

SUMMARY AUDIT REPORT

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

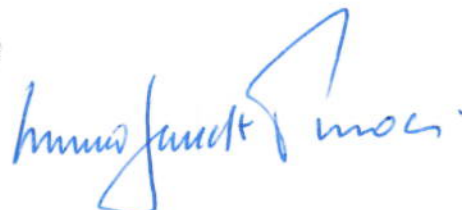
for

***Minera Florida Ltda/
Yamana Gold Group.***

June 2018

Prepared by NCABrasil Expert Auditors Ltd.

www.globalsheq.com

A handwritten signature in blue ink, appearing to read 'Humberto S. S. S.', is located in the bottom right corner of the page.

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
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.

Minera Florida
Name of Mine


Signature of Lead Auditor

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Date

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Name of Mine: Minera Florida Ltda.
Name of Mine Owner: Yamana Gold Inc.
Name of Mine Operator: Minera Florida Ltda.
Name of Responsible Manager: Carlos Pinto Ahumada
Address: Villa San Jeronimo de Alhué, Santiago, Chile.
State/Province: Santiago Country: Chile
Telephone: +56 2 9242400
Fax: +56 2 9242401
E-Mail: carlos.pinto@yamana.com

Location detail and description of operation:

Minera Florida Ltda. is an underground mine operation and process plant, located at Villa San Jeronimo de Alhué, a small town situated 150 km south of Santiago de Chile. The access to the operation is made through asphalted road. The operation is focused in the production of gold and silver (metallic bullion) and zinc concentrate. Basically, the operation process is:

Process in Plant begins by separating Mine Ore in three products: oversize (5-20 inches), middle size (1-4 inches) and small Size (under 10 mm), those products are destined to Primary Crusher (oversize), Secondary Crusher (middle size) and Stock Pile (small size).

After crushing process, mine ore goes to Stock Pile (100% under 10 mm) and is feeding to the three PLC (Planta de Lixiviación de Concentrado/ Concentrate Leaching Plant) mills with a total rate of 125 TMS/h and 74.500 TMS/month. Where TMS means: Tonelada Metrica Seca (Dry Metric Tonne).

Grinding product, with P80 of 120µm, is concentrated in bulk flotation process, 15 times to obtain gold concentrate that is sent to PLC leaching.

Fresh tailings of bulk flotation are sent directly to PTR (Planta de Tratamiento de Relaves/ Tailings Treatment Plant) leaching (without going through a regrinding). After the PTR leaching, the pulp enters into the carbon in pulp circuit (CIP) for adsorption and desorption of the gold contained in the liquid. This rich solution is sent to Electrowinning (EW) process.

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After PLC leaching, the liquid part of the pulp is separated to enter to EW process, where it joins with the rich solution from PTR, in this step the precious metals return to solid state as cathodic mud, which is filtered and dried to go to smelting furnaces and form the Doré Metal bars. These bars are dispatched to the final customer.

Solid part separated of the solution Rich in PLC, goes through the Plates Filter obtaining a product with 10% of humidity that is denominated leaching Gravel. This gravel is feeding to the Lead-Zinc Flotation Plant, where it is obtained a commercial product of 40% Zinc and 8% Lead

From EW poor solutions with residual free cyanide of 2.5 gpl are sent to PTR leach to be mixed with the bulk flotation tailings.

The gold solution of bulk flotation tailings in PTR leaching, can achieve a better performance by adding additional cyanide to the content in the EW poor solution (additional of +0.5 kg NaCN/tonne), reaching gold recovery values of 60% in PTR. Increasing the global recovery of gold in the plant to 91.13%.

The residual cyanide contained in the LIX-CIP effluent is destroyed in DETOX process, using sodium bisulfite and hydrogen peroxide as chemical agents to achieve this cancellation.

The final tailings (after detox) are sent to the deposit in paste, without going through again the flotation of zinc PTR.

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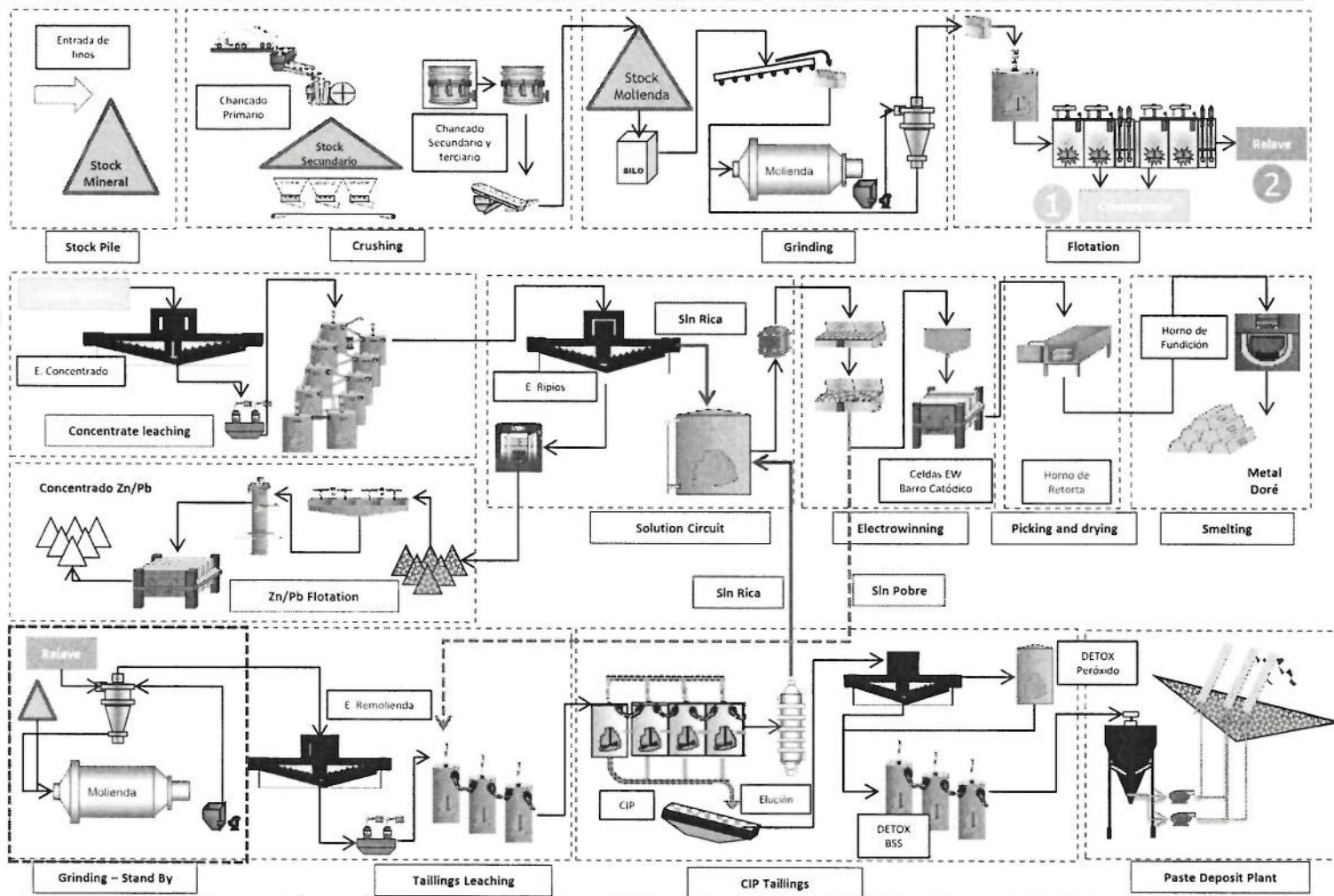
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Minera Florida: Actual Process Flowsheet



