### ICMI Cyanide Code Gold Mining Recertification Audit

### **Summary Audit Report**

# Lagunas Norte Mine – Barrick Gold Corporation

#### La Libertad - Peru

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

2020 Audit Cycle



Av. El Derby 254, Piso 25 N° 2501 Edificio Lima Central Tower, Santiago de Surco Lima – Peru www.rdzconsulting.com

#### **Table of Contents**

Audito 1. F mar 1	or's Finding	9
	cyanide to the environment1  TRANSPORTATION: Protect communities and the environment during cyanide transport	
а		
	2.2 Require that cyanide transporters implement appropriate emergency response plans and capabilities, and employ adequate measures for cyanide management1	
han	HANDLING AND STORAGE: Protect workers and the environment during cyanide and storage1	2
а	B.1 Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices and quality control and quality assurance procedures, spiorevention and spill containment measures1	
n	3.2 Operate unloading, storage and mixing facilities using inspections, preventive naintenance and contingency plans to prevent or contain releases and control and espond to worker exposures1	3
	OPERATIONS Manage cyanide process solutions and waste streams to protect human alth and the environment1	4
4 tl	I.1 Implement management and operating systems designed to protect human health an he environment including contingency planning and inspection and preventive naintenance procedures	d
4	I.2 Introduce management and operating systems to minimize cyanide use, thereby miting concentrations of cyanide in mill tailings1	
	I.3 Implement a comprehensive water management program to protect against unintentional releases1	7
	I.4 Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions1	
	I.5 Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water1	
	l.6 Implement measures designed to manage seepage from cyanide facilities to protect he beneficial uses of ground water2	20
4	1.7 Provide spill prevention or containment measures for process tanks and pipelines2	20

Barrick Gold Corporation Lagunas Norte Mine





	4.8 Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specification	
	4.9 Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.	
	DECOMMISSIONING: Protect communities and the environment from cyanide through evelopment and implementation of decommissioning plans for cyanide facilities	.23 o
	5.2 Establish an assurance mechanism capable of fully funding cyanide-related decommissioning activities.	.24
6.	WORKER SAFETY: Protect workers' health and safety from exposure to cyanide	
	6.2 Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures	.26
	6.3 Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide	.28
	EMERGENCY RESPONSE: Protect communities and the environment through the evelopment of emergency response strategies and capabilities	
	7.2 Involve site personnel and stakeholders in the planning process	.32
	7.3 Designate appropriate personnel and commit necessary equipment and resources f emergency response.	
	7.4 Develop procedures for internal and external emergency notification and reporting	.34
	7.5 Incorporate into response plans monitoring elements and remediation measures that account for the additional hazards of using cyanide treatment chemicals	
	7.6 Periodically evaluate response procedures and capabilities and revise them as needed.	.35
	TRAINING: Train workers and emergency response personnel to manage cyanide in a afe and environmentally protective manner.  8.1 Train workers to understand the hazards associated with cyanide use.	
	8.2 Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment	.37
	8.3 Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide	.38
9.	DIALOGUE: Engage in public consultation and disclosure.  9.1 Provide stakeholders the opportunity to communicate issues of concern	
	9.2 Initiate dialogue describing cyanide management procedures and responsively address identified concerns.	.40

Barrick Gold Corporation Lagunas Norte Mine





9.3 Make appropriate operational	and environmenta	ıl information regardi	ng cyanide
available to stakeholders			40

Barrick Gold Corporation Lagunas Norte Mine





Mining Operation: Lagunas Norte Mine

Mine Owner: Barrick Gold Corporation

**Mine Operator**: Minera Barrick Misquichilca S.A.

Name of Responsible Manager: Jaime Zuñiga Ide, Care & Maintenance Manager

#### **Address and Contact Information:**

Minera Barrick Misquichilca S.A. Av. Manuel Olguín N° 327; Piso 12 Santiago de Surco Lima 33, Perú Email: jzuniga@barrick.com

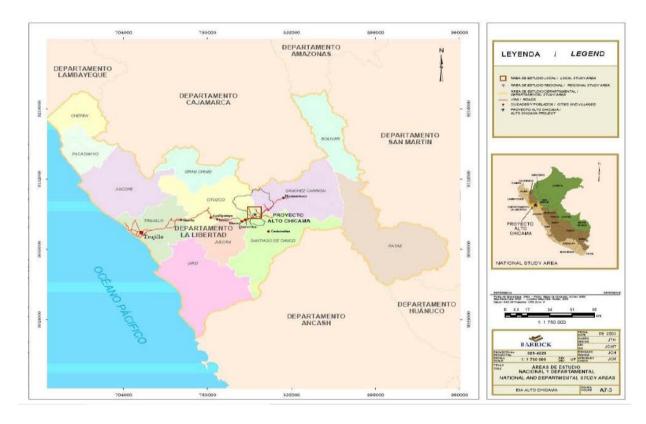
Tel. +511 612 4100

Barrick Gold Corporation Lagunas Norte Mine



#### Location and description of the operation

The location of the Lagunas Norte mine is presented in the picture below.



The Lagunas Norte Mine, operated by Barrick Gold Corporation's Peruvian wholly owned subsidiary Minera Barrick Misquichilca S.A. (MBM), is located in the Alto Chicama Mining District in north-central Peru (Province of Santiago de Chuco, District of Quiruvilca, Department of La Libertad), 140 kilometers east of the coastal city of Trujillo. The property is situated in the Peruvian Andes Mountains at an elevation of 4,000 to 4,260 meters above mean sea level and straddles the continental divide. The mine is accessed year round by road from Trujillo and Huamachuco. The climate in the project area is characterized by defined rainy and dry seasons. The rainy season extends from November to April when approximately 1.5 meter of rainfall occurs.

Lagunas Norte operations comprises an open pit mine, two waste rock storage areas, two geomembrane-lined heap leaching facilities, process and storm water pond system, acid rock drainage treatment plant, barren solution treatment plant using the INCO SO2 process, a Carbon in Column (CIC) plant and a Merrill Crowe processing plant to recover gold, silver and mercury as a by-product. 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 either the west or east storage areas designed specifically for this purpose.

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



Ore is placed on the heap leach facilities by truck. There are two heap leach facilities fully lined with geomembrane and drain by gravity to the Sedimentation Ponds 1 and 2. Once suspended solids settle, the pregnant leach solution is directed to the Pregnant Leaching Solution (PLS) Ponds 1 and 2, each of which is connected to an emergency overflow pond or Process Overflow Ponds (POP) that provide storage for extreme storms and drain down. Gold is recovered using conventional methods of heap leaching with dilute sodium cyanide solution for a 45-day leach cycle. The pregnant solution from PLS ponds is processed at the Merrill Crowe and CIC plants. The concentrated solution of the CIC plant (super pregnant solution) is sent to the Merrill Crowe plant for recovery. The precipitate obtained is then smelted to get Doré bars.

