ICMI Cyanide Code Gold Mining Recertification Audit

Summary Audit Report

Pierina Mine
Barrick Gold Corporation

Ancash - Peru

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

2021 Audit Cycle

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Mining Operation: Pierina Mine

Mine Owner: Barrick Gold Corporation

Mine Operator: Minera Barrick Peru S.A.

Name of Responsible Manager: Carlomagno Bazan Melgar, General Manager Closure

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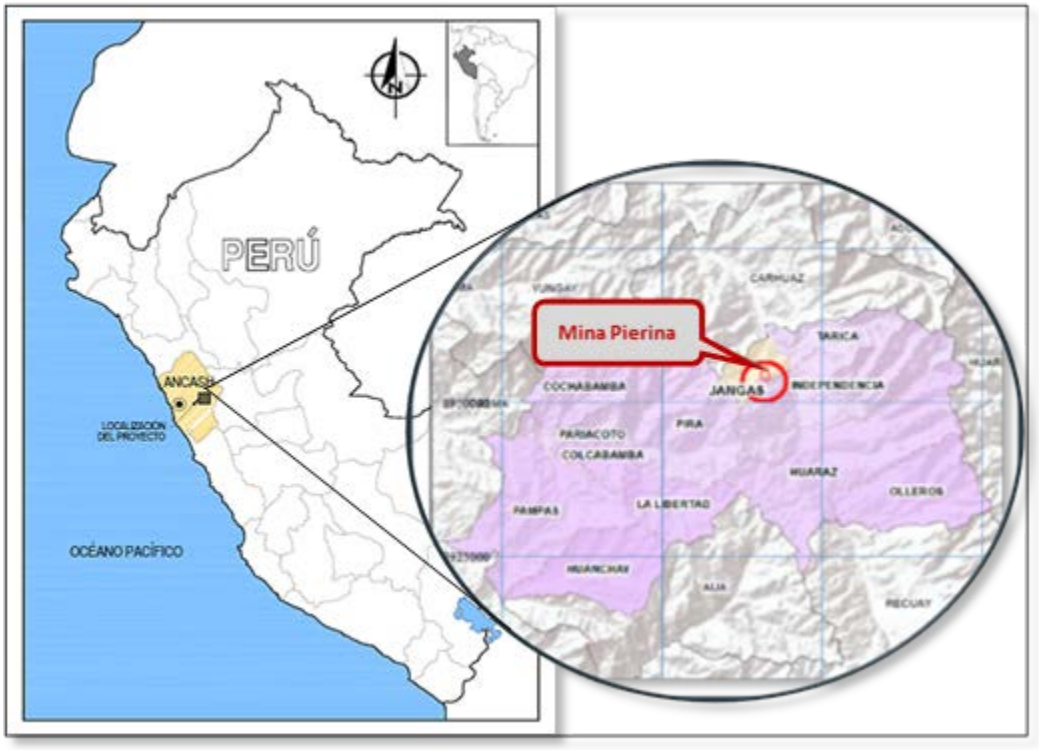
Location and description of the operation

The location of the Pierina mine is presented in the picture below.



The Pierina Mine (from now onwards “Pierina” or “the Site”) is located in the District of Jangas, Province of Huaraz, Department of Ancash in the Cordillera Negra of the Andes Mountains, in the north-central part of Peru, approximately 10 kilometers to the northwest of the city of Huaraz. Pierina is located at an elevation ranging from 3,800 to 4,100 meters.

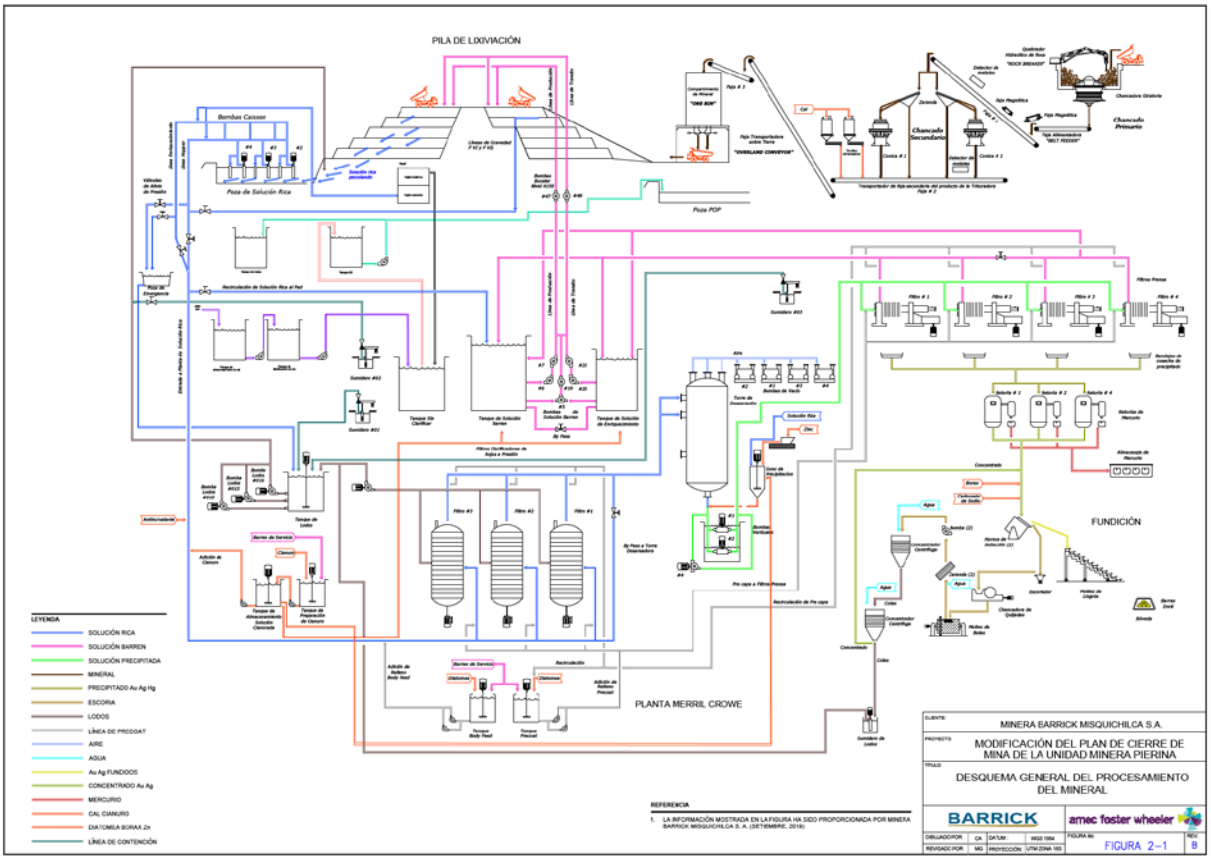
The mine is accessed by road from the town of Jangas (16 kilometers), north of Huaraz. The mining site is located within the Rio Santa Basin and sub-basins, all of which drain to the east into the Rio Santa. Pierina is located across a deep valley from the Huascaran National Park, which is located in the Cordillera Blanca of the Andes and is a designated United Nations Educational, Scientific and Cultural Organization (UNESCO) Natural Heritage site. The mine has no direct or indirect impact on said Park. The climate in the project area is characterized by defined rainy and dry seasons. The rainy season extends from November to April when approximately one meter (m) of rainfall occurs.

Pierina comprises an open pit mine, a waste rock storage area, a valley-fill heap leaching facility (the Pacchac Valley heap leach facility), process and storm water pond system, acid rock drainage and cyanide detoxification treatment plant, polishing pond, barren solution treatment plant, detox plant, a Merrill Crowe processing plant to recover gold, silver and mercury as a by-

product, installation of geomembrane raincoat liners, associated pipelines, and a South Diversion Ditch (SDD). The open pit has been developed by conventional mining methods using trucks and loaders to extract gold-bearing ore. The waste is transported by trucks to a storage area designed specifically for this purpose. Ore is placed on the valley-fill heap leach facility by truck. The valley-fill heap leach facility is fully lined with geomembrane and employs a cross-valley dam to impound pregnant process solutions within the placed ore. Gold is recovered using conventional methods of heap leaching with dilute sodium cyanide solution. The auxiliary facilities required for the mining operation include administration offices and buildings, laboratories, warehouses, maintenance shops, emergency facilities, electric power distribution, water supply, roads, fuel and reagent storage tanks, drainage structures, and explosive storage areas.

Pierina has developed and implemented a comprehensive process water balance program that includes monitoring and regular updates to track and plan water management activities. Pierina has an emergency response team that is trained to respond to onsite fires, chemical spills and worker exposures to cyanide. The mine is currently in active closure stage.

The Pierina mine ore processing flowsheet is presented below:



Auditor's Finding

The International Cyanide Management Institute (ICMI)-approved Audit Team verified that the Pierina operation is in FULL COMPLIANCE with ICMI Cyanide Code requirements for Mining operations.

Pierina has experienced zero significant cyanide incidents during this 3-year recertification audit cycle.

This operation was determined to be in FULL COMPLIANCE with the International Cyanide Management Code.

Auditor's Attestation

Audit Company:	SmartAccEss Socio Environmental Consulting, LLC
Lead Auditor:	Luis (Tito) Campos E-mail: titocampos@smartaccess.us
Mining Technical Auditor:	Bruno PizzorniE-mail: bpizzorni73@gmail.com
Date(s) of Audit:	Aug 3rd – 6th, 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 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 Institute for Mining Operations Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

Pierina Mine		Aug 6th, 2021
Name of Operations	Signature of Lead Auditor	Date

SUMMARY AUDIT REPORT

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
□ in substantial compliance
□ not in compliance with Standard of Practice 1.1

Discuss the basis for this Finding/Deficiencies Identified:

Minera Barrick Perú has a current agreement with Orica to purchase solid sodium cyanide for Pierina Mine. The agreement requires that the cyanide producer has to be certified as being in compliance with the Code.

Given the context of change of company name from Minera Barrick Misquichilca to Minera Barrick Perú, the cyanide purchasing contract from November 11, 2020 valid for two years, was complemented with an addendum signed on March 26, 2021 specifying the change of names and including colorant addition, all under the new company name.

The auditors reviewed purchase orders, commercial invoices and receipts of goods for the recertification period. The contract, shipping documents, reception and purchasing records were available and reviewed. The Chief of Logistics was interviewed.

Cyanide purchased by Pierina is manufactured at Orica´s Yarwun Plant in Queensland, Australia, a facility that is currently certified under the Code.

This plant achieved the original certification in 2006 and has maintained compliance and its ICMI certification since then. The latest recertification was on September 17, 2020. Certification status of this facility was verified by reviewing the ICMI website and the latest summary audit report.

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

Standards 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
□ in substantial compliance
□ not in compliance with Standard of Practice 2.1

Discuss the basis for the Finding/Deficiencies Identified:

The agreement for cyanide purchasing also includes transportation. According to it, Orica is obliged to transport sodium cyanide from the Peruvian port of arrival of the product, and/or authorized warehouse in Callao, to the mine, being able to subcontract a specialized company for the transport service.

For this purpose, the contract indicates that Orica will implement in its operations and those of its transport subcontractors all the compliance provisions required by the Cyanide Code related to manufacturing, handling, storage, packaging, labelling, transport and emergency response of sodium cyanide. It also indicates that Orica must have drivers duly qualified and trained for the transport of hazardous materials, which must have a valid driver's license, the category corresponding to the vehicle driving and its special category driver's license for drivers of ground transport units of hazardous materials

Likewise, the carrier must have transport units whose maximum age is 10 years, which must have passed the technical inspection and the vehicle rating required by the corresponding national regulations. Preventive and corrective maintenance of loading vehicles shall be carried out.

Convoys are used to road transport cyanide product from Callao to the mine site. A lead vehicle leads the convoy consisting of no more than 5 transport trucks. Pierina personnel organize the off-loading of the product once the transport convoy has reached the mine site. Convoy personnel are required to participate in the mine site induction training to familiarize themselves with site protocols.

The agreement requires to Orica the addition of colorant dye to high strength solid cyanide prior to deliver. Colorant dye is present in Orica’s boxed Sodium Cyanide. The box product is labelled as including colorant dye to allow ease of identification. For reference, approximately 25 grams of colorant dye per 1000 kg of Sodium Cyanide is added.

The contract states Orica will assume all risks of deterioration, loss or destruction of sodium cyanide, as well as all material, personal and/or environmental damage that this product may cause during the journey from the Peruvian port of arrival, and/or authorized warehouse of Callao, until its effective delivery at the mine.

The contract indicates that Orica will implement in its operations and those of its transport subcontractors all the compliance provisions required by the Cyanide Code related to

manufacturing, handling, storage, packaging, labelling, transport and emergency response of sodium cyanide.

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
□ in substantial compliance
□ not in compliance with Standard of Practice 2.2

Discuss the basis for the Finding/Deficiencies Identified:

The current contract indicates that the seller is responsible for all aspects of transportation of cyanide to the mine site. The contract also establishes a commitment of the seller to maintain International Cyanide Management Code (ICMC) certification and signatory status.

