

RIO DE JANEIRO, BRAZIL

# INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

## Gold Mining Operations Summary Audit Report



### For The International Cyanide Management Code FBDM – Fazenda Mine – Equinox Gold Teofilândia – Bahia / Brazil Audit Verification Protocol

[www.cyanidecode.org](http://www.cyanidecode.org)

**December 2020**

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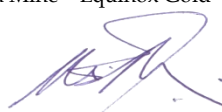
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Lead Auditor Signature

# SUMMARY AUDIT REPORT

## INTRODUCTION

### Information on the audited operation

#### Information of the audited operation

Name of Mine: FBDM - Fazenda Mine – Equinox Gold  
Name of Mine Owner: Equinox Gold Corp  
Name of Mine Operator: FBDM – Fazenda Mine  
Name of Responsible Manager: Alexandre Freitas - Plant Manager  
Address: Fazenda Brasileiro s/n (zona rural), CEP 48.770-000, Teofilândia.  
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E-Mail: [alexandre.freitas@equinoxgold.com](mailto:alexandre.freitas@equinoxgold.com)

#### Aspects of the location and description of the operation:

The Operation is located about 10 Km northwest of the Teofilândia Town in Bahia State, in the country zone. This area is a semi desert zone, without surface waters in the surrounding of the plant.

##### 1- Primary Crusher:

The "ROM" is tilted by trucks, in a hopper, equipped with fixed grid for protection with the opening of 800 mm fragments eventually retained on the grid is broken by a hydraulic impact breaker.

The fraction of the ROM is discharged in a primary double axis crusher, Metso C125 type, operating with an opening of 4 inches. The product of the primary crusher is sent through a conveyor belt to a surge pile with a total capacity of 19,000 tons.

##### 2- Secondary Crusher:

The ore of the surge pile is resumed through vibrating feeders and transferred to primary screening through a conveyor belt. The primary screening is performed at dry in an inclined vibrating screen, fitted with two decks, the first having an opening of 25 mm and 10 mm the second deck. The fraction retained in both decks feeds secondary crushing.

The secondary crushing is performed in a cone crusher, Model 300 HP, from Metso, operating with opening of 19 mm. The product unloaded on a conveyor belt feeds a garner. Then it is transferred to the secondary screening through another conveyor belt and a flow divider.

The secondary screening is performed in two vibrating screens with two decks that work in parallel. The fraction retained in the secondary screening feeds tertiary crushing.

The tertiary crushing is performed with two cone crushers that work in parallel, model 200 HP, operating at the opening of 10 mm, in closed circuit with the secondary screening.

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The ore passing in 10 mm, derived from primary and secondary screening is unloaded on a conveyor belt. Subsequently, the same will follow for a flow divider, and thence into at grinding and I or pile of emergency that has storage capacity of 1800 tons.

## 3- Grinding, Classification and Gravity Concentration

With respect to concentrated, from the gravity concentrators, it must be realized that this is collected in a tank, leased in the milling building and subsequently pumped into the reactor Acacia.

This step is performed manually and is the transfer of the stored concentrated in tanks TQ-523F-01, TQ-523F-02 and TQ-523F-03 gravity to concentrate receiving cone in Acacia. The transfer is making via peristaltic pump through HDPE pipe. The Operation is to control the solids concentration and the drive frequency of the pump during the transfer. Acacia intensive leaching reactor is a device that works with concentrated load in batches by recirculating the solution for 8 hours.

## 4- Acacia

This process uses a high intensity cyanidation process for achieving a recovery of gold from concentrates of extremely high gravity. The process utilizes a fluidized bed and leach conditions to improve the kinetics of dissolution of gold to the point where most of the dissolution occurs in a few hours. The process of the product is in the form of electrolytic gold cathode ready for casting by traditional means.

## 5- Thickening

The overflow of the two batteries of cyclones, from grinding is transferred to this area feeding a horizontal vibrating screen whose function is to remove splinters, plastics and similar.

The pulp passing through the screen goes to the thickener through an open trough, installed under the walkway of access to the central drive mechanism of the same. Most efficient sedimentation in the thickener is afforded using flocculants. The underflow from the thickener is he feed of the Hydrometallurgy. The overflow from the thickener is water and is recovered and recycled to the process.

## 6- Hydrometallurgy

This process step involves subjecting the ore slurry to a prior treatment of aeration for oxidation of sulfides and release of gold associated with them, followed by leaching in alkaline pH, with a dilute solution of sodium cyanide and lime milk, whose function is to control the Operation and adsorption of pH of gold dissolved in the liquid phase of a cyanidic ore slurry.

The slurry transfer through this process step is affected by gravity, through a 500 mm gap between tanks and inclined gutters. Each tank has a down-comer, unloading it at a depth in about 30% below the level of slurry, mini mizing thus the occurrence of short circuit in the tanks.

After the pre-airing, the ore slurry containing dissolved gold flows in counter-flow with activated carbon particles. During this transfer of coal, the static screens of each tank prevent the activated carbon to track the flow of slurry. On that occasion the same volume of coal and ore slurry is transferred from each tank to the immediately prior tank by

## SUMMARY AUDIT REPORT

pumping countercurrent to the flow of ore slurry in the tanks, also using vertical pumps. Coal regenerated or new is added to the last tank.

The carbon loaded with gold is separated from the slurry and washed in horizontal vibrating screen and is condition in a tank for later transfer to the desorption process. The slurry returns to the first adsorption tank.

