 6.3

☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation has an emergency room and a health center fully equipped with decontamination showers and low-pressure washeyes, emergency kits, resuscitators (pulmonary resuscitator manual - Type Ambu), defibrillators (resuscitation cardiac), oxygen cylinders, one ambulance, communication radio and direct telephone lines emergency (hot line). These facilities were evidenced in the field audit.
Emergency kits are also available cyanide in the discharge and unloading areas, big bag's storage and preparation areas. The kits are also available in Hydrometallurgy Plant.
The Clinic Team consists of a Doctor with expertise and training in Occupational Medicine (3 Shifts) four Nursing Technicians.
As other operations of Mines AngloGold Ashanti, Serra Grande Operation introduces the "Cyanokit"antidote to replace amile nitrite.

All the first aid equipment is effectively inspect as required by the Medical Team. Inspection records provide evidenced the duly implementation. The emergency products are stored under temperature control conditions into a refrigerator and their validity is daily checked.

It shown in the use of "CYANOKIT" antidote, within the validity period (2020).

Serra Grande Operation implanted an emergency office inside the plant fully equipped with oxygen, antidotes, first aid procedures, emergency phones, radios, filters, masks, among others. Serra Grande Operation has also a health care center (one doctor and four nurses divided into work shifts), also equipped with oxygen center, antidotes, one ambulance and two resuscitators / defibrillators. All the emergency and medical installations and personnel were evidence during the field audit.

Serra Grande Operation– also qualifies Local Hospital of Crixás, which have trained doctors to work in case of emergency with cyanide. Training and "CYANOKIT" were make available and extended to all medical areas of the City of Crixás.

Serra Grande Operation has two ambulances and qualified Drivers according Brazilian National legal requirements called "Resolução CONTRAN 168/2004" and "Resolução 484/2014". Serra Grande Operation also qualifies Local Hospital of Crixás.

Training and "CYANOKIT" were make available and extended to all medical areas of the City of Crixás.

Cyanide related emergency drills are effectively performed by the operation, including involving the local Hospitals teams in the exercises. It was evidenced 2017, 2018 and 2019 annual emergency mock plan.

Evaluated Simulated Exercise Report with participation of local hospital: "Victim affected by cyanide solution and product leakage to soil"

Date: Feb. 28, 2019

7.1 STANDARD OF PRACTICE 7.1: *PREPARE DETAILED EMERGENCY RESPONSE PLANS FOR POTENTIAL CYANIDE RELEASES.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 7.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that the operation defined, documented and implemented some Emergency Plans in order to respond to cyanide related emergencies. During the audit, the following plans were reviewed.

The Action Plan Emergency for Cyanide PN 0610, in the latest version, references the First Aid Manual (attached to the Emergency Plan Sodium Cyanide This document sets

out standard procedures and practices of victims by contact with sodium cyanide - item 1.5. - Effects from Exposure Cyanuric Gas by concentration in ppm.

Plan for Disasters and Crises of MSG BOX in the actual revision that determines the guidelines, actions and basic guidelines to follow in the various possible emergency scenarios, disasters and crises present in operation.

Reviewed the Management System Manual for Health, Safety and Environment – SHE, AGA 0001 in the latest version.

It was evidenced that the Action Plan Emergency for Cyanide PN 0610, references the First Aid Manual attached to the Emergency Plan Sodium Cyanide. Plan for Disasters and Crises of MSG BOX that determines the guidelines, actions and basic guidelines to follow in the various possible emergency scenarios, disasters and crises present in operation and the Management System Manual for Health, Safety and Environment – SHE, MSG, AGA 0001 in the actual versions, covers all the above mention circunstances, as required.

The Action Plan Emergency for Cyanide PN 0610, references the First Aid Manual attached to the Emergency Plan Sodium Cyanide. Plan for Disasters and Crises of MSG BOX that determines the guidelines, actions and basic guidelines to follow in the various possible emergency scenarios, disasters and crises present in operation and the Management System Manual for Health, Safety and Environment – SHE, MSG, AGA 0001 in the actual versions, covers all the above mention circunstances, as required.

7.2 STANDARD OF PRACTICE 7.2: *INVOLVE SITE PERSONNEL AND STAKEHOLDERS IN THE PLANNING PROCESS.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 7.2

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidence that Emergency Plans define responsibilities of several stakeholders (internal and external), including security and health authorities, public authorities, Federal Road Police, local hospitals, response suppliers and community representatives. During the audit, it was review the following documents: Action Plan Emergency for Cyanide PN 0610, references the First Aid Manual attached to the Emergency Plan Sodium Cyanide. Plan for Disasters and Crises of MSG, AGA BOX that determines the guidelines, actions and basic guidelines to follow in the various possible emergency scenarios, disasters and crises present in operation and the Management System Manual for Health, Safety and Environment – SHE, MSG 0001 covers all the above mention circunstances, as required.

