

SUMMARY AUDIT REPORT

***Gold Mining Operations  
Summary Audit Report***

*for*

***Mineração Serra Grande Ltda/ Anglo Gold  
Ashanti Group.***

***August 2022.***

***Prepared by NCABrasil Expert Auditors Ltd.***

**[www.globalsheq.com](http://www.globalsheq.com)**

***This report contains 24 (twenty-four) pages.***



# SUMMARY AUDIT REPORT

## SUMMARY AUDIT REPORT FOR GOLD MINING OPERATIONS

### *Instructions*

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

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

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



Mineração Serra Grande

Name of Mine

Signature of Lead Auditor

08/01/2024


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Name of Mine: Mineração Serra Grande Ltda.  
Name of Mine Owner: Anglo Gold Ashanti Inc.  
Name of Mine Operator: Mineração Serra Grande Ltda.  
Name of Responsible Manager: Fernando de Mendonça Gurgel  
Address: Zona Rural, Crixás, GO, Brasil.  
State/Province: Goiás Country: Brasil  
Telephone: (5562) 3365-7112  
E-Mail: FMGurgel@anglogoldashanti.com.br

## Location detail and description of operation:

Mineração Serra Grande's ore processing plant is located in Crixás, state of Goiás. It receives ore from three underground mines and one open pit: Mine III, Nova/Pequizão Mine, Palmeiras Mine and Open Pit, for gold processing and production. The operation uses solid NaCN supplied by Australian Gold Reagents Pty. (please refer to Standard of Practices 1.1, 2.1, 3.1 and 3.2 for more information related to type of cyanide used by the operation), to prepare cyanide solution. The operation does not add cyanide solution during the milling process. Mineração Serra Grande's metallurgical plant started operations in October 1989, with a capacity to process 1,200 t/day (tonne per day). Since the last recertification audit, the operation's hydro-metallurgical plant did not suffer any change in its configuration. The only noted change was related to the new system to manage the process tailings. The actual process results in dry tailings and the operation no longer dispose liquid tailings in traditional tailings storage facilities (TSF). Currently, Mineração Serra Grande metallurgical plant processes approximately 5,000 t/day of ore, 1,500,000 t/year (tonne per year), with a gold content of 2.50 g/t (gram per tonne) and metallurgical recovery of 93.7%. The production process is split into crushing, milling, gravity concentration, intensive leaching, thickening, leaching, adsorption, acid scrubbing, elution, electrolysis, smelting, and activated carbon regeneration. The ore is first crushed (primary, secondary, and tertiary crushing), sorted by particle size on screens (primary, secondary), a spiral classifier, and stored in two silos. The ore reclaimed from the silos feeds the milling circuit (without cyanide solution addition). Part of the circulating load from the mills (underflow from the hydro-cyclones) feeds the gravity concentration circuit. The overflows from the hydro-cyclones and the spiral classifier go to the thickening circuit to adjust the percentage of solids for the leaching step in tanks with sodium cyanide. Afterwards, the solubilized gold is adsorbed with activated carbon, which takes place in CIL (Carbon in Leaching) tanks. The tailings from this process are dried and disposed in a specific designed TSF for this purpose.



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The dry stacking system for tailings has proven to be one of the most viable alternatives for enterprises when it comes to safety and water recirculation, with up to 95% of the water being reused in industrial processes. Mineração Serra Grande has three press filters and 5 rotary filters. After the CIL stage, all material is pumped to the filters, after filtration the cake is stored and transported by trucks and directed to the stacking areas. Therefore, the plant's final gold production comes from two circuits in parallel: CIL and gravity.



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## *Auditor's Finding*

This operation is:

- in full compliance
- in substantial compliance \*(see below)
- not in compliance

with the International Cyanide Management Code.

*“This operation has not experienced any compliance issues during the previous three-year audit cycle”.*

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

Audit Company: NCA Brasil Expert Auditors Ltd. ([www.globalsheq.com](http://www.globalsheq.com))

Audit Team Leader: Celso Sandt Pessoa

E-mail: [celsopessoa@ncabrasil.com.br](mailto:celsopessoa@ncabrasil.com.br) or [celso@globalsheq.com](mailto:celso@globalsheq.com) (ICMI qualified lead auditor, since 2006, and TEA (Technical Expert Auditor)).

Names and Signatures of Other Auditors: none

Date(s) of Audit: 17 ~25/08/2022 (on-site) and  
27 ~ 29/10/2022 (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 certification audit. I further attest that the certification audit was conducted in a professional manner in accordance with the Mining Operations Verification Protocol, using standard and accepted practices for health, safety and environmental audits.



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**1. PRODUCTION:** *Encourage responsible cyanide manufacturing by purchasing from manufacturers who operate in a safe and environmentally protective manner.*

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

The operation buys solid NaCN from AGR Pty., where AGR means Australian Gold Reagents, an ICMI (where ICMI means International Cyanide Management Institute) certified Australian cyanide producer, in accordance with the information available at ICMI's website.

**2. TRANSPORTATION:** *Protect communities and the environment during cyanide transport.*

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

All transportation documentation from AGR plant in Australia and the mining operation is retained by the mining operation. The transportation documentation includes: AGR certificate of origin, AGR statement indicating the transporter used between the AGR plant and Fremantle port (Australia), Bill of Lading issued by the sea transporter (MSC/ Mediterranean Ship Cruisers), between Fremantle port and Brazilian port, road transportation document (DACTE) issued by the Brazilian transporter (Niquini Transportes, an ICMI certified transporter). Reviewed such transportation documentation, between 2019 and 2022, in this opportunity. AGR Pty. supply chain (Australian supply chain, Ocean Freight Supply Chain and Central and South America Supply Chain) is certified by ICMI, in accordance with the information available at ICMI's website.