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[Signature]
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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.

During the previous three years certification cycle, Minera Florida experienced one cyanide related incident, without any victims, which was adequately investigated, the causes were determined and improvement actions were implemented, being effective up to this audit end.

* 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)

Audit Team Leader: Celso Sandt Pessoa

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

Names and Signatures of Other Auditors: none

Date(s) of Audit: 16 ~26/04/2018 (on-site), 04 ~07/06/2016 (on-site) and
05 ~ 06/09/2018 (off-site).

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

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

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

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

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

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that the contract between Chemours (formerly E.I. DuPont), and Yamana Gold Canada clearly states that the cyanide produced by Chemours must be produced in a facility having a current certification under the International Cyanide Management Code. The contract is valid for a period of five years from 01/03/2013 up to 28/02/2018 (the original term) and could be extended for another two years. It is important to note that Chemours (formerly DuPont USA) is the cyanide supplier for the operation since the initial certification audit. The solid sodium cyanide provided to Minera Florida is imported and delivered by Chemours Chile. Reviewed DuPont USA spin-off communication, dated 09/12/2014, transferring to Chemours Company FC LLC on 01/02/2015, all contracts and obligations, including all branches, as DuPont Chile to Chemours Chile. Reviewed that Yamana Gold Canada (and its subsidiaries) signed-off the new amendment on 30/02/2014. Reviewed also two amendments, dated 25/02/2015 and 29/02/2016, performed by Chemours. The contract is valid by 31/12/2019.

The sodium cyanide used by Minera Florida is produced at Chemours facility at Memphis/TN/ USA, which is certified by Cyanide Code according to the information available in the ICMI website.

Minera Florida buys sodium cyanide from a certified producer (Chemours/ Memphis facility, through its Chilean branch, Chemours de Chile), and not from a distributor.

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

Standard of Practice 2.1: *Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.*

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

Summarize the basis for this Finding/Deficiencies Identified:

The agreements among the operation, the cyanide producer (Chemours USA and Chemours Chile) and the cyanide transporter (Transportes Verasay Chile) were reviewed and it was evidenced to be within required by the Cyanide Code. Reviewed DuPont spin-off communication, dated 09/12/2014, transferring to Chemours Company FC LLC on 01/02/2015, all contracts and obligations, including all branches, as DuPont Chile to Chemours Chile. The sodium cyanide is transported in containers specifically designed for this purpose (UNO), according to international and Chilean road transport legislation. Chemours USA and Chemours Chile transport supply chain are certified in conformance with ICMI principles for transportation, according to the information available at ICMI's website.

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The container and wooden boxes labeling are in English and in Spanish, and in accordance with the Chilean road transport legislation.

During the on-site audit, it was evidenced the first solid NaCN batch arriving with colorant dye. Evidenced the first trial with this red colorant dye, without any problems.

The sodium cyanide container is stored and loaded at Chemours USA facilities before its transported to the operation. The transport truck departs from Chemours Chile port facilities straight to the operation.

The route between USA and Chile are determined in accordance with international maritime transportation laws. The route between Chemours Chile port facility (San Antonio port, 5th region) and the operation are defined in conjunction by the seller, local authorities and the operation. The risks of the route are identified and evaluated. The route is 100% asphalted. The solid sodium cyanide cargo is transported by truck (road transportation), straight from the port facility at San Antonio to the operation.

The sodium cyanide is transported straight from the port facility to the operation, without any interim storage or unloading.

The cyanide is transported by Verasay Transportes Chile Ltd., which is certified by ICMI (according to the ICMI website), under Chemours Chile coordination.

The transport truck is received at the operation by a safety officer which inspects the cargo documentation, the truck condition, the driver permit, the safety equipment. After that, if approved, the truck is authorized to go into the operation and parks in the cyanide reception area, specifically assigned for this activity, assigned by the operation operators, at PLC warehouse or at PTR warehouse. From this moment on, the reception employees proceed the cyanide unloading, which is monitored by safety technicians. Evidenced in the field audit fully implemented.

Chemours USA supply chain (rail, truck and ocean transportation) is certified by ICMI. Transportes Verasay Chile is also ICMI certified. In both cases. The information was evidenced in the ICMI's website.


All the transport supply chain is certified by ICMI. Verasay Chile maintains a process to have their drivers trained in cyanide sodium related activities, including emergencies (in conjunction with Chemours Chile). Verasay Chile drivers shall have specific permits (according to the Chilean legislation) for road transportation of cyanide. These permits are reviewed in the reception of cyanide at the operation, and are verified in all cyanide receiving activities, by the operation's safety officer).

Chemours transport supply chain is certified by ICMI. All trucks are online monitored, since it departs from the port facility in San Antonio/ Chile until it arrives in the operation, as evidenced during the field audit.

Chemours USA supply chain is certified by ICMI and has implemented emergency response procedures. The cyanide transporting truck (belonging to Verasay Transportes Chile is fully monitored during the trip, between the port of entry and the operation. The communication between the driver and the Verasay operation center is also maintained during the trip (radio contact). In the event of any type of emergencies, the driver launches an emergency alert, involving all stakeholders. These procedures are tested, time to time, in conjunction by Chemours Chile and Verasay Transportes.

The written agreement, as previously mentioned, addresses all the responsibilities and authorities including the extension to subcontractors, although neither the producer/ transporter are allowed by the operation to subcontract anybody without prior acceptance by the operation. The operation maintains a system to monitor the contracts with the producer and the transporter.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

As previously mentioned and evidenced, the contract between the operation, the producer and the transporter, clearly addresses the requirement that the transporter must be certified by ICMI. The cyanide transporter, Verasay Transportes Chile is certified by ICMI, as evidenced at the ICMI website.

