REPORT

International Cyanide Management Code Pre-Operational Certification Audit

Gold Fields, Salares Norte Mine

Submitted to:

The International Cyanide Management Institute
1400 I Street, NW – Suite 550
Washington, DC 20005
USA

Submitted by:

Golder Associates

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1.0 SUMMARY AUDIT REPORT FOR PRE-OPERATIONAL GOLD MINING OPERATIONS

Name of Mine:	Salares Norte Gold Project
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2.0 BACKGROUND

2.1 General

Salares Norte Project is the development of a mining property located in the Atacama Region, northern Chile. The property is located in the northern part of the Maricunga Belt and consists of an intermediate grade gold and silver deposit. The Salares Norte Project is owned by Minera Gold Fields Salares Norte SpA, a fully owned subsidiary of South African mining company Gold Fields Ltd.

Salares Norte is located 332 km to the NE (North East) of Copiapó, 75 km NE of El Salvador, at the coordinates 26°00'S and 68°53'W. The main access road to the Project Site is from Copiapó via Diego de Almagro (332 km to the camp). The site altitude is approximately 4,500 m.a.s.l. (meters above sea level).

The Project considers the development of an open pit, processing plant, associated infrastructure and facilities. The processing plant will treat 2,000,000 tonnes of ore per year during its operating life. The selected process configuration is a hybrid scheme comprising cyanide leaching followed by Merrill Crowe and CIP (Carbon In Pulp).

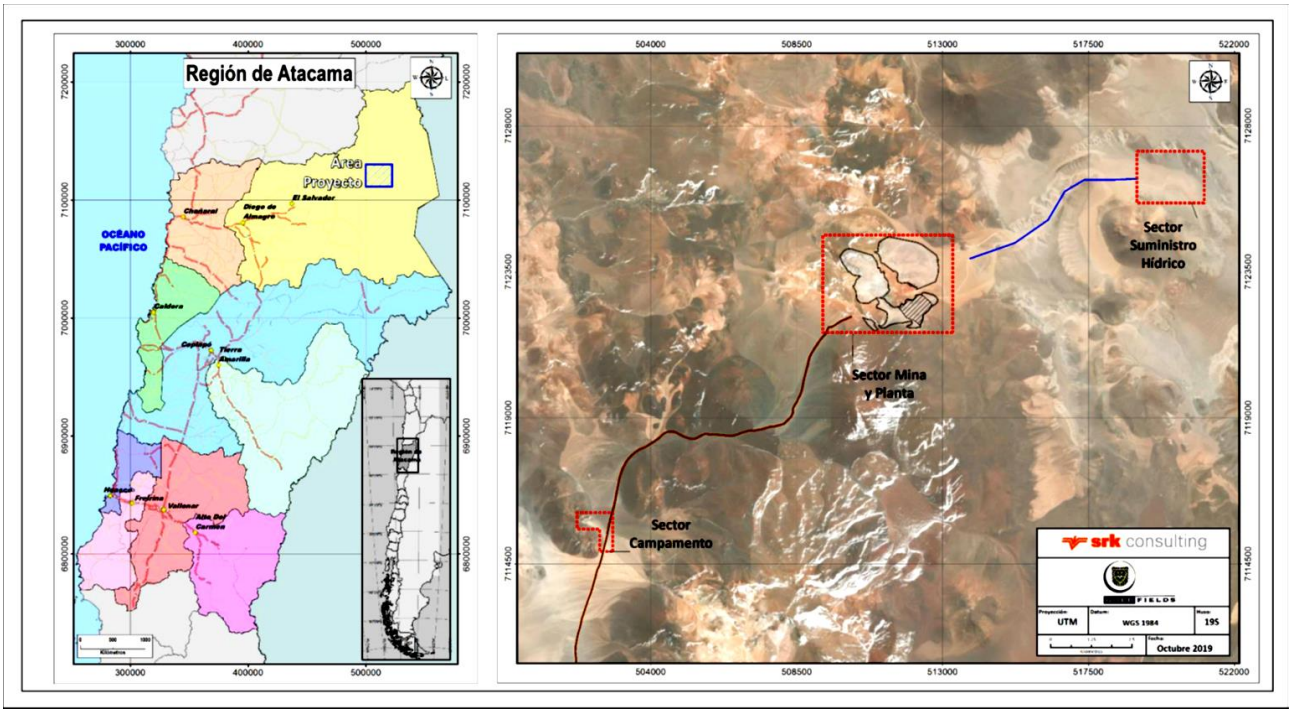

Figure 1: Regional Location Map.

2.2 Processing of Ore at Salares Norte gold mine

The process flowsheet is presented in Figure 2 while the plant layout with area designations is presented in Figure 3.

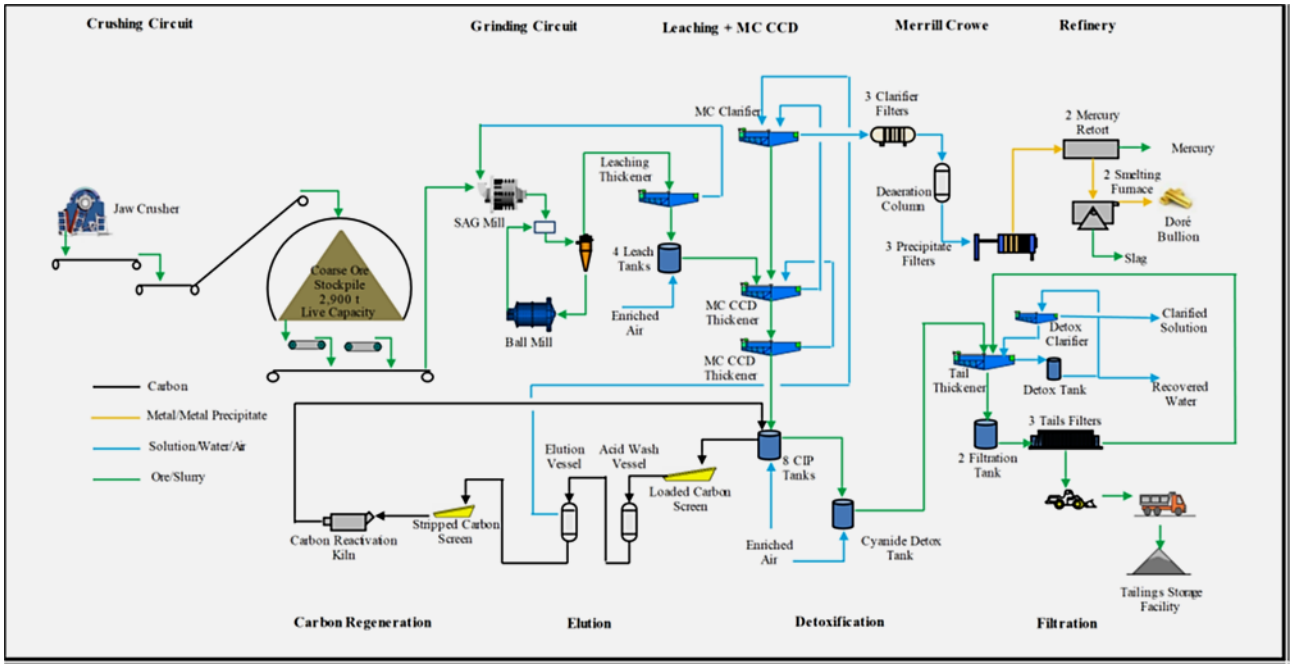

Figure 2: Process Flow Sheet.