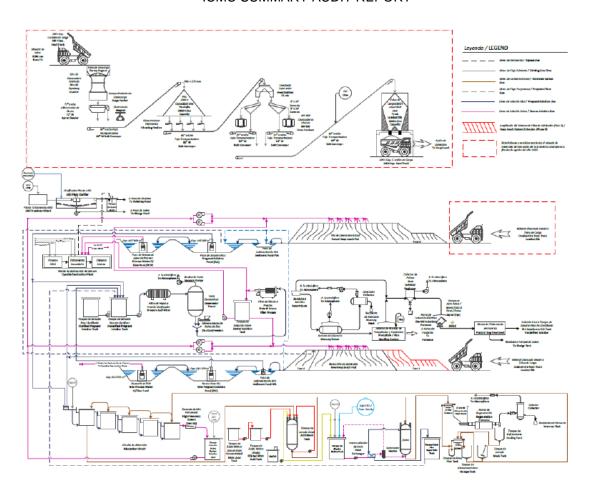
Lagunas Norte uses "raincoats" on the heap leach facilities to minimize infiltration of rainfall on inactive portions of the heap. The raincoats are high-density polyethylene (HDPE) geomembrane covers that convey clean precipitation to the storm water management system. The auxiliary facilities required 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.

On July 10<sup>th</sup>, 2019, Lagunas Norte communicated to Peruvian mining authorities that mining activities will cease at the end of August 2019. This includes auxiliary works and services associated with mining. Processing activities continues for the recovery of remaining gold in leach pads.

The Lagunas Norte mine ore processing flowsheet is presented below:

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor





Barrick Gold Corporation Lagunas Norte Mine





#### **Auditor's Finding**

The ICMI-approved Audit Team verified that the Lagunas Norte operation is in FULL COMPLIANCE with ICMI Cyanide Code requirements for Mining operations.

Lagunas Norte 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:	RDZ Consulting
Lead Auditor:	Luis (Tito) Campos
	E-mail: titocampos@smartaccess.us
Mining Technical Auditor:	Bruno Pizzorni
	E-mail: <u>bpizzorni73@gmail.com</u>
Date(s) of Audit:	Dec 14 <sup>th</sup> - 17 <sup>th</sup> , 2020

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.

Lagunas Norte Mine
Name of Operations

Signature of Lead Auditor

Dec 17th, 2020

Date

Barrick Gold Corporation Lagunas Norte Mine

Signature of Lead Auditor



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 Misquichilca has a current agreement with Orica to purchase solid sodium cyanide for Lagunas Norte Mine. The agreement requires that the cyanide producer has to be certified as being in compliance with the Code.

Cyanide purchased by Lagunas Norte is manufactured at a facility that is currently certified under the Code. Cyanide is produced at Orica's Yarwun Plant in Queensland, Australia.

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 packing, labeling, storage prior to shipment, routes selection and evaluation, storage at ports

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



of entry, interim loading, storage and unloading during shipment, transport to the operation and unloading at the mine site, safety and maintenance of the trucks throughout transport, task and safety training for transporters and handlers throughout transport, security and emergency response throughout transport.

Regarding addition of colorant dye to high strength liquid cyanide prior to delivery, the auditors reviewed a letter and email from Orica dated June 5, 2019, informing Lagunas Norte that in 2018, the ICMI announced the requirement of the use of colorant dye in high strength cyanide solutions at mining operations to provide quick and distinctive means of visual identification of sodium cyanide leaks or spills. Therefore, to support the mine operations and comply with ICMI's new requirements, colorant dye now is included in the full range of Orica's Sodium Cyanide products since May 2019.

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 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 also 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. 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 the International Cyanide Management Code (ICMC) certification and signatory status.

All cyanide transporters involved in Orica's cyanide supply chain to the mine site are currently Code certified companies:

- Orica Global Marine Supply Chain was last certified on January 16, 2018. It also includes the destination port of Callao, among others.
- Orica Latin America Supply Chain was last certified on January 31, 2018. It includes transportation of sodium cyanide within Peru, Argentina, and Colombia. Within Peru, transport is conducted by the certified transporter and warehouse 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.

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



Lagunas Norte 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 facilities for unloading, storing and mixing cyanide remain substantially unchanged from the previous recertification audit. Lagunas Norte receives solid sodium cyanide briquettes in one ton "bag in box" intermediate bulk container (IBC) plywood boxes. The cyanide unloading and storage area were designed by Tecnicas Metalicas Ingenieros in September 2005 following the overall project design criteria established by SNC-Lavalin in 2003. The design package includes foundation, concrete, and steel specifications. The cyanide mixing area is located inside the Merrill Crowe plant. The concrete at the Merrill Crowe plant was constructed according to Golder Associates engineering criteria and specifications, while the cyanide mixing and storage tanks were constructed by SNC-Lavalin. Lagunas Norte maintains design drawings stamped by a certified professional engineer, as-built drawings, and QA/QC records at the plant area.

The solid cyanide storage area is located in a dedicated facility located on competent concrete hardstanding, which is located far away from any offices, 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 along the four sidewalls. The storage area is dedicated to sodium cyanide storage only, with no other materials permitted to be stored. No storage of other materials was observed during the field inspection.

Inside the plant, the mixing and storage tanks are inside a separate, controlled-access room within the plant building, with limited ventilation. Access to the cyanide mixing area is strictly controlled and even trained individuals require specific approval from control room personnel prior to entering. The cyanide mixing area has two fixed HCN monitors Toxgards with visual and audible alarms to detect any HCN gases and evacuate the area if necessary. In addition, operators at the control room have handheld HCN monitors.

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



There are level indicators and high-level alarms installed in the mixing and cyanide storage tanks. These levels are continuously monitored from the process control room, which overlooks the mixing and storage area, to ensure it is operational. Arrangements remain unchanged since the previous recertification audit.

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. Mixing with incompatible materials is unlikely to occur. 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.

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:

Procedures for managing empty cyanide containers are described in OPR-ILN-062 "Treatment and disposal of cyanide bags and boxes". The auditors observed a cyanide mixing process and disposal of cyanide containers and verified that the procedure was followed at all times.

Lagunas Norte receives solid sodium cyanide briquettes in one ton "bag in box" intermediate bulk container (IBC) plywood boxes. Procedure OPR-ILN-062 "Treatment and disposal of cyanide bags and boxes" 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 bags and plastic materials are temporarily stored in the reagents storage area within the Merrill Crowe plant and then are transported by an authorized contractor to the leach pad. The cyanide bags and boxes are then disposed of in trenches located in inactive areas of the leach pad and buried.