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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.*

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 3.1  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

It was evidenced that Serra Grande designed and constructed two receiving/storage areas for the reception of the solid cyanide (without any change since the last recertification audit) and constructed according to Brazilian engineering standards. Refer to Standard of Practice/ SoP 4.8)). The cyanide mixing and distribution facilities (remains the same since the last recertification audit) were also designed and constructed according to Brazilian engineering standards. These facilities were designed and constructed in accordance with acceptable Brazilian engineering standards. Receiving and storage areas were evidenced, in the field audit, to have concreted floor, bricked wall separating materials, under roof, locked access, adequate ventilation and HCN sensors. The cyanide solution preparation area has also concreted floor and natural ventilation system. The two warehouses did not suffer any change since the last recertification audit and are included in the inspection and preventive maintenance programs, as well as the cyanide preparation and distribution area.

During the field audit it was evidenced that the access to the process plant is controlled, through magnetic cards specifically assigned for authorized persons. The entire process plant is fenced. Once inside the process plant, the unloading, storage and preparation areas are separated from people and far from surface waters. These areas have a drainage system, with a sump and a floor pump. During the unloading, storage and preparation activities only authorized operators are allowed to circulate in these areas. The operation uses solid cyanide and not liquid one. Anyway, as previously mentioned, the unloading areas have a concreted floor. As evidenced during the field audit, the cyanide preparation tank has an HCN sensor, pH sensor and level sensor (all calibrated and maintained against international standards). After preparing, the solution is transferred to distribution tanks, which are equipped with a calibrated and maintained level sensor. It was evidenced that the cyanide reception, storage and preparation areas were constructed in structural concrete, inside a secondary containment pool (preparation area), as evidenced in the design/ construction documentation and in the field audit. It was evidenced that the cyanide reception, storage and preparation areas were constructed in structural concrete, inside a secondary containment pool (preparation area), as evidenced in the design/ construction documentation and in the field audit. Cyanide storage tanks are constructed of carbon steel. It was evidenced that Serra Grande stores solid NaCN boxes in specific warehouses (under roof), as previously mentioned, in well ventilated areas, over wooden pallets. HCN detectors and alarm systems are in place as evidenced in the field audit.



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Both warehouses were designed and constructed with adequate (natural) ventilation, as evidenced during the field audit. The cyanide solution preparation and distribution area was also designed and constructed with a natural ventilation system.

It was evidenced that Serra Grande controls the access to the process plant and the warehouses (both inside the fenced process plant). The warehouses are inside fenced areas, well signed and locked. The cyanide solution preparation and distribution area is inside the fenced process plant. During the field audit it was observed that only authorized and qualified operators are allowed to access these areas. The cyanide storage areas (warehouses) are isolated (through a bricked wall) and apart from other storage areas and specifically assigned to store only solid sodium cyanide. It was evidenced that they are well maintained, clearly signed, clean and ordered. Food and tobacco products are not allowed in these areas. During the field audit this was clearly evidenced. Cyanide solution storage and distribution tanks are constructed of carbon Steel, which offer a good barrier to avoid mixing with other incompatible materials, that are not allowed to be stored in this area. Cyanide solution preparation and distribution area is exclusively used to prepare and distribute cyanide solution. It is not a storage area for other materials. Leaching tanks with cyanide are also constructed of carbon steel, which offer a good and effective barrier to avoid mixing with other incompatible materials. This leaching area is not a storage area for any type of materials. It is only used to leach the milled ore.

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

After neutralization, big bags are dried and disposed inside wooden boxes, stored inside a fenced area, concreted floor and under roof and then sent to Ecoblending Ambiental Ltd., a qualified environmental services supplier, for final disposition (incineration). All big bags are neutralized during 24 hours into a peroxide solution (15%) tank, as evidenced during the field audit. All big bags and wooden boxes are sent for incineration at a qualified environmental services supplier, as previously mentioned. All the sea containers returned to the NaCN seller or to the sea transporter (MSC) are inspected, cleaned (brushed) and sealed, before returning to the above-mentioned stakeholders. All valves, pumps, tanks, secondary containments, are included in the operation preventive maintenance plan. It was not evidenced that hoses are used during the preparation of cyanide solution. Valves and flanges are replaced when necessary. It is cheaper to have this approach instead including them in a preventive maintenance plan. Operational procedures are in place defining the steps to be followed during cyanide solution preparation, including the operation of valves. Such operations are performed from the control room or manually at the tanking area. All NaCN boxes are handled with the help of forklifts, operated by qualified operators. It was evidenced, during the field audit, that all NaCN boxes are kept in order, without puncturing or rupturing. The stacking limit is three boxes, according to the producer instructions. This was evidenced during the field audit. Evidenced, during the field audit, that the cyanide solution preparation areas are kept clean, in accordance with a documented operational procedure.



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The cyanide solution preparation is always performed by two operators and monitored from the control rooms. Specific PPEs are defined, in a documented operational procedure, to be used during the NaCN solution preparation. Evidenced, during the field audit, the preparation of one NaCN solution batch. AGR already supplies solid NaCN with dye colorant (light red), as evidenced during the field audit.

#### **4. OPERATIONS: *Manage cyanide process solutions and waste streams to protect human health and the environment.***

Standard of Practice 4.1: *Implement management and operating systems designed to protect human health and the environment utilizing contingency planning and inspection and preventive maintenance procedures.*