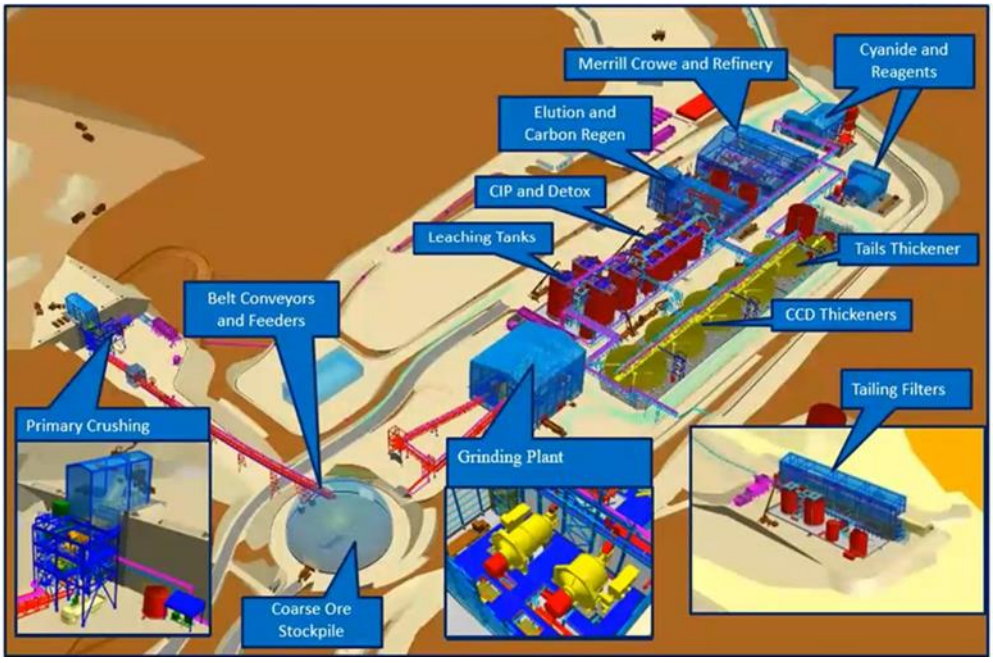

Figure 3: Plant Layout with Area Designations.

2.2.1 Crusher & Stockpile

The ROM (Run of Mine) ore, with 3% moisture (dry basis), is transported by 40-tonne trucks and is dumped in the reception bin. The ROM ore bin has a single dumping bay and the bin capacity is 80t.(tonnes).

The ROM ore bin is equipped with a dust suppression system, which produces a fog over the bin (by means of compressed air injected to water spray nozzles) for encapsulating the dust generated during the truck dumping within the bin.

From the bin the ore is fed into a single toggle jaw crusher by means of a push plate feeder. The crusher processes the ore for generating a coarse crushed ore (P_{80}:150 mm) which is discharged to a short belt conveyor located under the crusher. The discharge side of the crusher has also a dust suppression system based on a water “dry fog”. If oversized rocks come on the crusher feed side, there is a hydraulic rock breaker which allows broken it to feeding.

The conveyor receiving the crushed ore discharges in a long belt conveyor feeding the stockpile. The transfer point between the two conveyors is equipped with a magnet for removing magnetic metal pieces coming with the ore, giving protection to the conveyor belts downstream. Additionally, downstream of the magnet, there is a metal detector, which could stop the long conveyor to allow the nonmagnetic metal pieces to be removed, before damaging the conveyor. The transfer point also has a water “dry fog” dust suppression system.

The stockpile feed conveyor has an in-line belt scale which allows the measuring and recording of the ore feed mass.

The stockpile allows maintaining the feed to the plant for up to 9 to 11 hours after any shutdown of the crusher. The estimated live capacity is a 2,1 kt (70° drop angle), while live capacity reaches to 11 kt.

The stockpile is covered with a metallic dome to avoid wind dispersion of the dust from the stockpiled ore.

To feed the grinding plant, the crushed ore is reclaimed from the stockpile by means of two apron feeders overcapacity (120%, 300 t/h), in an in-line arrangement under the stockpile. The reclaim feeders discharge onto the SAG (semi-autogenous) mill feed conveyor located inside a tunnel under the stockpile. For the dust generated at the reclaim feeders, there is a water “dry fog” dust suppression system. The SAG mill feed conveyor has a belt scale for measuring and recording the SAG mill feed with the regulation of feed flow controlled through the feeder speed.

2.2.2 Grinding Circuit

The purpose of the grinding process is to transform the crushed ore into an ore slurry having the required solid size and solid content (P_{80}: 75 µm and 35% solids) for feeding the leaching stage.

To achieve that objective, the grinding process is performed in a circuit comprised by one SAG mill (6.71 m diameter by 4.42 m EGL (effective grinding length); 4.0 MW) and one ball mill (5.49 m diameter by 8.53 m EGL; 4.0 MW), with the configuration SAB (pebble recirculation to SAG, without pebble crushing).

The crushed ore and mill water (detox solution mixed with leach feed thickener overflow) is added continuously into the SAG mill to obtain slurry of 65.4% solids. Milk of lime is also added into the SAG mill. The slurry formed and milled in the SAG mill is discharged through a trommel screen located on the discharge end of the SAG mill. The slurry, containing the solids finer than the transfer size, falls into a cyclone feed box while the trommel oversize pebbles are conveyed to return to the SAG mill feed conveyor.

The SAG product plus the ball mill product is combined into the cyclone feed box, where the water content of the slurry is adjusted to 54.5% by the addition of mill water. The water adjustment ensures the right size classification in the cyclones. The ore slurry is feed into the cyclone cluster by a variable speed pump.

The cyclones produce the required classification of 75% minus 75 micron, with 35% solids in the cyclone overflow that exits the grinding circuit.

The cyclone underflow, with the remaining water, is fed to the ball mill, whose product goes to the cyclone feed box to reinitiate the classification loop. The nominal circulating load in the ball mill loop is 241% of fresh feed the circulating load for design is 400%.

Both the SAG and ball mill have to be fed periodically with steel chrome balls, for replacing the wornout media, maintaining the required charge into the mills. The SAG mill and ball mill ball consumption is 293 g/t and 689 g/t, respectively.

The maximum balls charge is 15% for SAG mill and 32% for ball mill.

As a note it is important to consider that the grinding circuit is a low cyanide area < 15 ppm CN Wad (Weak Acid Dissociable). However, the area is considered as a a cyanide facility according to the Code. For this reason, the appropriate design and health and safety measures, such as secondary containment, signage, emergency showers and eye wash stations for protection against cyanide contamination are being taken.

2.2.3 Leaching

The purpose of this circuit is to mix the pulp obtained from the grinding circuit with a cyanide solution and dissolved oxygen to produce a chemical reaction which dissolves the valuable metals.

The grinding product (cyclone overflow) passes a trash screen then is thickened to 55% solids in a 30 m diameter high-rate thickener. Thickener overflow is recirculated to the mill water tank in the grinding circuit and the thickener underflow is pumped to the leach circuit.

Before the slurry enters the leaching tanks, a metallurgical sampler periodically removes a sample increment to forming a sample which allows characterize the circuit's feed in the laboratory.

The leaching circuit comprise 4 reactors of 3,539 effective cubic meters each providing a total residence time of 35.6 hours. This residence time is required to achieve the target average recoveries of 92.70% Au and 67.50 % Ag (LOM (life of mine) average).

The thickened slurry is fed to an elevated feed box, together with the required flow of barren solution to dilute the slurry to 45 % and the addition of milk of lime to adjust the pH to 10.5, if required. From the feed box, the slurry discharges to the first reactor, where cyanide solution is added for driving the leaching to the required metal recovery. The cyanide consumption in leaching is an average 800 to 960 g NaCN / t of ore (leaching + CIP), with a residual free sodium cyanide content of 1,000 ppm in the leaching residues.

From the first reactor tank, the slurry overflows to the second and so on to reach the fourth reactor tank. The cyanide could be added to the first three tanks.

For the leach reaction requirements, enriched air is added through the agitator shaft into each leach tank. The enriched air supply is estimated to be 1.128 kg O_2 per t of ore (6.18 t/d O_2). The enriched air is considered to 90% O_2 purity, produced by BPSA Plant 16 t/d design capacity, which supplies the O_2 consumption leaching, CIP and detoxification process.

2.2.4 CCD Washing Circuit

Leached slurry is washed in a counter current decantation (CCD) circuit. Solid-liquid separation occurs with the recovery of dissolved valuable metals into the solution for further treatment. The CCD circuit comprises two 30 m diameter high-rate thickeners arranged in series, which each producing a thickened slurry underflow at 55% solids to feed to the next stage. Barren solution from the Merrill-Crowe process is added to the second thickener to act as the wash water. The overflow from the second thickener is used as the wash water for the first thickener.