Procedure OPR-ILN-065 "Cyanide preparation" 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. This practice was observed by the auditors during the field visit.

Lagunas Norte has procedure OPR-ILN-065 "Cyanide preparation" that 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. It also includes instructions for the prefill of the cyanide mixing tank with barren and caustic solution. The procedure includes a checklist for cyanide preparation that requires measuring pH levels,

Barrick Gold Corporation Lagunas Norte Mine

Signature of Lead Auditor



inspection of emergency showers and eye wash stations, inspection of HCN monitors, among other requirements for safe cyanide management.

Lagunas Norte has procedure FSC-PLN-005 "Transport, unloading, handling and storage of sodium cyanide" that provides instructions for the safe handling of sodium cyanide boxes including handling upon receipt, storage and transport 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. Procedure FSC-PLN-005 "Transport, unloading, handling and storage of sodium cyanide" limits stacking of cyanide containers to a maximum height of three per stack. This practice was also verified in the field.

Operators are required 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 at least three workers are present during the mixing activity. Cyanide preparation activities are also observed from the control room.

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

A cyanide mixing event was observed during the audit. The review indicated that Lagunas Norte 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:

Lagunas Norte has developed several procedures and instructives for the safe operation of cyanide facilities, including unloading, mixing and storage facilities, heap leach operations, Merrill Crowe and CIC plant operations, and cyanide detoxification. There are approximately 35 procedures and instructives related to cyanide management. In addition, Lagunas Norte has achieved ISO14001:2015 certification of its environmental management system in April 2019

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



and is valid for three years. All procedures and instructives include pictures of the tasks to be performed, a section related to PPE requirements, considerations of safety hazards and potential impacts on the environment. Procedures and instructives are reviewed and updated every two years to ensure they reflect current practices. Procedures were reviewed and found to be sufficiently detailed to enable safe operation.

Lagunas Norte has operations manuals, procedures and instructives that include critical parameters for the safe operation of cyanide facilities such as maximum operating levels for all the process ponds (i.e. PLS, POP, sediment ponds, raincoat ponds, acid rock drainage (ARD) and cyanide concentrations in underdrains; maximum cyanide concentration allowed in water discharges, which has been established at 0.1 mg/l Weak Acid Dissociable (WAD) Cyanide; the design storm events for solution ponds (100 and 500 years, 24-hour storm event) which are used in the Lagunas Norte water balance model; and pH levels in the process to be maintained above 9.8 to avoid generation of HCN gases.

There is a Management of Change (MoC) procedure issued from the corporate office that is used at all business units of the company. 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. The management of change process is used consistently at Lagunas Norte.

Lagunas Norte has implemented contingency procedures for heap leach facilities and process plants 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.

Lagunas Norte has developed and implemented an inspection program for cyanide facilities with frequencies that varies from daily, weekly, biweekly, monthly, quarterly and annually. Process Plant personnel has a monthly inspection program that includes inspections to leach pads facilities on a weekly basis, and equipment inspections (pumps, valves, tanks, among others) at the Merrill Crowe and CIC plants on a monthly basis. In addition, Process personnel conducts routine inspections of the plants and related infrastructure at the beginning of every shift, including emergency showers and eye wash stations. The Maintenance area also conducts inspections to cyanide facilities as part of their preventative maintenance program that complements the Process area inspection program. The Environmental department has an annual inspection program which frequencies of inspections varies depending on the criticality of the facility. The environmental inspections were temporarily suspended in 2020 due to lack of personnel related to COVID-19 restrictions, but were resumed in November 2020. Ponds and dams are inspected annually by a third party consultant. Lagunas Norte personnel inspect for wildlife mortalities on daily basis as part of their routine activities. 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

Barrick Gold Corporation Lagunas Norte Mine

Signature of Lead Auditor



parameters. The auditors reviewed inspections records for the last 3 years and verified that inspections are conducted on a consistent manner.

The auditors conducted a field inspection during the site visit and verified the condition of tanks, secondary containments, pipelines, pumps, valves, water diversions, ponds freeboard and heap leach facilities. These inspections also included cyanide unloading, mixing and storage facilities. Records of the inspections conducted by Lagunas Norte to cyanide facilities were reviewed by the auditors and were found to be complete.

Lagunas Norte 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 and CIC plants or leach pad areas are managed by the Maintenance area. These corrective actions are managed using the Oracle Asset Management software, where work orders are tracked, prioritized, planned and closed. 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. Lagunas Norte has achieved ISO14001:2015 recertification of its environmental management system in April 2019, which guarantee the retention of documents and records.

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.

Lagunas Norte facilities require between 11 to 12 MW of power that is provided from the national grid. In case of power outages, the power requirements to run critical equipment and maintain the water balance is 9.5 MW. Lagunas Norte has nine emergency power generators of 1.2 MW each of them, with a total capacity of 10.8 MW of backup power. This emergency power system is connected to the critical equipment identified that need to be running to prevent any release to the environment in case of a prolonged power outage. Lagunas Norte 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 monthly basis for fuel level, lighting, heating, and are also start tested.

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:

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



Not applicable to Lagunas Norte 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:

Lagunas Norte has a positive water balance, with an average annual precipitation of 1450 mm. 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. An external consulting company (Healthy Products SAC - Ingenieria) updates the climate data on a monthly basis and calibrates the model.

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 "Review and update of water balance model at Lagunas Norte", dated December 2020, prepared by Healthy Products SAC – Ingenieria.

The document "Review and update of water balance model at Lagunas Norte", dated December 2020, describes the solution rates applied to the leach pads, which is 14 liters/hour/m² and considers a 500-year/24-hour storm event of 68.4 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.

There is a weather station at Lagunas Norte (ESTM01) that collects rainfall data since 2002. The ESTM01 collects meteorological data such as precipitation, evaporation, temperature, wind speed and direction, solar radiation, atmospheric pressure, and relative humidity. Data from this station and from the Shorey weather station in Quiruvilca, which is located in the vicinity of the mine operation (records since 1965), were analyzed for use in estimating the site design precipitation. The information from both weather stations (ESTM01 and Shorey) is collected by the environmental area, and once validated, is included in the water balance model every month for calibration purposes. The auditors reviewed on-site meteorological monitoring data and found them to be complete.