During the audit, it was verified through the ICMI´s website, that all cyanide transporters involved in Orica´s supply chain delivering cyanide for Pierina were currently Code certified companies:

- Orica Australia Supply Chain was last ICMI certified on August 20, 2018.
- Orica Global Marine Supply Chain was last certified on June 16, 2021. It also includes the destination port of Callao, among others.
- Orica Latin America Supply Chain was last certified on August 13, 2021. It includes transportation of sodium cyanide within Peru, Argentina, and Colombia. Within Peru, transport is conducted by the certified transporter and warehouse APM Terminals Inland Services S.A. (APM) from the Port of Callao to Orica's Ventanilla Box to Sparge Transfer Facility, and then to mining operations using the certified transporter DCR Mineria y Construccion S.A.C. (DCR)

Responsibilities throughout transport are clear.

Pierina maintains all records of the chain of custody documents from the producer, the maritime transporter and land transporters that handle the cyanide brought to its site, identifying all the parties in the supply chain. The auditors reviewed bill of lading documentation covering the recertification audit, finding them in conformance.

3. HANDLING AND STORAGE: Protect workers and the environment during cyanide handling and storage.

Standards of Practice

3.1 Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices and quality control and quality assurance procedures, spill prevention and spill containment measures**.**

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

Discuss the basis for this Finding/Deficiencies Identified:

The cyanide unloading, storage, and mixing areas were designed and constructed with solid international engineering practices, as determined by the initial certification audit in 2007, and remain substantially unchanged since that time. Pierina receives solid sodium cyanide briquettes in one ton “bag in box” intermediate bulk container (IBC) plywood boxes. The boxes are stored in a secure, concrete floor and stem wall contained and covered building. As stated in previous audit reports, the design of the solid sodium cyanide storage facility meets local jurisdictional requirements and is based on sound and appropriate engineering practices. As the original design drawings of the cyanide storage facility were not available, in 2020 Pierina retained a contractor (Datco S&H) to review and develop drawings of the current conditions of the solid cyanide storage facility.

The cyanide mixing area is located inside the Merrill Crowe plant. The facility was constructed according to SNC-Lavalin engineering criteria and specifications. Pierina maintains design drawings stamped by a certified professional engineer, as-built drawings, and QC/QA records. The field component of the audit confirmed that the cyanide mixing area is located within the internal structure of the Merrill Crowe plant on concrete hardstanding and maintained in good condition. Cyanide mixing and cyanide storage tanks were located within containment concrete berms, which are sized to contain at least 110% volume of the largest tank.

The solid cyanide storage area is located in a dedicated facility located on competent concrete hardstanding, which is located far away from communities or surface waters. The unloading and storage areas are approximately 0.5 kilometers away from any surface water with no flow route for connection. The storage area is access controlled with the appropriate cyanide warning signage, is secured from weather and has adequate ventilation vents. HCN is monitored through handheld devices when entering the area. The solid cyanide storage area is located approximately 30 meters from the plant building.

Inside the plant, the mixing and storage tanks are inside a separate, controlled-access room. Access to the cyanide mixing area and liquid storage tank is strictly controlled and even trained individuals require specific approval from control room personnel prior to entering. The cyanide mixing area has one fixed HCN monitor with visual and audible alarms to detect any HCN gases and evacuate the area if necessary.

Pierina has a preparation area for cyanide that includes a mixing tank and a cyanide storage tank. There are level indicators and high-level alarms installed on both tanks. These levels are continuously monitored from the process control room to ensure they are operational.

Arrangements remain unchanged since the previous recertification audit. There is a Hi-level indicator (93%) on the cyanide storage tank and a Hi-level indicator (80%) on the cyanide mixing tank. Both level alarms are indicated in the procedure OPR-PPR-044 “Cyanide mixing at Merrill Crowe Plant”. The interlock valve from the mix tank to the storage tank shuts off automatically when the Hi-level indicator is reached. The auditors reviewed preventive maintenance records for high level alarm sensors at the cyanide storage and mixing tanks and found them to be complete. Preventive maintenance of these sensors are conducted on a quarterly basis.

Cyanide mixing and storage tanks are located in a separate room in the Merrill Crowe plant and contained within concrete berms with good condition concrete flooring with epoxy sealing to avoid infiltration. The bermed containment areas are sized to contain 110% of the largest tank volume and have been confirmed both previously as part of engineering specification checks and during the field audit. In addition, this containment area is also connected with the larger Merrill Crowe secondary containment which provides additional capacity. The secondary containment have a sump and automatic pumps to convey any fluids to the sludge tank.

The solid cyanide storage area is located in a dedicated facility that has a fan ventilation system. The walls of the warehouse have partial plastic covering to prevent the wind-blown inflow of rainwater. As such, it provides adequate ventilation and build-up of hydrogen cyanide gas is unlikely to occur. In addition, procedure OPR-PPR-041 “Cyanide transport from the cyanide storage area to Merrill Crowe plant”, requires that HCN gases are monitored prior to entering the storage facility to ensure that the vents are providing adequate ventilation in the unlikely event that water contacts the solid cyanide. The solid cyanide storage area is located under a roof, secured from weather, off the ground and constructed over good condition concrete hardstanding with epoxy sealing. It also has drainage ditches to direct meteoric water away from the facility. The risk of potential contact with meteoric water is very low. The solid cyanide storage area is located within the fenced, secure area of the mine with entry restricted at the mine gate. Access to the storage area is restricted, with the main access door locked when not in use and with no public access. The storage can only be opened by personnel carrying HCN monitors to verify that HCN gas concentration is within the safety concentration range before accessing the building. Appropriate warning signage is posted at access points. The solid cyanide storage area is dedicated to sodium cyanide storage only, with no other materials permitted to be stored.

The cyanide mixing and storage tanks are inside a separate, controlled-access room within the plant building. The area has a fan ventilation system on top of the building to prevent HCN build-up. The cyanide mixing area has one fixed HCN monitor with visual and audible alarms to detect any HCN gases and evacuate the area if necessary. Access to the cyanide mixing area is strictly controlled and specific approval from control room personnel is required. Cyanide mixing and storage tanks are contained within concrete berms with good condition concrete flooring with epoxy sealing to avoid infiltration. Mixing with incompatible materials is unlikely to occur.

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
□ in substantial compliance
□ not in compliance with Standard of Practice 3.2

Discuss the basis for this Finding/Deficiencies Identified:

Procedure MAM-PPR-004 “Management of cyanide packaging residues” specifies measures undertaken to ensure that cyanide packaging materials are managed in such a manner to prevent their use for any other purposes. The procedure specifies that plywood boxes, bags and plastic materials are stored in a temporary storage area within the Merrill Crowe plant. The boxes and wood residues are transported by an authorized contractor for disposal on site in a landfill located in the waste rock storage facility. The cyanide bags, plastic bags and labels are transported by an authorized contractor for disposal in an offsite secured landfill.

Procedure OPR-PPR-044 “Cyanide preparation in Merrill Crowe plant” requires that empty cyanide bags are rinsed three times with rinse water after the cyanide preparation is completed. Rinse water is then sent back to the process. Empty cyanide bags, once rinsed, are folded and placed inside a clean plastic bag, along with the cyanide labels and any other plastic residue. These plastic bags are then placed in a temporary storage area within the Merrill Crowe plant for transport to an offsite secured landfill. The boxes and wood residues are also temporarily stored within the Merrill Crowe area for transport to the onsite landfill for final disposal. Cyanide is not purchased in reusable containers and, as such, no packaging is returned to the supplier.

Procedure OPR-PPR-044 “Cyanide preparation in Merrill Crowe plant” outlines the requirements for inspection, observation and mixing of cyanide solutions; as well as the operation and function of valves, pumps and various interlocks within the cyanide mixing process. The procedure includes a checklist for cyanide preparation that requires measuring pH levels, inspection of emergency showers and eye wash stations, inspection of HCN monitors, among other requirements for safe cyanide management. The procedure also includes a requirement for immediate clean-up of any spilled cyanide including flushing the secondary containment of the cyanide mixing area with fresh water. No spills related to cyanide mixing were reported since the last recertification audit. In addition, procedure OPR-PPR-042 “Hoisting cyanide boxes” complements the cyanide preparation procedure and process.

Procedure OPR-PPR-041 “Cyanide transport from the cyanide storage area to Merrill Crowe plant” provides instructions for the safe handling of sodium cyanide boxes when they are transported to the mixing area. This procedure requires the use of cones to isolate the area during the activity. The auditors verified that this task was performed as outlined in the procedure. The auditors also verified that the cyanide boxes in the cyanide storage area as well as in the cyanide mixing area did not have any evidence of rupturing and puncturing. The procedure limits stacking of cyanide containers to a maximum height of three per stack. In addition, procedure FSC-PPR-001 “Transport, handling, unloading and storage of sodium cyanide” describes the process to be followed for the safe unloading and storage of cyanide boxes that are delivered to site.

Procedure OPR-PPR-044 “Cyanide preparation in Merrill Crowe plant” requires operators to use the appropriate PPE during mixing activities. These include steel-toed boots, rubber gloves, rubber boots, approved respirator, face shield, Tyvek and Tychem coveralls with attached hood, hardhat, hearing protection, and personal HCN detector. The procedure also requires that two workers are present during the mixing activity. One operator is stationed at floor level, helps hook the cyanide bag in the overhead crane and observes the other operator who, working from an elevated deck near the top of the mixing tank, breaks the bag, introducing the content into the mixing tank. Also, the cyanide preparation activities are observed from the control room with a remote camera.

The cyanide briquettes in the boxes already comes with red colorant dye. This was observed by the auditors during the filed visit.

A cyanide mixing event was observed during the audit. In general, the review indicated that Pierina has appropriate procedures and practices to handle and prepare cyanide solutions in a safe manner.

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

Standards of Practice

4.1 Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

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

Discuss the basis for the Finding/Deficiencies Identified:

Pierina has developed several procedures and plans for the safe operation of cyanide facilities, including unloading, mixing and storage facilities, heap leach operations, Merrill Crowe plant operations, and cyanide detoxification. There are approximately 33 procedures and plans related to cyanide management. In addition, Pierina has achieved ISO14001:2015 certification of its environmental management system in 2019 and is valid for three years. All procedures include the tasks to be performed, a section related to PPE requirements, and restrictions. Procedures and plans are reviewed and updated every year to ensure they reflect current practices. Procedures were reviewed and found to be sufficiently detailed to enable safe operation.

Pierina has manuals and procedures that include critical parameters for the safe operation of cyanide facilities. The Quebrada Pacchac operations manual, updated July 2021, includes a decision table for the management of water in Quebrada Pacchac. This decision table includes maximum operating levels and freeboards for all process ponds (i.e. Pregnant Leaching Solution

- PLS, Process Overflow Ponds - POP, raincoat ponds) and cyanide concentrations in underdrains, among other critical parameters. For the PLS pond, the required freeboard is 7 meters from the spillway. This manual also includes the design storm event for solution ponds (100 year, 24-hour storm event) which is used in the Pierina water balance model. Procedure OPR-PPR-044 “Cyanide preparation in Merrill Crowe plant” indicate that pH levels in the process are to be maintained above 9.0 to avoid generation of HCN gases and to maximize recovery in the plant. Procedure MAG-PPR-074 “Start up, operation, control and stoppage of cyanide detox plant” includes the maximum cyanide concentration allowed in water discharges, which has been established at 0.08 mg/l Weak Acid Dissociable (WAD) Cyanide. This value is also included in the Quebrada Pacchac manual. Pierina has not established a maximum level of cyanide concentrations in process ponds (i.e. PLS, POP), as these concentrations largely depends on the operational needs. To protect birds and other wildlife from the adverse effects of cyanide process solutions, Pierina has implemented controls such as netting and fences in ponds that might have cyanide concentrations higher than 50 mg/l WAD cyanide.

Pierina has developed and implemented plans and procedures for cyanide related tasks, which describe the standard practices necessary for the safe and environmentally sound operation of cyanide facilities. The operation has identified equipment, personnel, and procedures for cyanide unloading and mixing activities as well as for storage facilities, processing facilities, heap leach facilities and all associated piping and pumps as having contact with cyanide.

The Quebrada Pacchac manual has a decision table for the management of water in Quebrada Pacchac including maximum operating levels for all process ponds and how to operate them to retain the designed storage capacity in these facilities. This information is also included in the Pierina water balance documents.

Pierina has developed and implemented an inspection program for cyanide facilities with frequencies that varies from daily, weekly, biweekly, monthly and quarterly. Process Plant personnel has an inspection program including inspections to critical areas of the leach pad facilities on a biweekly basis, and quarterly inspections of critical valves, the solution channel between the leach pad and the plant, and equipment inspections (pumps, sumps, others) at the Merrill Crowe plant. In addition, cyanide mixing facilities are inspected every time cyanide is prepared, which occurs almost on a daily basis. The Environmental department has an annual inspection program for all areas of the mine, including cyanide facilities, which frequencies of inspections varies depending on the criticality of the facility. Quarterly stability inspections of leach pad, ponds and dams conducted by a third party consultant. Weekly inspections conducted by Upper Management with participation of representatives from different departments. The Maintenance area also conducts inspections to cyanide facilities as part of their preventative maintenance program, which complements the Process area inspection program.