From the first CCD overflow, a pregnant metal-rich, unclarified solution is recovered. This solution is clarified in a conventional 30 m diameter thickener, in preparation for the precious metal precipitation with zinc powder in the Merrill-Crowe process. The gold and silver concentration obtained in the clarified solution (Pregnant leaching solution (PLS)) at the end of this circuit is 1.73 ppm of gold and 17.8 ppm of silver average.

2.2.5 Carbon in Pulp (CIP)

The purpose of this circuit is to recover the quantity of metal that remains in the tailings slurry from the underflow of the second CCD stage.

Around 10% of the gold is not recovered in the leaching stage, due the mutual interference between gold and silver. For this reason a carbon-in-pulp (CIP) circuit has been included, which results in 0.01 ppm of gold and 0.40 ppm of silver in the tailings.

The CCD tailings slurry is contacted with activated carbon, in a series of eight CIP tanks of 1,360 effective cubic meters each. The CIP circuit aims to obtain a loaded carbon grade of approximately 284 g/t gold and 4,056 g/t silver. The average carbon movement is 8.26 t/d and carbon concentration is 15 g/l of slurry.

Tailings from CIP circuit are sent to a cyanide detoxification stage while the loaded carbon is recovered to be treated, on a semi batch schedule, in an elution facility of 13 t carbon capacity per batch, using the Triple AARL (Anglo American Research Laboratory) process scheme.

2.2.6 Acid Wash/Elution/Regeneration Circuit

Loaded carbon recovered from CIP stage through carbon screen is a conducted by gravity to the acid wash and elution section to be stripped.

The acid washing involves the soaking of the loaded carbon in a 4% w/w hydrochloric acid (HCl) solution in order to remove impurities. After a rinse with raw water, the carbon is transferred to the elution column. Here, the elution pre-soak solution containing sodium hydroxide (3% NaOH) and sodium cyanide (3% NaCN) is added and the column is heated and pressurized to the target temperature of 160 degrees Celsius (°C). A hot clean water elution is then commenced to produce the pregnant solution. This procedure repeats three times.

The pregnant solution obtained from the Triple AARL process is fed to the clarification stage in Merrill-Crowe circuit. The stripped carbon from the elution column is sent to a carbon regeneration kiln (diesel fired), where the carbon activity is recovered by submitting it to a slightly reducing water steam environment at 650°C.

The carbon discharged from the regeneration kiln is quenched with water in a tank, then it is passed through a vibrating screen for separating the fines, before being returned to the CIP process. The fines are filtered in a plate filter to be discarded as a residue.

The system also considers an attrition tank allowing new carbon to be fed to the circuit, after separating fines and cleaning the surface of particles.

The process gases from the kiln are passed through mercury and particle recovery system consisting of knockout box for direct cooling with water, a water cooler condensed, a scrubber with mist eliminator and sulphur carbon adsorption column.

2.2.7 Merrill-Crowe Circuit

The solution from the CCD washing stage is clarified in a conventional clarifier then is fed, together with the solution from the carbon elution to the pregnant solution tank. The pregnant solution is processed in the Merrill-Crowe circuit. All the solution fed to this circuit is “polished” in three clarifiers filters (leaf type filters), to reduce the suspended solids. Afterward, the polished liquor is fed to a deaeration column under a vacuum, to reduce the dissolved oxygen level in the solution to less than 0.5 g/m^3. After the dissolved oxygen level is reduced, a zinc powder suspension is added in a ratio of 5.42 grams of zinc per gram of metal (Au+Ag) in solution, which corresponds to the average value (LOM). The zinc reacts with the dissolved valuable metals to form a very fine metal precipitate. The suspension of metal is fed to three pressure plate filters, where the metals are recovered with the application of diatomaceous earth as filtering aid. The filtrate solution tail has a target concentration of 0.01 ppm of gold and 0.40 ppm of silver.

The wet precipitate from the pressure filter discharge contains 70% solids and is transferred by screw feeders into 390 kg capacity trays. The trays containing the wet precipitate are fed into two retort ovens to heat to 650°C, permitting the mercury content in the precipitate to be vaporized. The vaporized mercury is removed from the retorts, condensed, and captured to a mercury flask. The exhaust gases from the retort ovens, are purified in an activated sulphide-carbon adsorption column before being released to the atmosphere.

The metal precipitate, dry and mercury free, is processed by smelting to produce doré metal bullion (mass of bullion 1.094 Oz troy). The plant design includes two 20-cubic-foot-capacity diesel fired smelting furnaces. The furnace crucible is loaded with the precipitate mixed with fluxes for the smelting process.

The smelting is done on a batch basis. The doré metal is poured from the two smelting furnaces into the moulds in a cascade arrangement, then it is cooled and stored in the vault, before being transported offsite to a commercial refining facility.

The slag is poured from the smelting furnace and granulated by means of fast cooling using pressurized water jets. The granulated slag is sent to a slag coarse recovery screen, oversize is recycled to the retort furnaces and undersize is handled as slag.

2.2.8 Refinery

The refinery section allows converting the metal precipitate into “doré” metal bullions. The nonvaluable materials contained in the precipitate are obtained as granulated slag and as liquid mercury.

The wet precipitate obtained in Merrill-Crowe is placed into steel trays, 300 kg capacity each, to be fed into two retort ovens: 50 cubic feet nominal size each, electrically heated (250 kW). A forklift handles the precipitate trays.

The retorts were sized for extracting the mercury content of the precipitate in a 24 hours batch cycle, treating 2,226 kg of wet precipitate (30% humidity, per cycle, per oven). The retort has a preprogramed heating cooling curve which heats the precipitate up to 650 °C, cooling it to 150 °C at the end of the cycle. The heating and cooling evaporates the contained mercury which is extracted in the gases.

The gases from the retort are extracted by a liquid ring vacuum pump (977 Am^3/h (Actual cubic meter per hour) @ 33.3 kPa (kilo-Pascal)), passing through a sequential mercury abatement treatment which includes: a water cooled condenser and after cooler, a knock-out box for direct cooling with water, an EPA filter and a sulphur carbon bed for mercury adsorption. Exhaust gases are diluted in an airstream before being released to the environment.

For providing cooling to the condensers and after coolers, the system includes two chillers and a cooling circuit composed of a tank and three pumps. After the daily opening of each retort oven the trays containing dry, mercury free precipitate are placed in a rack waiting to the melting process.

The melting section of the plant is composed by a charge preparation system, which allow mixing the precipitate with the fluxes; two vertical tilting type, melting furnaces; two cascade molding carts; a gas collecting system plus the slag granulation system.

The project requirement is to prepare the mixing of a maximum 4,394 kg /d of precipitate with 4,394 kg/d of fluxes, based on 4 days per week operation schedule for the refinery. The LOM average quantities are 2,268 kg/d of precipitate plus 2,268 kg/d of fluxes.

The quantities of materials to be handled require a mechanized system:

- 5 bins 1.8 m^3 capacity each. Able for loading with 1 ton or 20 kg bags;
- 5 flux volumetric feeders, with locally adjustable speed for calibration;
- 1 flux screw conveyor for feeding the fluxes to the solid mixer;
- 1 precipitate & flux ribbon mixer;
- 1 articulated screw conveyor for transferring the mixture from the mixer to the smelting furnace;
- Control system for make a batch mixture.

By means of a forklift, the operator dumps the dry precipitate into a batch solids mixer. The precipitate is automatically weighed and the amount of flux calculated and added automatically.

The system comprises two smelting furnaces with a crucible volume of 13 ft^3, for processing up to 8,788 kg/d charge (precipitate plus fluxes).

The maximum metal production of the refinery section is about 12,869 oz of metal dore per day. Considering a smelting schedule of 5 days per week, the refinery feed would be 18,017 oz day. This is equivalent to producing up to 83 ingots (1,094 oz each) per week. Considering a five day schedule, up to 16 ingots per day should be produced.

The smelting furnace allows pouring about 4,357 oz of metal per melt. Considering the Project specification of 1,094 oz per mold, 4 moulds per pouring are required. A cascade of 5 molds per furnace. This cascade is mounted on a rail cart, integrated with the slag pouring launder.