Chemours USA supply chain and Verasay Transportes Chile are certified by ICMI, according to the information available at ICMI website.

Was evidenced that Minera Florida established an incoming inspection control in order to verify the cyanide related documentation (from origin until the operation) in the reception of the solid cyanide. Evidenced several incoming inspection records that were performed between 2016 and 2018. These records are retained by the operation.

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

It was evidenced that Minera Florida designed and constructed two receiving/storage areas for the reception of the solid cyanide. There are five storage areas (warehouses), being four for solid NaCN boxes (three at PLC (without any change since the last recertification audit) and one at PTR (new one and designed and constructed according to Chilean engineering standards. Refer to SoP 4.8)) and one for dangerous residues contaminated with sodium cyanide (at PLC area, without any change since the last recertification audit)). These facilities were designed and constructed in accordance with acceptable Chilean engineering standards. Receiving and storage areas (all five warehouses as previously mentioned) were evidenced, in the field audit, to have concreted floor, bricked walls, metallic roof, steel doors with two locks, adequate ventilation, HCN sensors, moisture sensors. The cyanide preparation area has also concreted floor and is under roof and natural ventilation system. The four PLC warehouses did not suffer any change since the last recertification audit. The PTR warehouse is a new installation, as previously mentioned.

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During the field audit it was evidenced that the access to the process plant is controlled (the operation plants, PLC and PTR, are fenced), through magnetic cards specifically assigned for authorized persons. Once inside the process plants, the unloading, storage and preparation areas are separated from people and far from surface waters. The areas have a drainage system which is linked with a specific containment pool. During the unloading, storage and preparation activities only authorized operators are allowed to circulate in these areas. Evidenced during the field audit. The operation uses solid cyanide and not liquid one. Anyway, as previously mentioned, the unloading areas have a concreted floor. In the event of any kind of solid cyanide release, the area configuration allows quickly recovering of the cyanide briquettes.

The cyanide preparation tanks (PLC and PTR) have an HCN sensor, pH sensor and level sensor (all calibrated against international standards). After preparing, the solution is transferred to distribution tanks, which are equipped with a calibrated level sensor.

It was evidenced that the cyanide reception, storage and preparation areas were constructed in structural concrete and HDPE, inside a secondary containment pool (preparation area), as evidenced in the design/ construction documentation and in the field audit.

It was evidenced that the containment pools are constructed in structural concrete and HDPE, according to specific international and Chilean standards.

It was evidenced that Minera Florida stores solid NaCN boxes in specific warehouses, as previously mentioned, in well ventilated areas. HCN detectors and alarm systems are in place as evidenced in the field audit. It was evidenced that Minera Florida stores solid NaCN in their original boxes, over pallets, on concreted floor, under roof, with adequate ventilation as evidenced in the field audit.

It was evidenced that Minera Florida controls the access the process plants (PLC and PTR) and the warehouses. The warehouses are inside fenced areas, well signed and locked. 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 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.

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:

The empty cyanide containers (big-bags) are washed, decontaminated, dried and sent to a qualified environmental supplier (Hidronor) which makes the final disposition (thermal destruction) in accordance with Chilean environmental legislation.

It was evidenced that all cyanide containers are washed, decontaminated and dried in a specific installation available for this activity in accordance with internal documented procedure. After that, the decontaminated containers are sent to a qualified supplier (by Chilean local EPA), Hidronor, which makes the final disposition in accordance with Chilean environmental legislation. The effluent of this activity returns to the cyanidation process. Evidenced during the field audit.

Before departing the operation, the truck is verified to be in conformance, without any kind of leakage and completely empty. The operation has implemented a formal inspection of the container that is sent back to Chemours Chile. This activity is recorded and the Verasay Transportes driver receives a copy of the inspection record. Evidenced during the field audit.

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It was evidenced that Minera Florida defined, documented and implemented a procedure to unload the solid cyanide during the reception. The operators are trained and qualified in this procedure. Records of such training activities and the field audit evidenced that the operational procedure clearly addresses the steps to be followed and the activity is fully monitored. Evidenced during the field audit.

The cyanide big-bags are handled with the help of lifting devices, including fork lifters, in a specific area designed for this purpose. The lifting device is included in a preventive maintenance program. Records of its maintenance were evidenced. Evidenced during the field audit. Cyanide boxes are piled in three (max).

In the event of any real spills, the operational procedure cover the neutralization and cleaning of the spills, which is directed to the drainage system. It was not evidenced any kind of spills (solution or solid cyanide) during the field audit.

A qualified operator, using appropriate PPE (including calibrated HCN detectors), is observed full time by a second operator that remains in a safe area. This practice was evidenced in the field audit. There is no manual mixing of solid cyanide.

During the audit, the operation received the first solid NaCN batch with red colorant dye. Initial trials were performed and no problems were detected.

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

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

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

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that Minera Florida defined, implemented and maintained internal management and operational documented procedures defining methodology for the operation of cyanide facilities including unloading, mixing and storage facilities, leach plants operations, which were found in conformance with a safety operation.

It was evidenced that Minera Florida defined, implemented and maintained internal documented procedures which identify the assumptions and parameters on which the facility design was based and any applicable regulatory requirements.

It was evidenced that Minera Florida defined, implemented and maintained internal operational and management documented procedures which describe the standard practices necessary for the safe and environmentally sound operation including the specific measures needed for compliance with the Code, such as inspections and preventive maintenance activities.

Yamana Gold defined and documented a corporate procedure, PCS-00-21-001-07(1), to identify when changes in a site's processes or operating practices may increase the potential for the release of cyanide and to incorporate the necessary release prevention measures. No such changes, that could impact or increase the potential of cyanide release were identified in the last three years.

It was observed that the Minera Florida implemented a cyanide management contingency procedure for situations when there is an upset in a facility's water balance, when inspections and monitoring identify a deviation from design or standard operating procedures, and/or when a temporary closure or cessation of operations may be necessary.

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It was evidenced that Minera Florida inspect (operational ones (every shift) and maintenance ones (weekly, monthly, quarterly, semesterly or annually)) cyanide facilities on an established frequency, depending on the installation/ equipment type, according internal documented procedures, sufficient to assure and document that they are functioning within design parameters criteria. The inspection and preventive maintenance system is controlled by a JD Edwards/ Oracle software. Reviewed inspection records for the following equipment: 500-TK-07, 06-TK-61, 06-TK-62, 500-TK-05, 02-EP-02, 01-PP-01, 01-PP-02, 06-PP-63, related to tanks, thickener and pumps, and associated parts (piping and valves).

It was evidenced that Minera Florida inspect tanks holding cyanide solutions for structural integrity and signs of corrosion and leakage. Records of such inspections were found in place, as previously mentioned.