The water balance includes the following factors: solution application rates; precipitation, evaporation and seepage rates; retention of water in the ore (estimated at 2-3%), raincoats on the heap leach facilities; potential power outages; and water treatment systems for surface

Barrick Gold Corporation Lagunas Norte Mine

Signature of Lead Auditor



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 nine 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 600 m3/hr. Water from the cyanide destruction system is then directed to the reverse osmosis plant for subsequent discharge from sediment pond #4 into Quebrada Laguna Negra. To reduce water treatment needs, Lagunas Norte has installed raincoats on the heap leach facilities to minimize infiltration of rainfall on inactive portions of the heap.

Lagunas Norte conducts weekly inspections and monitoring activities to heap leach pads and ponds to ensure they are operated according to the design criteria and requirements of the Quebrada Laguna Negra operations manual. This frequency is considered adequate considering the high precipitation rates in the area. Inspections include liner integrity, Leak Collection Recovery System (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.

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:

During the last 3 years, Lagunas Norte has been successful at preventing wildlife mortalities related to cyanide facilities.

Lagunas Norte has implemented bird balls to restrict access of wildlife to open waters where WAD cyanide exceeds 50 mg/l, which is the case at the PLS1, PLS 2 and POP1. The auditors verified that the bird balls were effectively covering all water surfaces of the ponds. POP2 pond does not have bird balls as WAD cyanide concentrations are well below 50 mg/l. In addition, there is netting on smaller ponds that can contain process solution such as the plant emergency pond, sediment ponds in Phase 5 of Leach Pad 2 and sediment ponds of Leach Pad 1. The auditors verified that the netting at these ponds were in good condition. All these ponds are

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



fenced to prevent access of livestock. The process plant is also fenced. The secondary containment of the process pipelines that run from the leach pad to the ponds and back to the plant were free of process solution during the audit.

Cyanide application rates at the leach pads have decreased in the last 3 years due to operational needs and the current care and maintenance stage, as no new ore has been placed on the leach pads since mid-2019. Lagunas Norte analyzes free cyanide on a daily basis at the PLS ponds and WAD cyanide at the POP ponds on a weekly basis. For those ponds that can contain WAD cyanide solution above 50 mg/l, Lagunas Norte has implemented bird balls or netting to prevent wildlife mortalities.

Instructive OPR-ILN-121 "Measurement and control of irrigation density on leach pad" requires daily inspections to check for ponding and the required steps to handle surface ponding, including manual or equipment excavation to aid drainage and improve infiltration. No wildlife mortalities associated to cyanide have been reported during the recertification period.

In addition, Instructive OPR-ILN-276 "Startup of leaching in slopes" indicates that leaching should occur with a gradient towards the center of the leach pad to avoid overspray of solution and/or saturation of leach material and potential slides outside the leach pad area.

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:

Lagunas Norte discharges process treated water to Quebrada Laguna Negra, a tributary to the Rio Chuyugual from the East Sediment Pond #4. Point QNSP-20 is located at the sediment pond #4 discharge. The maximum cyanide concentration allowed in water discharges has been established at 0.1 mg/l WAD Cyanide. The standard in receiving waters downstream of the point of discharge is also 0.1 mg/l WAD cyanide. Monitoring of WAD cyanide at point QNSP-20 is conducted on a biweekly basis; concentrations of WAD cyanide were reviewed for the period between August 2017 and December 2020 and the maximum value reported was 0.039 mg/l with an average value of 0.0086 mg/l WAD cyanide, which is well below 0.5 mg/l.

Lagunas Norte has to comply with the Peruvian General Water Law (LGA) at monitoring station SWQN-40, located downstream of the point of discharge from sediment pond #4. In addition, SWCH-30 and SWCH-38 upstream and downstream respectively of the confluence of the Quebrada Laguna Negra and Río Chuyugual are also monitored. Concentrations of free cyanide were reviewed for the period between August 2017 and December 2020. The concentration of free cyanide did not exceed the 0.022 mg/l standard at point SWQN-40. The maximum free cyanide value recorded in this period was 0.012 mg/l. Monitoring at SWQN-40 is conducted on a monthly basis.

Barrick Gold Corporation Lagunas Norte Mine

Signature of Lead Auditor



Lagunas Norte 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 SWQN-40 due to direct discharges to the Quebrada Laguna Negra. Water collected from the underdrains on leach pads and ponds do not discharge directly to the environment. 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 sediment pond #4 or pond ARD#2.

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

□ not in compliance with Standard of Practice 4.6

Discuss the basis for the Finding/Deficiencies Identified:

☐ in substantial compliance

There is no designated down gradient beneficial use, nor any actual point of groundwater use, nor any applicable groundwater standard. Regardless of that, Lagunas Norte has taken measures to manage seepage from 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 and CIC Plants, among others.

Lagunas Norte has a groundwater monitoring network that analyses for WAD cyanide concentrations. There are three groundwater monitoring wells downgradient of cyanide facilities (GWLN-15, GWLN-16, and GWLN-17). Data collected for the period between August 2017 and December 2020 indicate no detection levels for cyanide species (WAD cyanide values < 0.001 mg/l).

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) and the CIC plant (barren and elution 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

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



larger secondary containment of the Merrill Crowe plant. The Merrill Crowe and CIC plant areas are 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 trench drains, where any spills or rainwater will be pumped back to the process.

Lagunas Norte has not changed tanks or secondary containments since the last audit in 2017. 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. The secondary containment areas are constructed of reinforced concrete. In some cases, polycarbonate containment walls are placed to account for pressurized stream of released solution that could shoot over the secondary containment boundary.

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 Plant Emergency Pond has a pump to send any contained solution to the CIC barren tank and from there is sent to the leach pad.

Lagunas Norte 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. Instructive OPR-ILN-107 "Management of water from raincoats" details the process to sample water collected in the raincoats ponds prior to discharge to the environment.

Cyanide pipelines at Lagunas Norte 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. In some cases, polycarbonate containment walls are placed at the CIC plant to account for pressurized stream of released solution that could shoot over the secondary containment boundary. There are no buried pipelines in the plant area. Pipelines connecting the leach pads, process plant, PLS and POP ponds are lined with HDPE through all its extension to convey any leaks to larger containment areas. In addition, Lagunas Norte has installed protection devices (metal boxes) along the pipelines to prevent any high pressure releases outside of containment.

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 is compatible with high pH cyanide solutions.

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

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



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 (QA/QC) programs have been implemented du construction of cyanide facilities at Lagunas Norte. The mine maintains files with QA/QC for the facilities constructed before the last recertification audit in 2017, which was f compliance with the Code requirements, and has implemented QA/QC programs for new facilities built during this recertification period.	reports ound in
New facilities constructed since the 2017 audit include an expansion of the leach had #3	2 Phase

New facilities constructed since the 2017 audit include an expansion of the leach pad #2 Phase 7-A3, which was commissioned in February 2018. The new facility was built and tested following a quality control and quality assurance program conducted by COANSA. The auditors reviewed the QA/QC documentation for the foundation and geomembrane installation, as well as as-built drawings properly stamped and signed off by the engineer of record.