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

#### *Summarize the basis for this Finding/Deficiencies Identified:*

The operation designed, documented, implemented and maintains a SHEQ (Safety, Health, Environmental and Quality) management system which includes the management of cyanide. The system includes operational procedures such as reception, storage and handling of solid cyanide, strong cyanide solution preparation, leaching operational control, TSF operational control (dry tailings), Acacia operation, decontamination of cyanide installations prior to maintenance activities, working at confined spaces, among others and management procedures such as change management, incident reporting and investigation, water balance management, emergencies and crisis management, communication management, among others. All operational procedures are based on the design premises and were updated along the time, in accordance with the change management procedure. Legal requirements are also addressed at the operational and management procedures. Examples of such aspects are the design or required freeboard for impoundments and the design storm events for process solution impoundments. All operational and management procedures describe specifically the actions to be done in order to achieve the planned results. Hazards, risks and operational controls are addressed in the operational procedures. The required PPEs and prework inspections are also addressed in such operational procedures (or safe work procedures). The preventive maintenance management system and the maintenance inspection management system are included in the documented management system. The operation designed, documented, implemented and maintains a change management procedure which is applicable to several types of changes such as engineering changes, employees' changes, documentation changes among others. The change management procedure demands the participation of different stakeholders in order to review the proposed change, always including representatives of the environmental, health and occupational safety processes. The operation developed a contingency plan related to the management of any upset in the water balance, in the dry season and in the rainy season. There were no such upsets in the water balance in the last three years. Any problem related to monitoring results (e.g: free cyanide content in surface or underground waters) or detected during process plant inspections (e.g: pump leakages) are managed through the corrective actions management process. In the last three years there were no environmental monitoring nonconformances.



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Minor mechanical problems were evidenced during maintenance inspections and corrective maintenance orders were issued and timely implemented. The operation developed and implemented a crisis management plan. In the last three years, the operation did not face any situation requiring the trigger of the crisis management plan. The operation considers the temporary closure or cessation its activities as a crisis and, independent of the causes that resulted in such situations, these ones will be managed in accordance with the crisis management plan. The operation decommissioning and closure plan (please refer to Standard of Practice 5.1) is considered in the crisis management plan as well as the operation emergency response plan (when an emergency progress to a crisis). Both documents address typical responses such as how to dispose solid NaCN available in the warehouses and not used, how to maintain the leaching process plant in neutral operational, how to empty process tanks and store the content in secondary containments or at contingency pools, how to perform environmental monitoring, how to neutralize, wash and dismantle cyanide containing facilities, among other usual and specific actions during such situations.

The operation defined, documented and implemented specific inspection checklists focused on the process plants installations. Records of such inspections are retained by the operation. Reviewed inspection records performed between 2019 and 2022. The inspections are performed per area and includes all the installations included in that area (e.g: tanks, secondary containments, valves, pumps, piping, instrumentation). All cyanide containing tanks are inspected on a monthly basis. The inspection scope is focused on corrosion signs, leakages, pipelines, joints, valves and structural integrity. It is an integrated inspection, including the secondary containment, the tanks concreted bases. Records of such inspections are retained and were reviewed during this opportunity. During the field audit, it was evidenced that those installations are well maintained. As previously mentioned, the inspection of secondary containment, for tanks and piping, are included in the monthly inspection scope. During the field audit, it was evidenced that such installations are well maintained. The operation does not have leach pads and ponds but has an open pit that is being used to retain rainwater from the old diversions system of the previous TSF. This installation is monthly inspected. Inspections results performed between 2019 and 2022 were reviewed. Pipelines, pumps and valves are included in the inspection scope. All cyanide installations are included in a preventive maintenance program, and inspections are performed in order to confirm the effectiveness of the preventive maintenance program. The operation has an open pit being used to retain rainwater, that is inspected on a monthly basis. Records of such inspections are retained by the operation. Inspections results performed between 2019 and 2022 were reviewed. Cyanide containing installations (tanks, pipes, pumps, valves, secondary containment) are inspected on a monthly basis, in between preventive maintenance activities. Inspection checklists were developed and implemented. The inspection results are recorded in this checklist, that are retained by the operation in accordance with the quality records management procedure. The checklist addresses the quality aspects to be inspected and the acceptance criteria to be observed. The inspection checklist addresses the name of the inspector and the date of the inspection. If opportunities of improvement are identified, corrective or preventive maintenance orders are issued and implemented. Such cases were evidenced during this opportunity. Corrective maintenance orders are issued when the inspection result demands one. All corrective maintenance orders are dated and, when concluded, are retained by the operation. Some corrective maintenance orders issued between 2019 and 2022 were sampled and reviewed during this opportunity. The operation designed, documented, implemented and maintains a preventive maintenance program focused on tanks, pipelines, pumps, valves, secondary containments and instrumentation (e.g: pHmeter, HCN detector, level transmitter).



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The frequency of preventive maintenance is variable. For process tanks, for example, every five years they pass through a complete check in accordance with API 650 and API 653 standards (where API means American Petroleum Institute). Topographic evaluations are included in the preventive maintenance plan. In my professional experience, the defined preventive maintenance frequency is adequate to maintain the process installations in a safe way. Records of preventive maintenance orders performed during the last three years were reviewed. It was evidenced that the operation has emergency power resource (diesel generator/ 450 kVA (kilo Volt Ampere) to operate pumps and other equipment (e.g: agitators) to prevent unintentional releases and exposures in the event its primary source of power is interrupted. The back-up power generator equipment is covered by a preventive maintenance program (annual) and inspections (every 15 days). The generator is turned on every two weeks. Records of such activities are retained by the operations and were reviewed during this audit.

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 4.2  
 not in compliance with  
 not subject to

*Summarize the basis for this Finding/Deficiencies Identified:*

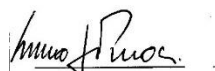
The operation conducts a program to determine appropriate cyanide addition rates and optimize gold recovery. This program is based on a geo-metallurgical test model. On a monthly basis, the metallurgical laboratory defines the cyanide consumption target (theoretical) and informs the production process. The cyanide solution consumption is monitored on a daily basis, which is adjusted when necessary. Cyanide consumption metrics are defined and the results until July 2022 indicates that the planned results for cyanide consumption are being reached and decreasing. The addition of cyanide solution in the leaching process is automatic through a cyanide and pH analyzer and controller (TAC 1000) device.

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

Mineração Serra Grande developed a comprehensive, probabilistic and dynamic water balance system, focused on the process plants and the TSF (dry one), which includes the reference to the design assumed inputs and outputs, and the real inputs and outputs.