The Quebrada Pacchac manual dated July 2021, include all the inspections, monitoring and maintenance requirements that need to be conducted for the safe operation of cyanide facilities and to ensure they are operated according to design parameters. The inspection of critical parameters defined in the manual is verified through the different inspections programs implemented at Pierina. In the case of inspections for wildlife mortalities, process personnel conduct daily visual inspections at the PLS, POP and leach pad as part of their routine activities.

Wildlife mortalities area reported on an exception basis, as WAD cyanide concentrations are usually below 50 mg/l. The inspection program of cyanide facilities including unloading, mixing and storage activities and frequency of inspections were found to be sufficient to assure that the operation is safe and functioning within design parameters.

The Maintenance area has a preventive maintenance program for pumps, pipelines, valves, flow meters, level sensors, pH meters, HCN monitors, sump pumps, tanks and cyanide facilities in general. The preventive maintenance program is used to perform necessary maintenance and inspect the integrity of process equipment, piping and tanks, according to a maintenance program and every time it is needed to keep equipment and installations working properly. Pierina develops a weekly plan for preventive maintenance using the Oracle Asset Management software until July 2021. Since August 2021, the site is using the SAP software. Preventive maintenance plans are generated automatically for each week. Corrective maintenance occurs as a result of work orders based on inspections. Work orders generated from inspection forms are entered in the system, including assigned priority. The auditors observed examples of both preventive maintenance and corrective maintenance records for the last three years and found them to be complete.

Pierina has a Management of Change (MoC) procedure (MAM-PPR-031) that has been developed following the corporate office guidelines. The MoC process includes the identification and review of the proposed changes; analysis and evaluation of the changes by a multidisciplinary team including health, safety and environmental aspects; approval, and subsequent implementation of the changes. The process includes a format which is signed off by all areas that participated in the evaluation of the changes. Pierina used the Intelex system to manage and track the MoC process until 2019. Since 2020, the system used is Isometrix. The management of change process is used consistently at Pierina. Examples of management of change formats were reviewed for the last 3 years; none of them were related to cyanide management or facilities.

Pierina has implemented contingency procedures for heap leach facilities and the process plant to respond to upsets in water balance, deviations from design conditions, problems identified by inspections, and to address temporary shutdowns of the facilities. Procedures include step-by-step measures for stopping and starting the plant facilities, events of a power outage, provide response measures for emergencies related to failures of cyanide equipment, and response plans to address upsets in the process water balance.

Each cyanide facility has its own contingency procedures. There are procedures for stoppage of the Merrill Crowe plant in case of emergency. Pierina also has a Cyanide Emergency Response Plan that defines actions to be taken and responsibilities in case of cyanide emergencies. The Quebrada Pacchac manual has a decision table for the management of water in Quebrada Pacchac including actions to be taken in case of deviations from operational parameters that could affect the water balance of the operation (e.g. PLS and POP pond levels above its maximum operational level; cyanide concentrations above 0.08 mg/l WAD cyanide in raincoats, underdrains and discharge points, among others). Procedure MAG-PPR-074 “Start up, operation, control and stoppage of cyanide detox plant” includes procedures to follow when there is high cyanide levels in the detox discharge. In relation to a temporary closure or cessation of

operations scenario (e.g. union strike) Pierina has identified critical activities and personnel required to maintain the water balance of the facilities and avoid potential overflow of cyanide solution. In case of power outages, Pierina has procedure OPR-PPR-155 “Start up of plant with back-up generators” that describes the steps to be taken to provide power and continue operating critical facilities.

Tanks holding cyanide solutions are inspected on a regular basis. Nondestructive tests are also conducted for tanks integrity holding cyanide solutions including the cyanide mixing tank, cyanide storage tank and the barren tank. Integrity tests were conducted in 2018 and 2021. The frequency of these tests is indicated in the conclusions and recommendations sections of each integrity test report (usually every 2 or 3 years). Secondary containments are also inspected on a regular basis. None of the containment areas has any drains to the adjacent land surface.

The heap leach pad facility is inspected regularly including liner integrity, Leak Collection Recovery Systems (LCRS), ponding on the heap surface, and levels at PLS and POP ponds. Examples of these inspection forms were reviewed for the last three years. There is one LCRS below the heap leach pad and ponds (PLS and POP). Water quality and volumes of pumped fluids are monitored every month. Water quality data indicate that there are negligible cyanide concentrations detected between the liners. Pumped water is recirculated back to process. The heap leach pad, PLS and POP ponds are inspected on a daily basis for critical aspects according with requirements of the Quebrada Pacchac manual, including integrity of surface water diversions and available freeboard. Historical freeboard for the last 3 years at the PLS and POP ponds was reviewed by the auditors and verified that the ponds were managed according to the design criteria.

Pipelines, pumps and valves in the Merrill Crowe plant, and heap leach areas are inspected on frequencies that varies between biweekly and quarterly. Any deficiencies identified are corrected and verified in the following inspection. Inspection forms for the plants and heap leach facilities were verified for the inclusion of items related to deterioration and leakage of pipes, pumps and valves.

Records of inspections are retained and were reviewed by the auditors. The inspections are documented and include date of the inspection, the name of the inspector and observed deficiencies. The inspection program also include cyanide unloading, mixing and storage facilities. Pierina has two mechanisms to document, track and close corrective actions identified during inspections: Corrective actions identified that are related to maintenance of equipment at the Merrill Crowe plant or leach pad area are managed by the Maintenance area. These corrective actions are managed using the Oracle Asset Management software (now SAP), where work orders are tracked, prioritized, planned and closed. The auditors verified that corrective actions related to cyanide facilties were prioritized for prompt implementation. All other corrective actions not related to maintenance of equipment that are identified through inspections conducted by either Upper Management, Process or the Environmental areas are tracked by each department, implemented and followed up until closure. The auditors reviewed examples of items identified during inspections and records of the implementation of the corrective actions until they were closed. The auditors reviewed the traceability of items identified in inspection forms, the work orders numbers assigned (if applicable) and the corrective actions.

Pierina facilities uses power provided from the national grid. Pierina has five emergency power generators with a total capacity of 6.6 Megawatts (MW) of backup power. This emergency power system starts up automatically and is connected to critical equipment that need to be running to prevent any release to the environment in case of a prolonged power outage, such as equipment to recirculate solution back to the leach pad. The ponds and leach pad system have a draindown capacity of 7 days. Pierina provided examples of preventive maintenance records for the backup power generators for the last three years. A review of these records, confirmed that the generators are checked on a biweekly basis for fuel level, lighting, heating, and are also start tested. This inspection would trigger a corrective maintenance work order if required.

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

The operation is: ■ in full compliance
□ in substantial compliance
□ not in compliance with Standard of Practice 4.2

Discuss the basis for this Finding/Deficiencies Identified:

Not applicable to Pierina, as this Standard of Practice solely applies to milling operations.

4.3 Implement a comprehensive water management program to protect against unintentional releases.

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

Discuss the basis for the Finding/Deficiencies Identified:

The operation continued using the comprehensive, probabilistic water balance simulation software, Goldsim. This model is used to generate different precipitation scenarios based on meteorological data collected at site to determine water treatment requirements as well as water needed for the process during the dry season. Climate data is used on a monthly basis by Process personnel to update and operate the water balance. An external consulting company (Wood) updates the climate data and calibrates the model on an annual basis. The water balance includes the following factors: solution application rates; precipitation, evaporation and seepage rates; retention of water in the ore, raincoats on the heap leach facilities to minimize infiltration of rainfall on inactive portions of the heap; potential power outages, and the capacity and availability of water treatment systems for surface discharges. A description of the water balance model and calculations is included in the document “Final Report – Pierina mine Water Balance”, dated October 2020, prepared by Wood.

The water balance describes the solution rates applied to the leach pad, which is 4 liters/hour/m2 for slopes and 8-10 liters/hour/m2 for secondary cells. This information is collected daily from each cell that is under leaching and is used as an input into the Goldsim model.

The document “Final Report – Pierina mine Water Balance”, dated October 2020, considers a 500-year/24-hour storm event of 65.4 mm of rain. This design storm duration and storm return interval of 500 years provides a sufficient degree of probability that overtopping of the ponds can be prevented during the operational life of the facility. The auditors reviewed current free volume capacity of the PLS and POP ponds and verified that there is enough capacity to contain the 500-year/24-hour storm event.

The heap leach facilities at Pierina have a surface water control system for controlling and safely directing runoff generated from upgradient watersheds around the heap leach pad, ponds and plant. In addition, Pierina has implemented raincoats to cover the slopes of the leach pad and divert clean rainfall water from entering the process.

The water balance includes the following factors: solution application rates; precipitation, evaporation and seepage rates; retention of water in the ore (estimated at 6%), raincoats on the heap leach facilities; potential power outages; and water treatment systems for surface discharges. The heap leach operations recirculate water from the PLS and POP ponds and includes addition of fresh water to maintain the required water balance for operations.

The water balance model considers power outage contingency simulation. The model can simulate a certain number of hours of power outage and generate different scenarios. These contingency scenarios could only occur in case the primary source of power (National grid) and the five emergency power generators were not operational, which is a very unlikely scenario.

The cyanide destruction and water discharge systems are included in the water balance model. The cyanide destruction system has a treatment capacity of 400 m3/hr. Water from the cyanide destruction system is then directed to the polishing pond for subsequent discharge into the Santa river. To reduce water treatment needs, Pierina has installed raincoats on the heap leach facilities to minimize infiltration of rainfall on inactive portions of the heap. The area of raincoats have decreased in the last few years (from 247 hectares to 64 hectares) due to closure needs.

Pierina conducts daily inspections and monitoring activities to the heap leach pad and ponds to ensure they are operated according to the design criteria and requirements of the Quebrada Pacchac manual. This frequency is considered adequate considering the precipitation rates in the area. Inspections include liner integrity, LCRSs, ponding on the heap surface, and levels at PLS and POP ponds, solution collection systems and diversion channels around the heap leach facilities. Records of inspection forms for the last 3 years were reviewed and found to be complete. Freeboard and solution volumes in the PLS and POP ponds are monitored daily from the control room. The auditors reviewed free volume capacity data for the last 3 years and verified it was managed according to the design criteria.

The Quebrada Pacchac manual includes a water balance section that indicates the maximum solution level in the ponds. In the case of the PLS, the maximum solution level is 501,000 m3

and for POP is 37,000 m3. The collection pond and polishing pond has a maximum capacity of 667,000 m3 and 157,000 respectively. All these pond levels are monitored remotely from the control room. The cyanide destruction system has a treatment capacity of 400 m3/hr. The control systems have intervention triggers when the ponds reach both the operating and maximum levels. Corrective measures when reaching both capacities have been included in the decision table for the management of water in Quebrada Pacchac. Operation capacities of the ponds have been determined based on the response time to divert the flow from the ponds. Inspection records for the heap leach facilities and ponds were reviewed for the last 3 years and found them to be complete. The auditors also reviewed monitoring data for the last 3 years and verified that the solution volumes at the PLS and POP ponds were managed at all times according to the design criteria.

Pierina has two weather stations: the Pacchac and Mine stations, which collect meteorological data since 2005 and 1997, respectively. The weather stations collect meteorological data such as precipitation and evaporation, among other parameters. Data from these two stations were analyzed for use in estimating the site design precipitation. The information from both weather stations is collected by the environmental area, and once validated, is provided to the Process area on a monthly basis to update and operate the water balance. An external consulting company (Wood) updates the climate data and calibrates the model on an annual basis. The auditors reviewed on-site meteorological monitoring data and found them to be complete.

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

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

Discuss the basis for the Finding/Deficiencies Identified:

Pierina has implemented netting to restrict access of wildlife to open waters where WAD cyanide may exceed 50 mg/l, which could be the case at the POP pond. The PLS is buried and is not accessible. The collection pond and polishing pond do not contain cyanide solutions greater than 50 mg/l WAD cyanide. The auditors verified that the netting at the POP was in good condition. WAD cyanide concentrations in this pond is well below 50 mg/l. The pond is fenced to prevent access of livestock. The secondary containment of the process pipelines that run from the leach pad to the plant were free of process solution during the audit. Procedure OPR-PPR-010 “Leaching density control on leach pad” requires daily inspections to check for ponding and the required steps to handle surface ponding, including manual excavation to aid drainage and improve infiltration. No wildlife mortalities associated to cyanide have been reported during the recertification period.

Cyanide application rates at the leach pads have decreased in the last 3 years due to operational needs and the current closure stage, as no new ore has been placed on the leach pad since September 2019. Pierina analyzes free cyanide on a daily basis at the PLS ponds and WAD

cyanide at the POP pond on a weekly basis. Considering a factor of 2 as a relation between free and WAD cyanide (i.e. WAD cyanide doubles the amount of free cyanide in solution), WAD cyanide values are generally below 50 mg/l at the PLS. The measured WAD cyanide concentration in a sample is estimated to be double the free cyanide concentration, as the free cyanide component in a sample cannot be greater than the WAD cyanide component.