### 7- Desorption

Consists of reverse the adsorption process, extracting the metals of interest from coal and delivering them to a solution that is subjected to an electrolysis process. Due to the need to reverse the process of adsorption, the operating conditions should be opposite to those stipulated in the the adsorption process. Thus, high temperature, pH and high concentrations of cyanide favoring desorption.

This step of the process, operating under batches, involves the column elution of the desorption of adsorbed gold in the carbon from the IPC, performed in closed circuit with the electro recovery of this gold in cathodes made of steel wool.

### 8- Acid Wash and Carbon Thermal Regeneration

The Acid Wash is a chemical treatment performed after the use of coal in the adsorption. It is a removal of calcium and silica by leaching in a dilute acid solution. Thus, part of the base metals adsorbed on coal (such as nickel), is also eliminate, resulting in facilitating the adsorption kinetics.

Thermal Regeneration is the partial or total removal of impurities adsorbed on coal with the gold during the CIP circuit through the burning of these impurities in a cylindrical rotary furnace. These impurities are carbonates, basic metals, clays, and organic matter.

### 9- Smelting

The slag resulting from the casting process and the crucibles are unsuitable for reuse, they are crush and returned to the milling circuit.

### 10- Tailings Dams

The slurry leaving the last CIL tank is pump to the dam number IV. The ore decants fanning beaches and the crystalline solution percolates down to a point where it is re-pump back into the process.

# SUMMARY AUDIT REPORT

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### FOR CYANIDE GOLD MINNING OPERATIONS

#### Instructions

1. The basis for the finding and/or statement of deficiencies for each Transport 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 cyanide transportation operation, lead auditor signature and date of the audit must be inserted on the bottom of each page of this Summary Audit Report.
3. An operation undergoing a Code Verification Audit 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, for a cyanide transportation operation undergoing a Code Verification Audit with all required signatures must be submitted in hard copy to:

#### International Cyanide Management Institute (ICMI)

1400 I Street, NW, Suite 550

Washington, DC 20005, USA

5. The submittal must be accompanied by 1) a letter from the owner or authorized representative which grants the ICMI permission to post the Summary Audit Report and Corrective Action Plan, if necessary, on the Code Website, and 2) a completed Auditor Credentials Form. The 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 cyanide transportation company.
7. The description of the cyanide transport company should include sufficient information to describe the scope and complexity of its operation.

# SUMMARY AUDIT REPORT

## SUMMARY AUDIT REPORT

### Auditor's Finding

This Operation is:

- X in full compliance
- in substantial compliance
- not in compliance

**The International  
Cyanide  
Management Code**

With the International Cyanide Management Code.

Audit Company: JMAQ AUDITORES DA QUALIDADE Ltda.

Auditor Team Leader: Julio César Macedo Monteiro

E-mail: [monteirojulio790@gmail.com](mailto:monteirojulio790@gmail.com)

Date(s) of Audit: December 08, 09 & 10, 2020 (In site); December 14, 15 & 16 (off site)

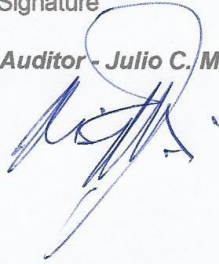
I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management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

I attest that this Summary Audit Report accurately describes the findings of the verification audit.

I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Verification Protocol for 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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Lead Auditor Signature



# SUMMARY AUDIT REPORT

## 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 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.*

**X in full compliance with**

The operation is  in substantial compliance with Standard Practice 1.1  
 Not in compliance with

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

The Operation has a supply contract with Proquigel Química S.A. an International Cyanide Management Institute (ICMI) signatory company.

<http://cyanidecode.org/>

Proquigel Química S.A. has two facilities located in Brazil, at Camaçari and Candeias cities, both at the State of Bahia. These facilities produce solid and liquid cyanide.

The Operation signed the Contract Nr. 4686 on March 01 - 2019, valid until February 28 – 2020 and 1st. Additive signed between FBDM and Proquigel in February 29 - 2020 and valid until December 31 - 2020.

Operation continues to purchase sodium cyanide with Proquigel and has a new contract signed on 12/18/2020 valid until 12/31/2021.

### 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 operation is  in substantial compliance with Standard Practice 2.1  
 Not in compliance with

# SUMMARY AUDIT REPORT

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

The Operation purchased it at Proquigel Química S.A. which is a facility certified in compliance with the Code.

In Contract No. 4686, in Clause 6.2.1- it establishes that the contract Carrier must be certified by the International Code for Sodium Cyanide and will strictly comply with the Rules establish in the "Regulation for the Road Transport of Hazardous Products - Annex to Decree Nr. 96.044 of May 18, 1998" and all Brazilian Legislation, Administrative or Technical Standardization, and shall prove, upon request by either party, the Company's regular Support and Emergency Service Contract during transportation.

### 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 operation is  in substantial compliance with Standard Practice 2.2  
 Not in compliance with

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

The observe agreement establishes the responsibility of Proquigel Química S.A. for hiring of transport provided and duly certified according to the international code of sodium cyanide. During the period of validity of the contract evidenced the use of Confins Transportes carrier for Sodium cyanide in solution. Freight is the type of CIF - Cost, Insurance and Freight, which guarantees delivery in FBDM under the responsibility of Proquigel Química S.A. and the contracted carrier, within the chain of custody.