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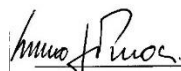
The water balance is managed and monitored on a daily basis, in accordance with the water balance model defined by a technical study developed by CLAM Engenharia Ltd., which uses the software GoldSim (developed by GoldSim Technology Group LLC). The model considers the storm rain return of 1000 years/ 310 mm/ 24 hours (0,01% probability to fall during the life of mine). The operation has a decommissioned open pit that is used to collect and retain rainwater, including the storm rain. The operation tailings are dried and stored in a specific dry tailing's storage area, where the residual moisture is evaporated. The operation has the precipitation and evaporation data since 1987. The precipitation resulting from surface run-on from the up-gradient watershed did not enter in a pond (TSF), because the former TSF (wet) was decommissioned and tailings are dried. All rainwater is directed to the open pit used to retain it. The freezing potential is nil. Dewatering is not a critical aspect to the operation water balance because in most of the cases, piezometers installed in different places around the operation, show insignificant water level or are dry. The operation has a power backup system that provides sufficient energy to maintain the pumping and agitation system working. The process plant pumping system has a redundancy of two pumps. There is no leach pad at the operation. All plant effluents are neutralized and discharged, when necessary, on surface waters (Córrego Gerais). The amount of effluent discharged on surface waters is not a critical aspect to the water balance. The freeboard of the open pit used to retain the rainwater is defined, controlled and monitored by the operation. It was evidenced that the operation implemented operating procedures that incorporate inspection and monitoring activities to implement and maintain the water balance and prevent overtopping of ponds (open pit). Records of such inspections were reviewed. This inspection checklist also considers the presence of solution in the secondary containments. These inspections are performed by the process plant operators. It was evidenced that the operation implemented operating procedures that incorporate inspection and monitoring activities to implement and maintain the water balance and prevent overtopping of ponds (open pit). Records of such inspections were reviewed. This inspection checklist also considers the presence of solution in the secondary containments. These inspections are performed by the process plant operators. The operation monitors precipitation and evaporation and compares with the historical values.

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 4.4  
 not in compliance with

*Summarize the basis for this Finding/Deficiencias Identified:*

All the operation perimeter is fenced. Mineração Serra Grande monitors all open waters (Pequidão open pit), in a frequency defined by the Brazilian environmental authority. All analysis is performed by an ISO 17025 certified laboratory. All reviewed monitoring reports did not show any result for WAD (Weak Acid Dissociable Cyanide is an operationally defined group of cyanide species that undergo dissociation and liberate free cyanide when refluxed under weakly acidic conditions) cyanide (CNw) exceeding 50mg/l. All results for WAD cyanide are below 0,05 mg/l. Reviewed documentation were: Environmental control and monitoring plan (2019~2022) and monitoring reports. The operation developed and implemented an environmental monitoring plan, which includes the monitoring of the open waters. The monitoring frequency is defined in accordance with the environmental permits hold by the operation.



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Effluent samples are taken at the discharge points of the contingency pools, which are connected. Such pools are used to capture and treat any process overflows (effluents), that are pumped back to the process. These pools are used for contingency purposes only. Reviewed monitoring results between 2019 and 2022 for WAD cyanide all results are below 50 ppm. The Pequizão open pit inspections are performed every fifteen days and includes the verification of dead animals inside the them. There were no cases of fauna mortality since 2019. The operation has no leach pads.

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 4.5  
 not in compliance with

*Summarize the basis for this Finding/Deficiencias Identified:*

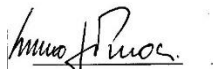
Mineração Serra Grande have direct discharge (when necessary) to surface water, after plant effluents being neutralized (95% of the neutralized effluents are reutilized by the operation). Neutralized effluents are discharged into Córrego (creek) Gerais. and all analytical results for WAD cyanide are below 0,005 mg/l (not detectable). All analytical results for free cyanide are below 0,005 mg/l (not detectable). All analyses are performed by an ISO 17025 certified laboratory. Reviewed monitoring records performed between 2019 and 2022. It was evidenced that water samples are taken upstream and downstream of the mixing / discharge point and all results, for free cyanide, are below 0,005 mg/l. It was not evidenced that environmental impacts over surface waters were caused by the operation activities.

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

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

*Summarize the basis for this Finding/Deficiencias Identified:*

It was evidenced that the operation has implemented a specific water management system, where seepage is not a critical aspect to the water balance (refers to Standard of Practice/ SoP 4.3). Operational controls such soil compaction, HDPE (High Density Polyethylene) liners, structural concrete secondary containments, soil quality aspects and underground water quality monitoring, are effective barriers to protect the underground water to be impacted by cyanide. The operation does not use underground water in its process. The operation monitors the content of total cyanide (in accordance with Brazilian technical standard CONAMA 396/ 2008 (CONAMA = Conselho Nacional de Meio Ambiente) in underground waters taking samples in all piezometers and wells installed by the operation. All results between 2019 and 2022 are below 0,02 ppm, all in accordance with the defined acceptance criteria. The operations do not use tailings as backfill, as evidenced during the field audit. There were no impacts on the underground water between 2019 and 2022. The operation does not use underground water in its process plant.



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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 4.7  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

All process tanks are constructed inside secondary containments, over concrete base, made of structural concrete, as evidenced in the design specifications, construction records and during the field audit. All the secondary containments are designed to hold 115% of the biggest tank volume inside the containment plus the storm rain return, which probability is 0,01% during LoM (Life of Mine). All secondary containments are provided with automatic floor pumps, inside a sump. All effluent collected inside a secondary containment is pumped back to the process tank. Evidenced this system during the field audit. All process tanks are constructed inside secondary containments. All cyanide containing pipelines and joints have a secondary containment in order to avoid any spillage or leakage. It was evidenced two types of containment, the first one a pipe inside a pipe, for pressurized pipelines and half pipeline containment and collecting trays for non-pressurized pipelines. This was evidenced in design documentation and during the field audit. There are no cases where cyanide containing pipelines are a risk to surface waters. All cyanide containing tanks are constructed of carbon steel and pipelines, depending on the diameter are made of carbon steel or HDPE. Evidenced through the design documentation and during the field audit.