The communications with potentially affected communities and other outside responders occurs directly under the "Open Company" specific program for

Stakeholders, and with the participation of Representatives of Communities, for example: Religious Leaders, Residents Associations Representatives, Communities Representatives, Government and the Regional Directorate of Environment of the City of Crixás.
Some themes: "What is sodium cyanide, its use and application, its controls", "Emergency scenarios", Understanding of the International Code of Sodium Cyanide" and Tailings dam management.

The Action Plan Emergency for Cyanide, references the First Aid Manual, attached to the Emergency Plan Sodium Cyanide was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities and community representatives.

Serra Grande Operation available to the stakeholders and the program Open Company communication channels, such as 0800 727 1500, through in newspapers, magazines, space in the local community radio station, program meetings, Good Neighbourhood, Whatsapp, Sintonia (Tunning) and other means of communication with the stakeholders.

7.3 STANDARD OF PRACTICE 7.3: *DESIGNATE APPROPRIATE PERSONNEL AND COMMIT NECESSARY EQUIPMENT AND RESOURCES FOR EMERGENCY RESPONSE.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 7.3

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Action Plan Emergency for Cyanide references the First Aid Manual (attached to the Emergency Plan Sodium Cyanide. was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities and community representatives. Responsibilities and authorities are clearly defined and communicate to all involved stakeholders (internal and external).

Serra Grande Operation sets in its Emergency Action Plan – PE 0594 the Metallurgy Manager for the conduct of emergency actions, and the Operations Metallurgy Manager as a substitute for the Sustainability and Administration Manager with authority for decisions and actions, including the release of funds and use of structures operation.

The Emergency Response Brigade Members are voluntary but passed through a selection process (medical, theoretical and practical) to be assigned as a Brigade Member. It was observed that Brigade Members were trained as required. Training and qualification records were reviewed in this opportunity and maintained at HR – Human Resources department process (medical, theoretical and practical), to be assigned as a Brigade Member. It was observed, through training records and personal interviews,

that Brigade Members were trained as required. Training and qualification records were reviewed in this opportunity and maintained at HR – Human Resources Department.

It was evidenced that Serra Grande Operation has a toll-free phone number (0800 727 1500) as well as emergency phones which are available all day long.

The emergency master list addresses all the necessary information about the Brigade Members including contact details of internal and external stakeholders. Also, review the emergency communication loop.

It was evidenced an available list which defines the emergency response equipment protection gear available. The emergency response plan identifies the required resources that are necessary to each situation. The basic emergency response equipment is consisted of two ambulances, one complete equipped emergency truck and auxiliary equipment (PPEs) for the Brigade Members, such as chemical/flame resistant overall, chemical gloves, oxygen masks and cylinders, chemical masks.

Observed, through inspection records, that the emergency response equipments are inspected by the safety and operation area. Records of such inspections were evidenced and found in place.

7.4 STANDARD OF PRACTICE 7.4: *DEVELOP PROCEDURES FOR INTERNAL AND EXTERNAL EMERGENCY NOTIFICATION AND REPORTING.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 7.4

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Action Plan Emergency for Cyanide PN 0610 references the First Aid Manual (attached to the Emergency Sodium Cyanide Plan) and was reviewed, approved and communicated to several stakeholders (internal and external), including the security and health authorities, public authorities and community representatives. The plan clearly defines the communication procedures to be used during an cyanide related emergency including a list of emergency phones (24 hours available) of all emergency Brigade Members, Leaders, Managers and General Manager, Public Authorities, Hospitals, Cyanide Supplier, Cyanide Transporters Niquini. The communication procedures also involve the security process of the operation. Necessary resource is clearly defined and provided.

7.5 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.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 7.5

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Action Plan Emergency for Cyanide PN 0610, references the First Aid Manual (attached to the Emergency Plan Sodium Cyanide considers all these scenarios: Recovery or neutralization of solutions or solids, decontamination of soils or other contaminated enviroment, management and/or disposal of spill clean-up debris, provision of an alternate drinking water supply.

The Emergency Plan explicitly prohibits the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been release into surface water.