As mentioned in the previous recertification audit report, the QA/QC 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.

The auditors reviewed records of construction reports, including as-built drawings for the new cyanide facilities (i.e. expansion of the leach pad #2 Phase 7-A3). As-built drawings were properly stamped by a qualified engineer. As mentioned in previous recertification audit reports, construction of all other cyanide facilities were reviewed by reputable engineering companies.

Qualified engineering companies performed the QA/QC inspections and reviews during construction of the cyanide facilities at Lagunas Norte, 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.

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:

Lagunas Norte uses a thirds part vendor (ALS Peru) since May 2019 for monitoring activities at the mine site. Prior to that date, the Environmental department was in charge of monitoring activities. ALS has a written procedure called "Water sampling, preservation and transport" dated

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



July 2020, that provides a general overview their services. This procedure provides details related to sampling techniques, duplicate and blank samples, sampling equipment, calibration of field equipment, preservation techniques, and chain of custody procedures. Lagunas Norte communicates to ALS Peru the monitoring program on a monthly basis including sample locations and cyanide species and other parameters to be analyzed.

The ALS Peru monitoring procedure was developed by Luis Marino Pelaez, who has more than 10 years of experience in water quality matters and has experience working at different labs in Lima.

Lagunas Norte communicates to ALS Peru the monitoring program on a monthly basis including sample locations, frequencies, and cyanide species and other parameters to be analyzed. ALS Peru has a procedure that details preservation techniques, equipment calibration, quality control, chain of custody procedures, and shipping instructions. Water samples are sent for analysis to ALS Peru lab in Lima. Examples of completed chain-of-custody records showing proper use of the forms were reviewed. Maps showing the monitoring locations with respect to cyanide facilities were also reviewed by the auditors.

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

During the last 3 years, Lagunas Norte has been successful at preventing wildlife mortalities related to cyanide facilities. Although WAD cyanide values at the PLS 1 and 2, and POP 1 ponds are above the recommended value of 50 mg/l, the controls in place have shown to be effective. The leach pad is inspected daily for wildlife mortalities.

Lagunas Norte has an annual monitoring program that is communicated on a monthly basis to ALS Peru including sample locations, frequencies, and cyanide species and other parameters to be analyzed. The monitoring program includes sampling frequencies that varies between weekly, biweekly, 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

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



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:

Lagunas Norte has developed the Mine Closure Plan (MCP) in accordance with local regulations requirements of the Peruvian Ministry of Energy and Mines. 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 document considers decommissioning strategies for the cyanide facilities and treatment systems which includes heap leach pads, process ponds and channels, Merrill Crowe plant; CIC plant and cyanide destruction plant, event ponds and seepage collection system.

A conceptual decommissioning schedule has been developed with tentative timeframes and activities associated with decommissioning activities. These activities are developed and updated, in coordination with the Mine Closure Superintendence, when changes to the facilities and/or mine plan occur, so the schedule can reflect any impacts including duration and sequencing of activities. The Mine Closure Superintendent is accountable for maintaining this schedule in alignment with the MCP.

The MCP is updated by the Mine Closure Superintendent as required due to changes in operating conditions, facilities, and due to legal requirements of Peruvian regulations, which requires that the MCP is updated 3 years after its approval, and every 5 years thereafter. The auditors reviewed the third modification of the MCP approved by the Ministry of Energy and Mines (MEM), covering the period 2017 - 2020.

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 MCP outlines the cost for full implementation of the site-wide closure and reclamation plan tor the current and planned facilities and activities, including cyanide facilities. These costs are reviewed periodically and updates are made as required. Updates to the MCP are made to account for changes in plant layout, disturbance areas, cost variables, and resource availability. The decommissioning and cyanide decontamination estimates provided were generated as a function of the full fund third party implementation costs.

Barrick Gold Corporation Lagunas Norte Mine / 7 .



Lagunas Norte has updated its internal mine closure cost estimates annually. The auditors reviewed updated and approved MCP cost estimates for 2020.

As required by the Peruvian Regulation for MCP's, the MEM approved as financial mechanism, the closure bonds issued by different banks for Lagunas Norte closure activities, covering years 2017 through to 2020, which were reviewed by the auditors.

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:

Lagunas Norte 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.

The procedures have been developed for cyanide storage, preparation area, Merrill Crowe plant, CIC plant, cyanide destruction plant, heap leach pads and process ponds, among others. 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. Procedures were reviewed and found to be sufficiently detailed to enable safe operation and to minimize worker exposure.

All Lagunas Norte SOPs, work instructives 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. 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 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.

Lagunas Norte 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

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



do not adversely impact on health and safety, the environment, or communities. The procedure addresses, among others, the current and potential controls to minimize adverse conditions and promote continuous improvement associated with change management. The auditor reviewed several 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.

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. In addition, Lagunas Norte has implemented an intranet-based suggestion box, through which supervisors receive input from workers.

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:

Lagunas Norte has determined that the minimal pH control for mixing solutions is 9.8 to prevent the evolution of HCN gas. The work instructive Preparation of High Strength Cyanide Solution, and the SOP 'Preparation of Cyanide', provides the procedure to verify that the pH of the barren solution is greater than 9.8 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. A visual alarm is set up at 9.8 in the plant control room. Additionally, pH levels are measured manually at the press filters (barren), barren makeup tank and leach pad on every shift (every 12 hours). Lime is added at the Barren Tank and at the crushing facility to maintain the pH level.

The operation 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 as 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.

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



Lagunas Norte has established a number of high risk areas where exposure to HCN gas may occur, including areas within the cyanide preparation room, the Merrill Crowe plant and tanks, CIC plant, maintenance area and refinery filter presses, among others. SOPs detail the appropriate PPE that is required in each area. Fixed HCN gas monitors are installed in these areas, workers are also required to wear personal HCN monitors in these areas. The operation undertakes annually HCN gas measurement to assess operator's exposure to HCN at areas where workers may be exposed to cyanide. The auditors reviewed HCN survey reports recorded during the recertification period. Measured HCN levels were generally below 0.3 ppm, with isolated peaks of 1.4 and 2.5 ppm.