During the Audit there was a download of the solution, carried out by the Confins Transportes Company, certified by ICMI on January 04, 2018. Checked: Vehicle Receipt Inspection Record; Discharge Operation Record. The entire discharge process was considered satisfactory, given the procedure for Cyanide Discharge.

<http://cyanidecode.org/>

### 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

## SUMMARY AUDIT REPORT

The operation is  in substantial compliance with Standard Practice 3.1  
 not in compliance with

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

The facilities for unloading, storing, and mixing cyanide were design and constructed in accordance with Brazilian Engineering Practices. This audit showed that the area is well maintained and provided with concrete floor. During the audit was also performed discharge monitoring of liquid cyanide with due compliance with the established operating procedures, including proper training of those responsible.

It was observed, during the audit, that the tanks are provided with level indicator and high-level alarm. These alarms are monitored by the Supervisory System of the Room Operation in Hydrometallurgy Plant.

The unloading and storage areas for cyanide solution is located away from other people circulating on the plant. The access to this area is limited to qualified operators and all the doors are locked. The area is far from surface waters, not being a risk for that. The entire area has a concrete floor, and the solution cyanide is discharge under roof.

The cyanide storage tanks and unloading area is not cloistered, so this configuration minimizes the risk of HCN concentration.

The storage tank of cyanide is separately from incompatible materials such as acids, strong oxidizers, and explosives and apart from foods, animal feed and tobacco products by fences.

Critical instruments related to cyanide operation have a bi-monthly maintenance routine according to maintenance plan Nr. 10034.

### 3.2 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 operation is  in substantial compliance with Standard Practice 3.2  
 not in compliance with

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

For the discharge of cyanide, the operational procedure PO-EQX-FBDM-PLA-004 establishes the step-by-step to carry out the activity with the best safety practices, in case of any leak, the operational procedure PO-EQX-FBDM-PLA-015 establishes the necessary measures for clean and decontamination.

# SUMMARY AUDIT REPORT

## 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 operation is  in substantial compliance with Standard Practice 4.1  
 not in compliance with

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

It was evidence that the Operation did develop, document, and implement management and Operation procedures. Involved Employees were trained in such procedures. Training records are maintaining by the Operation and were review during the audit.

It was evidence that the Operation has procedures to identify and consider the design and regulatory parameters. Evidenced that the following parameters were addressed: Freeboard for tailing dam, leaching flow, discharge flow, WAD cyanide at tailing dam, pH, tank volumes and alarm levels, maintenance frequency for critical equipments, among others.

The facility has in Operation tailing dam, called Lake IV. During the remote pre audit, it was reviewed the as built drawings of Lake IV Tailing Dam, provided by the Organization "Pimenta de Avila Consulting".

It was show during the evaluation the Maintenance Manual, Operation and Monitoring of Lake IV Dam called Security Plan of the FBDM tailings disposal system.

It was verified that the construction projects meet the engineering requirements for dams. The freeboard of Operational criteria meets project settings for the dams. The Lake IV dam minimum freeboard is 1.0 meter, according to the Pimenta de Avila consulting project nr. FG-1421-YAM-S-BA-RT01-01 – September 2012.

Any changes that made to the plant projects meet the requirements of Form Change Management - RE-EQX-FBDM-SIG-004.

The Operation has 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 review during the audit some documented procedures such as Maintenance Plans (predictive and preventive) and inspection routines were established and implemented.

## SUMMARY AUDIT REPORT

In general terms, was evidence in this audit, that the Operation installations are well maintain.

The Operation has some cyanide related emergency plans covering any potential incident involving cyanide, including an upset in a facility's water balance.

The Operation (maintenance process) defined and implemented a comprehensive preventive inspection system for its facilities and equipments. It was evidenced that were defined several inspection plans that are performe on a daily, weekly, or monthly basis depending on the aspects being inspected.

In my opinion professional Y claim that regarding whether the Operation inspects cyanide facilities on an established frequency sufficient to assure and document that they are functioning within establish design parameters.

Evidenced that maintenance process developed and implemented specific measurements at tanks (thickness, corrosion, and leakage) and process plant installations such as secondary containments, drainage system and locks.

Verified Infrared report dated November 29 - 2020 Thermography Technique was used to measure the wall thickness of tanks. This technique demonstrates high efficiency in determining the wall thickness of the tanks, defining the need for repair, if it is below the specified tolerance.

The secondary containments and associated aspects are inspected in the same activity of tank inspections. Also, were reviewed secondary containments during audit, all dry, however, the secondary containments in the Process Plant present satisfactory conditions, and in case of leaks it is possible to count them.

Although the Operation does not use the heap leaching process, the implemented inspection system encompasses the inspection of collection systems and the tailing dams. The tailing dams' systems are inspecting on a biweekly basis and records related on inspections performed were review FBDM Dams Report. Inspections were evidence in the elements of the waste disposal system.

It was verified the Declaration of Tailings Dam Stability condition - Lake IV, held in October 2020. The report states that the dam is "under appropriate conditions of security for the physical stability of the massive and overflow capacity."

The inspection system encompasses all pipelines, pumps and valve that are in touch with cyanide solutions. The Operation did identify (made an inventory) of all installations that have contact with cyanide solutions. This inventory is also used to plan the Operation closure.

In case of temporary closures of operations, the Emergency Plan PG-EQX-FBDM-PLA-001 advises that it is necessary to maintain security teams for the Beneficiation Plant where the cyanide is stored and a worker for the Control Room to ensure the safety of operations.