7.6 STANDARD OF PRACTICE 7.6: *PERIODICALLY EVALUATE RESPONSE PROCEDURES AND CAPABILITIES AND REVISE THEM AS NEEDED.*

X in full compliance with the ICMI

The operation is □ in substantial compliance with Standard Practice 7.6

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was observed that Emergency Plan is reviewed and revised when necessary (after real incidents or after simulation tests). Sampled examples were Emergency Simulation Records such as the latest Simulated Exercises 2018 and 2019 according to Annual Emergency Mock Plans. Both cyanide and others related emergency plans are being update regularly. Also sampled the following specific simulation scenarios:
- Scenario - HcN Poisoning Victim in the Area of Preparation - may, 14, 2018;
- Scenario - Victim Accident for Sodium Cyanide Contamination - Feb 28, 2019;
- Victim of HcN Poisoning in the Area of Preparation - aug. 3, 2018;
- Scenario - Simulated Community Evacuation Exercise - Self-Rescue Zone (ZAS) (Emergency Dam Plan) nov. 21, 2018;
- Scenario - Simulated Community Evacuation Exercise - PABM (Emergency Dam Plan) nov. 27, 2018

Verified by the Audit Team reports prepared by the Security Area, Health and the Environment of Serra Grande Operation.

8 TRAINING:

Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.

8.1 STANDARD OF PRACTICE 8.1: *TRAIN WORKERS TO UNDERSTAND THE HAZARDS ASSOCIATED WITH CYANIDE USE.*

X in full compliance with the ICMI

The operation is in substantial compliance with Standard Practice 8.1

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Serra Grande Operation trains all personnel who may encounter cyanide hazard recognition according the procedure to control training PN 0005 - Training and Development. During the audit in the area of Human Resources were highlights: integration-training schedule, specific training cyanide to own and hired staff, cyanide management training - theoretical and practical module, among others, including contractors. Verified during the audit the related records of the providers.

The cyanide hazard recognition refresher training is in place. Checked update training records in recognition of the hazards of cyanide and operational procedures.

During the audit in the area of Human Resources were highlight: integration-training schedule, specific training cyanide to own and hired staff, cyanide management training - theoretical and practical module, among others.

Recycling training "Safety in Handling and First Aid Cyanide" done periodically every two years.

8.2 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 ICMI

The operation is in substantial compliance with Standard Practice 8.2

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Evidences were available (introductory training program, on the job training program, training records, personal interviews with operators) that the company trains

appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment through systematic training procedures. Plant operators are qualified based on education, training, experience and personal skills. Sampled examples were integration training schedule, specific training cyanide to own and hired staff, cyanide management training - theoretical and practical module

Serra Grande Operation maintains records according to the integrated management system certificated in safety, health and environment (OHSAS 18001 and ISO 14001) for manage all documents including records.

It was checked the training material Training deals with the integration - Cyanide Management Training. Specific training material was established for specific functions, such as operators, laboratory technicians, warehouse keepers, emergency brigade members. A general introductory training, related to risks associated to cyanide is also provided to the own personnel and subcontractors. It was found the introductory Training Schedule that occurs according the Training Plan. Highlighted the latest list dated April 2019 – Training of Process Operator.

All training sessions are led by qualified personnel. Internal Instructors are Senior Operators and/or Process Specialists and /or Safety Staff. External training, Verified by tracking the training performed in various trainings was provided by cyanide Experts.

The Employees are trained prior to working with cyanide; records were check to 2019. Verified specific training cyanide to own personnel and contractors according procedure PN 0005.

Mock Drills and written tests and planned job observations are used to verify the effectiveness of the training sessions.

The cyanide related training record clearly addresses the date, the subject, the instructor name, the personnel being trained and the Instructor perception about the trainee performance. Training records are kept while the Employee is working and plus five years after the employee lefts the company, according Brazilian labor laws.

The Human Resources area maintains records according to the integrated management system certificated in safety, health and environment (OHSAS 18001 and ISO 14001) for manage all documents including records.

8.3 STANDARD OF PRACTICE 8.3: *TRAIN APPROPRIATE WORKERS AND PERSONNEL TO RESPOND TO WORKER EXPOSURES AND ENVIRONMENTAL RELEASES OF CYANIDE.*

X in full compliance with the ICMI

The operation is in substantial compliance with Standard Practice 8.3

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was observed through on the job-training program, emergency training program, training records and personal interviews that the plant Operators and maintenance Employees have been trained in the procedures to be followed if cyanide is released.

The cyanide preparation process was followed up and verified that the Operators who performed the activity followed all the steps provided in preparation procedure PE 0207. The Auditors Team, demonstrating the effectiveness of the training performed, considered the activity satisfactory.

Observed, through emergency training program, training records and personal interviews that cyanide response personnel, including unloading, mixing, production and maintenance workers, have been train in decontamination and first aid procedures. The Brigade Members were train and qualified before being assigned as Emergency Brigade Members. Decontamination and first aid procedures are included in the emergency drills training scope.

Observed, through meeting records, that communication with community members, medical providers, hospitals and police officer, about the elements of the Emergency Response Plan related to cyanide are perform regularly, mainly before emergency training drills. Sampled examples were Security and health authorities, public authorities and community representatives.