HCN fixed and portable monitors are calibrated on a regular basis and records are kept for at least one year. The calibration frequency of the cyanide monitoring equipment meets the frequency recommended by the manufacturer. The mine calibrates and maintains fixed monitors every 15 days according to the work instruction HCN Monitor Calibration, which includes the frequency requirements. Work orders are emitted monthly by the preventive maintenance program in Oracle software The maintenance program automatically generates a work request.

Portable HCN detectors are maintained and calibrated on an annual basis by an external contractor, excepting the portable monitors at the cyanide mixing area which are calibrated by the bump test every time they are going to prepare cyanide solution.

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. Warning signs are posted in Spanish, the language of the workforce.

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.

The areas for cyanide unloading, mixing, cyanide warehouse, CIC Plant and process plant area 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 by personnel of the Process Area who is responsible for 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.

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



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.

Lagunas Norte 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. There are binders containing SDS and first aid procedures for cyanide safety in all areas where cyanide is stored, handled and managed and in the medical clinic. All materials are written in Spanish.

Lagunas Norte uses the TapRooT® systematic process to find and fix the root causes of audits/assessments, precursor incidents, and major accidents. The system is 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 system allows Lagunas Norte and Barrick to evaluate any potential trends of incidents and determine if changes are required in the operation's programs and procedures. The Accident Investigation Policy 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.

Lagunas Norte also uses the Responsibility Incident Management System (RIMS) procedure to develop and implement follow up action to cyanide incidents. RIMS requires a formal close out of incident by safety personnel or the supervisor. At the time of the field audit, the RIMS report platform was migrating from Intelex safety hazard reporting software to IsoMetrix, a supplier of integrated software for governance, risk, and compliance. Verification was by interview with process, safety and environmental personnel and review of a cyanide incident investigation report.

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:

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



Lagunas Norte has made available water, oxygen, resuscitators (both automatic and manual external defibrillators), radios, telephones, and alarms in critical areas. One first aid kit is located in each of the following areas: Merrill Crowe control room, chemical - metallurgical lab, refinery and CIC Plant. Antidote kits for cyanide specific treatment are at the medical center El Sauco (4 kits) and at Topico Mina medical center (3 kits). The antidote kits at the medical centers 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. 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. 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 sound 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.

Lagunas Norte 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 on 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.

Cyanide first aid equipment (oxygen) at the Control Room is inspected prior to a cyanide solution preparation event. Antidote expiration dates and oxygen tank pressures were checked during the audit. All antidote kits were within expiration date and oxygen tanks were fully pressurized.

Lagunas Norte 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 guidelines 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. 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.

To provide first aid and medical assistance to workers exposed to cyanide, Lagunas Norte has two onsite medical facilities (one for accidents and cyanide exposure treatment - Topico Mina clinic), and one for recovery (El Sauco medical center). The Topico Mina clinic is located near the process area and is provides first response to cyanide exposure incidents. El Sauco medical center is located at the mine camp and receives cyanide victims after they have been stabilized. First aids emergency response equipment include two fully equipped ambulances, one for each medical center. The medical facilities are staffed by 2 physicians, 4 paramedics and 4 nurses. Two physicians are onsite at all times along with 2 paramedics and 2 nurses. These medical

Barrick Gold Corporation Lagunas Norte Mine

Signature of Lead Auditor



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 Emergency Response Team (ERT) and dedicated medical team to effectively respond to cyanide and other incidents at the site. In addition to ERT and medical team personnel, Lagunas Norte 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 Topico Mina clinic 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 one of the ambulances maintained at the medical centers to Trujillo city. The SOP entitled 'Patient Transfer' 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 transport time is three to four hours by road to these off-site facilities. The cyanide antidote will be transported along with the patient to the clinic.

If required, Lagunas Norte 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. Lagunas Norte has an airstrip located outside of the mine property to facilitate air evacuation.

Lagunas Norte has established formalized arrangements with medical facilities regarding the potential to treat patients that have been exposed to cyanide. Lagunas Norte 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. Lagunas Norte 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 personal checks that external medical centers have an intensive care unit. During the month of November 2020, the San Pablo Clinic, the Regional Teaching Hospital and 2 other hospitals, all in Trujillo were visited. Records of the visits are kept. The San Pablo Clinic has a specialty in emergency and disaster care.

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.

Barrick Gold Corporation Lagunas Norte Mine

Signature of Lead Auditor



In all cases Lagunas Norte 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 releas	ses.
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:

Lagunas Norte has developed several plans and procedures that address potential accidental releases of cyanide. Plans include the Cyanide Management Emergency Preparedness and Response Plan, the General Emergency Plan (the Plan), the Quebrada Laguna Negra Operating Manual, the Chuyugual River Basin Evacuation Plan, Pre Plans and task specific SOPs. 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.

Lagunas Norte 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. The Cyanide Management Emergency Preparedness and Response Plan, the General Emergency Plan, Pre Plans, SOPs and the Quebrada Laguna Negra Operating Manual address site-specific circumstances and responses for potential onsite release scenarios that may reasonably be expected to occur in a realistic manner and with an appropriate degree of specificity.

The Plans describe actions for an on-site release of HCN in the various process areas, it includes transportation accidents, releases during unloading and mixing, releases during fires and explosions, pipe, valve and tank ruptures, overtopping of ponds and impoundments, power outages and pump failures, uncontrolled seepage, failure of cyanide destruction systems, failure of heap leach facilities and other cyanide facilities

The cyanide supplier for Lagunas Norte is Orica. Orica contracts DCR for terrestrial cyanide transport. Both companies have been certified as fully compliant with the Code. Lagunas Norte 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

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



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. Lagunas Norte, Orica and DCR have defined responsibilities for transportation related emergencies.

The General Emergency Plan and associated Pre Plans and procedures appropriately address emergency response requirements specific to Lagunas Norte. The site has adequate secondary containment to prevent offsite cyanide releases. The General Emergency Plan includes emergency procedures for Lagunas Norte personnel. This plan and the Pre 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 Pre Plans also include evacuation procedures. The 'Chuyugual River Basin Evacuation Plan' 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:

Lagunas Norte solicits the input of its workforce in its emergency response planning process. The General Emergency Plan is updated once per year. No outside stakeholders have been involved on the development of the plan since they do not have designated responsibilities under the plan. Lagunas Norte has established formalized arrangements with 3 off-site medical facilities regarding the potential to treat patients that have been exposed to cyanide. They also solicits the input of its workforce in the cyanide response planning through safety meetings and mock drills. The workforce participates in the annual risk evaluations. Another opportunity they have to express their opinion is during the emergency response plan. The mine has workers representatives in the Health Safety (H&S) Joint Committee, which is a legal requirement in Peru, through which Barrick receive input from workers. Verification included review of the General Emergency Plan, safety meeting records, mock drill reports and intranet suggestion forms where cyanide topics were discussed.