The tailing dams' systems are inspecting monthly, and records related on inspections performed on august 2020 were reviewed (FBDM Operation and Security Dam Report). Inspections were evidence in the following elements of the waste disposal system: Lake IV and diversion canal. The results are compiling in geotechnical security monthly

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Assessment Report conducted by the Geotechnical Engineer Yamana, responsible for the dams. The reports for the months of August 2020 indicate satisfactory results.

Standby generators systems are in place. Preventive maintenance, including testing is established.

According to the Management System of FBDM implemented, document retention times, in this case records are retained for 2 years.

### 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 operation is  in substantial compliance with Standard Practice 4.2  
 not in compliance with

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

The Operation does not add cyanide solution during the mill phase but developed a control base on the ore type that will be leach; the plant laboratory performs specific tests to determine the optimum cyanide addition rate. The cyanide solution addition is control by an automatic device (TAC) and evaluated three times every day to confirm the calculated addition versus the real addition.

For process control and working to reduce cyanide consumption at the FBDM Operation, a formula was created that takes the gold content of the treated ore and concentrations of residual cyanide from the process to define the optimal dosage to be used in the leaching circuit.

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

**X in full compliance with**

The operation is  in substantial compliance with Standard Practice 4.3  
 not in compliance with

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

The Operation did develop a comprehensive water balance management system, considering flood history, incoming water, effluent discharge rate in the tailings dams, rain history and evaporation rates. Based on rain and flood history (statistical data related to last twenty years obtained at IBGE (Brazilian Institute of Geography and Statistics),

## SUMMARY AUDIT REPORT

the Operation considered the worst possible scenario (24h rain of 25mm for a freeboard of 100cm Operational freeboard. The Operation is located at a semi-desertic zone (high evaporation rate) where storm rains are statistically exceptionally low probable. So, statistically, the Operation water balance is very realistic and managed on a structured way. It was reviewed the annual water balance report for 26 october 2020 The plant counts with a meteorological station and performs water balance monitoring daily.

A study considered the rain history of the region (last 20 years). The evaporation rate is much greater than the rain rate. The worst possible scenario is a 24-hour rain of 25mm, for a freeboard of 100cm. The minimum freeboard of the dams is 100cm (actual value).

The amount of precipitation entering a pond or impoundment resulting from surface run-on from the up-gradient watershed, including adjustments as necessary to account for differences in elevation and for infiltration of the runoff into the ground.

Potential freezing and thawing conditions are not applicable on this Operation. No freezing occurs in the Brazil's Semi-Arid Region that FBDM is located.

There is no discharge to surface waters.

Inspection and monitoring programs are carrying out. Inspection records and monitoring data were observed. The FBDM meets the legal requirement Brazilian Legislation - Portaria DNPM 416/2012 - Dam Safety.

The FBDM holds a periodic schedule of geotechnical inspections of dams. During the audit were check the checklists dam safety, book of monthly monitoring records of meetings (topics: erosion, conditions of geomembrane, drainage, pruning vegetation on slopes and berms, treatment, and others).

All results were below the freeboard for the Tailings dams, demonstrating the effectiveness of the water balance management system.

Based on the reviewed study and on the daily monitoring, the Operation manages the water balance on a dynamic approach.

The Operation has Meteorological Station. Records of Meteorological Data were verifying for 2020. It was evidenced spreadsheet with results of the weather station monitoring. In the date 28 - octobre 2020 indicates 0, 60 of rainfall and historical media 6, 49 of evaporimetry. The evaporation results are always higher than the rainfall data.

#### **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 operation is  in substantial compliance with Standard Practice 4.4  
 not in compliance with

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

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The 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.

The Operation implemented a monitoring system in the tailings dams. The monitoring results described at the water monitoring spreadsheets indicate that the WAD cyanide concentration has not exceeded 50 mg/l.

Through reports, no evidence of mortality of birds, other wildlife and livestock were observed during the audit 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 operation is  in substantial compliance with Standard Practice 4.5  
 not in compliance with

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

The Operation does not have any direct discharge to surface water, because there are no surface waters in the zone. There is a season river "Riacho do Incó" that is remaining dry most of the year, but it is located around 6 Km (upstream) from the Operation's tailings dam.

#### **4.6 STANDARD OF PRACTICE 4.6: IMPLEMENT MEASURES DESIGNED TO MANAGE SEEPAGE FROM CYANIDE FACILITIES TO PROTECT THE BENEFICIAL USES OF GROUND WATER.**

**X in full compliance with**

The operation is  in substantial compliance with Standard Practice 4.6  
 not in compliance with

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

The Operation did implement a comprehensive water management system, associated with the specific design of the tailings dam which is recovered with HOPE (high density polyethylene membrane). Anyway, there is no ground water in the surroundings of the Operation. The fresh water used in the Operation is captured from a town that is situated 60 Km from the Operation (Biringa Community).

There is no use of groundwater in the region or in the Operation (brackish water). In the Regulatory Standard of CONAMA Resolution 3967-2009 establishes the water quality standard.

The Operation does not use the mills tailings as backfill.



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### 4.7 STANDARD OF PRACTICE 4.7: *PROVIDE SPILL PREVENTION OR CONTAINMENT MEASURES FOR PROCESS TANKS AND PIPELINES.*

**X in full compliance with**

The operation is  in substantial compliance with Standard Practice 4.7  
 not in compliance with

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

Cyanide tank areas are surrounded by containment walls, constructed according to Engineering Specifications and according to Brazilian Safety and Environmental laws. Cyanide piping is protecting against spilling, to protect the workers and the environment. Cyanide piping system is fully identified through color codes. There are secondary containments for all process tanks, as evidenced in the engineering documents and in the audit.