Cyanide concentrations at the PLS and POP ponds were reviewed for the last 3 years. PLS had average WAD cyanide concentrations of 28 mg/l in 2018 and decreased to 3 mg/l in 2021. Maximum WAD cyanide value reported in this period was 108 mg/l in 2018, however, this pond is buried and not accesible to wildlife. POP had a maximum WAD cyanide concentrations of 14 mg/L. As mentioned above, this pond has netting on top and fencing to prevent wildlife access.

WAD cyanide values at the POP pond are well below 50 mg/l. Regardless of that, this pond has netting on top of the pond to prevent access of wildlife. As mentioned above, the PLS is buried and is not accessible to wildlife. In addition, the heap leach pad area is inspected on a daily basis for ponding and wildlife mortalities. No wildlife mortalities associated to cyanide have been reported during the recertification period, which indicates that the implemented measures are effective. Procedure MAM-PPR-007 “Control of wildlife mortalities” provide details on how to proceed and report wildlife mortalities.

WAD cyanide concentrations applied in the leach pad are in the order of 60 mg/l (30 mg/l free cyanide). Procedure OPR-PPR-009 “Inspection of leaching cells” requires daily inspections to check for ponding and provide details on actions to be taken to avoid ponding. Procedure OPR-PPR-010 “Leaching density control on leach pad” provides the required steps to handle surface ponding, including manual excavation to aid drainage and improve infiltration. Form OPR-FPR-018 is used to report and correct ponding occurrences in the leach pad. Leaching takes place by drip emitters and no sprayers are used on site. During the field visit, the auditors inspected areas under leaching. No ponding on the heap surface or overspray outside of the heap leach liner was observed. No wildlife mortalities associated to cyanide have been reported during the recertification period.

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
□ in substantial compliance
□ not in compliance with Standard of Practice 4.5

Discuss the basis for the Finding/Deficiencies Identified:

Pierina discharges process treated water to the Santa river from the polishing pond. There is a 4 km pipeline from the polishing pond to the Santa river. Monitoring station E2B is located at the outlet of the pipeline. The maximum cyanide concentration allowed in water discharges has been established at 0.08 mg/l WAD Cyanide at E2B. The standard in receiving waters downstream of the point of discharge is also 0.08 mg/l WAD cyanide. Monitoring of WAD cyanide

at point E2B is conducted on a weekly and monthly basis, when there are water discharges. Concentrations of WAD cyanide were reviewed for the recertification period and the maximum value reported was 0.009 mg/l, which is well below 0.5 mg/l.

Pierina has to comply with the Peruvian General Water Law (LGA) at monitoring station RSM90, located approximately 200 meters downstream of the point of discharge E2B. In addition, RSM89 located upstream of the discharge point is also monitored. Concentrations of free cyanide were reviewed for the recertification period. The concentration of free cyanide did not exceed the 0.022 mg/l standard at point RMS90. The maximum free cyanide value recorded in this period was <0.0006 mg/l. Monitoring at RMS90 is conducted on a monthly basis. Water quality samples were analyzed by ALS Peru, an external lab located in Lima. The auditors verified quality control and quality assurance information from the laboratory.

Pierina does not have any indirect discharges to surface water from cyanide facilities. Maximum values of free cyanide did not exceed the 0.022 mg/l standard at monitoring point RMS90 due to direct discharges to the Santa river. There is one underdrain (LPCS-1) located below the leach pad, PLS and POP ponds. Water collected from this underdrain do not discharge directly to the environment. According to the Quebrada Pacchac decision table, if WAD cyanide concentrations are detected above 0.08 mg/l then the water is pumped back to the process; otherwise, it is sent to the polishing pond for discharge. Concentrations of WAD and free cyanide were reviewed for the recertification period at LPCS-1. All values were below the detection limit. LPCS-1 is monitored on a weekly and monthly basis.

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
□ in substantial compliance
□ not in compliance with Standard of Practice 4.6

Discuss the basis for the Finding/Deficiencies Identified:

There is no designated down gradient beneficial use, nor any actual point of groundwater use, nor any applicable groundwater standard. Regardless of that, Pierina has implemented solution management and seepage control systems to protect groundwater below and down gradient of cyanide facilities including a composite clay and geomembrane liners with underdrain systems in the leach pads and ponds; leak detection recovery systems between liners of the ponds, pumps to return underdrain waters to the process circuit, secondary containments for cyanide facilities in the Merrill Crowe, among others.

There is no actual or designated downgradient beneficial use, nor any actual point of groundwater use identified by the Water National Authority (ANA), nor any applicable groundwater standard for cyanide or other parameters. Regardless of this, Pierina has a groundwater monitoring network that analyzes for WAD cyanide concentrations. There are four groundwater monitoring wells downgradient of cyanide facilities (MW3, MW4, MW55 and

MW56). Data collected for the recertification period indicate no detection levels for cyanide species (WAD cyanide values < 0.001 mg/l, and free cyanide values <0.0006 mg/l).

Pierina does not have seepage that has caused cyanide concentration of groundwater to rise about levels protective of beneficial use.

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

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

Discuss the basis for the Finding/Deficiencies Identified:

Spill prevention and containment measures are provided for all cyanide unloading, storage, mixing and process solution tanks. Tanks located at the Merrill Crowe plant (cyanide mixing, cyanide storage and barren tanks) are all within an interconnected concrete secondary containment which is in good condition and provides a large containment area. Secondary containments of cyanide preparation area is connected with the larger secondary containment of the Merrill Crowe plant. The Merrill Crowe areas is contained within a concrete pad surrounded by curbs and walls, providing a competent barrier to seepage. The concrete floor is sloped to drain to concrete sumps with automatic pumps, where any spills or rainwater will be pumped back to the process. The secondary containment system is inspected on a biweekly basis as part of the process facilities inspection program. The auditors observed that the concrete containment systems were in good condition at the time of the audit and free of any fluid.

Pierina has not changed tanks or secondary containments since the last audit in 2018. Therefore, the original finding is still valid that the individual containments can hold 110% of the single largest tank plus precipitation. Some secondary containments are interconnected while other ones are stand-alone. The secondary containment volume calculations were reviewed and deemed as sufficient. In the Merrill Crowe Plant, the maximum tank volume is 1,257 m3 and the secondary containment volumes is 1,500 m3. In addition, the perimeter drainage canals of the plant are connected to the collection pond, which provides significant excess capacity should the plant secondary containments be compromised. At the detox plant, the largest cyanide bearing tank is reactor #1 with a volume of 1,197 m3, and the secondary containment plus the emergency pond has a combined capacity of 2,010 m3. Containment areas have sump pits with dedicated pumps that return collected solutions back into the process circuit. The secondary containment areas are constructed of reinforced concrete. The auditors observed that the secondary containments were maintained empty, with no materials stored inside them.

All containment areas have sump pits with dedicated pumps that return collected solutions back into the process circuit. There are no discharges from secondary containments to the environment. The pumps have automatic level sensors to keep the secondary containments free of water. These pumps are inspected on a biweekly basis and are included in the preventive maintenance program. Pierina uses “raincoats” on the heap leach facilities to minimize infiltration

of rainfall on inactive portions of the heap. The raincoats are high-density polyethylene (HDPE) geomembrane covers that convey clean precipitation to the storm water management system. Water collected in the raincoats ponds are sampled prior to discharge to the environment.

Cyanide pipelines at Pierina are located within a secondary containment provided for at the process plant and leach pad areas, including concrete and plastic lined channels as well as pipe-in-pipe containment where necessary. There are no buried pipelines in the plant area. Pipelines connecting the leach pad, ponds and the process plant are lined with HDPE through all its extension to convey any leaks to larger containment areas. In addition, Pierina has installed protection devices (liner covers) along the pipeline welded sections to prevent any high pressure releases outside of containment. At the detox plant, the barren solution pipeline has shutoff valves and a secondary containment with sumps to collect any spillage and convey it to the emergency pond. Cyanide pipelines are inspected on a quarterly basis as part of the routine inspections by plant personnel and are also included in the preventive maintenance program.

As mentioned in previous audit reports, no cyanide pipelines present a direct risk to surface water as there is no surface water body that requires special protection over and above the containment measures previously described. Pipelines remain unchanged and retain the same safety features identified in previous audits.

As stated in previous audit reports, all cyanide mixing, storage and process tanks and pipelines are constructed of coated carbon steel and HDPE; which are compatible with high pH cyanide solutions. At the cyanide mixing area, Pierina is using a Bredel NR (Natural Rubber) hose to connect the cyanide storage tank to a carbon steel pipeline that delivers reagent cyanide to the plant. Pierina showed information from the manufacturer indicating that this natural rubber hose is compatible with cyanide and high pH conditions.

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
□ in substantial compliance
□ not in compliance with Standard of Practice 4.8

Describe the basis for the Finding/Deficiencies Identified:

Quality control and quality assurance (QC/QA) programs have been implemented during the construction of cyanide facilities at Pierina. The mine maintains files with QC/QA reports for the facilities constructed before the last recertification audit in 2017, which was found in compliance with the Code requirements. No new cyanide facilities have been built during this recertification period.

Pierina QC/QA programs addressed the suitability of materials and adequacy of soil compaction. The mine maintains files with the QC/QA reports for its cyanide facilities in the Merrill Crowe plant. As mentioned in the previous recertification audit report, the QC/QA program and the

records reviewed and verified during the audit demonstrate that the materials are according to design specifications, the compaction has been adequate, the foundations of the tanks are suitable, geomembranes are appropriate and have been placed according to design and assembly specifications.

QC/QA records for cyanide facilities are retained by Pierina. The auditors confirmed by visual inspection that documents in hard copy and electronic versions are maintained and available for review and consultation at the Merril Crowe plant.

Qualified engineering companies performed the QC/QA inspections and reviews during construction of the cyanide facilities at Pierina, and prepared the final construction reports and as-built drawings certifying that the facilities were constructed in accordance with the design drawings and technical specifications. As mentioned in previous recertification audit reports, and found in compliance, construction of all cyanide facilities were reviewed by reputable engineering companies.

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
□ in substantial compliance
□ not in compliance with Standard of Practice 4.9

Describe the basis for the Finding/Deficiencies Identified:

Pierina has a procedure MAM-PPR-058 “Surface and groundwater monitoring” dated April 2021, that is updated every year and provides details related to sampling techniques, duplicate and blank samples, sampling equipment, calibration of field equipment, preservation techniques, chain of custody procedures, and parameters to be analyzed, including cyanide species. Water sampling is conducted by Pierina personnel and samples are sent to ALS Peru lab in Lima for analysis.
Competent individuals from Barrick and Pierina mine have originally developed, reviewed, and approved the water monitoring procedure. The procedure is updated every year in-house by environmental personnel with qualifications on water sampling and monitoring activities and approved by the Environmental Superintendent. All personnel involved in the development and update of the procedure are registered engineers with more than 10 years of experience in environmental management in mining. Analytical protocols for environmental samples are provided by ALS Peru.

Procedure MAM-PPR-058 “Surface and groundwater monitoring”, provides details related to sampling preservation techniques, chain of custody procedures, shipping instructions to ALS Peru lab and cyanide species to be analyzed. Pierina has an annual monitoring plan. The auditors reviewed annual monitoring plans for the recertification period that include sampling frequencies (that varies from weekly, monthly and quarterly), the suites of parameters to be analyzed and maps showing the monitoring locations with respect to cyanide facilities. Examples

of completed chain-of-custody records for the recertification period showing proper use of the forms were reviewed.

Pierina field data sheets for surface and groundwater samples register in writing sampling conditions including weather, livestock/wildlife activity, field parameters (i.e. conductivity, pH, and temperature) and groundwater levels. Completed monitoring field forms were reviewed by the auditors and verified that these conditions are being registered consistently.

Pierina has prepared a map of surface water and groundwater sampling locations, and a monitoring plan with defined frequencies and parameters. Pierina monitors WAD cyanide, free cyanide and total cyanide at: Discharge locations: E2B (end of pipe from polishing pond); Surface water: RSM90 (located in the Santa river approximately 200 meters downstream of the point of discharge E2B), and RSM89 (located upstream of the discharge point E2B); Groundwater: MW3, MW4, MW55 and MW56 (downgradient of cyanide facilities). The auditors reviewed examples of monitoring records of the period 2018-2021 and found them to be complete.

During the last 3 years, Pierina has been successful at preventing wildlife mortalities related to cyanide facilities. Controls in place have shown to be effective. WAD cyanide values at the process ponds are below the recommended value of 50 mg/l. Procedure MAM-PPR-007 “Control of wildlife mortalities” provide details on how to proceed, investigate and report wildlife mortalities. Pierina has and maintains a register to track wildlife mortalities. The leach pad and ponds are inspected daily for wildlife mortalities. No wildlife mortalities related to cyanide have been reported in the last three years.

Pierina has annual monitoring programs including sample locations, frequencies, and cyanide species and other parameters to be analyzed. The monitoring programs include sampling frequencies that varies between weekly, monthly and quarterly. Samples are sent for analysis to ALS Peru lab in Lima. Cyanide species (WAD, free, total) are analyzed on weekly, monthly and quarterly samples. Records were available and reviewed by the auditors for all sampling and monitoring activities. The frequencies of the monitoring activities were deemed to be appropriate by the auditors.