Operational inspections are performed every shift, focusing secondary containments integrity and available capacity, including the floor pumping system effectiveness. Records of such inspections, performed between 2016 and 2018 were reviewed.

The operation has a daily inspection plan for all open waters (TSFs) available at the site. Records of such inspections are in place and the inspections performed between 2016 and 2018 were sampled and reviewed.

All previously mentioned inspections are recorded, including the date, the inspector name, the equipment/ installation being inspected and the inspection results. Reviewed inspection records for the following equipment: 500-TK-07, 06-TK-61, 06-TK-62, 500-TK-05, 02-EP-02, 01-PP-01, 01-PP-02, 06-PP-63, related to tanks, thickener and pumps, and associated parts (piping and valves).

It was evidenced that preventive maintenance programs are implemented and results are recorded to ensure that equipment and devices function as necessary for safe cyanide management. They prescribe the specific nature and frequency of preventive maintenance activities. Reviewed the annual maintenance plan, focusing tanks, piping, valves, instrumentation and structural concrete structures (secondary containments). All main leaching tanks were recertified in accordance with API-653/2009 standard. Reviewed records for tanks 01-TK-02, 01-TK-06 and 01-TK-04, all dated 04/06/2018. Reviewed preventive maintenance records for pHmeters 01-AIT-114, 992-AIT-2202, 922-AIT-2201, 922-AIT-2207P and 922-AIT-2208P, all performed during May 2018. Also reviewed preventive maintenance records for pumping systems such as 930-PP-328, 922-CL-202, 922-PP-211 and 922-PP-105, all performed during November 2017. Also reviewed the preventive maintenance plan for the elution column, according to ASME VIII. Reviewed record dated 11/06/2018, for the twin filters replacement.

It was evidenced that Minera Florida has an emergency power resources to operate pumps and other equipment to prevent unintentional releases and exposures in the event its primary source of power is interrupted (the operation has seven generators providing around 8,5 Mwh for different installations). The back-up power generator equipment is covered by a preventive maintenance program (annual) and inspections. The generators are turned on every two weeks.

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

☒ in full compliance with

The operation is: ☐ in substantial compliance with Standard of Practice 4.2

☐ not in compliance with

☐ not subject to

Summarize the basis for this Finding/Deficiencies Identified:

The operation conducts a program to determine appropriate cyanide addition rates and optimize gold recovery. This program is based on metallurgical tests (bottle testing) A second tag mill was introduced in the circuit, and the addition of cyanide solution is done in two different tanks (TK-01 and TK-05), resulting is less cyanide consumption and increased gold recovery. The cyanide consumption forecast for this year is 1,4 Kg/ ton (comparing to 2,0 Kg/ ton in 2016). Monthly monitoring indicates that, ytd, the cyanide consumption is 1,47 Kg/ ton, and the trend is going down.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

Minera Florida developed a comprehensive, probabilistic and dynamic water balance system, focused on the process plants and the TSFs, which includes the reference to the design assumed inputs and outputs, and the real inputs and outputs. The water balance is managed and monitored on a daily basis, in accordance with the water balance model defined by a Yamana Gold corporate management procedure.

The rate that the tailings are deposited at TSF is considered in the water balance management.

The storm duration and the storm return interval is considered in the water balance model.

These aspects (precipitation and evaporation) are provided by the Chilean Institute responsible to monitor and collect data about precipitation and evaporation along the years. Did not change since de certification audit.

The precipitation resulting from surface run-on from the up-gradient watershed did not enter in a pond (TSF), because there is a special channel constructed to conduct this water (from surface run-on) out. This channel surrounds the TSFs. There is no potential of freezing.

The solution losses in addition to evaporation, such as the capacity of decant, drainage and recycling systems, allowable seepage to the subsurface has no significant impact on the water balance. There are no discharges to surface water (the operation works on a closed circuit).

There is no leach pad in Minera Florida. Power outages or pump and other equipment failures will not impact the water balance significantly. If this occurs the operation will maintain the balance.

It was evidenced that Minera Florida implement operating procedures that incorporate inspection and monitoring activities to implement the water balance and prevent overtopping of ponds and impoundments and unplanned discharge of cyanide solutions to the environment; Records of such inspections were reviewed.

The ponds and impoundments designed and operated with adequate freeboard above the maximum design storage capacity determined to be necessary from water balance calculations. There are inspections in place to ensure the control of all design and operational parameters.

Minera Florida measure the precipitation and compare the results to design assumptions. Reviewed "precipitation and evaporation" daily monitoring records.

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

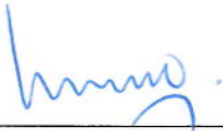
The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 4.4
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Minera Florida monitors all open waters (TSFs), in a frequency defined by the Chilean environmental authority. All monitoring are performed by an ISO 17025 certified laboratory. All reviewed monitoring reports did not show any result for WAD cyanide (CNw) exceeding 50mg/l. Reviewed reports were: AQ-023965, ANAM-4576359, AQ-023966, ANAM-4576360, AQ-023969, ANAM-4576365, AQ-0239968, ANAM-4576363, AQ-024221, AQ-024222, AQ-023967, ANAM-4576361, AQ-0257243, AQ-0257242, AQ-023730, ANAM-4640608, AQ-023731 and ANAM-4587924. Typical results for CNw are below 0,5 ppm. Special measures (fencing) were implemented to restrict access by wildlife and livestock in the TSFs areas. There is no record of wildlife mortality since the certification audit.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

Minera Florida does not have any direct discharge to surface water. The operation configuration is a closed circuit. Although there is not any direct discharge to surface waters, the operations monitor on a regular basis, the existing surface water, downstream of the plant. The records of monitoring show that the concentration of free cyanide is lower than 0.004 mg/l (free cyanide was not detected). Monitoring is performed by an external laboratory which is certified according to ISO 17025/ 2005. Reviewed records were: AQ-023730, ANAM-4640608, AQ-023731 and ANAM-4587924.

It was evidenced that Minera Florida does not have an indirect discharge to surface water, as verified in the monitoring results previously mentioned.

It was evidenced that Minera Florida does not have any record of indirect discharge to surface water. No cases in the last three years.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that the operation has implemented a specific water management system, where seepage is not a critical aspect to the water balance (refer to SoP 4.3). Operational controls such soil compaction, HDPE liners, structural concrete secondary containments and underground water quality monitoring (52 wells are installed) are effective barriers to protect the underground water to be impacted by cyanide.