Several communities are located close to the mine. Lagunas Norte has various social engagement programs that allow communication and feedback between communities, stakeholders and the mine. One mechanism that has recently successfully developed the mine is that of guided visits to the mine, which are offered to the inhabitants of the surrounding communities. During these guided tours the mine dedicates time to explain to them the emergency response plan and the grievance and complaint mechanism. During the recertification period, between 10 and 15 visits to the mine were conducted every year, each of them with about 20 community participants. During these visits, Lagunas Norte also provided printed information and talks on various topics, where the participants have the opportunity to

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



provide feedback to the mine on topics of their concern. During these programs Lagunas Norte provides information on the process, cyanide risks and use.

In addition to the guided visits to the mine, Lagunas Norte has various social engagement programs that allow communication and feedback between communities, stakeholders and the mine. Lagunas Norte also provides training on hazardous material and on the Chuyugual Basin Emergency Plan to communities and the Highway Patrol, located along the route between Trujillo and the mine site.

During these programs, Lagunas Norte provides information on the process, cyanide risks and use. The flyer called 'Cyanide Management at Lagunas Norte Mine' is provided during the training sessions.

Lagunas Norte has on-site capabilities for fire-fighting, medical emergency, and hazmat cleanup. According to site personnel and given the location of this mine, these emergency response capabilities are the best available in the area. Lagunas Norte will take full responsibility for response to a cyanide release. Lagunas Norte has established formalized arrangements with offsite medical facilities regarding the potential to treat patients that have been exposed to cyanide. Lagunas Norte has the policy to stabilize victims onsite prior to transferring to off- site facilities. Therefore, the off-site facilities do not necessarily treat victims directly for cyanide exposure.

Although Lagunas Norte General Emergency Plan does not designate any responsibilities to offsite responders and communities, during the guided visits to the mine, the locals have opportunity to learn firsthand about the emergency response plans, and also regarding the evacuation plan for nearby communities in case of a cyanide incident requiring evacuation.

The mock drills completed to date at the mine have not involved external stakeholders. However, the plan includes current contact information for notifying regulatory agencies such as OSINERGMIN, General Directorate of Environmental Health (DIGESA), Ministry of Energy and Mines, Civil Defense, Labor Ministry, offsite medical facilities, the media, and other stakeholders.

Lagunas Norte would maintain responsibility for emergency response activities within the communities if required. Local medical, fire and police services will coordinate with the mine's personnel in the event their response is required. Local agencies (e.g. Fire and Police) have a statutory responsibility to assist with notification and mobilization of people.

7.3	Designate	appropriate	personnel	and	commit	necessary	equipment	and	resources	tor
eme	ergency resp	ponse.								

The operation is: ■ in t	full compliance
. □ in	substantial compliance
□ no	t in compliance with Standard of Practice 7.3
. Describe the basis for	the Finding/Deficiencies Identified:

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



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. The Plan has a list of onsite emergency personnel including First Responders and Brigade Members (first aid, firefighting and hazmat). It details the training required for the Brigade Members. Training includes advanced first aid (cyanide exposure, locations of cyanide antidote kits, medical oxygen); Hazardous Materials Level I, II, and III; confined spaces; firefighting and others. Verification was by interview with emergency response personnel and review of the General Emergency Plan and training records.

The Plan includes office and 24-our cell phone numbers for the Brigade Members. Lagunas Norte control center also notifies on a weekly basis updated information of emergency response personnel. This information includes name, address, phone number, working area, room number and shift. It specifies duties and responsibilities of the Incident Commander including specific duties and responsibilities for the human resources, equipment, material and supplies, and communication teams. The Plan has a list of emergency response equipment for each area where cyanide is used and for the emergency response vehicles.

All emergency equipment and supplies are inspected on a regular basis by the Emergency Response and Safety personnel. Monthly inspection records for the first aid and antidote kits and weekly inspection records for the Hazmat equipment were reviewed to verify compliance.

Lagunas Norte does not use off-site responders for on-site emergencies. The mine has established formalized arrangements with off-site medical facilities regarding the potential to treat patients that have been exposed to cyanide. Lagunas Norte has the policy to stabilize victims on-site prior to transferring to off-site facilities. Therefore, the off-site facilities do not necessarily treat victims directly for cyanide exposure. Lagunas Norte has determined that the facilities have adequate, qualified staff, equipment and expertise to respond effectively.

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 Plan includes procedures and current contact information to notify management, regulatory agencies, cyanide supplier and transporter (Orica and DCR), National Police, off-site medical facilities, the media, and other stakeholders. In addition both the Plan and the Chuyugual River Basin Evacuation Plan include communication procedures as well as contact information for community representatives in the nearby areas. Media communication procedures are also included in the Plan.

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



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:

The Plan and the Spill Management SOP indicate that dry cyanide spills are to be covered with an impermeable plastic and shoveled and/or swept into a drum or suitable container, thus keeping the spilled material dry. 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, if necessary, to minimize the extent of the release and prevent it from reaching drainage systems. The spill area must be flushed with a 12% dilute solution of sodium hypochlorite which, as stated in the spill management procedure and confirmed during the audit, is stored in the emergency response truck for hazardous materials parked in an area adjacent to the mine's medical center. The procedure describes how it is to be prepared to the appropriate concentration.

The 'Cyanide Solution Spill outside the Process Plant' SOP and related procedures require cyanide contaminated soils to be disposed of in the heap leach facility. Spill clean-up materials such as gloves, Tyvek® suits and other equipment are to be disposed separately from the soils, stored and hauled by a certified hazardous waste carrier.

Lagunas Norte uses bottled water for its mine site drinking water supply. There are no community or resident water supplies that would be at risk and potentially require an alternative water supply.

The 'Cyanide Solution Spill outside the Process Plant' SOP prohibits the use of sodium hypochlorite or other chemicals to treat cyanide that has been released into surface waters.

The 'Spill Management' SOP and the 'Water and Soil Monitoring' SOP address the potential need for environmental monitoring to identify the extent and effect of a cyanide release. The necessary monitoring activities will be conducted based on the procedures described in the 'Water and Soil Monitoring' SOP and the 'Monitoring of Cyanide in Soil in an Emergency Case' SOP, that include sampling methodologies, parameters and, where practical, possible sampling locations.

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:

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



The Plan is reviewed annually and following mock drills and actual incidents as needed. It 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 since the Initial Certification Audit. As during this recertification period the Plan was not activated due cyanide-related incidents, no review was performed to it due to this reason.

Lagunas Norte 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. Records of these drills are kept with the Emergency Response Department and were reviewed. The mine 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. Records of mock drill debriefs were also reviewed.