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

Standards 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
□ in substantial compliance

□ not in compliance with Standard of Practice 5.1

Describe the basis for the Finding/Deficiencies Identified:

Pierina is currently in active closure stage. Pierina has developed its 4th Modification of the Mine Closure Plan (MCP) in accordance with local regulations requirements of the Peruvian Ministry of Energy and Mines (MEM). The MCP was developed by Wood and was approved in July 2020. The MCP has a section on decommissioning activities tor cyanide facilities. This includes decontamination of equipment (tanks, pipelines, pumps, and valves), planned draindown and removal of residual cyanide reagents, water balance and quality control mechanisms, final decommissioning and disposal of cyanide facilities, and/or reclamation of facilities. The MCP considers decommissioning strategies for cyanide facilities and treatment systems including the heap leach pad, process ponds and solution channels, Merrill Crowe plant, raincoat pond, cyanide destruction plant, cyanide storage facility, and seepage collection system.

Pierina has also prepared the procedure MAM-PPR-012 “Demolition and dismantling of facilities and infrastructure” that includes details about decontamination tasks such as defining an area for decontamination activities, decontamination using a neutralizing chemical as indicated by national legislation, and collection/treatment/disposal of decontamination water. This procedure is aligned with the 4th Modification of the MCP. At closure, once gold recovery ceases, all processing plant items and steel structures will be washed thoroughly with water and a neutralizing chemical. All concrete surfaces will be thoroughly washed down to remove any residual material. Pipelines will be flushed dependent on the material conveyed and whether they are to be re-used after closure. Heap leach pad drain down water is expected to be treated in the water treatment plant until 2025.

The MCP includes an implementation schedule with proposed timeframes and activities between 2021 and 2055, including 5 years of closure (until 2025) and 30 years of post closure activities, mainly related to water treatment needs. Pierina is currently conducting progressive closure activities as the mine is in active closure stage

The MCP has been updated twice in this recertification period. First review was in 2018 and the second one in 2020. According to national regulations, the closure plans needs to be updated every 5 years. Pierina reviewed the MCP more frequent to include detailed engineering closure designs and changes in closure plans in the most recent modification of the MCP (4th Modification). The MCP is planned to be reviewed and updated again in 2023.

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

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

Describe the basis for this Finding/Deficiencies Identified:

The 4th Modification of the MCP outlines in Chapter 7 the cost for full implementation of the site-wide closure and reclamation plan for existing facilities, including all cyanide facilities and water treatment activities. The total closure cost, including concurrent reclamation, final reclamation and post closure activities, has been estimated at US$ 205 million (MM). US$82 MM of the total closure costs are related to decommissioning of cyanide facilities, including long-term water treatment needs. This closure cost is updated along with the required updates to the MCP.

The decommissioning and cyanide decontamination estimates provided were generated as a function of the full fund third party implementation costs. This is consistent with the methodology used at other ICMI certified Barrick sites, and represents a reliable estimation of third party decommissioning costs. The costs were estimated using third-party rates from 4 contractor companies (COSAPI, HLC, ICSK and OHL) used by Pierina for earthworks, concrete, infrastructures and dismantling activities.

Pierina updates its closure costs every time the MCP is updated. The MCP was updated in 2018 and 2020 during this recertification period. The closure cost was estimated at US$460 MM in 2018 and decreased to US$205 MM in 2020 due to the development of detailed engineering closure designs, and optimization of water treatment, unit rates and water balance for the life of mine. Additionally, according to Barrick requirements, Pierina reviews and updates annually its closure costs, including decommissioning costs for cyanide facilities, as part of its internal PER (Provisions for Environmental Reclamation) cost estimation exercise. The most recent PER closure cost estimate is US$326 MM, which is slightly lower than the previous amount of US$331 MM.

Closure bonds have been issued by the three different banks (Banco de Credito del Peru, BBVA Continental and Scotiabank) on behalf of Pierina for a total of US$259 MM. Based on MEM closure requirements, the financial assurance amount is sufficient to cover cyanide-related decommissioning activities. These bonds are updated and renewed every year. The auditors reviewed the closure bonds for the recertification period.

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

Standards of Practice

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

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

Describe the basis for the Finding/Deficiencies Identified:

Pierina has established a number of Standard Operating Procedures (SOPs), work instructives, checklists and work permits among others, along with Barrick´s corporate SOP´s for cyanide related work, which helps to ensure that worker exposure to cyanide is minimized and/or controlled.

Work permit systems have been developed for more general activities which apply across various areas of the plant and/or the mine operation. These include, for example, lock out/ tag out/try out, hot work and confined space entry permits. These SOPs and permits are available in the site document control center and are developed and maintained by the Process area and the Risk Prevention and Environment Superintendence.

The procedures have been developed for all cyanide facilities. They are detailed for the risks involved with each task (including preparation, plant operations, entry into confined spaces, and equipment decontamination) and adequately describe safe work practices.

The procedures detail task specific requirements, minimum training requirements to conduct the task, and procedures to follow in case of a contingency. SOPs are supported by specific training conducted by competent operators and/or designated personnel and complemented by training modules. Verification of the written procedures included review of the specific task, plans and worker interviews. Procedures were reviewed and found to be sufficiently detailed to enable safe operation and to minimize worker exposure.

All Pierina´s SOPs, work instructive and permits provide a listing of required personal protective equipment (PPE) to prevent and/or minimize worker exposure to cyanide and/or cyanide containing solutions. In addition to these procedures, signage and task safety training is used to provide awareness to personnel of the minimum PPE requirements for an area.

During pre-start checks, operators are required to identify whether they have the required PPE to perform the task at hand and/or identify any upset conditions which may require additional precautionary measures. In case of non-routine tasks, a Job Hazard Analysis may be required to identify any risks associated with the work and ensure that adequate PPE is provided to complete the work safely. In addition to the use of general PPE, such as hard-hat, steel toes shoes, and safety glasses throughout the production area, areas and/or tasks where personnel may come into contact with cyanide have additional PPE requirements.

Observations during the audit confirmed that hard hat, rubber boots, rubber gloves, chemical suits, face shields, handheld two way radio, and HCN monitors were in use for tasks that were performed at the cyanide mixing area.

Pre-work inspections prior to a cyanide mixing are completed by process personnel. For example, cyanide preparation pre-inspections include pH verification, first aid equipment, cyanide valves, tanks and pumps, and a checklist of the steps to follow. Pre task inspection records were reviewed to verify compliance.

In order to obtain a work permit in an area, a pre-work inspection must be completed. This process requires that workers evaluate the job that is about to be performed for potential hazards and plan out the work to ensure that the hazards are appropriately managed. Maintenance personnel need to obtain a work permit prior to any activities in the process areas such as repairing a cyanide pump. Examples of work permits were reviewed.

Pierina has implemented the Barrick´s corporate SOP Management of Change (MOC) procedure. The procedure is used to manage changes to facilities and ensure that these changes do not adversely impact on health and safety, the environment, or communities.

The process requires a review and sign-off by health, safety and environmental personnel, and operational personnel helps to identity how changes to a facility or its operating practices may increase cyanide exposure risks and provides a chance to evaluate, address and implement effective change management.

The procedure addresses, among others, the current and potential controls to minimize adverse conditions and promote continuous improvement associated with change management. The auditors reviewed examples of MOC procedures conducted during the recertification period, although none of them were related to change management for cyanide issues.

Workers at the operation are given the opportunity to provide input to procedures via a variety of mechanisms, including pre-shift meetings. Comments for improvement are directed to supervisors and/or management for consideration.

Supervisors from each area meet annually in the process called Participation and Consultation where they review the procedures to see if any modification is required and they consult with the operators to see if there is any need for change. The auditors reviewed records of this meeting from January 14, 2021, where the APM (water, processes and maintenance) area met with the participation of 45 workers, including managers, reviewed the emergency response plan and the operating procedures. Local regulations mandate that the operating procedures be reviewed at least annually.

New and revised documents go through a review procedure which may include feedback from area operators with significant experience in that area. Comments are incorporated and then updated procedures are disseminated to the supervisors for review with the crew for final review and implementation.

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
□ in substantial compliance
□ not in compliance with Standard of Practice 6.2

Describe the basis for the Finding/Deficiencies Identified:

Pierina has determined that pH for cyanide solution preparation must be equal or above 9 to prevent the evolution of HCN gas. The procedure OPR-PPR-044 “Cyanide Preparation at the Merrill Crowe Plant”, requires verifying that the pH of the barren solution is greater than 9 prior to mixing cyanide. To help control pH, barren solution is used to dissolve solid sodium cyanide briquettes and sodium hydroxide (lime grout) is added to rise the pH to the desired value.

The solution pH level is measured continuously with a probe at the barren tank and at the unclarified tank and results are monitored online in the Merrill Crowe plant control room.

Verification was through interviews with process personnel and review of test logs. Historical data was reviewed showing pH levels versus HCN gas levels for the recertification period. During the procedure task observation performed by the auditors in occasion of a cyanide preparation event, it was verified at the control room that pH was above 9.84.

Pierina uses fixed and personal (portable) monitoring devices to confirm that controls are adequate to limit worker exposure to hydrogen cyanide. HCN alarms are set to visually alert operators at 4.7 ppm and 10 ppm. The alarm for 4.7 ppm activates a flashing strobe locally and an alarm shows in the control room alerting of possible high HCN gas in the area. At the activation of the alarm at 4.7 ppm, personnel must immediately leave the area until the area is safe to resume work and the alarm is reset. Although HCN detectors alarms are set at 4.7 and 10.0 ppm, all actions to evacuate the area, are set for the low level first alarm; the higher alarm triggering at 10 ppm will find all personnel out of the area evaluating the situation. The auditors reviewed the procedure OPR-PPR-055 “Actions in Case of High Level of HCN Gas”.

Fixed monitors are located, among other places, in the cyanide preparation area with three sensors where gas values area also showed in monitors displayed at the entrance and inside the preparation area. Operators and maintenance personnel were observed using portable monitors throughout the Plant area during the audit.

Pierina has established a number of high risk areas where exposure to HCN gas may occur, including areas within the cyanide preparation room at the Merrill Crowe plant. SOPs detail the appropriate PPE that is required in each area. The operation undertakes annually HCN gas measurement to assess operator’s exposure to HCN at areas where workers may be exposed to cyanide.

HCN gas monitoring is carried out annually in Pierina where risk areas are first identified and then evaluation of existing values in the area is carried out. This evaluation is in charge of an industrial hygiene and safety engineer, who is the Occupational Hygiene Supervisor. During this monitoring, different detectors are used to contrast the results. These evaluations are carried out for different activities, not only for cyanide, and compared with the permissible limits. The auditors reviewed HCN survey reports recorded during the recertification period; in all cases results were below these limits.

Signage, risk maps, procedures and training developed by the process plant help to ensure that workers understand the high risk areas and the alarm responses requirements. Process plant

personnel are responsible for ensuring that adequate levels of signage and alarms are maintained throughout the plant to protect against HCN exposures.

HCN fixed and portable monitors are calibrated on a regular basis as directed by the manufacturer and records are kept for at least one year. Each area tracks the date of calibration of their portable monitors. The maintenance of the fixed monitors is carried out by the plant instrumentation area. The auditors reviewed calibration certificates for portable monitors which are calibrated annually, following the frequency recommended by the manufacturer.

Records of tests and calibration activities both for fixed and portable HCN gas monitors were available for the auditors´ review covering the recertification period.

Signage is displayed at the plant entrance and throughout the various facilities to alert personnel of the presence and/or possible presence of cyanide, access restrictions and the required PPE for the area. In addition to identification of cyanide areas and PPE requirements, signage is also used to restrict eating, drinking, smoking and open flames to authorized areas only.

Pierina installed warning signs in the cyanide warehouse, at the entrance of the heap leach pads, in the ponds with cyanide solutions, in the process plant and even in pipes. Warning signs are posted in Spanish, the language of the workforce. Verification was through visual inspection of the signs located in areas where cyanide solution is prepared and used.

High strength cyanide solution is dyed in red color for clear identification. Since May 2019, Orica send the dye inside the Intermediate Bulk Containers (IBCs) with the cyanide briquettes so that during the mixing operation, the high strength cyanide solution results colored in red.

All areas at the process plant are equipped with a number of fixed safety showers/eyewash stations to provide emergency rinsing in the event of chemical exposure, installed at strategic locations throughout the operation in all areas where there is a potential for exposure to cyanide. Safety showers and eyewash stations are checked as part of daily inspection checklists to ensure that they are operational and that water flows are adequate. This process of testing the shower and eye-wash stations prior to commencing work was observed during the audit. The auditors randomly checked showers and eyewash stations during the site tour to verify functionality. In addition to the daily checks, routine preventative maintenance on the showers is completed monthly.

To protect against fire, dry chemical powder fire extinguishers are used where cyanide is present to prevent generation of HCN gas whilst extinguishing a fire. These extinguishers are checked during routine inspections and replacement of uncharged or faulty extinguishers. The auditors randomly checked fire extinguishers to confirm they are an acceptable type for use with cyanide.

Verification was through visual inspection of showers, low-pressure eyewash stations and fire extinguishers in areas where cyanide is used and review of inspection records. The auditors verified that the showers and eyewash stations are functional and that water pressure in the eyewash stations are appropriate.