It was evidenced that the monitoring conducted by an ISO 17025 certified laboratory indicates that there is not any contamination of ground water caused by any type cyanide (total, wad or free). The Chilean law # 1333 "Requisitos para calidad de aguas para diferentes usos/ quality criteria for general use of water", did not establish any value for WAD or free cyanide for underground water, only for total cyanide (<0,20 ppm). Reviewed the following underground monitoring reports: AQ-0240021, AQ-0203839 and ANAM-4576366, where CNw and CNf were below 0,004 ppm (not detectable). Minera Florida does not use mill tailings as underground backfill.

It was evidenced that there is no record of seepage from the operation to the ground water in the last three years as previously mentioned.

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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:

It was evidenced, during the field, that the cyanide unloading, storage, mixing and process solution tanks are provided with spill prevention and containment measures, such as secondary containment (structural concrete + impermeable varnish) and HDPE liners.

It was evidenced that according the design drawings, all cyanide unloading, storage, mixing and process tanks contain secondary containment sized to hold a volume greater than that of the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event. All secondary containments are provided with floor pumping system, as evidenced during the field audit.

There are procedures in place, as previously mentioned, that ensures a pumping system to recirculate the cyanide solution or cyanide-contaminated effluent or pulp, that is collected in a secondary containment area, back to the leach tanks. Minera Florida does not have process tanks without secondary containment.

It was evidenced, during the field audit, that all cyanide process solution pipelines are provided with spill prevention to collect leaks and prevent releases to the environment.

There are no areas where cyanide pipelines present a risk to surface water. All pipelines are within controlled areas, are contained by secondary containments, mainly by HDPE piping (pipe inside a pipe), as evidenced during the field audit. It was evidenced that all cyanide tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions, such as carbon steel (tanks and piping) and HDPE (piping).

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

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

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that Minera Florida conducted quality control and quality assurance programs for a new installation, PTR (Planta de Tratamiento de Relaves/ Tailings Treatment Plant), which was designed and constructed by OGM Obras y Montajes Chile SRL y Arcadis Chile SRL. The operation retains design and construction records, in proper data-books, which were reviewed in this opportunity. Sampled records were: drawing 1059-922-GP-02 (3), drawing 1059-922-ME-13 (1), Protocolo de Verticalidad de Estanques (acc. To API-650) for tanks 922-TK-117 and 922-TK-403, topography drawing 1059-922-GH-01(0), valves assembly drawing # 3893-0922-II-PID-009(0), HDPE welding protocol # 3893-922-II-PID-012(0) for line 922-H2-90-PP-89, structural foundations for CIP tanking area drawing 1059-922-CI-09(2), earthing test protocol for substation 922, detox as built drawing # 1059-922-GP-01(3) (piping and tanks) and 1059-922-CI-34(1) for foundations, stud liner assembly drawing 1059-922-CI(1), for tanks 922-TK-302/303/304 and 305. Steel plates quality certificate issued by Usiminas Brasil # 2433101 (ASTM- A36, batch # 462253), welding qualification record # STI/ PQR-613/ GMAW/ MAG and welder qualification record for Mr. Eduardo Briso. The previous existing installation, PLC (Planta de Lixiviación de Concentrado/ Concentrate Leaching Plant), did not suffer any major change.

The original documentation of its design and construction, including QA/QC records, remains stored at the plant. The ones sampled in the initial audit are still in place ("Larox filter – 873-510-CI-07, 873-500-CI-10 leach facilities 875-500-CI-02, storage facilities LXV002-11, unload area LXV001-11, document "Recepcion Final 02/01 – Departamento Obra Civil" from the municipality of Villa Alhué attesting that all the construction is aligned with all the Chilean rules related to the safe construction.

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Verified that Minera Florida developed a quality control and quality assurance programs addressing the suitability of materials (carbon steel for tanks and piping, and HDPE for piping and liners) and adequacy of soil compaction through the performance of several standard compaction tests. Records of such tests are available and were reviewed is this opportunity.

It was evidenced that Minera Florida retains all records of quality control and quality assurance for the new cyanide and existing facilities., as previously mentioned.

It was evidenced that appropriately qualified personnel reviewed the new cyanide facility construction and provided documentation that the facility has been built as proposed and approved. Verified the sign-off of the responsible project Director. Also reviewed that the original documentation of the existing facility PLC (Planta de Lixiviación de Concentrado/ Concentrate Leaching Plant), are maintained at the operation. The ones reviewed in the initial audit are still in place ("Larox filter – 873-510-CI-07, 873-500-CI-10 leach facilities 875-500-CI-02, storage facilities LXV002-11, unload area LXV001-11, document "Recepcion Final 02/01 – Departamento Obra Civil" issued by the municipality of Villa Alhué attesting that all the construction is aligned with all the Chilean rules related to the safe construction.

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:

It was evidenced that the operation defined, documented and implemented monitoring plans , focused on the water (open, surface and underground) quality and fauna, in accordance with the local EPA permits and the Chilean environmental legislation for mining activities.

All analytical protocols were developed by qualified personnel and are in accordance with the "Standard Methods for the Examination of Water and Wastewater/ 22nd edition". The supplier laboratory is certified in accordance with ISO 17025.

It was evidenced that the monitoring plan and protocols addresses how and where samples shall be taken, describe the sample preservation techniques, describe the chain of custody and cyanide species to be analyzed. It was evidenced that these procedures are in conformance with Chilean Standard NCh 411/2010.

It was reviewed procedures and records of sampling conditions (weather, livestock/wildlife activity, anthropogenic influences) in accordance with the supplier laboratory protocols.

It was evidenced that Minera Florida inspect for and record wildlife mortalities related to contact with and ingestion of cyanide solutions. There were no records of wildlife and livestock mortality in the last three years.

The monitoring frequencies are defined by the local EPA and addressed at the environmental permits. In my perception and experience, such frequencies are adequate to characterize the medium being monitored and to promptly identify any changes in the environmental circumstances.

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

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Summarize the basis for this Finding/Deficiencies Identified:

The operation defined and documented a decommissioning plan, MFL-13048-REP-MAMB-002 (0), dated 04/10/2017, developed by MWH/ Stantec Chile. The plan was submitted to SERNAGEOMIN, the public authority responsible to review and approve all mining decommissioning plans. Life of mine (LoM) is defined for 2032. The plan will be updated in 2019.

The above mentioned decommissioning plan for cyanide facilities addresses the implementation schedule and all decommissioning activities, including the decontamination of all cyanide related activities. The forecast to implement the plan is also defined in the plan and was developed by MWH/ Stantec Chile, considering that the decommissioning plan will be implemented by a third part. Minera Florida updates the decommissioning plan with sufficient frequency to reflect changes in the operation as they affect decommissioning activities. Next updating is scheduled for 2019, as previously mentioned.