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:

All personnel and visitors to the site attend a site induction training which discusses cyanide hazards present on the site. 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. Lagunas Norte has included cyanide management requirements in several training courses. The level of detail and depth of these training courses depends on the type of personnel being trained. The general induction which is provided to all workers, contractors and visitors includes a section about cyanide management. This was verified during the general induction training received by the auditor upon arrival to site.

Lagunas Norte requires all eligible employees to have refresher training in Cyanide Awareness every year. Refreshment training needs is monitored by means of the Training Matrix. Training database is checked at least once a week to identify employees due for refreshment training. A monthly training schedule is developed and distributed to department heads so they can line up their people for training.

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

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



electronic version stored. Records identify the trainer, trainee, topics covered, date and sign off sheet.

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 that work in the plant must undergo training prior to being allowed to work at the process plant. Prerequisite training includes site induction, plant induction, plant general/ specific orientation and safety awareness.. In addition, after successful completion of these training sessions, operators are assigned to a specific circuit and work under the direction of a competent operator until they have been deemed competent to work without direct supervision.

Formal training in working procedures is given in cyanide-related tasks, including cyanide unloading and storage, preparation, production and maintenance. Determination of competency is based on test score and observations by qualified and/or experienced plant operators and/or maintenance personnel.

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.

Trainers at Lagunas Norte have industry experience and have been certified as trainers. 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.

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.

Lagunas Norte 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.

To evaluate the effectiveness of task specific training related to cyanide, tests are usually taken after a classroom training session while planned task observations are conducted by the

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



supervisor of the trainee after on-the-job training sessions. For classroom training, written tests are developed and suitable pass rates are established for personnel taking the exam. Test scores are then recorded in employee's training records with a "Pass/Fail" designation.

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.

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, Pre Plans, Cyanide Code, Quebrada Laguna Negra Operating Manual, spill management, equipment decontamination and plant emergency stop, among others.

Process plant first responders and ERT personnel are trained in cyanide first aid, decontamination and cleanup procedures. To supplement the training program, personnel are routinely involved in drills to test their retention of emergency response. The mine provides first aid training and emergency procedures. First responders and ERT members undergo periodic refresher training exercises to ensure they are able and ready to respond to various scenarios across the plant.

The operation has a fulltime Emergency Response Team (ERT) trained to the Laguna Norte emergency response requirements. All the Emergency Response Team members are trained in the use of necessary response equipment. In addition, Process Plant responders receive communications and training on their roles relating to their role 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.

Lagunas Norte has onsite emergency responders (firefighting, hazmat, first response) and will not be using off-site emergency responders, because there are not available in the area. Lagunas Norte has established formalized arrangements with 3 off-site medical facilities (The Regional Hospital in Trujillo, Peruvian American Clinic and Sanchez Ferrer Clinic) regarding the potential to treat patients that have been exposed to cyanide. The site has the policy to stabilize victims on-site prior to transferring to off-site facilities. Therefore, the off-site facilities do not

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



necessarily treat victims directly for cyanide exposure. Lagunas Norte has determined that the facilities have adequate, qualified staff, equipment and expertise to respond effectively.

Refresher training for cyanide events is conducted as part of the site training and mock drill programs. Training requirements from the training matrix are routinely monitored and refresher training is scheduled as required. Lagunas Norte personnel receive annual specific and general refresher training. Training topics include Cyanide Code, cyanide procedures, Quebrada Laguna Negra Operating Manual, cyanide risks, cyanide kit, General Emergency Plan, and Pre Plans. Training records were reviewed for the recertification period. Test results and follow up measures are indicated for each person.

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 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.

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

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:

Lagunas Norte provides the opportunity for stakeholders to communicate issues of concern in different ways depending on the type of stakeholder. The operation has developed the SOP for

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



External Communications and a community procedure plan with a variety of activities and programs to engage community members and other external stakeholders on a regular basis.

These programs include community information centers, routine face-to-face meetings/ engagements, complaints and grievances, mine site tours, company website, media relations team and communications. Communication engagement meetings are targeted at groups identified by stakeholder mapping activities. The program provides stakeholders with the opportunity to share and discuss cyanide concerns.

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:

Lagunas Norte manages opportunities to interact with stakeholders and provide information to them under the SOP for External Communications. The mine provides these opportunities via the site visits, and training for local residents in health, safety, and environment issues.

Lagunas Norte shares information with communities about the company's responsible management practices and offers an overview of the cyanide facilities and programs during site tours. Stakeholder concerns or complaints identified via tours, meetings, community information centers or other means are logged in the stakeholder management database, where, these concerns are reviewed, evaluated and responses are provided to concerned persons and/or groups.

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:

Lagunas Norte distributes the following pamphlets and bulletins to local residents to provide information regarding cyanide management: How We Manage Cyanide in the Lagunas Norte Mine; How We Conduct Our Mineral Exploration; How We Produce Gold in Lagunas Norte; and Citizen Participation Process Bulletins. Lagunas Norte also regularly distributes press releases to newspapers and magazines that discuss cyanide management. The site also utilizes a global website to share information on cyanide management practices and information as it relates to

Barrick Gold Corporation Lagunas Norte Mine Signature of Lead Auditor



global operations. Information regarding Barrick's management systems that are used to manage environmental, safety, health, and community relation topics is available on the internet.

Lagunas Norte staff stated that the local populations are Spanish speaking and that literacy levels are high. Nonetheless, Lagunas Norte provides information verbally and/or visually via meetings, slideshows, and videos. In addition, the Barrick South America website allows download of videos for verbal/visual communication.

Lagunas Norte is required to report fatalities and loss of time incidents to the Peruvian Ministry of Energy and Mining, where it is then publically available via their website. The site voluntarily reports health, safety, and environment information on Barrick's website. The Barrick website contains safety and health performance, number of regulatory actions, fines paid, fatalities, lost-time injury rate, and total medical injury rate. Also contains environment performance tables informing number of regulatory actions, chemical spills escaping secondary containment, chemical spills escaping mine property, and water permit exceedances.

The Emergency Response Plan for Lagunas Norte describes regulatory and public communications required in the event of emergency response.

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 Lagunas Norte mine, among others, in safety, health, environment, with their respective ratios.

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. Other mechanism for informing the public in the event of a reportable incident involving a spill or exposure to cyanide, is the mine Emergency and Crisis Communications Plan, which provides timely information on the nature and location of the incident to stakeholders. This Plan is a specific protocol aligned with the Emergency Response Plan of the mine Lagunas Norte.

Barrick Gold Corporation Lagunas Norte Mine

Signature of Lead Auditor