Slag granulation system is based on water-cooling. It considers a stainless steel, water-cooled granulation launder of 0.42 m x 8.8 m x 0.3 m, a granulated slag sump pump, a static screen for separating particles larger than 701 microns, a cooling water recovery sump pump the 24 m^3 cooling water recovery pond and two recovery pumps.

2.2.9 Cyanide Detoxification Circuit

The purpose of this stage is to provide low cyanide process water using an INCO based method for converting WAD cyanide to cyanate, using sodium metabisulfite (SMBS) and oxygen, plus lime and copper sulphate.

Tailings from CIP are sent to the cyanide detoxification stage. This stage comprises a single 1,360 m^3 agitated tank, where milk of lime is added to control the pH value between 8.5 and 10.

Copper sulphate and sodium metabisulphite are added and the solution is aerated to oxidise the most of the cyanide species.

The Salares Norte Process Plant uses both a cyanide detoxification stage and the dewatering of tailings by filtration to discharge to storage dry tailings with less than 15 ppm of CN_{WAD}.

The detoxification reactor discharges by overflow feeding by gravity a carbon safety screen. The detoxified slurry will pass through this vibratory screen, flowing by gravity tailings thickener. This screen will retain carbon particles in the event of an undesired carbon leakage from the CIP process towards detoxification reactors.

2.2.10 Tailings Dewatering

After the tailings are detoxified, the slurry is sent to a dewatering process with the objective of maximizing the water recovery and to utilize a dry tailings storage method.

The first stage of dewatering is by thickening, using a 30 m diameter Hi-Rate thickener. Thickener underflow with 55% solids is then sent to a filtration plant while thickener overflow is recycled to the process. A fraction of the overflow is clarified in order to produce better quality process water for some specific uses. The filtration stage considers three vertical plate pressure filters. The filter cake discharges with a target moisture content of around 17.6 % (dry basis) and is hauled by 40 tonnes trucks to be placed and compacted in the dry stack Tailings Storage Facility (TSF).

The filtrate reports to a tank which also could receive seepage or run-off water recovered from TSF.

3.0 SUMMARY AUDIT REPORT

Auditors Findings

	☒ **in full compliance with**	
Salares Norte Mine is:	☐ in substantial compliance with	**The International Cyanide Management Code**
	☐ not in compliance with	

This operation has demonstrated full compliance with the International Cyanide Management Institute Mining Operations Verification Protocol for the International Cyanide Management Code.

Audit Company:	Golder Associates
Lead Auditor:	Alistair Cadden
Email:	acadden@golder.cl

Name of Other Auditors

Rubén Pedraza, Golder Associates.

Dates of Audit

The Certification Audit was carried out remotely during the months of 19th to 22nd October 2021.

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 Mining Operations Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

Signature of Lead Auditor

SUMMARY AUDIT REPORT

3.1 PRINCIPLE 1 – PRODUCTION

Encourage Responsible Cyanide Manufacturing by Purchasing from Manufacturers that Operate in a Safe and Environmentally Protective Manner

Standard of Practice 1.1

Purchase cyanide from certified manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment.

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

Summarize the basis for this Finding/Deficiencies Identified

MGFSN (Minera Gold Fields Salares Norte) is currently with the Contract with Manufacturer in the bidding process whereby MGFSN is committed to require, in contracts with cyanide manufacturers or distributors, that cyanide is produced in a Code-certified facility. In the case of more than one independent distributor, they will be required to provide evidence that the cyanide comes from a certified manufacturer.

MGFSN is committed to purchasing cyanide only from manufacturers that employ appropriate practices and procedures to limit the exposure of their workforce to cyanide and to prevent cyanide emissions to the environment.

3.2 PRINCIPLE 2 – TRANSPORTATION

Protect Communities and the Environment during Cyanide Transport

Standard of Practice 2.1

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

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

Summarize the basis for this Finding/Deficiencies Identified

MGFSN is currently bidding on the Contract with the transporter and MGFSN is committed to requiring that written agreements with Cyanide producers, distributors and manufacturers reflect responsibilities and requirements for transportation, safety, security, unloading, emergency response (spill prevention and clean-up), dye use, route planning and risk assessments, community liaison, access to and availability of emergency response resources, training and communication.

MGFSN is committed to establishing clear lines of responsibility for safety, safety release prevention, training and emergency response in written agreements with producers, distributors and transporters.

MGFSN is committed to have all chain of custody records or other documentation to identify the transporters and supply chain responsible for the transport of Cyanide from the factory to the operation.

MGFSN is committed to a written agreement requiring all transporters to be certified in accordance with the Code.

3.3 PRINCIPLE 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**	**Standard of Practice 3.1**
	☐ in substantial compliance with	
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

The design of the cyanide storage, unloading and preparation facilities was reviewed by professionals from the companies: FLUOR and TECPROMIN S.A. The reviewed drawings show details suitable to demonstrate that the unloading, storage and mixing facilities will be constructed following accepted engineering practices.

According to the design, the warehouse building is a metal-framed, gable-roofed, single-level shed with a concrete floor, restricted access, enclosed and will have a forced ventilation system that will prevent the accumulation of HCN gas. MGFSN will receive sodium cyanide in briquettes, which will be stored in maxi-bags, inside wooden crates and in shipping containers that will be located in an enclosed building with a concrete floor and a capacity of 10 shipping containers. The building where cyanide will be stored, prepared and distributed is isolated from other incompatible materials such as acids, strong oxidants, explosives and foodstuffs.

The preparation and distribution tanks will be located on a parapet on an epoxy-coated concrete floor. The tanks are made of Carbon Steel (ASTM (American Society for Testing and Materials) A36). According to the revised design, the cyanide preparation and distribution tanks will be equipped with level sensors and visible alarms. All will be monitored and controlled from the Integrated Operations Centre.

According to the revised design, the cyanide storage, preparation and distribution area is remote from the camp area and will be an enclosed and restricted area. There are no permanent surface watercourses and any watercourses will be routed to collection chambers and then pumped with submersible pumps to the detoxification pond.

There are 3 HCN detectors distributed between the cyanide storage, preparation and distribution area.

As reviewed MGFSN has Emergency Procedures and Plans in place to deal with a potential release or spill.

MGFSN agrees to provide engineering designs showing that its cyanide unloading, storage and mixing facilities will be constructed in accordance with cyanide producer guidelines, applicable jurisdictional rules and/or other sound and accepted engineering practices for such facilities.

MGFSN will perform routine testing and maintenance of its tank level sensor and alarm systems in accordance with its standard operating and maintenance procedures.

Standard of Practice 3.2

Operate unloading storage and mixing facilities using inspections, preventative maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 3.2**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN will receive solid sodium cyanide briquettes with a primary packaging of a polypropylene maxi-bag, up to 1 ton, which in turn is covered by a polyethylene bag and enclosed in a wooden box. The boxes and maxi bags, once used, will be stored, together with the disposable PPE, in an exclusive container for Hazardous Waste which, according to established regulations, will not be stored for over 6 months and will be sent to final disposal by a certified company. The maxi bags or any other waste generated will not be washed in order to comply with Chilean Jurisdictional Laws.

Empty sea containers will be returned to the manufacturer following established protocols. MGFSN has undertaken to design procedures for cleaning cyanide residues from the outside of the shipping containers, and to seal them for safe return to the provider.

The cyanide storage warehouse will be maintained clean and free of empty packaging. Maxi-sacks will be stored in a hazardous waste container, in accordance with Chilean law. Any cyanide waste will be managed using an alkaline solution and pumped to the cyanide detoxification plant.

The cyanide is received solid in wooden boxes and the maximum stacking height of the containers is 2 levels.

The cyanide preparation procedure outlines the steps to be taken in the event of a sodium cyanide spill and to keep the area clean.

Procedures to prevent exposures and releases during cyanide unloading and preparation activities were reviewed and detailed:

- The operation of valves for solid cyanide discharge and liquid cyanide mixing which is automatically operated from the control room.
- How to act in the event of a spill.
- Use of specific PPE.
- Camera monitoring during cyanide preparation.
- Location of emergency kits.