Standard of Practice 4.8: *Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.*

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 4.8  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

Since the last recertification audit, the process plant did not suffer any major change. Please refer to the previous audit reports, because the previously reviewed documentation remains the same. The operation is now drying its tailings. The dewatering of tailings slurry system was designed and constructed in accordance with Brazilian engineering standards. A quality assurance (QA) plan for the design and construction of such facilities was developed and implemented by the operation. It is important to note that the chemical composition of the tailing's slurry indicates that WAD and free cyanide content are below 0,005 mg/l (not detectable). As previously mentioned, the process plant did not suffer no major changes since the last recertification audit. Soil compaction test records, welding procedures and records, material specifications and quality records are still retained by the operation, in specific data-books.



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For the new dewatering of tailings slurry system, the operation implemented a quality assurance plan addressing the materials to be used, the civil installations (structural concrete) and the inspections (receiving, in process and final ones) and tests to be performed. Commissioning activities are also addressed in this QA plan. Records of such inspections and tests are retained by the operation. Commissioning records and as-built documentation are still retained by the operation. Since the operation first certification, the design and construction documentation related to leaching plant are retained by the operation. They were sampled and reviewed several times since then and found in conformance. Commissioning records of the dewatering tailings slurry system are retained by the operation.

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

The operation, according to the Brazilian mining legislation, developed, documented and maintains an environmental monitoring plan for normal and emergency situations. The monitoring plans includes the monitoring of soil, water, air and wildlife. All analytical methods were developed by an ISO 17025/2017 certified analytical laboratory, accredited by the Brazilian Metrology Institute (INMETRO), and are based on the SMWW (Standard Methods for Water and Wastewater/ edition # 23). The monitoring plan defines where the samples shall be taken, in accordance with the environmental permits and documented protocols define how the samples shall be taken, preserved and transported to the analytical laboratory. The cyanide types to be analyzed are total, WAD and free cyanide, depending on the sampling points. Laboratory's sampling protocol (and custody record as well) addresses the environmental conditions where the samples were taken. Reviewed such protocol/ record from samples taken between 2019 and 2022. The monitoring frequencies are defined by the environmental permits and, in my professional experience, are adequate to characterize the medium being monitored.

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

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

The operation, in accordance with the Brazilian mining legislation, developed, documented and approved a detailed mining decommissioning and closure plan. The operation decommissioning and closure plan was updated and prepared by Golder Associates Brasil Ltd. (dated 31/01/2020). Related to the cyanide facilities and installations, the plan addresses neutralization, rinsing, dismantle, disposition and after closure activities, such as environmental monitoring. The closure plan defines the implementation schedule for the decommissioning and closure activities along and after the life of mine (LoM=2031). The closure plan must be updated, at least, every five years.

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

The operation calculated and defined the value of decommissioning and closure plan, in Brazilian currency, to implement the closure plan by a third party. The closure plan cost estimate is updated annually. There is no Brazilian legislation defining financial mechanisms to ensure a mining closure plan implementation. The operation implemented a self-guarantee to cover the implementation of the closure plan. Annually the operation is audited by independent third-party auditors, using financial audit standards (International Financial Reporting Standards, developed by the International Accounting Standards Board). Reviewed financial audit reports performed by Ernst & Young (accredited according the Brazilian Accounting Council under the number CRC# 2SP015199/O-6) and led by the auditor Tomás Menezes (accredited by the Brazilian Accounting Council under the number CRC # 1MG090648/O-0). Reviewed audit reports dated 18/04/2022 (financial years 2021/2020) and 23/04/2021 (financial years 2020/2019). Both audit reports stated that the operation has enough financial strength to cover the expenses related to the implementation of the operation closure plan.



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

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

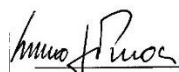
The operation designed, documented, implemented and maintains a set of safe work procedures which includes operational and management ones, such as leaching operations, Acacia operation, cyanide solution preparation, solid cyanide handling and storage, sampling activities, neutralization of cyanide containing installations before maintenance activities, filtering activities, working at confined spaces, among others. All operational procedures clearly define the necessary PPE that must be used to perform an activity which involves cyanide. Pre-work inspections, such as PPE inspection, forklift inspection, crane inspection, fire extinguisher inspection, shower and eye-washer inspection, among others are addressed at the operational procedures. Records of such inspections are retained by the operation and were reviewed during this opportunity. The draft safe work procedures are prepared by the plant operators who will perform that activity, reviewed by process supervisors and approved by a process engineer.

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 6.2  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

The operation defined two ranges of pH that shall be observed during cyanide solution preparation (between 11 and 12) and during leaching process (between 10.2 and 10.9). The operation targets the noted minimum pH levels to limit the evolution of hydrogen cyanide gas during mixing and production activities. Verified during the field audit and through interviews with plant operators, control room operators and supervisors that these values are kept under control. Also evidenced that the operation installed pH meters in specific process tanks. Such pH meters are included in the preventive maintenance plan, and pH meters maintenance and calibration records were reviewed during this audit. The areas with such HCN generation potential, such as cyanide solution preparation tank, cyanide solution addition tanks, leaching tanks Acacia reactor, were identified and specific and adequate PPEs are mandatory to be used in such areas. Such areas are well identified as evidenced during the field audit. The operation installed fixed Drager HCN detectors in such areas and operators also use portable Drager HCN detectors. Both HCN detector types are included in the preventive maintenance and calibration program.