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 ☐ not in compliance with Standard of Practice 5.2

Summarize the basis for this Finding/Deficiencies Identified:

Minera Florida developed an estimate of cost to fully fund third party implementation of cyanide related decommissioning activities, as mentioned at SoP 5.1. The ARO (Asset Reclamation Obligation) is updated on a yearly basis.

There is a new Chilean law (# 20551) that defines a financial mechanism and will require from the mining operation to implement such mechanism. This process is yet in progress.

Minera Florida established a self-guarantee as a financial assurance mechanism. It was evidenced the last two financial audit reports, performed by Deloitte Chile, dated 16/03/2018 (refer to financial years ended 31/12/2016 and 31/12/2017). The audits were carried out in accordance with IASB (International Accounting Standards Board) and led by Mr. Martin Colossi, a certified financial auditor in accordance with the Chilean legislation, which concluded that the Yamana Gold Corporation has financial health to fully fund the implementation of the decommissioning plan. Reports are available, for public consultation, at the web site www.yamana.com.

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 ☐ not in compliance with Standard of Practice 6.1

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that Minera Florida established, implemented and maintains internal management and operational documented procedures which clearly defines methodology for unloading, mixing, plant operations, entry into confined spaces, and equipment decontamination prior to maintenance.

It was evidenced that Minera Florida established, implemented and maintains internal management and operational documented procedures which clearly defines the use of personal protective equipment and address pre-work inspections. It was evidenced during the field audit, the adequate use of EPPs and pre-activity inspections, including EPPs inspection, safety installations (shower and low-pressure eye-washer) and the operational ones.

The operation implemented a documented corporate change management procedure, PCS-00-21-001-07 (1).

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The work force participates effectively in the hazard identification and risk evaluation (PEACE) and in the development of operational procedures through specific meetings specifically planned for this purpose. Such meetings are led by the process supervisor. During the field audit and personal interviews, this procedure was clearly identified. It was evidenced that the job rotation among the operational workforce is very low.

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 ☐ not in compliance with Standard of Practice 6.2

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that Minera Florida defined and documented that the minimum pH value shall be equal or greater than 10,5. During the field audit and reviewing pertinent records it was verified that the pH has been effectively controlled and monitored (through calibrated pH meter) in the operation. Alarm systems are in place. Additionally, during the field audit, it was noted that the usual pH value remains between 10,5 and 12. The pH is controlled through the online addition of soda solution using a calibrated flowmeter.

It was evidenced that Minera Florida has fixed calibrated HCN detectors in the tank and CIP leaching areas and the operators also use portable calibrated HCN detectors. Both cases were evidenced in the field audit. Alarm level is set for 4ppm HCN. Reviewing pertinent records evidences were provided that the parameters have been maintained as stated (below exposition limits). In the event of alarm situation (4 ppm HCN), the operators are ordered to leave the area, only returning when allowed by the supervision, after technical checking. Also observed that all the operators use adequate personal protective equipment.

The operation has fixed calibrated HCN detectors in the tank and CIP leaching area and the operators also use portable calibrated HCN detectors. Both cases evidenced in the field audit. Beyond these controls, all the operators use adequate personal protective equipment. As previously mentioned both, the fix and portable ones, are maintained and calibrated in accordance with a calibration management system, each three months. Calibration records (Dräger calibration certificates) were evidenced.

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


As previously mentioned, during the on-site audit, the operation received its first batch of solid NaCN containing red colorant dying. First trials were performed and the results fulfilled the expectations.

It was observed, during the field audit, that all the required auxiliary installations were evidenced to be in place and operational. They were tested during the field audit and worked properly. The operation has also implemented a system to manage all the fire extinguishers available at the plant. Inspection records of such equipment provided evidences that they have been adequately maintained. Occupational Safety process is responsible to manage the maintenance of all fire extinguishers. During the field audit it was evidenced that all cyanide tanks and piping are clearly painted, identified and the flow direction clearly showed.

It was evidenced that Minera Florida implemented and maintains an emergency response program inside the plant, where all cyanide related information is available in Spanish. This emergency response program includes the safety information related to cyanide (MSDS), first aid procedures including decontamination and alarm systems.

Minera Florida defined, documented, implemented and maintains a documented management procedure to investigate real and potential cyanide related incidents. This procedure is managed through the Antirion system. In the last three years there was one real incident, without victims, where a failure in the twin filters of the elution column occurred. The investigation of such incident was recorded under the code INC#1823 (December 2017). The emergency response plan for this scenario was promptly activated and demonstrated that it was effective. Lessons learned, including causes, were addressed at the emergency response plan (refer to Principle # 7).

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 6.3
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced during the field audit that Minera Florida has a health care center, fully equipped with water, a resuscitator, one ambulance, antidote kits, oxygen cylinders, AED, self-contained breathing equipment, alarm system and several communication channels such as telephone, cell phone and radio channel. The medical team monitor every cyanide solution preparation.

It was evidenced there is a monthly inspection of personal protective equipment (PPE). It was also evidenced that inspections results are recorded. During the field audit it was observed that all the first aid equipment and antidotes, including the ambulance are effectively inspected by the medical personnel. Such inspections are performed based on a specific checklist, specifically designed for this purpose. Storage conditions of amyl nitrite, sodium nitrite and sodium thiosulphate are clearly defined. Evidenced inspection records from March 2016 up to June 2018. The antidotes are stored under controlled conditions as directed by their manufacturer, into a refrigerator and their validity is monthly checked. A set of antidotes and O2 bottles are also available at the local medical facility, Posta Vila Alhué. The medical services are provided by an external provider ACHS (Asociacion Chilena de Seguridad/ Chilean Safety Association), including medics and paramedics.

It was evidenced that the operation and the medical services (ACHS) clearly identifies the procedures to respond to cyanide exposures and intoxication, defining protection measures (PPEs) in first aid, considering several intoxication scenarios such as first aid with conscious victim, first aid treatment for unconscious victim breathing, first aid treatment for unconscious victim not breathing, standard medical treatment (intravenous antidotes), first aid for contact with skin and eyes, administration of activated charcoal, medical treatment kits against intoxication by cyanide, CPR procedures, including the use of AED. Chemours' MSDS is also used as an emergency response procedure. See also principle # 7.

It was evidenced that Minera Florida has a medical facility, fully equipped with oxygen, antidotes, first aid procedures, telephone, filters, AED and PPEs. It was evidenced that Minera Florida has one doctor and five paramedics, as previously mentioned, they are supplied by ACHS, all working in shifts.

It was observed the operation developed and implemented medical procedures to transport intoxicated works to external, medical facilities, such as the Alhue medical center, Melipilla Hospital or Hospital del Trabajador in Santiago. Transfer procedures include the use of local ambulances (two, one at the medical center and the second one at the mine) and air rescue to Santiago, after the implementation of the first procedures, when the intoxicated workers are stabilized.