MGFSN is committed to design and implement procedures for proper handling of cyanide boxes and bags to avoid exposures and leaks during unloading and preparation activities in order to handle cyanide containers without breakage or punctures.

MGFSN commits to use dye to identify a potential leak of cyanide solution.

3.4 PRINCIPLE 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 including contingency planning and inspection and preventative maintenance procedures.

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

Summarize the basis for this Finding/Deficiencies Identified

MGFSN has developed and is developing written management and operating plans or procedures for cyanide facilities including unloading, mixing and storage facilities, process plants, tailings facilities, and cyanide treatment systems, as appropriate.

The Cyanide Preparation and Handling Operating Procedure, instrumentation and control system manuals, the Environmental Impact Assessment, Water Balance and the construction design of the filtered tailings dam were reviewed. MGFSN commits to develop Operating and Management Procedures and/or Plans, in order to work in a safe and responsible manner at the cyanide facilities: storage area, cyanide discharge and preparation, leaching, CCD, cyanide destruction, contact water ponds and filtered tailings dam. MGFSN commits to include in its Procedures and/or Plans facility design assumptions and parameters as well as any applicable requirements as necessary to prevent or control cyanide emissions and exposures. The report 4.15_A SRK-GFCH137-FS-6100-GE-RP-0012_00S: SALARES NORTE MINE STORAGE FACILITIES DESIGN_TAILINGS OPERATION MANUAL includes the Minimum freeboard and storm events requirements.

MGFSN is developing a Maintenance Plan: (Cyanide_Strategy_Maintenance_Line) in SAP System that will include all Cyanide related equipment. MGFSN is committed to perform a plan of inspections at a frequency that will ensure that the operation is safe and functions within design parameters. These inspections will include: tanks, valves, pumps, containment devices, showers & eye washers, fire extinguishers, emergency kits, piping, first aid kits, fixed HCN detectors, pH meters, level sensors. MGFSN undertakes that the inspection records/forms will include the date of the inspection, the name of the person carrying out the inspection, possible defects observed and corrective measures to remedy them (if any).

MGFSN is committed to carry out a Change Management Procedure to carry out and certify a safe change in the process; in order to protect people, environment and equipment owned by external parties or the company. MGFSN has a Change Management Diagram that shows all the steps to be followed for any change in a general way. This diagram includes, among other areas, the Environment and Safety area.

MGFSN has collection ponds at the dumps (North and South) and at the filtered tailings pond. It will be waterproofed with a geomembrane and will have a detection and drainage of water infiltrated through the geomembrane to the outside, where with a piezometer it will be possible to identify water leaks. MGFSN is committed to carry out inspections forms or procedures for parameters identified in the design as critical to containment of process solutions and maintenance of the water balance, such as available freeboard and integrity of surface water diversions in the process ponds.

MGFSN has both a Shutdown Plan where you can see what happens under a temporary shutdown or cessation of operations and a document that identifies the critical loads of the operation and details how to proceed and power up in the event of a power outage. MGFSN commits to contingency procedures that include actions to be taken in response to, but not limited to, a change in water balance to restore design containment capacity, how to proceed when a change in pH or CN Wad levels in the process is noted, or when a temporary or total shutdown of the facility may be necessary.

The energy to supply the Salares Norte Project will be provided through an energy matrix composed of local diesel generation or in island mode. (not connected to the national electricity system SIC-SING). Electricity will be supplied by electric generators with a projected capacity of 1,250 kVA (kilovoltamp) each during the operation of the Project.

Standard of Practice 4.2

Introduce management and operating systems to minimise 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	

Summarize the basis for this Finding/Deficiencies Identified

The MGFSN design considers Cyanide addition control strategies through measurement instruments (flowmeters and analyzers) and analysis. MGFSN will have metallurgical samplers at the tailings thickener and leach discharge.

MGFSN undertakes to determine the rates of cyanide increase in treatment following a schedule and to obtain an optimum cyanide concentration.

Standard of Practice 4.3

Implement a comprehensive water management programme to protect against unintentional releases.

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

Summarize the basis for this Finding/Deficiencies Identified

A memorandum prepared by SRK was reviewed, which presents a flow diagram representing the hydrological system of the Salares Norte Project and a water balance for the maximum demand case, corresponding to the worst case, during the construction, operation and closure phases.

A design, prepared by Fluor, describing the water distribution strategy established for the project and the water requirements at each stage of the process in terms of quantity and quality, was reviewed.

The balance and distribution calculations show that most of the water used in the process is recycled and the main loss is the water retained by the tailings after filtration.

MGFSN has collection ponds at the dumps (North and South) and at the filtered tailings pond. It will be waterproofed with a geomembrane and will have a detection and drainage of water infiltrated through the geomembrane to the outside, where with a piezometer it will be possible to identify water leaks. MGFSN is committed to carry out inspection forms or procedures for parameters identified in the design as critical to containment of process solutions and maintenance of the water balance, such as available freeboard and integrity of surface water diversions in the processo ponds.

MGFSN has had the Camp Meteorological Station in operation since September 2017. The station equipped with sensors for Wind Speed and Direction, Temperature, Radiation, Relative Humidity, Precipitation, Snow Height, Atmospheric Pressure and Evaporation. Data are kept since September 2017.

MGFSN has a Monitoring Plan with daily, weekly, monthly and annual frequency. This plan includes taking instrument readings, visual inspections and analysis of the data collected, including a review by specialists to resolve any faults or deviations that could lead to production losses.

MGFSN commits to design a comprehensive and probabilistic water balance that considers, where applicable, all of the requirements listed in NP 4.3.2 as appropriate for its facilities and the environment.

MGFSN is committed to measuring precipitation, and comparing the results with design assumptions, way to modify the operating conditions when necessary.

Standard of Practice 4.4

Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

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

Summarize the basis for this Finding/Deficiencies Identified

MGFSN will have a filtered tailings storage tank and contact water pools with a cyanide concentration not exceeding 50 mg/l. They will have a 2.25 meter high perimeter fence to prevent access by animals.

MGFSN commits to record the presence of wildlife and, if applicable, wildlife mortality related to cyanide contact.

MGFSN does not have leach pads.

Standard of Practice 4.5

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

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

Summarize the basis for this Finding/Deficiencies Identified

Not applicable, MGFSN will not discharge directly to surface waters. It also has no permanent surface water flows.

However, MGFSN will have a monitoring plan in place at various locations as outlined in the Voluntary Environmental Commitments.

MGFSN is committed to limiting any indirect discharge to surface water so that it will not result in a free cyanide concentration greater than 0.022 mg/l.

Standard of Practice 4.6

Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.

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

Summarize the basis for this Finding/Deficiencies Identified

The process plant is designed to manage seepage and protect groundwater quality. The entire area, including the cyanide storage, discharge and mixing area, is contained on concrete base containment devices and perimeter walls. In addition, the base and internal walls are epoxy coated for protection. The filtered tailings impoundment and accumulation ponds will be on a bituminous geomembrane base and the piping will be located on waterproofed channels to prevent seepage.

There are no beneficial domestic or agricultural uses of groundwater beneath and/or immediately downgradient of Salares Norte.

MGFSN has a Groundwater Monitoring Plan to monitor water quality. The MGFSN EIA (Environmental Impact Assessment) shows the actions to be taken in the event of a possible impact on groundwater quality in dumps and filtered tailings deposits.

MGFSN does not contemplate the use of tailings in the underground fill. MGFSN will be an open pit operation.

Standard of Practice 4.7

Provide spill prevention or containment measures for process tanks and pipelines.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 4.7**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

According to the revised drawings, all cyanide solution tanks have an epoxy-coated concrete-based containment device on the base and exposed face that provides spill prevention and containment measures.

According to documentation reviewed, the containment devices for the cyanide unloading, storage, mixing and process tanks are sized to contain a volume greater than the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event when required.

MGFSN has a drain at the lowest point of each parapet with a 1% slope and a pumping system to prevent the cyanide solution from overflowing. Any accumulated solution will be pumped back into the process.

There is no surface water at MGFSN so no pipelines present a risk to surface water. However, MGFSN, according to its design, has implemented spill containment measures for all pipelines containing cyanide solution to prevent leaks into natural terrain.