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Records of such activities are retained by the operation and were reviewed during this opportunity. The frequency of calibration for both types of HCN detectors are in accordance with Drager (Original Equipment Manufacturer/OEM) recommendations. Both types of cyanide detectors are calibrated to alarm in two points: 2.5 ppm (alarm 1) where operators must contact and inform the control rooms and 4.5 ppm (alarm 2) where the operators must inform the control rooms and leave the area. Safety signage and safety pictograms are placed in specific places in the process plants, including the solid NaCN warehouses, which are inside the fenced perimeter of the process plants, at process plant installations (including pipelines). Safety signage includes information related to cyanide, the PPEs that must be used, that is forbidden to eat, drink and smoke in such places and also open flames are not allowed. The cyanide solution is dyed for clear identification. AGR Australia Pty. supplies solid NaCN briquettes with dye colorant. Evidenced dyed solution during the field audit (cyanide solution preparation activity). It was evidenced during the field audit that shower and low-pressure eye-washers are available in specific assigned places at the process plants. Such installations were tested during the field audit and worked adequately. Both equipment are included in the preventive maintenance program. The operation uses dry chemical powder fire extinguishers (ABC type) in the process plant area. Such fire extinguishers are annually maintained and monthly inspected by the occupational safety process. Records of such activities are retained by the operation and were reviewed during this audit. Fire extinguishers are also checked before some cyanide related activities (pre-work inspection). All process tanks are identified by color (purple marks) and safety signage that cyanide is present. In the same way all pipelines containing cyanide are identified by color, safety signage and the flow direction identified, as evidenced during the field audit. AGR's MSDS (Material Safety Data Sheet/ Ficha de Segurança do Produto) are available in the warehouse, in the cyanide solution preparation area and at process plant, documented in Portuguese, as well as first aid procedures for cyanide intoxication and chemical burning, as evidenced during the field audit. The operation designed, documented, implemented and maintains and incident (real or potential) reporting and investigation procedure. There were no cyanide related incidents (real or potential) in the last three years. The documented procedure was implemented to report and investigate non-cyanide related incidents, addressing dispositions taken, investigation of the causes, definition of corrective (for real incidents) or preventive actions (for potential incidents), implementation of the proposed improvement actions and the verification of the effectiveness of the implemented improvement actions.

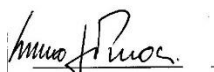
*Standard of Practice 6.3: Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.*

**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/Deficiências Identified:*

In the process plant there are first aid resource, such as oxygen and water and communication mean such as radios and telephone, as evidenced during the field audit. The operation has an ambulatory located close to the process plant, equipped with oxygen bottles, mechanical breathing apparatus (ambu), which may be used manually or associated with pressurized medicinal oxygen, additional antidotes (cyanokit), radio, telephone, external automatic defibrillator and one ambulance. The medical team (per shift) is composed by one doctor and two nurses. All medical resources are inspected and tested by the nurses on a regular basis.



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Records of such inspections are retained by the operation and reviewed during this audit. All cyanide antidotes were evidenced to be adequately stored and within the valid date defined by the producer. All medical support belongs to the operation, which developed a first aid protocol that includes cyanide intoxication and chemical burning. The operation has its own ambulatory equipped with resources to attend workers exposed to cyanide. The operation has one ambulance that is able to transport stabilized workers to Crixás regional hospital (Dr. Augusto César Caldas). The Crixás regional hospital was evaluated by the operation medical team and they concluded that it is adequate to be used.

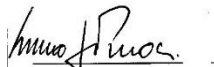
## **7. EMERGENCY RESPONSE** *Protect communities and the environment through the development of emergency response strategies and capabilities.*

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 7.1  
 not in compliance with

### *Summarize the basis for this Finding/Deficiencies Identified:*

According to the Brazilian mining legislation, the operation designed, documented, implemented and maintains an emergency response plan/ERP (PN-0610(9)). The ERP was developed by different internal stakeholders such as process plant team, maintenance team, occupational health professionals, occupational safety team and environmental professionals. Catastrophic release of hydrogen cyanide from storage, process or regeneration facilities' scenario is addressed at the emergency response plan (ERP), mainly related to cyanide solution preparation and elution. The ERP addresses the activities that must be performed in emergencies involving solid NaCN transportation inside the operation and in the vicinity of the operation. The ERP addresses the response to emergencies related to releases during unloading and mixing. The ERP addresses the response activities to be performed during fires, mainly in the solid NaCN warehouses. The ERP describes the activities to be done in the event of pipes, valves and tanks ruptures. The ERP has a specific chapter related to the open pit used to retain neutralized effluents and rainwater related emergencies, including overtopping. The ERP addresses the response activities to be done in the event of power outages (backup generator system) and pumps failures (redundancy two system). Uncontrolled seepage is not a critical emergency scenario for the operation, because all the process plant areas and the TSF were designed and constructed (soil compaction, concreted floor (secondary containments) covered with HDPE membrane and the previous TSF, beyond the soil compaction, is covered with HDPE membrane). Underground water monitoring confirms the effectiveness of such operational aspects. The dry tailings are being disposed at a decommissioned open pit (cava 5) which was prepared to receive these tailings. The open pit preparation was consisted of a layer of sterile crushed stones covered by a layer of compacted soil and a layer of compacted clay compound (clay, concrete and additives). Field tests demonstrated the effectiveness of such configuration to avoid seepage. The ERP addresses the response activities to be done in the event of failure of effluent neutralization system.