In the Storage Areas (secondary containments), it is possible to observe that there is total integrity, and that they may contain occurrences of leakage.

According to the Engineering Documentation, all secondary containment was design to support 110% of the volume of the largest tank in the area, also considering the design storm event. All tanks are provided with alarm systems.

The 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 pumped back to the process. The plant also has a drainage system.

All pipelines that contain cyanide solution have a secondary protection, mainly to avoid the contamination of the workers as observed in the audit. The process plant has a concreted floor. The pipelines flanges (conections) are also protected against spills, as evidenced in the audit.

All process tanks are made of carbon steel (ASTM A-36). All process pipelines are made of carbon steel (ASTM A-36) and PEAD, according to engineering specifications (ASME code and Metals Handbook).

### 4.8 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 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 Operation did implement a Change Management Procedure –

## SUMMARY AUDIT REPORT

PG-EQX-SSMA-038 to ensure that all modifications to the existing facilities will be performed on a structured way. Overhauled installations (replacement of cyanide solution pipelines and process tanks) were planned and performed according to Brazilian Engineering Standards where quality control and assurance were observed. Records of such overhauling (like construction and inspection plans, commissioning plan, welding plans and materials specifications) were reviewed and are maintained by the Operation. A fourth tailing dam and emergency lake was also designed and constructed according to Brazilian engineering standards and related records were reviewed also.

All new installations (pipelines and process tanks) were designed and constructed in accordance with Brazilian Engineering Standards. We verify all performed projects (design) of the facilities built (retention basins, tanks, pipes, pumps, and others). The compatibility of the materials with cyanide was checked and the adequacy of soil compaction was reviewed. The existing and overhauled installations were controlled, inspected and commissioned by qualified personnel, according to the Brazilian Legislation.

Quality control, Quality Assurance or as built drawings were 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 operation is  in substantial compliance with Standard Practice 4.9  
 not in compliance with

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

Evidence was available in the Procedure PG-EQX-FBDM-SGI-002 – Environmental Identification and Evaluation of Aspects and Impacts, which list the parameters, sampling frequency and sampling 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, 22<sup>a</sup> edition. PG-EQX-FBDM-SGI-002 – Environmental Identification and Evaluation of Aspects and Impacts procedure was also evidence.

The PG-EQX-FBDM-SGI-002 – Environmental Identification and Evaluation of Aspects and Impacts procedure describes the parameters, sampling frequency, sampling preservation procedures, shipping instructions, legal requirements such as conditions, and contains means to implement monitoring program. All environmental monitoring analyses are carried out by a qualified third part laboratory. The frequency of monitoring was defined according with the conditions of environmental permits and risk assessment.

## SUMMARY AUDIT REPORT

The Operation does not discharge process effluents on surface water, but on the tailing's dams. The final effluent is characterizing before discharged in the dams and the dam's effluent is characterized and monitored in specific sampling locations around the dams. The Operation monitors cyanide (total, free and WAD), arsenic and other aspects. Records of such monitoring are kept by the Operation and reviewed during the audit. The Operation also implemented a monitoring system to verify, through piezometers, the effectiveness of the dams' membrane. Records of such monitoring were also reviewed.

An inspection program for wildlife mortalities exists. There is a vigilance program with daily inspections in the dam's area to check the occurrence of wildlife mortality. There were no mortalities recorded. The established frequency is in accordance with the Brazilian Legislation and the Bahia State EPA (Environmental Protection Agency) permits.

In my opinion professional Y claim that regarding whether the Operation environmental monitoring is conducted at frequencies adequate to characterize the medium being monitored and to identify changes in a timely manner.

### 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 operation is  in substantial compliance with Standard Practice 5.1  
 not in compliance with

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

According to the Brazilian environmental legislation, the Operation must establish a general plan to recover the area where it was installed. At FBDM, this plan is call degraded area recovery plan (PRAD) and shall be updated every five years and presented to the Bahia local environmental protection agency. The last edition of this plan was release and approve on 14 March 2018.

#### 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 operation is  in substantial compliance with Standard Practice 5.2  
 not in compliance with

# SUMMARY AUDIT REPORT

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

The Operation prepared a cyanide installations inventory of equipment and plant facilities cyanide decontamination where all cyanide containing installations were mapped, including civil installations and emergency pools, procedures to neutralize and dismantle defined and the economic resources necessary to implement the plan were forecasted. The inventory is also linked with the inspections and preventive maintenance program (these installations shall be maintained until they are dismantled). The new PRAD version was update and approved in March 2018. Based on the degraded area recovery plan (PRAD) and on the cyanide installations inventory an economic forecast was prepared by the Operation. The forecast was update in 2025 and it is reviewing every year.

Plan revised and updated in 2018.

Operation has decided to have a self-insurance to cover the estimated costs for cyanide decommissioning activities.

Who will do the decommissioning will be a third-party company as well as the cost projection.