It was evidenced that Minera Florida has formal arrangements with Villa Alhué Medical center (very close to the operation), the Melipilla Hospital (biggest municipality close to the operation) and with Hospital del Trabajador (with belongs to ACHS), at Santiago. Such resources were approved by the medical team of the operation, and are inspected on a regular basis. Refresh training in first aid procedures, with medical teams of such institutions, are performed also on a regular basis (refer to SoP 8.3).

It was evidenced the operation developed and implemented an emergency response plan,, which includes an annual calendar for cyanide related mock drill exercises. Reviewed 2017 and 2018 annual emergency drill program, and associated reports. Refer to SoP 7.6.

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

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

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:

It was evidenced that Minera Florida defined, documented and implemented procedures to respond to cyanide related emergencies. It was reviewed the emergency response plan (PAE) GGI-E-P-18 (6), dated 01/03/2018 encompassing cyanide emergency scenarios related to transport, unloading and operations. This document clearly addresses the required resources, PPEs, communication channels and telephones (including the NaCN supplier and transporter ones) as well as the specific procedures for each identified scenario, such as PAE chapter 13 and PAE chapter 18. It was evidenced that emergency plan describes specifically the response for all cyanide related emergencies scenarios. The plan is shared with Chemours (NaCN producer) and Verasay Transportes (NaCN transporter), both ICMI certified suppliers, for emergencies related to external NaCN transportation activities. Also addresses the responses related to internal NaCN transportation activities - PAE chapter 13.

The TSF burst scenario is covered in the emergency response plan. The emergency plan was entirely reviewed about its completeness. The plan was implemented, in that possible situations, through the mock drill plan. It was evidenced also in place the emergency response plan prepared by Chemours Chile and Verasay Transportes Chile.

It was evidenced that are defined and documented cyanide related emergencies responses during external transportation to Minera Florida which are shared by the NaCN producer (Chemours) and NaCN transporter (Verasay), both ICMI certified, and the operation, that will have a support role in this scenario.

It was evidenced that the emergency plans clearly addresses specific responses to that situations, considering internal and external stakeholders.

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:

It was evidenced that the emergency response plan (refer to SoP 7.1.1), was reviewed, approved and communicated to several stakeholders (internal and external), including security (Carabineros de Chile, Villa Alhue Firefighters) and health authorities (local hospital), public authorities, emergency response suppliers (e.g: Chemours Chile, air rescue supplier) and community representatives.

The emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives (the operation in conjunction with Chemours, planned and performed specific meetings with external stakeholders about cyanide related emergencies. Records of such meetings are retained by the operation. Please refer to Principle # 9.

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The emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives, as previously mentioned.

It was evidenced that the emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan)). The last one was performed on 27/03/2018. This process is being maintained along the years.

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 ☐ not in compliance with Standard of Practice 7.3

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that Minera Florida defined, documented and implemented procedures to respond to cyanide related emergencies, as previously mentioned (refer to SoP 7.1). Responsibilities and authorities are clearly defined and communicated to all involved stakeholders (internal and external). The emergency committee organizational flowchart was defined.

The emergency coordinator is a professional and qualified firefighter.

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

The emergency brigade master list addresses all the necessary information about the brigade members, including contact details of internal and external stakeholders. The emergency coordinator also maintains a contact list personally. The contact list is available at security process, human resources process, plant control room, communication boards. The emergency brigade organizational flowchart clearly defines the role of each member.

The emergency response plans (internal and the Chemours Chile one) identifies the required resources (hardware) that are necessary to each situation. The basic emergency response hardware is consisted of one ambulance (fully equipped) , auxiliary equipment (PPEs) for the brigade members, such as chemical/flame resistant overall, chemical gloves, oxygen masks and cylinders, chemical masks. The Chemours Chile emergency plan covers that situations outside the operation (during transportation), in conjunction with Verasay Transportes, both ICMI certified.

The emergency response hardware is monthly inspected by the safety officers of the operation. Records of such inspections were evidenced and found in place.

It was evidenced that the emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan. Basically, the external emergency responders are involved in road control (Policia Nacional de Carreteras/ Carabineros de Chile), the transport and reception of intoxicated people (local hospital/ Posta Villa Alhue and regional hospitals/ Melipilla and Hospital del Trabajador Santiago), cyanide supplier (Chemours Chile/ emergency response management).

It was evidenced that the emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan)).

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

The operation is: ☒ in full compliance with
☐ in substantial compliance with
☐ not in compliance with

Standard of Practice 7.4

Summarize the basis for this Finding/Deficiencies Identified:

Was evidenced that contact information for notifying management, regulatory agencies, outside response providers as well as medical facilities of the cyanide emergency is defined and documented. It was evidenced that the emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan)). The emergency communication loop is clearly defined and also contact information is available in the plan.

It was evidenced that the emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan). The emergency communication loop is clearly defined and also contact information is available in the plan. Communication procedures with external media were found in place (addressed at crisis management plan).

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
☐ not in compliance with

Standard of Practice 7.5

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that PAE chapters 13 and 18 clearly defines recovery or neutralization of solutions or solids.

It was evidenced that PAE chapters 13 and 18 clearly defines decontamination of soils or other contaminated media.

It was evidenced that PAE chapters 13 and 18 clearly defines management and/or disposal of spill clean-up debris.

It was evidenced that PAE chapter 18 clearly defines provision of an alternate drinking water supply.

It was evidenced that PAE chapter 18 clearly states that chemicals products are not allowed to be used in surface water treatment. The operation emergency brigade does not have these kind of chemicals in their emergency response kit, as evidenced in the field audit.

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

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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:

I was evidenced that Minera Florida defined and documented an Emergency Response Plan and keep it up to date. Last up date was on March 2018. Evidenced that Minera Florida review and evaluated the cyanide related elements of its Emergency response Plan at least annually or after mock drills or real emergencies.

Evidenced the 2017 and 2018 Emergency Drill Plan. Evidenced that Minera Florida has been performing emergency mock drills as required in the Emergency Drill Plans. Reviewed the last three drills performed on 07/06/2017, 12/04/2018 and 31/05/2018.

It was evidenced that Minera Florida, evaluate after each emergency drill, the drill results. They are reviewed and discussed among the participants and when necessary, the opportunities of improvement raise-up during the drill are considered as corrective or preventive actions and managed adequately. Reports related to the drills and their reviewed were found in place. The records of the three drills previously reported were reviewed and opportunities of improvement, identified during the drills, were implemented.