According to revised designs the tanks and piping are constructed of materials compatible with cyanide and high pH. Cyanide preparation and distribution tanks are constructed of Carbon Steel (ASTM A36). Piping is constructed of Carbon Steel (ASTM A53 Gr.B).

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.

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

Summarize the basis for this Finding/Deficiencies Identified

MGFSN is in the construction phase. MGFSN commits to implement quality control and quality assurance during construction of all cyanide facilities, including unloading, storage and mixingg facilities and maintain documentation.

FLUOR, under EPCM contract, is currently implementing, during the construction phase, quality assurance and quality control (QA/QC) programmes at the Cyanide Facilities including the cyanide offloading, storage and mixing facilities. The programme will include appropriate testing regarding the suitability of materials, welding, concrete, adequacy of earthworks and soil compaction, and installation of geomembrane liners. MGFSN commits to keep all documentation regarding quality control for the construction of all cyanide facilities.

MGFSN commits that its quality control and quality assurance will include the suitability of materials, welding, soil compaction, earthworks, testing and testing of materials, electrical systems, instrumentation, piping, and coatings and that qualified personnel will perform QA/QC inspections and reviews during the construction of the Cyanide facilities.

Standard of Practice 4.9

Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 4.9**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN has a document that outlines the surface and groundwater monitoring plan for the operation. Sampling and analysis protocols have been developed by appropriately qualified personnel. The Environmental Commitment was designed by SRK.

Sampling will be carried out in an accredited laboratory. MGFSN is in the bidding process for the Operation Service Contract to have a Chemical Laboratory at the Project but will also work with an external Laboratory. MGFSN commits that all sampling and analytical protocols will be prepared by qualified personnel.

In the reviewed documents can be observed:

- Monitoring points,
- Parameters to be analyzed,
- Methodology,
- Monitoring length and frequency,
- Sample transport protocol.

MGFSN is committed to using reliable methods to detect free cyanide, WAD cyanide and total cyanide according to the requirements of the Cyanide Code.

MGFSN is committed to include meteorological conditions and wildlife presence in the sampling record.

MGFSN does not discharge on Surface water.

In the opinion of the auditors, the frequency of monitoring activities included in the MGFSN procedures are adequate to characterize the environment being monitored and to identify changes in a timely manner.

3.5 PRINCIPLE 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.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 5.1**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN is not yet operational.

MGFSN has a closure plan that incorporates plans and procedures for the decommissioning of the cyanide facilities. It outlines the measures, activities and works for the closure of the cyanide facilities (remaining and non-remaining).

Included in the closure plan is the closure schedule, designed considering that all facilities will be closed at the end of the processing operations with a timeframe of 2 years.

MGFSN commits to undertake an update of the decommissioning process for the Cyanide facilities during the life of the Project and revise it as necessary.

Standard of Practice 5.2

Establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 5.2**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

The closure plan includes the valuation of the closure and post-closure measures as well as the calculation of the financial guarantee by which the State of Chile is guaranteed full and timely compliance with the closure (established in Law 20.551 that regulates the Closure of Mining Sites and Facilities).

The closure plan includes the assessment of closure and post-closure measures by third parties.

For the estimation of the closure costs, the valuation of the closure and post-closure measures proposed for the Salares Norte mine have been developed under the methodology proposed by SERNAGEOMIN (The National Geology and Mining Service of Chile).

MGFSN, in accordance with current environmental legislation, will establish a financing mechanism to cover the estimated costs of the decommissioning tasks related to cyanide, as defined in the decommissioning and closure strategy.

MGFSN commits to update the cost estimate of the decommissioning works according to Gold Fieds' internal obligations at least every 5 years and when any activity affecting the cyanide facilities is carried out.

3.6 PRINCIPLE 6 – WORKER SAFETY

Protect Workers' Health and Safety from Exposure to Cyanide

Standard of Practice 6.1

Identify potential cyanide exposure scenarios and take measure as necessary to eliminate, reduce and control them.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 6.1**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN is committed to developing procedures describing cyanide-related tasks such as unloading, mixing, plant operations, confined space entry and decontamination of equipment prior to maintenance to minimise worker exposure. Operational, environmental and emergency documents were reviewed.

MGFSN is committed to developing procedures that require the use of personal protective equipment when necessary, and address pre-job inspections. In the procedures reviewed, there is a requirement for the use of activity-specific PPE. In addition, prior to the tasks, the Work Hazard Analysis is carried out and is an integral part of the procedures. The personnel involved will participate in the preparation of the WHAs. (Work Hazard Analysis).

MGFSN is committed to actively solicit and consider the views of workers in developing and evaluating health and safety procedures. The Shift Manager and Supervisors shall define and support the correction of all deviations reported by staff on operational, safety, health or environmental issues.

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.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 6.2**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

The operation has determined the appropriate pH to limit the presence of HCN gas in the area of the Leach, Detox and CIP tanks. MGFSN is committed to determine the appropriate pH to limit the evolution of HCN gas during mixing and production activities. pH-meters are distributed throughout the process area with permanent monitoring from the Control Room.

MGFSN commits to identify areas where workers may be exposed to cyanide concentrations in excess of 10 ppm for a short term or 4.7 ppm for an 8-hour period. The revised procedures explain the precautions to be taken to avoid exposures such as the use of specific PPE.

MGFSN will distribute fixed HCN detectors in strategic areas to monitor exposure to HCN gas. Alarms are set at 2 ppm (High) and 4.7 ppm (High High) and can be monitored from the Control Room. MGFSN has a document showing the list of equipment alarms.

MGFSN undertakes to provide portable detectors so that staff can carry out their activities safely. MGFSN is developing a preventive maintenance plan that includes the fixed HCN detectors. MGFSN is committed to maintain both fixed and portable detectors in accordance with the manufacturer's requirements and retain records for a period of 3 years.

MGFSN agrees to post warning signs where cyanide is used to warn workers that cyanide is present, that smoking, open flames, eating and drinking are not allowed and that, if necessary, appropriate personal protective equipment must be worn.

MGFSN undertakes to add colorant, either by the producer or the operation itself, to the high concentration cyanide solution in order to identify a possible cyanide solution leak.

According to the revised plans, MGFSN will have showers and eyewashes distributed throughout the operation which are included in the preventive maintenance plan.

MGFSN undertakes to install inert powder fire extinguishers in the committed areas and to carry out the corresponding inspections.

MGFSN has a report which notes the form of pipe tagging.

MGFSN commits that all tanks and piping containing cyanide solutions will be clearly identified, with appropriate labelling and arrows indicating the direction of flow.

The MSDS for sodium cyanide is attached to the cyanide preparation procedure. As revised in the Emergency Plan, it is recorded that the Medical Unit will have the MSDS of the products used in the mine in order to follow the instructions in case of accidents.

MGFSN commits to have current MSDSs available in the language of the workers in places where cyanide is handled.

MGFSN, as designed, will have emergency kits distributed throughout the process area that include Amyl Nitrite and Oxygen.

The review of the Plant Emergency Procedure shows how to proceed in the event of an Emergency and in the event of a Grade 2 or 3 Emergency, an incident report will be made in the Environmental Monitoring System.

The incident report will be made indicating date and time of the incident, size of the surface or area affected, type of incident according to SMA (Environment Superintendency) classification or other, environmental matrix affected, general description of the incident in no more than 100 characters, description of the measures or actions implemented if applicable.

MGFSN commits to conduct a cyanide exposure incident investigation procedure to protect the health and safety of workers.

MGFSN has SOPs (Standard Operating Procedures) under development which commit to explain the actions to be taken in case alarm levels reach 2.0 or 4.7 ppm.

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**	**Standard of Practice 6.3**
	☐ in substantial compliance with	
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN will have a medical unit (Polyclinic) and it is committed to have water, oxygen, a resuscitator unit, antidote kits and a radio, telephone, alarm system or other means of emergency communication or notification available for use at the cyanide unloading, storage and mixing sites and elsewhere in the process.

MGFSN will have a medical unit (Polyclinic) to provide low complexity and first aid services to an injured person. The Polyclinic will have 24-hour availability (1 doctor, 1 nurse and 6 EMTs), 2 ambulances with equipment for rescue, first aid and casualty transfer, defibrillators, a first aid kit with medicines and supplies and vital sign monitoring equipment.