The financial strength of the Operation is quarterly audited by third part financial auditors, legally established in Brazil and Canada. Financial audit report dated 31 December 2017 and publisher 14 July 2020, provided by Delloite Touch Tohmatsu Auditors (Brazilian accountability permit / registration CRC /2/SP/011609/0-8) clearly states that the Operation has financial strength to implement the Operation closure plan. In the item 25 of the Delloite Touch Tohmatsu Auditors Report it is possible to show the approval and authorization for disclosure of the set of financial statements for the Company for the year ended December 31, 2017.

## 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 operation is  in substantial compliance with Standard Practice 6.1  
 not in compliance with

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

The Operation developed procedures describing how cyanide-related tasks such as unloading, plant Operations, entry into confined spaces, and equipment decontamination prior to maintenance should be conduct. It was reviewed PO-EQX-FBDM-PLA-004 -

## SUMMARY AUDIT REPORT

Unloading Operation and preparation of chemicals and PG-EQX-FBDM-SSMA-023 - Confined Environment.

FBDM considered the Worker input in developing, revisions and evaluating health and safety procedures.

**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 operation is  in substantial compliance with Standard Practice 6.2  
 not in compliance with

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

The Operation determined that the minimum pH value shall be equal or reater than 12. This value is address at the Operational procedure PG-EQX-FBDM-070 - Management of Atmospheric Emissions.

The Operators use portable HCN sensors which are previously calibrated against Brazilian or International Standards. The PAC – Calibration Plan have been checked.

The Operation has no areas where it exceeds 10 ppm. FBDM identified areas and activities where workers may be expose to cyanide and were verified the presence of monitoring devices in these areas, like unloading area, CIL tanks and desortion.

The procedure PG-EQX-FBDM-PLA-001 establishes as limit of exposure for alarm activation the limit of 4 ppm being carried out the evacuation of the place in case of generation of cyanide gas above this limit.

It was defined that FBDM established, documented, maintain, and implemented methodology for preventive maintenance as well as calibration plan which ensure that cyanide monitoring equipment is used as defined by the manufacturer.

Cyanidric gas monitoring equipment is calibrated annually by a contracted company and calibration certificates with reference to the equipment's serial number are kept on file as demonstrated during the audit.

The Management System in the Operation implemented establish documentation times, in this case records are retained for 2 years.

The signage, covering the presence of cyanide, that eating, drinking, and smoking is allowed, and open flames are prohibitedthere is evidence that the signposts have in reading.

All required auxiliary installations are in place and Operational. They were tested observe in video during the audit and worked properly. Sampled examples were – eye wash stations, showers, fire extinguish, fume detectors. They maintained, inspected, and tested on a regular basis.

## SUMMARY AUDIT REPORT

The painting of the cyanide-containing networks shows wear to identify, color code, flow direction and contained solution information, according to International Color Code.

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

It was not evidenced the occurrence of any cyanide related incident involving plant Operators in this year.

### **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 operation is  in substantial compliance with Standard Practice 6.3  
 not in compliance with

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

It was verified the presence of water, oxygen, a resuscitator, alarm system, antidote kits and a radio in unloading area, laboratory, and Emergency Office. Telephone and water are present in the area. Evidence was available that FBDM has a specific treatment procedure PG-EQX-FBDM-PLA-001 Attendance of Emergency Plan – Sodium Cyanide. All the first aid equipment is effectively inspected as required. Inspection records provide evidenced the duly implementation. The antidotes are validity in daily checked.

FBDM implemented the use of CYANOKIT as an antidote for emergency cases in incidents involving sodium cyanide. The Operation implanted an emergency office inside the plant, fully equipped with oxygen, antidotes, first aid procedures, emergency phones, radios, filters, masks, among others. All the emergency and medical installations and personnel were evidenced during the audit. FBDM have its own on-site capability 24hs to provide first aid or medical assistance to workers exposed to cyanide.

The FBDM plant is located around 10Km away from the nearest hospital in the city of Teofilandia. The Operation counts wfffh an ambulance, adequately equipped and fueled, that is available 24h per day. The ambulance is daily inspected by a nursery technician, which is qualified to drive the ambulance, when necessary. Records of the daily inspection were verifying, and the audit also demonstrates that the transportation procedure is adequate. Local hospital is also qualified by FBDM – “Hospital Municipal de Teofilandia”.

Operation has 1 doctor, 1 Nurse Formely and 4 Techicals Nurse trained and available all day long to provide necessary actions in potential emergencies. FBDM has agreements with “Hospital Municipal de Teofilandia” and which have trained doctors to work in case of emergency with cyanide.

Verify plan to conducted emergency drills according to PG-EQX-FBDM-PLA-001 -Attendance of Emergency Plan – Sodium Cyanide. It was verified that the Operation defined and

# SUMMARY AUDIT REPORT

implemented an annual mock emergency drill program considering different cyanide related emergencies. Verify Emergency Simulation "Area Abandonment" held on November 11, 2020.

Scenario: Simulation of pipe rupture in Area 534, (preparation of reagents) reacting with water and generating Cyanhydric Gas. 400 people participated, Emergency Brigade, Work Safety, Property Security, Medical Service, Employees and Stakeholders. The results were considered satisfactory, making the performance of the Emergency Brigade effective during the care of the victims, containment of the leak and guidance of evacuation from the Unit.

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

**X in full compliance with**

The operation is  in substantial compliance with Standard Practice 7.1  
 not in compliance with

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

It was evidenced that the Operation defined, document and implemented some Emergency Plans to respond to cyanide related emergencies.