Pipelines and tanks that contain cyanide or cyanide solution are labeled to enable plant personnel to identity its content. Labeling is typically located at places to easily identify and track the lines to identity contents.

For pipelines, flow direction arrows for cyanide bearing lines are used to allow personnel to understand the flow and possible exposures and/or response requirements tor leaks and/or maintenance work.

Color coding is also used to identify tanks and process solution pipelines. These color codes are done in accordance with ANSI standards. To support identification of pipelines, personnel participate in area-specific training to identify process solution tanks and pipelines in their respective work areas.

Verification was by visual inspection. Storage and preparation areas, process tanks and piping containing cyanide are properly identified to alert workers of their contents. All areas observed during the audit had appropriately identified tanks, pipes, and cyanide storage areas. Auditors followed the cyanide solution circuit from the cyanide solution preparation, through all the process.

Pierina maintains Safety Data Sheets (SDS) for all chemicals on site inclusive of sodium cyanide. Hard copy documents and/or permanent stands are maintained locally tor bulk chemical storage areas such as the cyanide offloading, mixing and storage areas. In addition to the SDS sheets, signage is available to alert personnel to chemicals and required emergency response requirements in the high risk cyanide areas.

Pierina has binders containing SDS in all areas where cyanide is stored, handled and managed and in the medical clinic. All materials are written in Spanish. Verification was conducted by visual verification of material included in the binders.

Pierina has the procedure SYS-PPR-016 “Incident Investigation” to describe the criteria, methodology and guidelines to develop the notification and investigation of incidents in order to identify the root causes that originated it, determine the corrective actions and disseminate the events to prevent similar recurrence.

Pierina reports and investigates incidents through the electronic platform Internal Incident Report Announcement System. Also uses the Barrick corporative incident report system The Core. Systems are used to collect, understand, and organize evidence about what happened. It helps identifying the basic causes (human errors or equipment failures) that led to the problem. The report systems allows Pierina to evaluate any potential trends of incidents and determine if changes are required in the operation’s programs and procedures. The mine requires that all incidents involving cyanide exposure are investigated and evaluated to determine if programs and procedures to protect worker health and safety and to respond to cyanide exposures are adequate or if changes are necessary.

Pierina requires a formal close out of incident by safety personnel or the supervisor. Verification was by interview with process, safety and environmental personnel and review of a cyanide incident investigation report.

During this certification period Pierina did not have to report any cyanide incidents. The auditor reviewed the *Internal Incident Report Announcement System* documents with examples of detailed information regarding other incidents reported, not cyanide related, showing incidents investigations, if it was the case, and the action plan where the required actions have already been closed.

6.3 Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

The operation is: ■ in full compliance
□ in substantial compliance
□ not in compliance with Standard of Practice 6.3

Summarize the basis for this Finding/Deficiencies Identified:

Pierina has made available water, oxygen, resuscitators (both automatic and manual external defibrillators), radios, telephones, and alarms in critical areas. Cyanide first aid kits are located at the warehouse, the plant´s control room and the medical center.

First aid kits include:
- Oxygen tank with pressure gauge.
- Mask with reservoir bag.
- Manual resuscitator (Ambu).
- Gauze
- Gloves.

Antidote kits for cyanide specific treatment are at the medical center (7 kits). The antidote kits at the medical center contains the intravenous antidotes sodium nitrite and sodium thiosulfate in addition to first aids kits. It was confirmed that all antidote kits are stored at the correct temperature and that the antidotes have not expired. Antidotes are checked twice a day to control the temperature, the whole kit is subjected to monthly review. The antidote kits are not stored in the ambulance stationed at the clinic due to temperature variability. The locations of the emergency equipment were deemed to be appropriate for the operation.

Operators are required to carry a radio while performing their tasks. Emergency radio communication is in channel 5 or by telephone calling to annex 1111; they also have cellphones. All the operators by shift have radio equipment and are trained in their use so that they can report adequately. The Control Center is the first point of notification in accordance with what they have established.

All fixed HCN monitors are equipped and set with an alarm system. The alarm systems for all the HCN monitors and showers have a visual and audible alarm, and are hard wired to the control room that is manned 24-hours/7 days. In addition there are alarm red buttons distributed strategically through the different areas. Pierina has alarm systems which are manual emergency call points in the plant and at other strategic points, all inspected on a monthly basis. When emergency showers are used, an audible and visual alarms are activated.

Verification was conducted by visual inspection of the cyanide antidote kits at the medical centers and interview with the doctor and paramedic of Plan Vital, the medical contractor responsible for medical attention at the mine site.

Pierina regularly inspects the cyanide first aid equipment to make sure it is available when needed. This includes daily temperature checks to cyanide antidotes at the medical centers. Cyanide kits are stored as directed by their manufacturer and replaced following a schedule to ensure that they will be effective when needed and can be readily available for an emergency. The mine has monthly formal checks to first aid equipment in areas where cyanide is used, to ensure it is available and in working conditions if needed. The checklist includes the inspection of cyanide antidote kits (storage requirements and expiration dates), oxygen, facemask, and the ambulance, among others. The response equipment and inspection frequency are maintained in the site emergency response equipment register.

The storage temperature of the specific cyanide antidotes as indicated by the manufacturer, is in the range between 15° to 25° degrees Celsius which is controlled twice a day, since in cold season it varies considerably between morning and afternoon. The auditors reviewed examples of cyanide temperature control records in charge of the nursing staff at the medical center. The auditors also reviewed the antidotes expiration date, which is controlled during the monthly inspections. The auditors reviewed the planned inspection format where they record the expiration date. Antidote expiration dates and oxygen tank pressures were checked during the audit. All antidote kits were within expiration date.

Cyanide first aid equipment (oxygen) at the Control Room is inspected prior to a cyanide solution preparation event; oxygen tanks were fully pressurized. Given the oxygen shortage crisis due to the COVID-19 pandemic, the mine has been supplied with a larger stock of oxygen tanks. Plan Vital contractor paramedics perform daily inspections of the ambulance, cyanide kit and oxygen located in the medical clinic. Inspections are documented.

Verification was through visual examination of the antidote kits expiration dates, interviews with process personnel and onsite doctor and paramedic, and review of inspection records.

Pierina medical area has developed the Clinical Practical Guide in Cyanide Poisoning No. GO-SO-21 describing written emergency response guidelines to respond to cyanide exposures. The Cyanide Management Emergency Preparedness and Response Plan has also these indications in accordance with the Clinical Practical Guide.

The guideline describe in detail what is to be done in the event of a cyanide exposure. These include personnel responsibilities, intoxication levels, first aid procedure, and medical attention.

The first responder in the place initially will aid the victim securing the area and administrating oxygen. Specific instructions are given for treating victims who are exposed to sodium cyanide via inhalation, ingestion, and dermal routes. Instructions detail the steps to be taken for conscious versus unconscious victims. Then the medical services will receive the victim decontaminated by the Emergency Response Team (ERT or brigades) to receive treatment with the cyanide antidotes, if necessary.

To provide first aid and medical assistance to workers exposed to cyanide, Pierina has an onsite medical facility (medical center) located at the administrative offices area. First aids emergency response equipment include one fully equipped ambulance.

On every shift, Pierina has a doctor, a nurse, a paramedic and a pharmaceutical chemist and a Superintendent Occupational Health doctor in occupational health with master's studies in Germany. These medical professionals also have the ability to communicate with external medical resources if required to assist with medical treatment.

The site utilizes a fully trained volunteer ERT (Emergency Response Team) and dedicated medical team to effectively respond to cyanide and other incidents at the site. In addition to ERT and medical team personnel, Pierina has on site trained personnel who are trained in first aid related to cyanide exposure. A number of process plant first responders have been trained in the plant to provide initial rescue efforts. Verification was through interviews and examination of training records and certificates (i.e. brigade members and first responders). Every shift has at least 2 brigade members and various First Responders trained to administer oxygen. Verification was through interview with an on-site doctor and nurse and visual inspection of the medical center and emergency equipment.

In the event of a cyanide exposure where the victim, once stabilized, requires medical attention beyond the capabilities of the on-site medical clinic, the medical contractor Plan Vital will transport the victim in the ambulance maintained at the medical center to Huaraz, a 45-minutes' drive. The SOP PO-SO-09 "Patient Transfer Procedure" prepared by Plan Vital describes the procedures to transfer the victim including responsibilities of the onsite doctor and nurse. The primary objective of the procedure is to stabilize the victim onsite prior to transfer. The cyanide antidote will be transported along with the patient to the clinic.

If required, Pierina has also provisions to evacuate the patient by air to Lima. The mine has made arrangements to air transport to Lima a worker exposed to cyanide for additional medical treatment. Pierina has an airstrip located outside of the mine property to facilitate air evacuation.

Verification was through interviews with one of the onsite doctors and review of the procedures. The procedures include the name of the hospitals and related contact information.

Pierina has established formalized arrangements with medical facilities regarding the potential to treat patients that have been exposed to cyanide. Pierina has the policy to stabilize victims onsite prior to transferring to offsite facilities. Therefore, the offsite facilities do not necessarily treat victims directly for cyanide exposure. Pierina has determined that its medical facilities have qualified staff, adequate equipment and expertise to respond effectively.

According to an annual schedule of clinic visits, mine personnel check that external medical centers have an intensive care unit. During this recertification period, the San Pablo Clinic was visited. Records of the visits are kept. The San Pablo Clinic has a specialty in emergency and disaster care.

Verification was also through interviews with the mine medical personnel and risk prevention personnel, and review of documentation (certifications and correspondence showing arrangements).

Cyanide related mock drills are held no less than every year to test the emergency response capabilities of process plant and emergency response personnel including the provision of first aid. These drills test the capabilities of various types of emergencies including both cyanide exposure and environmental spillages across the complete response chain. Drills for other identified emergency events are also completed on a routine basis to maintain an adequate level of emergency response preparedness. Records of the drills, the outcomes and the corrective actions are maintained by the site for a period of no less than three years.

On December 21, 2018, Pierina had an emergency drill simulating a cyanide spill with exposition resulting in two unconscious workers, with 14 participants. The auditors reviewed the drill report with opportunities for improvement as required training in hazardous materials. The action was closed.

On March 28, 2019, Pierina simulated a spill in the leach pad with material resulting out of the contained area. This occurred due to a landslide sliding leached material falling into the distribution pond.

On June 15, 2020, Pierina simulated a cyanide spill with a worker exposure. They had 12 participants.

In all cases Pierina evaluated the mock drills and identified the deficiencies and closed the corrective actions. Lessons learned are incorporated into its emergency response planning after a mock drill, if required. Documentation includes photos, strengths, weaknesses, lessons learned and corrective actions. Follow up documentation verifying that identified corrective actions have been accomplished was also reviewed.

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

Standards of Practice

7.1 Prepare detailed emergency response plans for potential cyanide releases.

The operation is: ■ in full compliance
□ in substantial compliance

□ not in compliance with Standard of Practice 7.1

Describe the basis for the Finding/Deficiencies Identified:

Pierina has developed the SSE-MPR-001 “General Emergency Response Plan for the Mine” which sets out the procedures necessary to respond to unforeseen events which may affect workers, the environment or facilities, whether of technical or natural origin which arise in the operations area. The Plan also considers that due to activities of the mine in progressive closure, the Operation of Pierina is exposed to a wide variety of risks, and it may be the case that the severity of an event is increased by not having enough equipment, materials or trained personnel (emergency brigade) to respond to the emergency and minimize it.

The General Emergency Response is linked to the SSE-PPR-089 “Emergency Attention with Sodium Cyanide” and other plans and procedures that address potential accidental releases of cyanide, and the Operations Manual for the Pacchac Basin, among others.

These documents outline the various credible event scenarios tor the operation and the responsibilities, actions, and notifications required to ensure an effective and efficient response. Verification was by review of these updated documents and interview with safety and process personnel.

Pierina plans for emergency response list the various credible event scenarios for the site inclusive of cyanide incidents such as cyanide spills, exposures and transportation accidents.

a) The emergency response plans for the cyanide storage area and mixing room contains information regarding potential catastrophic (classified as a level 3 incident) release scenarios and appropriate emergency response.

b) Cyanide is transported to Pierina from Orica’s Yarwun plant using a code compliant supply chain to the mine. Transportation emergency response is covered within this approved supply chain. On-site transportation incidents are covered within the Emergency Response Plan. Off-site incidents are covered by the cyanide transporter DCR. If notified by DCR, Pierina would attend an incident within close proximity to the mine. The plan for on-site incidents details the following prioritization: protect life, emergency control; emergency response and remediation.

c) The plans and procedures detail different failure scenarios that would affect unloading and mixing activities: which include earthquakes; fire; accidents; structural infrastructure collapse; and leaks in the cyanide solution pipes.

d) The Emergency Attention with Sodium Cyanide Procedure details emergency response in the case of fire and explosion, among others.

e) The plans and procedures details different failure scenarios including: cyanide (CN) spills in the warehouse as a particulate solid cyanide, CN spills inside of the property as a particulate solid cyanide, CN spills as a cyanide solution, cyanide spills in fire and explosions.

f) The operations manual for the heap leach pad (Valle Pacchac) contains emergency response procedures for the overtopping of the ponds. It includes overtopping emergency response of collection and polishing ponds and leach pad; includes also scenarios of how overtopping may occur, lines of communication including outside stakeholders, actions on how to handle the emergency, personnel protective equipment, medical and other equipment that may be required.

g) Pierina has emergency power generators with capacity that is adequate to ensure the correct function of critical equipment in the event of a power outage.

h) The emergency response for uncontrolled seepage from the heap leach facility and process solution is described in the heap leach operations manual. Response options include pumping and treating.

i) Pierina's Operations Manual for the Pacchac Valley heap leach, Emergency Stop product of Cyanide Solution Operational instructions and Barren Solution Cyanide Destruction Treatment Plant procedure address emergency response at cyanide treatment and destruction facilities. If these facilities fail to operate, solution is diverted to the collection pond (lined pond). From the collection pond, solution can be pumped back to the leach pad or to the cyanide destruction plant or recirculated into the process. Site cyanide solution management is focused on prevention and on maintaining proper pond levels to provide containment in case of an emergency.

j) Pierina has an emergency response plan for failure of the heap leach pad and ponds. This identifies a number of critical situations, such as overtopping of cyanide solution ponds, and the emergency response to these scenarios.