MGFSN is committed to have its medical unit fully capable of providing first aid or medical assistance to workers exposed to cyanide.

MGFSN has 3 Emergency Kits, one of them in the cyanide preparation area, with oxygen and the antidote (Amyl Nitrite). MGFSN has first aid kits, with items for first aid use, which are inspected on a monthly basis.

MGFSN is committed to inspecting emergency kits (oxygen, antidote) as often as necessary, to ensure that they are operational in case of need and to keep a record of antidote expiration dates. MGFSN has committed to stockpiling, evaluating, and/or replacing antidotes for cyanide, as directed by their manufacturers, to ensure they are effective when needed.

MGFSN has written emergency response plans for responding to cyanide emergencies. They describe the responsibilities of the personnel involved, how to act, how to communicate and how to coordinate a possible evacuation.

MGFSN in the Emergency Plan refers to a Patient Transfer Procedure for the Medical Unit, taking as nearby healthcare centres: Clínica Atacama, Hospital El Salvador, Hospital de Diego de Almagro and Hospital Regional de Copiapó.

MGFSN commits to develop a procedure for transporting cyanide-exposed workers to qualified off-site medical facilities available locally.

Contact telephone numbers for the nearest hospitals can be found in the Emergency Plant procedures. (GFSN03-DD-EM-3000-PT-00009_PROC.EMERGENCIAS PLANTA MGFSN_REV.0).

MGFSN is committed to reach an agreement with hospitals to provide assistance to workers exposed to cyanide. These hospitals must be prepared to care for cyanide poisoned patients.

3.7 PRINCIPLE 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**	**Standard of Practice 7.1**
	☐ in substantial compliance with	
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN has written emergency response plans to respond to cyanide emergencies, ranging from spills during transport to the release of solid, liquid and gaseous cyanide during operations.

These procedures address the cyanide exposure incidents like solid cyanide spills in the stores, sodium cyanide spill during mixing, sodium cyanide solution spill at Process Plant and inhalation or skin contact poisoning. Off site cyande incidents are also included.

The Emergency Plan, the Plant Emergency procedure and the EIA were reviewed and consider the following scenarios:

a) Catastrophic release of hydrogen cyanide from storage or process facilities;

b) Transportation accidents;

c) Cyanide Releases during unloading and mixing;

d) Cyanide Releases during fires and explosions;

e) Pipe, valve and tank ruptures;

f) Power outages and pump failures;

g) Uncontrolled seepage;

h) Failure of cyanide treatment, destruction or recovery systems;

i) Failure of tailings impoundments, heap leach facilities and other cyanide facilities.

MGFSN has committed to consider, in the Emergency Response Plan or in another document, the potential for damage in cyanide treatment, destruction and recovery systems.

In the revised emergency plans and procedures it can be seen:

- Staff training in the use of fire extinguishers, evacuation and emergency response behavior.
- Evacuation organization to the established safety zones.

- Evacuation of communities in accordance with the Transapell programme.

It can be seen from the emergency plan that MGFSN will assist in emergencies that occur within the community in its direct area of influence or other emergencies involving Gold Fields within Chile. The nearest community is 76 km away.

MGFSN is committed to involving the workforce and stakeholders, including potentially affected communities, in the cyanide emergency response planning process.

MGFSN has committed to describing, in the emergency response plan, control of releases at their source, and containment, analysis, mitigation and measures to prevent future releases.

MGFSN commits to train personnel to conduct an evacuation of both staff and potentially affected communities, in the use of first aid measures and cyanide antidotes and for the control, containment and mitigation of releases.

Standard of Practice 7.2

Involve site personnel and stakeholders in the planning process.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 7.2**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN is part of the Transapell programme which is a United Nations Environment Programme. This programme covers the risks associated with fixed installations and those related to the shipment, distribution and transport of hazardous products and substances. It is a local co-operative action programme that addresses the preparedness of emergency services and communities for potential accidents.

It can be seen in the Emergency Plan that MGFSN will assist in emergencies occurring in the community within its direct area of influence or others involving Gold Fields within Chile. The nearest community is 76 km away.

MGFSN is committed to involving labor and stakeholders, including potentially affected communities, in the cyanide emergency response planning process.

MGFSN has reached out, through the Transapell programme, to nearby communities to communicate the risks associated with accidental cyanide releases.

Workshops have been organized to address concerns.

MGFSN is committed to raising awareness among potentially affected communities of the risks associated with accidental cyanide releases.

MGFSN in its procedures and plans includes the contacts of local agencies: Fire Brigade, Carabineros, Hospitals.

MGFSN, through the Transapell programme, and as safety measures for the transport of hazardous substances, has a specialized brigade operating 24 hours a day inside the project and with respect to accidents outside the project, there will be HAZMAT teams in Copiapó with personnel available 24 hours a day. Both brigades will be coordinated with the fire brigades of Diego de Almagro and Chañaral. In areas where pollution is identified near the route where cyanide will be transported, a plan will be established with the community authorities so that the population is aware.

MGFSN is committed to integrating local response agencies (fire brigades, hospitals) into its emergency response process to keep the emergency plan up to date and establish their roles and responsibilities.

MGFSN in its procedures and plans we can see a Communication Flowchart where we can see the contact numbers of local agencies to request external support to possible emergencies in MGFSN and inform the authority according to the emergency.

Standard of Practice 7.3

Designate appropriate personnel and commit necessary equipment and resources for emergency response.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 7.3**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

The Emergency Plan presented by MGFSN aims to establish structure, roles and responsibilities of the members involved as emergency committee and crisis management committee, allowing to act and communicate the emergency to the different levels of the organisation and to the authorities in a timely manner.

The Plant Emergency Procedure identifies the Emergency Response Teams:

- Emergency Brigade (For level 1 Emergencies),
- Emergency Response Team (For levels 2 and 3 emergencies),
- Emergency Leader.

MGFSN, in its Procedures, requires its Emergency Response Teams to be specialized, trained, qualified and authorized to respond to emergencies.

MGFSN is committed to developing a training plan/programme for Emergency Response Teams to evidence staff preparedness.

The Emergency Plan includes an Emergency Communication flowchart detailing the channels of communication when an incident is detected: Via Radio (Channel 1), Annex 6387 or telephones.

MGFSN commits to have a permanent Emergency Response Team (permanent or volunteer) on site and to reflect in its plans/procedures its 24-hour availability.

MGFSN commits to develop a procedure detailing the list of equipment to be used in an emergency and the frequency of inspection.

MGFSN commits to integrate local response agencies into its emergency response process and establish their roles and responsibilities.

Even though the nearest community is approximately 70 km away, MGFSN is committed to verifying that the nearest community is within a 70 km radius. MGFSN commits to verify that external entities (emergency plans and procedures include contact numbers for external agencies) included in its plans and procedures are aware of their roles in an emergency and to involve them in drills and training.

Standard of Practice 7.4

Develop procedures for internal and external emergency notification and reporting.

The operation is

☒ in full compliance with

☐ in substantial compliance with **Standard of Practice 7.4**

☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified

The Emergency Plan includes an Emergency Communication flowchart. It details the channels of communication when an incident is detected: Via Radio (Channel 1), Annex 6387 or telephones. The RRCC (Community Relations) area acts as a liaison with the corresponding external organisations.

The Plant Emergency Procedure contains the Communication Flowchart and the Emergency Telephone Numbers.

MGFSN's crisis response protocol includes the Communication Flowchart for Safety, Health, Environment and Community events and the Communication Flowchart for labour-related events for contractors.

MGFSN´S Community Relations area acts as a liaison with the corresponding external organizations like regulatory agencies, external response providers and medical facilities.

MGFSN belongs to the Transapell programme whose overall objective is to prevent loss of life or damage to health and social welfare, avoid damage to property, and safeguard environmental safety in a local community.

MGFSN has agreed to include procedures and contact information for notifying the media of communication and communities that may be affected about a cyanide-related incident and the measures to be taken.

MGFSN commits to include in a procedure the notification to ICMI (International Cyanide Management Institute) of any significant cyanide incident as well as to report all cyanide incidents that have occurred.