The contract with Proquigel the Transporters must be certified by the International Code for Sodium Cyanide and will strictly comply with the Rules establish in the "Regulation for the Road Transport of Hazardous Products - Annex to Decree Nr. 96.044 of May 18, 1998" and all Legislation, Administrative or Technical Standardization, and shall prove, upon request by either party, the Company's regular Support and Emergency Service Contract during transportation. Task and safety training for transporters and handlers throughout transport responsibilities are clearly defined as applicable legal requirements. Evaluation and selection of routes, including community involvement are clearly defined as applicable legal requirements. Emergency response throughout transport responsibilities is clearly defined as applicable legal requirements. It was evidenced that PG-EQX-FBDM-PLA-001 -Attendance of Emergency Plan – Sodium Cyanide clearly defines specific responses to that situations, considering internal and external stakeholders.

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

**X in full compliance with**

The operation is  in substantial compliance with Standard Practice 7.2  
 not in compliance with

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

## SUMMARY AUDIT REPORT

The 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 reviewed the PG-EQX-FBDM-PLA-001 -Attendance of Emergency Plan – Sodium Cyanide.

The PG-EQX-FBDM-PLA-001 - Attendance of 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.

### 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 operation is  in substantial compliance with Standard Practice 7.3  
 not in compliance with

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

The Emergency Response Plan was reviewed, approve, 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 communicated to all involved stakeholders (internal and external).

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 Area.

It was evidenced that FBDM has a toll-free phone number (0800 284 5405) as well as emergency phones which are available all day long. It was also available the CHK 06 - Phonebook – Cyanide Emergency.

Other means of communication (Emergency Contacts):

Emergency - Extension: 2500 Radio: Track 1 or 5

Medical Service - Extension: 5357 Radio: Track 5

Main Ordinance - Extension 5343 Radio: Track 1

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 one ambulance and auxiliary equipment (PPEs) for the Brigade Members, such as chemical/flame resistant overall, chemical gloves, oxygen masks and cylinders, chemical masks.



## SUMMARY AUDIT REPORT

The Emergency Response Plan was reviewed, approved, and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, and community representatives. Responsibilities are clearly defined, for example: Health Care Area for releasing the ambulance and decide if it is necessary or not to use the qualified local hospital services (Hospital Municipal de Teofilândia).

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

#### **X in full compliance with**

The operation is  in substantial compliance with Standard Practice 7.4  
 not in compliance with

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

The Emergency Plan was reviewed, approved, and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, and community representatives. The plan clearly defines the communication procedures to be used during a cyanide related emergency including a list of emergency emergency phones (24 hours available) of all emergency brigade members, leaders, managers and general manager, public authorities, hospital, cyanide supplier, cyanide transporter (In this case according to the Agreement between FBDM and PROQUIGEL Química S.A. nr. 4686). The communication procedures also involve the security process of the Operation. Necessary resource is clearly defined and provided.

The Emergency Response Plan establishes the person responsible for communication with the media, PG-EQX-FBDM-PLA-001 in item 6.5.

### **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 operation is  in substantial compliance with Standard Practice 7.5  
 not in compliance with

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

The PG-EQX-FBDM-PLA-001 - Attendance of Emergency Plan – Sodium Cyanide considers all the items mentioned of the remediation measures, including all the necessary remediation procedures.

## SUMMARY AUDIT REPORT

The PG-EQX-FBDM-PLA-001 - Attendance of Emergency Plan – Sodium Cyanide, explicitly prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate, and hydrogen peroxide to treat cyanide that has been released into surface water.

The PG-EQX-FBDM-PLA-001 - Attendance of Emergency Plan – Sodium Cyanide clearly defines the required monitoring procedures to be implemented in the event of soil and water potential contamination.

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

#### **X in full compliance with**

The operation is  in substantial compliance with Standard Practice 7.6  
 not in compliance with

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

The Emergency Plans were reviewed and revised when necessary (after real incidents or after simulation tests). During the Audit, Simulated Exercise Report were presented, the Simulated Cronogram - Year 2020. Verify: Report on the simulated cyanide scenario conducted November 11, 2020.

The Emergency Response Plan after any cyanide related emergencies requires implementation of the corrective actions, so the reviews are conducted.

After emergency drill, the results are reviewed and discussed among the participants. The opportunities for improvement raised-up during the drill are considered as corrective/preventive actions and managed adequately.

### 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 operation is  in substantial compliance with Standard Practice 8.1  
 not in compliance with

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

The Operation trains all personnel who may encounter cyanide hazard recognition according to the procedure to control training PG-EQX-FBDM-001 – Training and Awareness. During the audit in Human Resources were highlight integration-training

## SUMMARY AUDIT REPORT

schedule, specific training cyanide to own and hired staff, cyanide management training - theoretical and practical module, temporary work instruction, mandatory technical training (legislation), recycling, among others.

The cyanide hazard recognition refresher training is not in place. Checked update training records in recognition of the hazards of cyanide and Operational procedures. During the audit in Human Resources were highlight integration-training schedule, specific training cyanide to own and hired staff, cyanide management training - theoretical and practical module, among others.

The trainings are held annually with a workload of 04 hours for first training and 02 hours for revisions. Training summary: Use of cyanide; cyanide properties and characteristics; International Cyanide Code; Emergency Scenarios; control measures; hot, warm, and cold zones; meeting points; emergency communication; Emergency brigade; intoxication pathways; responsibilities of Employees and Emergency Brigade.