The cyanide supplier for Pierina is Orica. Orica subcontracts DCR for terrestrial cyanide transport. Both companies have been certified as fully compliant with the Code. Pierina keeps a copy of DCR´s emergency response plan for cyanide transportation to the mine site. The plan addresses all Code requirements for the transportation of cyanide. The plan includes the vehicle specifications; responsibilities for the cyanide supplier, the mine, the transporters and external responders; permits required by the national authorities, organization chart for emergencies, communications flow in case of emergencies, a route risk assessment and instructions for specific emergency scenarios. Pierina, Orica and DCR have defined responsibilities for transportation related emergencies.

The General Emergency Plan and associated plans and procedures appropriately address emergency response requirements specific to Pierina. The site has adequate secondary containment to prevent offsite cyanide releases. The General Emergency Plan includes emergency procedures for Pierina. These plans detail response for worker and environmental exposures at a sufficient level of detail for control of the cyanide release at the source, containment, assessment, and mitigation. The plans also include evacuation procedures. The Operations Manual for the Pacchac Basin includes procedures to notify the communities in case of a cyanide emergency that may potentially result in exposure to individuals outside of the facility boundary.

7.2 Involve site personnel and stakeholders in the planning process.

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

Describe the basis for the Finding/Deficiencies Identified:

Every year Pierina holds meetings with its workforce and stakeholders relating to emergency matters. One of the meetings relates to updates of the Emergency Response Plan (ERP). In this meeting there are representatives from all areas of the operation (such as mine operations, legal, H&S, technical services, environmental, construction and process), where they review the emergency response plan and are able to make suggestions for its improvement.

Pierina also organizes talks where they invite stakeholders such as fire fighters, police, government department INDECI (Civil Defense), and hospitals and give a presentation on the emergency plan where comments can be made. The auditors reviewed attendance records from February 2020 and December 10, 2020 where they met with the police, firefighters of Taricá and Monterrosa districts. In this last meeting, the activities carried out included planning of an emergency response in the mine, review of the emergency response plan for 2021, and a tour to the mine facilities on simulation of an emergency event, where commitments for aid were established. Communication with firefighters of Huaraz is fluid and also with the police due to security matters.

The auditors also reviewed the doctor annual plan to visit Huaraz hospitals, and records from the meeting held on August 27, 2019 with personnel of the San Pablo clinic at Huaraz with the attendance of 8 people.

In addition to the guided visits to the mine, Pierina has various social engagement programs that allow communication and feedback between communities, stakeholders and the mine. Pierina also provides training on hazardous material and on the Pacchac Basin Emergency.

In normal conditions Pierina holds informative talks with the local communities; which were suspended due to the COVID-19 pandemic. These talks were undertaken approximately every year. The talks included awareness and preparation for local level emergencies and include what the local communities should know about cyanide. Whilst they do not specifically talk about the emergency, they include some items regarding emergency response. The auditors reviewed photographs and attendance records for year 2019.

Every year Pierina organizes a talk where they invite outside stakeholders (fire fighters, police, INDECI, hospitals) and give a presentation on the emergency plan. The last one was held in February 2020. The auditors reviewed invitation letters to INDECI, police officers at Huaraz city, Anta - Huaraz airport, firefighters, director of the regional health department and other organizations, and meetings records from February and December 2020.

Pierina holds annually meetings with its workforce and stakeholders relating to emergency matters. One of the meetings is related to updates of the ERP. In this meeting there are representatives from all areas of the operation (such as mine operations, legal, H&S, technical services, environmental, construction and process), where they review the emergency response plan and are able to make suggestions for its improvement. On April 3, 2021 there was a meeting among 11 mine managers including the logistic area. Other meeting was held on March 31, 2020 with attendance of 25 workers from APM (water, processes and maintenance).

During Pierina talks with external emergency responder as fire fighters, police, government department, INDECI and hospitals, the mine gives a presentation on the emergency plan where comments can be made. The auditors reviewed attendance records from these meetings as indicated in previous paragraphs of this audit report.

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

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

Describe the basis for the Finding/Deficiencies Identified:

a) The incidents command on the scene is made up of the Emergency Response Team (ERT) - supervisory personnel and emergency technicians - and the brigade personnel, to provide response, control and coordination of individual efforts that work as a team to control the damages, to minimize its impact and protect life, goods and the environment during the emergency. It is made up of the Incident Commander (supervision staff, ERT on duty) and staff from security, operations, planning, logistics and finance staff.

The general emergency plan designates primary and alternative emergency response coordinators. The Incident Commander has the authority to commit the necessary resources to implement the plan, and to define the primary and alternative response coordinators for the incident commander team. Verification was by review of the general emergency plan, which defines the primary and alternative response coordinators.

The members that make up these areas will be summoned at the discretion of the Incident Commander (Emergency Technician or members of the brigade) according to the level of the emergency, this basic organization can be expanded or reduced depending on the magnitude of the emergency and the resources available.

b) Section 12.2.3 of the 2020 emergency response plan has a list made up of 32 workers from different areas of the mine that make up the Emergency Response Team.

c) The emergency response plan includes in section 10.1 training requirements for emergency personnel, which includes first aid, hazardous materials, fire, ropes, confined spaces, road traffic accident response, and incident command system. Training records were viewed for the recertification period. The auditors also reviewed the ERT training program by semesters.

d) Pierina has availability of ERT personnel. The plan has in section 12.2 the brigade members contact list and response leaders. According to the emergency procedures, in an emergency you should call the Control Center which is attends 24/7 throughout the year.

e) The duties and responsibilities for the coordinators are listed in the Emergency Response Plan section 7.6. The duties and responsibilities for the emergency team members is detailed in the regulations of the Emergency Response Team.

f) Emergency Response equipment lists are detailed in the Emergency Response Plan.

g) The instructive for the hazardous materials (HAZOP) truck include procedures for inspecting the emergency response equipment, as well as instructions for the fire truck. Inspections for these trucks is set quarterly. The annual inspection program establishes the frequency of inspections including emergency response equipment. The auditor reviewed the inspection records confirming the operation inspected its emergency response equipment during this certification period.

h) Under the Response Procedures in the emergency response plan it is stated that the incident team is to coordinate outside responders and external support. The emergency response procedures also describe the roles of communities and other outside responders, such as the local fire department. Annually the Occupational Health Main Physician visits off-site hospitals to assess the facilities and the understanding of the staff for the treatment of patients exposed to cyanide. A letter is written to the hospital stating that the mine is satisfied with the facilities they have. The letter is signed by the hospital and returned to Pierina.

Pierina has established formalized arrangements with the medical facilities located in Huaraz regarding the potential to treat patients for cyanide exposure. Pierina has determined that the facilities have adequate, qualified staff, equipment and expertise to respond effectively. The Huaraz medical facilities are aware of their potential role if the on-site Pierina medical facilities are not able to handle the number of victims.

A letter was sent to the local fire department which included the following: general cyanide information, a presentation on the Cyanide Code and information about cyanide use, how to handle a medical emergency with cyanide, route monitoring and second response by Security-Tech, Pierina General Emergency Plan, and Emergency Response with hazardous materials. The letter was signed by the local fire department and sent back to Pierina.

7.4 Develop procedures for internal and external emergency notification and reporting.

The operation is: ■ in full compliance

□ in substantial compliance
□ not in compliance with Standard of Practice 7.4

Describe the basis for the Finding/Deficiencies Identified:

The ERP, Section 8.1 External Communications, details procedures and contact information including regulatory authorities, outside responders including police, firefighters and medical center. Also includes procedures to communicate with the communities if necessary, in case of emergencies.

The ERP has contact information and procedures to contact with authorities within the area of influence. It includes contact names of staff, their positions and phone numbers. The response procedures determines that if surface waters are contaminated with cyanide then the incident is considered a 'high' level incident, and provides a number of communication steps to be taken which include when to contact local communities.

As part of the Plan, Pierina has a section titled 'Roles and responsibilities for community relations and the media'. This specifies a chain of command for media relations and states that the Superintendent and/or Head of Social Closure will establish contact with the communities with prior communication and authorization from the Crisis Committee Manager (Site Manager) and the Director of Community Relations following the procedures established in their protocols.

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

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

Describe the basis for the Finding/Deficiencies Identified:

a) The Plan, instructives, and related procedures indicate that dry cyanide spills are to be covered with an impermeable plastic sheet and shoveled and/or swept into a drum or suitable container, thus keeping the spilled material dry. The spill area must be flushed with a 5% dilute solution of sodium hypochlorite proportion in water, which is stored at the mine warehouse. The procedure states how the chemicals are to be poured slowly to prevent the generation of HCN. Spilled cyanide solutions within the process plant will be returned to the process circuit from the floor sumps. Liquid cyanide spills are to be contained by constructing berms. Spilled solution is to be pumped to 55-gallon drums with sealed lids. If high HCN concentrations are detected, manual or spark-free pumps are to be used. Sodium hypochlorite is to be used only in cases where the solution is contained. Procedures reviewed include: Emergency Attention with Sodium Cyanide; Emergency Shutdown due to Cyanide Solution Spill; Management of the Diversion Gates; Cyanide Spill Management Soil sampling instructive for determination of CN WAD emergency. .Final cyanide concentration allowed in residual soil as evidence that the release

has been completely cleaned up is according to require by the Peruvian Environmental Quality Standards (ECA) for soil, as stated by local regulations.

b) The Plan and related procedures require cyanide contaminated soils to be disposed of in the heap leach pad facility and solutions to be pumped to the Merrill Crowe Plant. If solutions are contaminated with solids then they are disposed of in the heap leach pad facility.

c) The Plan and related procedures require contaminated materials to be placed in the heap leach pad facility or Merrill Crowe plant as appropriate.

d) Pierina has procedures in place to use bottled water for its alternate drinking water supply. Drinking water at the mine is bottled water. The nearby communities use water from their own springs. Pierina´s operation has a system of closing gates and several containment ponds in case of a spill. Pierina has two water treatment plants, one for each creek of the mine´s influence area. According to local regulations the use of this water is classified as class 3 water, suitable for irrigation and consumption of livestock.

The Plan clearly prohibits the use of sodium hypochlorite, ferrous sulphate and hydrogen peroxide to treat surface waters.

Within the Operations Manual for the Pacchac Basin and the Soil sampling instructive for determination of CN WAD emergency, details are given regarding the requirement to take samples up-stream and down-stream of a cyanide related incident. The instructive for soil sampling details the soil analysis that will be undertaken, the sampling methodologies and parameters.

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

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

Describe the basis for the Finding/Deficiencies Identified:

The General Emergency Plan is reviewed annually and following mock drills and actual incidents as needed. The plan includes a list of the changes/modifications made to this document since its original version. Auditors verified that the plan has been reviewed and evaluated on an annual basis during this ICMC recertification period..

Pierina conducts annual mock drills based on likely release/exposure scenarios to test the response procedure, and incorporates lessons learned from the drills into its response planning.

Pierina evaluates the mock drills and identifies deficiencies and corrective actions. Lesson learned are incorporated into its emergency response planning after a mock drill, if required. Documentation includes photos, strengths, weaknesses, lessons learned and corrective actions.

Follow up correspondence verifying that identified corrective actions have been accomplished was also reviewed.

Record of mock drill debriefs were from December 21, 2018 for a cyanide spill with exposure; March 28, 2019 for a spill in the leach pad with material resulting out of the contained area; and on June 15, 2020, where the site simulated a cyanide spill with a worker exposure.

The General Emergency Plan states the emergency plans must be evaluated and revised after any cyanide related emergency requiring their implementation. The operation has not conducted any reviews of its emergency response procedures following an actual cyanide-related incident requiring their implementation, as no such incidents occurred during this ICMC recertification period.

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

Standards of Practice

8.1 Train workers to understand the hazards associated with cyanide use.

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

Describe the basis for the Finding/Deficiencies Identified:

Pierina has a number of cyanide hazard awareness presentations which are given to visitors, contractors and staff. The degree of detail given varies depending on the potential risk of exposure. This ranges from an introductory talk for site visitors that mention the use of cyanide and its potential dangers, through to detailed cyanide safety training for contractors and workers.