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 designed and implemented a safety, health and environmental induction program (16 hours) for all new employees joining the operation. This induction program was developed by the ACHS (Asociacion Chilena de Seguridad) and there is a specific chapter related to cyanide related risks.

Every three years, the induction program is refreshed for all employees and contractors.

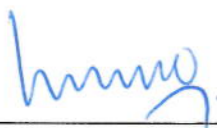
All training records related to the induction program (initial and refresh) are retained by the operation. Reviewed initial induction training for new employees (to work in the process plant).

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

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Summarize the basis for this Finding/Deficiencies Identified:

The operation designed, documented and implemented a training program specific for that new employees that will work at the process plants, straight with cyanide. This program is divided in two phases, where phase one is related to theoretical (operational and emergency response procedures) training of new employees (plant induction training program) and the second phase, where the new employees will work during four weeks (one shift) under the mentoring of an expert supervisor or operator. New employees never work alone before being evaluated by tests and job observations. The mentor and the plant manager must sign-off the approval (or not) of the new employee.

The training materials are basically the operational procedures and the emergency response procedures, including first aid and decontamination activities. All the instructors are expert operators, supervisors and process engineers. As previously mentioned, all new employees are trained before working with cyanide.

Every time an operational or emergency response procedure is changed, all involved personnel are retrained in that procedure. Independent if the employee participated or not in the review of the updated procedure. If, in a three year period, there are no changes in the operational and emergency response procedures, the operation provides a refresh training for all process plant and maintenance personnel.

It was evidenced that Minera Florida evaluate the effectiveness of cyanide training by testing (theoretical training) and planned job observations (operational training under surveillance).

The operation retains all training records related to the employees working straight with cyanide, including the initial and the refresh ones. The records address the employee and the instructor name, the training scope and the final evaluation about the understanding of the training (acquiring or maintaining the knowledge).

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

☒ in full compliance with

The operation is:

☐ in substantial compliance with Standard of Practice 8.3

☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

As previously mentioned, it was evidenced that plant operators and maintainers have specific training in emergency response procedures, including first aid and decontamination procedures. All emergency brigade members (surface team) are operators or maintainers of the process plants.

All plant operators and maintainers, as previously mentioned, receive specific training on emergency response procedures. Beyond that, all emergency brigade (surface team) members belong to the process plant or to the maintenance process.

All emergency response coordinators (one principal and two replacements) and the emergency brigade members (surface team) are trained in the emergency response procedures addressed at the emergency response plan mentioned at Principle # 7.

As previously mentioned (refer to Principle # 7), the emergency response plan is communicated to external stakeholders that are included in the emergency response plan, such as the Alhue firefighters, Alhue medical center, Carabineros de Chile, Alhue community representatives. All these stakeholders participate in emergency mock drills. Reviewed refresh training sessions performed in 2017 and 2018 (beyond the emergency mock drills reported at SoP 7.6) for the brigade members.

It was evidenced that Minera Florida uses mock emergency drills to evaluate its emergency response plans and procedures and to evaluate the performance of the emergency brigade members and coordinators. When opportunities of improvement are identified, they are implemented. Refer to Principle # 7.

It was evidenced that the operation retains all records related to emergency training, addressing the trainee and the instructor name, the date, the training scope, and the instructor evaluation. Reviewed training records for the brigade members, including the coordinator and replacements.

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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 provides for internal and external stakeholders to communicate issues of concern regarding the cyanide management system. Internally, there are several means for every employee to clarify concerns about the cyanide, mainly through training, daily safety dialogs, meetings, emergency mock drills, emails, communication boards and CCTV. For external stakeholders, there is a specific communication process which interacts with the surrounding communities, through specific meetings carried-out every two months. The last specific one related to cyanide management was carried-out on 08/03/2018. Telephone lines are available to contact the operation. The operation is implementing an environmental monitoring program with the participation of the community's representatives and a specific magazine to be distributed among the stakeholders. Public authorities have direct contact with the operation.

Standard of Practice 9.2: *Initiate dialogue describing cyanide management procedures and responsively address identified concerns.*

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

Summarize the basis for this Finding/Deficiencies Identified:

The operation provides for internal and external stakeholders to communicate issues of concern regarding the cyanide management system. Internally, there are several means for every employee to clarify concerns about the cyanide, mainly through training, daily safety dialogs, meetings, emergency mock drills, emails, communication boards and CCTV. For external stakeholders, there is a specific communication process which interacts with the surrounding communities, through specific meetings carried-out every two months. The last specific one related to cyanide management was carried-out on 08/03/2018. Telephone lines are available to contact the operation. The operation is implementing an environmental monitoring program with the participation of the community's representatives and a specific magazine to be distributed among the stakeholders. Public authorities have direct contact with the operation.

Standard of Practice 9.3: *Make appropriate operational and environmental information regarding cyanide available to stakeholders.*

The operation is: ☒ in full compliance with
☐ in substantial compliance with Standard of Practice 9.3
☐ not in compliance with

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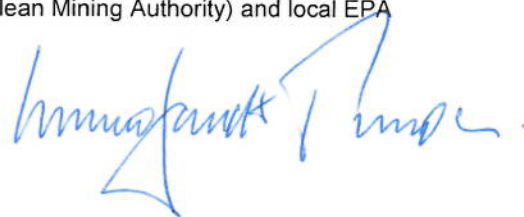
Summarize the basis for this Finding/Deficiencies Identified:

The operation developed and implemented a specific leaflet (tríptico), describing how cyanide is managed at the operation. This document is available for all stakeholders.

The majority of the local population is literate.

The operation, through its communication process, have specific communication channels to provide information related to cyanide related incidents. It was evidenced that the operation has a crises management plan, addressing specific communication procedures to be followed in front of any confirmed real incident involving cyanide. The crisis management plan was updated on February 2018.

- a) Cyanide exposure resulting in hospitalization or fatality? In the event of such incidents, the operation shall communicate the ACHS (Asociación Chilena de Seguridad) and ESACH (Servicios de Salud).
- b) Cyanide releases off the mine site requiring response or remediation? In the event of such incident, the operation shall communicate Chemours Chile (consigner) and local EPA (COREMA), according to the crisis management plan.
- c) Cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment? In the event of such incidents, the operation shall communicate the ACHS (Asociación Chilena de Seguridad) and ESACH (Servicios de Salud) and DuPont Chile (consigner).
- d) Cyanide releases on or off the mine site requiring reporting under applicable regulations? In the event of such incident, the operation shall communicate with SERNAGEOMIN (Chilean Mining Authority) and local EPA (COREMA).
- e) Releases that are or that cause applicable limits for cyanide to be exceeded? In the event of such incident, the operation shall communicate with SERNAGEOMIN (Chilean Mining Authority) and local EPA (COREMA).



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