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The ERP has a specific chapter related to the open pit used to retain neutralized effluents and rainwater related emergencies, including overtopping. The primary responsibility related to solid NaCN transportation emergencies is from the cyanide seller (AGR supply chains/ Niquini Transportes). After the solid NaCN delivery in a Brazilian port, the cyanide is transported by road (truck) by Niquini Transportes. In the event of transport emergencies in the vicinity of the operation, the operation emergency response team will participate also. The cyanide boxes are transported within a 20' sea container. The ERP addresses the activities to be performed related to the clearing of internal stakeholders (the first step is to reunite the site personnel in specific meeting points and then, under a brigade member orientation, to leave the operation) and also potentially affected external communities. The ERP addresses the use of antidotes, such as oxygen and cyanokit, and additional first aid measures, as previously mentioned. The ERP was developed by different stakeholders, including the process plant and maintenance teams, this approach ensures that the releases will be controlled in their sources. The ERP addresses, where necessary, containment actions such as containing berms, assessment and mitigation action such as the use of calcium oxide or hydrogen peroxide solution (10%), to neutralize cyanide (solid and solution, respectively) spillage over soil, and the review of the real or potential emergency (learning from incidents approach), resulting in the definition and implementation of corrective and preventive actions.

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*


The ERP was developed by different internal stakeholders and submitted to external stakeholders such as Crixás Municipality, Civil Defense, Military Fire Fighters, Civil Police and Crixás Regional Hospital. The ERP includes several external stakeholders such as Crixás Regional Hospital, Civil Defense, Military Fire Fighters and Civil Police. In order to maintain the ERP updated, the same approach used to develop the ERP is used to update it. Different stakeholders are involved in the ERP preparation and update, as previously mentioned.

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 7.3  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

The operation defined an Emergency Response Committee in order to manage any type of emergencies.



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The emergency coordinator is the general manager, that may be replaced by the Occupational Health, Safety and Environmental manager. The emergency committee is composed of distinct internal stakeholders. All requirements to be an emergency response brigade member are clearly defined. All volunteers must pass through a medical/ psychological evaluation, theoretical and practical training and a final evaluation to be qualified. All brigade members, including the Emergency Response Committee contact information, are available at the ERP. Beyond that, there is a WhatsApp Group related to the Emergency Response Team. Call-out procedures includes the communication, by radio, with security and control rooms, which will trigger the emergency contacting the emergency response team coordinator. The emergency communication loop is clearly defined at the emergency response plan. There are specific activities defined to emergency coordinators, brigade leader and brigade members, as well as for external stakeholders. The operation maintains a master list of all emergency response resources that must be available at the site. There is a specific emergency response room where such resources are stored. This was evidenced during the field audit. All emergency response resources are monthly inspected by the brigade members. Records of such inspections are retained by the operation and were reviewed during this audit. As previously mentioned, the role of external stakeholders during an emergency are clearly defined at the ERP. The operation promotes meetings and performs emergency mock drills, involving external stakeholders, where the roles of external stakeholders are communicated, and all involved stakeholders become aware about their roles during an emergency response.

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

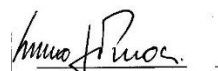
The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 7.4  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

The ERP addresses the communication loop to be followed during an emergency, which includes the communication with external stakeholders (including ICMI, hospital, firefighters, public authorities, press, among others). As previously mentioned, the operation develops a communication loop involving the contact with internal and external stakeholders, including communities' representatives, press institutions and public authorities. Communication to ICMI is included in the operation communication loop. No significant cyanide related incident has occurred between 2019 and 2022.

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 7.5  
 not in compliance with



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*Summarize the basis for this Finding/Deficiencies Identified:*


The ERP defines, in the event of solid NaCN leakage or NaCN solution/ pulp spillages, the actions to be performed in both cases. In the event of solid NaCN (briquettes) real incidents, the plan indicates that calcium oxide powder shall be poured over the briquettes, then collected with plastic shovels and brushes, put inside plastic bags and disposed into de NaCN preparation tank. It is important to note, as previously mentioned, that solid NaCN is handled over concreted surfaces. In the event of cyanide solution or pulp spillage, outside the secondary containments, such spillage shall be neutralized with hydrogen peroxide (10%) solution, which is available in the plant inside 1000-liter plastic containers. The operations uses natural absorber to dry the impacted area, which are disposed into plastic bags and sent for final disposition at the TSF (dry tailings). In order to confirm the effectiveness of the neutralization process, soil samples are taken every 5 cm, in depth, until the value of total cyanide is zero (or not detectable). The ERP describes neutralization of soils or other contaminated media. It is important to note that all process tanks and cyanide containing pipelines are protected by a secondary containment and the soil in the process plant was compacted. Any contaminated and neutralized debris, including soil, will be disposed at the TSF. The operation has alternate water sources, such as a water well and water suppliers in tank-trucks, mineral water producers. Chemical products are forbidden to be used in the event of surface water impacted by cyanide. The environmental monitoring plan addresses the necessary monitoring of contaminated soil, water and air, defining sampling protocols, the type of cyanide to be monitored and the acceptance criteria.

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

The operation is:  in full compliance with  
 in substantial compliance with      Standard of Practice 7.6  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

In the event of real or potential emergencies, after mock drills or external emergencies related to cyanide, the ERP is reviewed and updated if necessary. The operation plans and performs, on an annual basis, emergency mock drills. Due to Covid 19 pandemic in 2020, the operation did not perform an emergency mock drill. Reviewed emergency mock drills performed in 2019, 2021 and 2022. The mock drills are integrated impacting three dimensions, safety, health and environment. After the drill the results are reviewed by the attendees in order to confirm if the drill was a real situation the specific ERP would work and if the attendees performed their roles in accordance with the planned activities. In all three cases, opportunities of improvement (corrective and preventive) were identified and implemented, resulting in the update of the ERP. There was no cyanide related real incidents or emergencies during the last three years.



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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.

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 8.1  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*


The operation developed an integrated safety, health and environmental induction training for all stakeholders arriving in the operation, including the ICMI auditor, where there is a specific chapter about the cyanide management system. Records of such training sessions are retained by the operation and were reviewed during this audit. The operation's induction training adequately addresses cyanide related impacts, such as the cyanide effects on the safety and health of the employees, the symptoms of cyanide exposure, and the procedures to follow in the event of exposure. Environmental impacts of the cyanide are also informed. The induction training also includes the cyanide types present at the operation. For internal stakeholders (including permanent contractors), the operation performs a refresh induction training every three years. Records of such refresh training sessions are retained by the operation and were reviewed during this audit.