Everyone entering the operation undergoes an induction training, highlighting the key issues for cyanide awareness. New worker training induction is for everyone who works at the operation. Pierina issues a card to employees, contractors and visitors highlighting the key issues for cyanide awareness.

In addition to the general site induction, a Process Plant Induction is required for all personnel with process plant access. This training provides a plant overview and includes environmental, health, and safety standards for working inside the plant area inclusive of cyanide risks and safe operating practices. The training covers but is not limited to locations where cyanide is present, alarm response, PPE requirements, safe handling and management guidelines, symptoms of exposure, cyanide first aid and emergency response.

Pierina also provides a number of additional hazard identification training courses and inspections to ensure that personnel are able to identify and report hazards that they observe in their respective work areas.

Verification was by interview with process and training personnel, random interviews to operators and contractors, and review of employee training records covering the recertification period. Cyanide awareness refresher training is given to all workers annually. The Human Resource department maintains a database which contains information regarding when training given and when it is next due. These records are also kept in hard copy in individual training records files.

The on-site medical team are given annual refresher training on the protocol for cyanide poisoning. This training includes the training on the use of antidotes and administering of oxygen. The medical team provides training to the workers/emergency responders (brigades) on how to deal with cyanide poisoning.

Training records, including refreshers and cyanide hazard training for supply chain personnel, the process plant operators and contractors are retained in the form of hard copies and also an electronic version stored.

Training records identify the trainer, trainee, topics covered, date and sign off sheet. This requirement was verified through review of a sample of records for four workers covering the recertification period.

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
□ in substantial compliance
□ not in compliance with Standard of Practice 8.2

Describe the basis for the Finding/Deficiencies Identified:

All personnel in job positions that involve the use of cyanide and cyanide management (including unloading, mixing, production and maintenance) receive training on how to perform their assigned tasks with minimum risk to worker health and safety. Individual training is provided for each specific task an operator will perform related to cyanide management. Task specific training includes cyanide task SOPs described in Section 6.1 and cyanide transfer, cyanide bags and boxes management and disposal, critical valves management, equipment decontamination, valves and interconnections management for containment zones, plant emergency stop, new version of SDS, cyanide preparation and others.

Verification was conducted through interview with process and loss control personnel, and review of training records.

Training elements for each specific job are identified in the work procedures and presentations that are used as training material. Personnel are trained following the work procedures, which include the step by step process to perform the job. These work procedures include the objective of the procedures, photos of the task/activity to be conducted, required PPE, decontamination requirements, risks associated with the cyanide task, contingency plans and the individual task specific steps.

Training includes two type of assessments, written and practical. Presentations, training materials, and tests were reviewed. All information was found to be complete.

Pierina has experienced personnel in cyanide processes conducting the plant process training which provide task specific training to operators. To support the trainers, the process plant employs a number of qualified supervisor and management personnel with adequate knowledge, experience and qualifications to train personnel on the necessary techniques and requirements for safe and environmentally sound process plant operations.

The mine also uses external support as Orica to provide cyanide training to the personnel. Verification was through interviews with process people and review of training records to verify compliance.

All personnel in job positions that involve the use of cyanide and cyanide management are required, prior to working with cyanide, to receive training on how to perform their assigned tasks with minimum risk to worker health and safety. After completing the pre-requisite training, employees complete a classroom-training program prior to working with cyanide.

Individual training is provided for each specific cyanide related task that an operator will perform and includes cyanide work procedures. A senior/junior on-the-job training approach is used to further training for the personnel on job activities and cyanide safety. New trainees are assigned to work in one of the circuits under the supervision of a competent operator. These trainees are required to work under direction of these competent operators until they demonstrate ability to work without direct supervision in a safe and responsible manner.

This requirement was verified with through interviews with the supervisors and field personnel and review of training programs and records.

Cyanide refresher training is performed annually for all staff and cover Health and Safety (H&S) and environmental issues. Pierina requires and provides annual refresher for safety cyanide management, first aid for cyanide intoxication and cyanide emergency response to assure that employees and contractors continue to perform their jobs in a safe and environmentally protective manner. Refresher training records were reviewed to verify compliance. Training records and test results covering the recertification period were reviewed by the auditors and were found to be complete.

Pierina uses written tests to evaluate the effectiveness of cyanide training and inductions. Following classroom training, an employee is supervised out of production mode. The supervisor

will determine when that individual is then able to perform the task on their own. Records are retained of written quizzes and the employees' understanding of cyanide.

In addition to the formal testing and assessment program, the process plant supervisors helps to identify deficiencies in task procedures performed by personnel so that these deficiencies can be corrected either on the spot or via additional task training. Training records and testing results were reviewed and were found to be complete. Verification was by interview with training and process personnel, and review of training records.
Employee training records are entered into the training database for each employee. These records are maintained for the duration of employment and include information including training completed and dates, topics covered, test and assessment scores/ratings.

A training matrix is generated from the training database to assist process plant personnel in their training progression and refresher exercises. Samples of records were available and reviewed and were found to be complete. Verification was through interview with training and process personnel and review of training records covering the recertification period.

8.3 Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

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

Describe the basis for the Finding/Deficiencies Identified:

Personnel responsible for unloading, mixing, production, and maintenance are trained in decontamination and first aid procedures for cyanide release incidents. Verification included review of training records and interviews with cyanide operators.

Specific training includes safety cyanide management, safe cyanide handling, first aid for cyanide intoxication, cyanide SDS, cyanide emergency response, General Emergency Plan, Cyanide Code, spill management, hazardous materials, risks management, emergency cyanide soil monitoring, HCN monitoring and cyanide management procedures (cyanide transfer, cyanide bags and boxes management and disposal, critical valves management, equipment decontamination, valves and interconnections management for containment zones, plant emergency stop, cyanide preparation and transport, unloading, manipulation, storage and delivery of sodium cyanide).

Pierina undertakes training of workers to identify cases of cyanide exposure and provide first aid to the victims. The training covers use of PPE to ensure their own safety, decontamination and supplied oxygen. This training is provided every year.

The medical team provide training to the workers/emergency responders on how to deal with cyanide poisoning. Mock drills are conducted regularly as part of the Emergency Response Plan.

The operation has a fulltime Emergency Response Team (ERT) trained to Pierina´s emergency response requirements. ERT members are trained in the use of necessary response equipment. In addition, Process Plant responders receive communications and training on their roles during an emergency in the plant. Knowledge of these plans and understanding of the plans is tested through periodic drills and actual events.

ERT members are trained through participation in mock drill exercises as well as formal training programs. Formal brigades are in place for fire, first aid, spill, and evacuation. Emergency responders are available on all shifts. Training records and emergency drills were reviewed by the auditors.

Training is provided to third party responders: the brigades, fire brigade and police. Pierina has established formalized arrangements with the medical facilities located in Huaraz regarding the potential to treat patients for cyanide exposure. Pierina has determined that the facilities have adequate, qualified staff, equipment and expertise to respond effectively.

Every year the medical manager visits both off-site medical facilities to assess the facilities and the understanding of the staff for the treatment of patients exposed to cyanide. A letter is written to the hospital stating that the mine is satisfied with the facilities they have. The letter is signed by the hospital and returned to Pierina.

The medical manager provides training to staff at both medical facilities and also holds training to other organizations including fire fighters and police.

The medical team provides annual refresher training to the emergency response personnel on how to deal with cyanide poisoning.

Pierina personnel receive annual specific and general refresher training. Training topics are cyanide code, cyanide procedures, cyanide risks, cyanide kit and General Emergency Plan, and procedures. Training records were reviewed for the recertification period. Test results and follow up measures are indicated for each person.

Verification was through interview with process, loss control and emergency response personnel, interviews with in-field employees, and review of training records.

Cyanide emergency response drills are scheduled no less than one per year to test the emergency response systems and capabilities of site personnel. Various types of responses are tested including both cyanide spillages and exposure scenarios.

The Emergency Response Team (ERT) trains weekly to ensure that are able to respond to an emergency and that their skills remain current.

At the completion of emergency response drills, debrief sessions are held to review and identify the actual versus expected outcomes of the emergency response to identity opportunities for improvement and changes to training and awareness programs. When deficiencies are identified

in the response, corrective actions are assigned to relevant personnel which may include modifications to training and/or awareness programs to ensure that gaps are addressed.

The auditors reviewed the mock drills reports and supporting documentation to verify that action items identified for the mock drills have been accomplished. Records of the mock drills debrief and training sessions were also reviewed to verify the evaluation of drills considers the adequacy of training.
Records of emergency response training are documented in a database. These include training conducted by internal and external parties. Samples of records were reviewed and found to be complete. The name of the employee, the name of the trainer, the date of the training, the topics covered, and the result of the testing are maintained as part of the record files. Verification was through interview with training and process personnel and review of training records.

9. DIALOGUE: Engage in public consultation and disclosure.

Standards of Practice

9.1 Provide stakeholders the opportunity to communicate issues of concern.

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

Describe the basis for the Finding/Deficiencies Identified:

Pierina provides multiple opportunities to stakeholders to communicate issues of concern in different ways depending on the type of stakeholder. Before the COVID-19 pandemic in 2020, Pierina personnel visited frequently the nearby communities, had an information office at Jangas (now closed), organized guided tours to the mine, community workshops, gave the interested parties the opportunity to assist in the environmental monitoring carried out by the mine in areas outside the operation.

Pierina has a grievance mechanism to be able to receive, process, manage and resolve written or verbal complaints (currently by email or cellphone) and grievances in a culturally sensitive, timely and consistent manner. The complaints system in place has been maintained during the recertification period. This covers all items of complaint including cyanide related issues. The complaint tracking system shows the nature of the complaints and their current status.

The auditors reviewed the complaint tracking system for the recertification period, the Community Relations Management System Barrick Perú and presentation materials for workshops to explain use of cyanide.

9.2 Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

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

Describe the basis for the Finding/Deficiencies Identified:

Before the COVID-19 pandemic in 2020, the operation continued with training programs for local communities and with fairs alongside other public health campaigns and events as photographic exhibition and The Water Conservation Week, among others.

Due to the pandemic restriction to congregate, currently Pierina has established digital (electronic) means to interact with stakeholders and provide them with information, including cyanide, management practices and procedures. Among the electronic means for stakeholders to communicate and interact with the mine, are a cellphone number and email address announced outside the closed office at Jangas.

The records maintained by the Department of Communications and Public Relations show a diverse range of attendees including universities, schools, government officials and community representatives from around the country, before the pandemic. The auditors reviewed meeting records, site visit records, presentation materials and posters provided to the communities, and interviews with the community relations department.

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

The operation is: ■ in full compliance
□ in substantial compliance
□ not in compliance with Standard of Practice 9.3

Describe the basis for the Finding/Deficiencies Identified:

Pierina has produced and distributed leaflets on cyanide management and information on what Pierina is doing to achieve the new water quality standards.

In addition the operation has run, before the pandemic, a training program for local communities. Due to a degree of illiteracy in the local population the program uses images/drawings photos to explain.

Pierina utilizes a global website to share information on cyanide management practices and information as it relates to global operations. Information regarding Barrick's management

systems that are used to manage environmental, safety, health, and community relation topics are available on the internet.

Pierina has disseminated information on cyanide in verbal form in Spanish and Quechua as necessary at local trade shows and community meetings. Before the pandemics it was active a rolling program of site visits by community organizations, educational establishments and the general public where the use of cyanide in the gold extraction process, its dangers and how it is managed safely is discussed.

The auditors reviewed the bimonthly publication named “Communicating”, also reviewed brochures, articles in magazines, posters, a brochure and magazine article about the mine closure process, also saw flyers on controls required to handling cyanide and videos in both Spanish and Quechua describing the mine activities, including cyanide use.

Pierina has a legal obligation to report any cyanide related accidents and incidents to the Peruvian authorities and is also stated in the mine´s emergency response plan. This information is in the public domain and can be accessed by the public on demand. Pierina is required to report fatalities and loss of time incidents to the Peruvian Ministry of Energy and Mining (MEM), where it is then publically available via their website. The MEM website contains:

- Fatality Tables: date, mine, names, and causes of fatalities.
- Frequency and Severity Rates: incidents and accidents categorized by mild, incapacitating, and fatal, along with days lost, hours worked, and severity.

Barrick publishes a number of documents which report their safety, environmental and social performance, including annual sustainability reports, and Barrick Beyond Borders magazine. These are available on the company website and as hard copy at the operations. In addition the website contains detailed tables of data relating to environmental, health and safety and, social performance.

From the information on the Barrick Gold Corporation website, accessible to the public, Barrick makes available to the stakeholders different content that report the performance of Pierina mine, among others, in safety, health, environment, with their respective ratios, such as Quarterly Reports and Sustainability Reports.

It should be noted that this information is available at the following web address: https://www.barrick.com/English/sustainability/reports-and-policies/default.aspx

As reported by the Government Affairs Superintendent, in the event of any reportable incident, including those involving a spill or exposure to cyanide, the information will be available on the corporate website, and will be reported as indicated above.

During this certification period no cyanide related incident was experienced in the mine operation needing to be communicated to the authorities.