The frequency of recycling training "Safety in Handling and First Aid Sodium Cyanide" held regularly every two years. The Emergency Brigade training frequency is 12 months.

The recycling trainings, as well as those established by Braziliam Laws are defined and carried out according to the determinations in the realization periods.

Was verified the reports made after drills that include strong performances and opportunity for improvement. The Action Plan Emergency for Cyanide PN 0610 defines that with some deficiency are identified the procedure must to be changed.

It was observed through emergency training program and reports that simulated cyanide emergency drills are periodically conducted for training purposes. These mock drills cover the work exposures and environmental releases.

9 DIALOGUE:

Engage in public consultation and disclosure.

9.1 STANDARD OF PRACTICE 9.1: *PROVIDE STAKEHOLDERS THE OPPORTUNITY TO COMMUNICATE ISSUES OF CONCERN.*

X in full compliance with the ICMI

The operation is in substantial compliance with Standard Practice 9.1

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Serra Grande Operation has several forms of media to provide stakeholders the opportunity to communicate issues of concern. The means showing an effectiveness contact with stakeholders (Internal and External) are Sintonia (Sintony), Boa Vizinhança (Good Neighborhood), his program has been completely overhauled, Em Foco (In Foccus), Na Hora (On Time), Social Comunication (Whatappand) and phone nr. 0800 727 1500.
The program call "Boa Vizinhança (Good Neighbourhood)", 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 reviewed during the audit.
Stakeholders also can communicate with the operation through specific email address (ARPublicas@anglogoldashanti.com.br) which communicated to the public (internal and external) also through the recently redesigned website <www.anglogoldashanti.com.br>
Serra Grande Operation has also implemented a monthly Radio program at the local FM Radio where the Serra Grande Operation representative talks about one specific subject linked with the operation and answer questions formulated by the listeners, a live. Serra Grande Operation also published in local newspaper (the Cerrado Press) articles related operations and mineral projects in the Municipality of Crixás.

9.2 STANDARD OF PRACTICE 9.2: *INITIATE DIALOGUE DESCRIBING CYANIDE MANAGEMENT PROCEDURES AND RESPONSIVELY ADDRESS IDENTIFIED CONCERNS.*

X in full compliance with the ICMI

The operation is in substantial compliance with Standard Practice 9.2

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande Operation has implement and maintain the procedure PN 0006 – "Communication SG – Serra Grande" that establish the medias for communication.

Another opportunity to dialogue with stakeholders (local EPA - SEMAD), is through programmed meetings.

Unplanned meetings with public authorities are also use by the operation to dialogue with external stakeholders. Finally, the Serra Grande Operation training programs focused on cyanide management are also used to dialogue with internal stakeholders (Employees and Contractors).

Serra Grande Operation training programs focused on cyanide management are also used to dialogue with internal stakeholders (Employees and Contractors). "Em Foco" is distribute for internal stakeholders (Employees by email and hardcopy and contractors only by hardcopies is available at the Serra Grande Operation. The Visit Program allows the Communities to visit the Plant and be aware of the risks of cyanide.

9.3 STANDARD OF PRACTICE 9.3: *MAKE APPROPRIATE OPERATIONAL AND ENVIRONMENTAL INFORMATION REGARDING CYANIDE AVAILABLE TO STAKEHOLDERS.*

X in full compliance with the ICMI

The operation is in substantial compliance with Standard Practice 9.3

 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Serra Grande 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 "Sintonia" and "Boa Vizinhança" to also addresses on 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).
Through the Good Neighborhood program, the Communities have access to the Serra Grande Plant Areas.

Serra Grande Operation allows that the Communities visit the Plant and be aware about the risks of cyanide.
Although the local population, in many cases is illiterate the Serra Grande Operation disseminated in verbal or visual form information related to cyanide management at the operation (meetings with community representatives).
There is no record of accidents related to those aspects at Serra Grande operations.
If it occurs there are procedures implemented and maintained to officially report such incident to ORT / GO (Regional Employment Agency / State Goiás) and to the general public, through the Communications Department and Community Relations, contemplated situation in Emergency Response Plan.
Serra Grande Operation shall communicate any kind of incident to SEMAD/GO (local EPA).
Serra Grande Operation did not have any of the above mention incidents. In the event of such kind incidents, the Serra Grande Operation will make information available through the TOLL FREE phone number (0800 - 727 1500), which is available 24 hours per day.
Stakeholders may also access:

- Environmental protection agency www.semad.com.br
- Specific email address canalderelacionamento@anglogoldashanti.com.br
- Web Site (redesigned) www.anglogoldashanti.com.br