According to the Annual Training Plan, and Considering the Pandemic aspects of CORONAVIRUS, some of the planned training programs have been reprogrammed, however the training that is legislated has been carried out.

The Operation retained cyanide training records according to the procedure. Evidence was available that the training effectiveness, through simulation tests, is verified by the Operation. Planned job observations are also used to verify the effectiveness of the provided training. Records of planned job observations were reviewed at Human Resources area. The Operation maintains records according to the standards of integrated management system - ABNT NBR ISO 19011:2018 and ISO 45001:2018 for manage all documents including records.

**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 operation is  in substantial compliance with Standard Practice 8.2

not in compliance with

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

Evidence 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.

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In 2020, considering the Pandemic of COVID 19, investments in community training were replaced by social programs, maintaining the guidelines for social distance.

The training material deals with the integration - Cyanide Management Training. Specific training material was established for specific functions, such as Operators, warehouse keepers and emergency Brigade Members. A general introductory training related to risks associated to cyanide is also provided to the own personnel and subcontractors.

All training sessions are leaded by qualified personnel. Internal Instructors are Senior Operators and/or Process Specialists and/or Safety Staff. External training was provided by cyanide experts.

The Employees are trained prior to working with cyanide. It was verified specific training cyanide to own personnel and contractors.

Were verified records of refresher training on cyanide management to ensure that employees continue to perform their jobs in a safe and environmentally protective manner. Annual refreshing training is also provided to all workers working with cyanide. Simulation 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.

### **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 operation is  in substantial compliance with Standard Practice 8.3

not in compliance with

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

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.

Also, through Emergency Training Program, Training Records and Personal Interviews that cyanide response personnel, including unloading, mixing, production and maintenance workers, have been trained in decontamination and first aid procedures, and Emergency Response Coordinators and Members of the Emergency Response Team trained in the procedures included in the Emergency Response Plan regarding cyanide, including the use of necessary response equipment.

Evidence through meeting records, that communication with community members, medical providers, hospital, and police officer, about the elements of the Emergency Response Plan related to cyanide are performed regularly, mainly before emergency

## SUMMARY AUDIT REPORT

training drills. Sampled examples were Security and Health Authorities, Public Authorities, and Community Representatives.

Evidence, through emergency training program and associated records, that refresher training for response to cyanide exposures and release have been conducted as stated.

Scenario: Simulation of pipe rupture in Area 534, (preparation of reagents) reacting with water and generating Cyanhydric Gas.

400 people participated, including: Emergency Brigade, Work Safety, Property Security, Medical Service, Employees and Stakeholders. The results were considered satisfactory, making the performance of the Emergency Brigade effective during the care of the victims, containment of the leak and guidance of evacuation from the Unit.

Verify Emergency Simulation "Area Abandonment" held on November 11, 2020.

It was observed some records documenting the cyanide training, including the names of the Employee and the Trainer, the date of training, the topics covered and how the Employee demonstrated an understanding of the training materials.

The Operation maintains records according to the standards of integrated management system - ABNT NBR ISO 19011:2018 and ISO 45001:2018 for manage audit documents including records.

### 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 operation is  in substantial compliance with Standard Practice 9.1  
 not in compliance with

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

The 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: Toll free 0800 284 5405 (Green Canal), emails, whatsapp, mapped the social diagnosis of FDBM, blogs, websites of municipal governments, community radio, Nossa Voz (Blog and Radio), Radio Morena Bela, printed materials (brochures, posters, booklets), FBDM em Ação, among others.

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

## SUMMARY AUDIT REPORT

### X in full compliance with

The operation is  in substantial compliance with Standard Practice 9.2  
 not in compliance with

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

The Operation established several means to interact with stakeholders, ensuring an effective interaction with several stakeholders.

Some social responsibility programs, had to be discontinued, considering the Pandemic of COVID 19. Those programs that allowed agglomeration, were not implemented during this phase of social isolation. As an example, we can mention: Open Door Program, Partnership Seminar, Citizen Meeting Integrate Program, Integrate Day, and others. FBDM, to continue its initiatives, used investments in donations of breathing apparatus, food bags, children's day toys, individual protection EPP's for COVID 19.

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

### X in full compliance with

The operation is  in substantial compliance with Standard Practice 9.3  
 not in compliance with

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

The Operation did develop a specific leaflet describing in a very didactic way, its Operations and procedures and contact information. These leaflets were distributed to specific stakeholders, such as community representatives, public authorities, and entities. This leaflet is also available to every visitor to the Operation.

Verified Profile Report of the Community of Povoado do Canto in the Municipality of Teofilândia and the positive and negative aspects of Povoado can be observed, such as:

Positives: Use of local labor, providing water to the community (FBDM passes it on to Embasa to distribute it to the houses).

Negatives: Traffic of vehicles with toxic products, traffic of light and heavy vehicles through the village.

Key Expectations: Implementation of Employment Generation projects and Continuous income. Fostering entrepreneurship and renewal technological.

The Operation shall communicate this kind of incident to DRT/ BA (Local Labor Agency), and INEMA/ BA (Local Environmental Agency).

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The Operation did not have any of the above-mentioned incidents. In the event of such kind incidents, the Operation will make information available through the TOLL-FREE phone number (0800 284 5405), which is available 24hours per day.

Stakeholders may also access:

- Labor Public Authority DRT/ MG7 <http://portal.mte.gov.br/delegacias/ba>
- Environmental Protection Agency [www.inema.ba.gov.br](http://www.inema.ba.gov.br)