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**	**Standard of Practice 7.5**
	☐ in substantial compliance with	
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN's Emergency Plan includes incident control with hazardous materials and/or waste, and the Plant Emergency Procedure describes how to act in the event of a spill.

According to MGFSN's EIA, drinking water for use throughout the project is supplied by 2 independent sources to nearby communities, so they would not be affected by possible groundwater contamination. MGFSN staff drink bottled water.

Although there are no surface water courses in the Project area, MGFSN commits to include in its procedures/plans a prohibition on the use of chemicals, such as sodium hypochlorite, ferrous sulphate and hydrogen peroxide, for the treatment of cyanide spilled in surface water.

MGFSN's emergency plan, in the section "Instructions for the control of incidents involving hazardous materials and/or waste", plant emergency procedure in section 5.3.5 Spills and in EIA addresses cases:

a) Recovery or neutralisation of solutions or solids;

b) Decontamination of soils or other contaminated media;

c) Management and/or disposal of spill clean-up debris;

d) Provision of an alternate drinking water supply.

MGFSN commits to include in its emergency procedures the concentration limit (ppm) at which the surface will be considered free of cyanide. The Emergency Plan shows how corrective actions have to be taken after a spill:

- Clean area and waste treated as hazardous waste;
- Control actions will be directed with the resources and means available, and it will be determined if the emergency can affect or reach the sectors surrounding the project.

In order to protect the life and health of workers and the population living near the project, to protect the environment as a priority, and to prevent water resources from being affected, additional control measures have been foreseen to prevent large spills of hydrocarbons or hazardous materials or waste during transport to and within the mine site, in addition to the preventive ones, so as to prevent an incident of this nature from going beyond the limits of the site and coming into contact with the population and with water receptors.

MGFSN undertakes to detail the additional control measures to carry out environmental monitoring to determine the extent and effects of the incident including sampling methodologies, parameters to be analyzed, location to carry out the analyses.

Standard of Practice 7.6

Periodically evaluate response procedures and capabilities and revise them as needed.

The operation is	☒ **in full compliance with**	**Standard of Practice 7.6**
	☐ in substantial compliance with	
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

The EIA describes that procedures and response capabilities are to be periodically evaluated and corrected as necessary, and a schedule of drills will be developed.

MGFSN commits to review and update cyanide-related aspects of its emergency plans/procedures on a regular basis and commits to conduct drills to evaluate the emergency procedures/plans.

MGFSN is committed to evaluating and modifying the Emergency Response Plan after any cyanide-related emergency that requires its implementation.

MGFSN commits to carry out an evaluation, at the end of each drill, to verify the effectiveness of the emergency plan and to observe possible deficiencies in order to be able to revise, if necessary, the emergency plan.

3.8 PRINCIPLE 8 – TRAINING

Train Workers and Emergency Response Personnel to Manage Cyanide in a Safe and Environmentally Protective Manner

Standard of Practice 8.1

Periodically evaluate response procedures and capabilities and revise them as needed.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 8.1**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN commits to train all personnel who may come into contact with cyanide on the risks associated with cyanide, to conduct periodic refresher courses on cyanide hazard recognition and to maintain records of cyanide hazard recognition courses.

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.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 8.2**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN commits to train workers to perform their normal duties, including unloading, mixing, production and maintenance operations, in a manner that minimises risks to their health and safety and accidental releases of cyanide and to employ only appropriately qualified personnel to provide task training related to cyanide handling activities.

MGFSN commits to identify the training elements required for each job involving cyanide handling in a training plan or other training material.

MGFSN commits to provide refresher training on cyanide handling to ensure that workers continue to perform their tasks in a safe and environmentally responsible manner and to evaluate the effectiveness of cyanide training through testing, observation or other procedures.

MGFSN commits to maintain records throughout the workers' employment documenting the training they receive. Such records will include the names of the workers and the person in charge of providing the training, the date of the training, the topics covered, and whether the workers demonstrated their understanding of the training material.

MGFSN commits to train employees before allowing them to work with cyanide.

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

MGFSN is developing the Transapell programme, which is a local cooperative action process that addresses emergency services and community preparedness for potential accidents.

MGFSN is committed to training all unloading, mixing, production and maintenance personnel about the procedures to follow if a cyanide release occurs includes training in decontamination and first aid procedures.

MGFSN commits to train Emergency Response Coordinators and Emergency Response Team members on the procedures included in the Emergency Response Plan as they relate to cyanide, including the use of necessary response equipment.

MGFSN commits to conduct regular refresher courses for cyanide exposure and release response.

MGFSN agrees to maintain records of cyanide-related training, including the names of the employee, the trainer, the date of the training, the topics covered, and whether the employee demonstrated an understanding of the training material.

3.9 PRINCIPLE 9 – DIALOGUE

Engage in Public Consultation and Disclosure

Standard of Practice 9.1

Provide stakeholders with the opportunity to communicate issues of concern.

	☒ **in full compliance with**	
The operation is	☐ in substantial compliance with	**Standard of Practice 9.1**
	☐ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified

MGFSN is developing the Transapell implementation plan, which is an Emergency Response Plan for the transport of hazardous substances and wastes on the roads, which considers the participation of neighbours, industries and local government services and public institutions.

The specific objectives of the Transapell programme are:

- Provide information to interested members of a community on the hazards involved in industrial operations in their vicinity and on the measures taken to reduce the risks.
- Review, update or establish emergency response plans for the local area.
- Increase local industry participation in community awareness and emergency response planning.
- Integrate industry emergency plans and local emergency response plans into one overall plan for the community to handle all types of emergencies.
- Involve community members in the preparation, testing and implementation of the overall emergency response plan.

A technical assessment of citizen observations and groundwater quality monitoring is included in the Salares Norte EIA so that indigenous communities can access and understand the monitoring information. (Capacity Development Plan).

As can be seen in the EIA, there is a register of complaints by mail (sugerencias.chile@goldfields.com), mailbox and visits to indigenous communities. This will be maintained throughout the life of the project.

Standard of Practice 9.2

Make appropriate operational and environmental information regarding cyanide available to stakeholders.

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

Summarize the basis for this Finding/Deficiencies Identified

MGFSN is implementing the Transapell Program. The specific objectives of the Transapell programme are:

- Inform members of civil protection organisations, communities and stakeholders in Region III about measures to deal with emergencies that may occur in the process of transporting hazardous substances during the construction, operation and closure stages.
- Communication, coordination and dissemination of the Emergency Plan for the transport of hazardous substances among the Company's Brigades, civil protection and first response institutions in the communities, such as the Emergency Operations Committees (EOCs), primary care facilities and hospitals, other industrial activities, Minera Gold Fields Salares Norte employees and the communities, based on increasing community awareness of risks and control measures.
- Integrate industry emergency plans and local emergency response plans into one overall plan for the community to manage all types of emergencies.
- Involve local community members in the preparation, testing and implementation of the overall emergency response plan.
- The Transpell programme considers community involvement of residents, industries and public services and institutions. It provides information to stakeholders about hazards that may affect the community and measures to be taken to reduce the risks. Workshops are organized with the communities to explain and clarify doubts.
- Offsite, the steps for responding to cyanide releases involving human health and/or environmental effects are listed in document109- TransAPELL Manual for EECC 18.05.21. The response to the incident will depend on the level and includes the preparation of the Incident Investigation Report.

In the Emergency Procedure Plan it is indicated how to proceed in the event of an Emergency:

Cases of Emergency Grade 2 and 3 will be reported to the appropriate agencies by proceeding as follows:

- Telephone communication with the Environmental Superintendence and corresponding organizations, giving immediate notice of the type of incident and its main characteristics (location and potential implications).

- Reporting the incident in the RCA (Environmental Qualification Resolution)Environmental Monitoring System provided by the SMA on its website. The incident report will be made indicating date and time of the incident, size of the surface or area affected, type of incident according to SMA classification or other, environmental matrix affected, general description of the incident in no more than 100 characters, description of the measures or actions implemented if applicable, and a description of the incident.
- Among the steps to be followed in the programme, is communicating the plan to the community, so to clarify that MGFSN is committed to making the information publicly available after confirmed incidents of cyanide release or exposure.

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