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 8.2  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

After passing through the safety, health and environmental induction training, the new employees or contractors that will work in activities involving cyanide are assigned to be trained specifically in the operational procedures for 45 days, under supervision. This training time is divided in phases and, after each completed phase, the trainee is evaluated by its mentor. In the end of the training program, the trainee is evaluated by its mentor and the process plant manager, in order to be qualified (or not) to work in the process plant. The operational training is focused on the operational and management procedures that are linked with activities involving cyanide. All operational training is provided by process operators, supervisors and/ or process engineers. It was evidenced that the operation also implemented on-line operational training. The operation's Human Resources process designed and implemented a robust operational training system. All new employees or contractors that will work in activities involving cyanide are trained and qualified before working with cyanide, as previously mentioned. In order to ensure that the employees that work with cyanide maintain their knowledge, the operation performs refresh training sessions every three years or, in the event of any update in the operational procedures, all involved employees are promptly trained in the new version of the operational and management procedures.



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The training effectiveness is evaluated in two phases, the first one during the theoretical training through tests and the second phase through planned job observations while they are working under supervision. Records of such evaluations are retained by the operation and were reviewed during this audit. The job rotation in the operation is low and, between 2019 and 2022, only three new employees were admitted working in the process plant. All training related records are retained by the operation, by the Human Resources management process. Initial and refresh training records were sampled and reviewed during this opportunity. The reviewed training records addresses the name of the trainees, the name of the instructors, the dates of the training, the topics covered by the training and the conclusions about the performance of the employees.

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

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

*Summarize the basis for this Finding/Deficiencies Identified:*

All employees that work directly with cyanide receive specific emergency related training (general knowledge) which includes first aid procedures, decontamination of workers, neutralization of leakages over soil or other surfaces like concrete. Records of such trainings are retained by the operation and were evidenced during this audit. During the field audit, some plant operators and supervisors were interviewed and demonstrated they are aware about general and specific aspects of emergency response activities. The emergency response coordinators are trained in the response protocols related to emergencies with cyanide and the resources that are necessary to respond to such situations. The Emergency Brigade members are volunteer employees that pass through medical / psychological evaluations, theoretical and practical training before being qualified as brigade members. Records of such trainings are retained by the operation and were reviewed during this opportunity. Annually, the coordinators and brigade members participate in emergency mock drills, as part of their permanent training program. They also participate in a refresh training, mandatory according to the Brazilian legislation, in accordance with Military Firefighters of Goiás State protocol. All external stakeholders that are included in the emergency response plan, such as military firefighters, local civil police and Crixás regional hospital professionals are aware about their role in cyanide related emergencies and also participates in emergency mock drills. Records of such meetings and mock drills are retained by the operation and were reviewed during this audit. Beyond the annual mock drill program, the brigade members requalified/ retrained every year, as previously mentioned. Records of such activities are retained by the operation and were reviewed during this audit. The initial and refresh training records, beyond the emergency mock drill reports, addresses the attendee's names, their performance, the training scope, instructors' names, dates and instructors' feedback about the trainee's performance.



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## 9. DIALOGUE: Engage in public consultation and disclosure.

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

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 9.1  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

The operation has a specific communication process to interact with internal and external stakeholders (e.g: press, communities, public authorities). On a regular basis, the operation promotes specific meetings with the communities in order to discuss several aspects, including the cyanide management model. Records of such meetings, performed in 2019, 2021 and 2022 were reviewed during this audit. In 2020 such presential meetings were not performed due to Covid 19 pandemic.

Standard of Practice 9.2: Make appropriate operational and environmental information regarding cyanide available to stakeholders.

The operation is:  in full compliance with  
 in substantial compliance with Standard of Practice 9.2  
 not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*

The operation designed and documented specific information (e.g: documented procedures (internal stakeholders) and leaflets (external stakeholders)) about the cyanide management at the operation that are available to internal and external stakeholders and are distributed during the meetings with the communities and other stakeholders. It was evidence that most of the external stakeholders are educated and literate. The operation has a specific communication process to interact with internal and external stakeholders (e.g: communities, public authorities, press, employees). Between 2019 and 2022 there were no critical incidents involving cyanide that resulted in fatalities, hospitalization, major environmental impacts that deserved to be communicated to the general public (internal and external). In the event of such real and confirmed incidents, the operation developed and documented a Crisis Management plan, which was reviewed during this opportunity and includes a specific chapter about the communication management during a crisis situation. The incidents will be made public. The communication will be led by the corporation spokesman through press releases, press conferences, social media publications, meetings with public authorities, phone calls and emails. Cyanide exposure resulting in hospitalization or fatality, cyanide releases off the mine site requiring response or remediation (this is a major environmental impact), cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment (this is a major environmental impact), cyanide releases on or off the mine site requiring reporting under applicable regulations (this is a major environmental impact) and releases that cause applicable limits for cyanide to be exceeded (this is a major environmental impact) are considered critical real incidents.



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## Audit team conclusions:

Was evidenced that Mineração Serra Grande maintains a SHEQ management system. This system ensures an adequate cyanide management in accordance with the Cyanide Code principles. During the previous three years certification cycle, Mineração Serra Grande did not experience any significant cyanide related incidents, nor any compliance problems related to cyanide management.

Being usual in all audit process, through sampling, opportunities of improvement (corrective and preventive) may exist and were not identified in this opportunity. Based on the sampled evidences, the physical conditions of the site (installations), in the interviewed personnel and in the reviewed documentation, the audit team concludes that the cyanide management system **is FULLY** implemented and maintained in accordance with the ICMI protocol for gold mining operations.



Rio de Janeiro, RJ, Brasil, 08/January/2024.

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08/01/2024

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