

***INTERNATIONAL CYANIDE  
MANAGEMENT INSTITUTE***

***Cyanide Code Compliance Audit  
Gold Mining Operations***

***Summary Audit Report***

***Barrick  
Bulyanhulu Gold Plant  
Tanzania***

***17<sup>th</sup> – 21<sup>st</sup> November 2025***

***For the  
International Cyanide Management  
Institute  
Cyanide Code***



Name of Operation: Bulyanhulu Gold Mine  
Name of Operation Owner: Barrick Corporation  
Name of Operation Operator: Bulyanhulu Gold Mine  
Name of Responsible Manager: Raymond Zackeyo  
Address: Kahama Shinyanga  
State/Province: Shinyanga  
Country: Tanzania  
Telephone: +255 767 884 454  
Fax: +255 22 2600 222  
E-Mail: [rzackeyo@barrick.com](mailto:rzackeyo@barrick.com)

**Location detail and description of operation:**

**Location Detail**

The Bulyanhulu gold mine is located in North West Tanzania, in the Kahama district of the Shinyanga region, approximately 55 kilometres south of Lake Victoria and approximately 150 kilometres southwest of the city of Mwanza, a regional business and economic hub. The Bulyanhulu process plant has the capacity to process an average of approximately 3,300 tonnes of ore per day (approximately 1.1 million tonnes per year), operating 24 hours a day on a 365-day per year basis.

The mine consists of an underground mine, a process plant, waste rock dumps, tailings containment, water management ponds and associated facilities. The backfill plant gets its material from the Float Process, and therefore, there is no cyanide in the backfill going underground. The mine is an underground trackless operation, using long hole as its principal stoping method. The mine was stopped in 2017 due to a concentrate export ban, and 90% of all employees were retrenched. During the period 2017-2020, the plant was only reprocessing tailings from TSF. In 2020, the underground Mine resumed normal production, and currently, the Process Plant is treating fresh ore from underground and has re-employed 1077 employees (71 ex-pats and 1006 nationals).

Bulyanhulu is a narrow-vein gold mine containing gold, silver and copper mineralisation in sulphides. Mineralisation of Bulyanhulu is associated with



steeply dipping Argillite units referred to as Reefs. To date, several distinct reefs have been identified, including Reef Zero, Reef One and Reef Two. The Bulyanhulu life-of-mine is currently estimated to be more than 25 years, based on its proven and probable gold reserves of 7.64 million ounces.

### **Process Plant Description**

The run-of-mine ore (ROM) is hoisted from underground and deposited at the ROM pad at an F100 of 350mm. From the ROM, the ore is reclaimed using front-end loaders and fed into the primary jaw crusher, which reduces the size to P100 of 125mm. A secondary cone crusher crushes the ore further down to P80 of 40mm before depositing it onto the crushed ore stockpile. The crushed ore is reclaimed from the crushed ore stockpile using vibrating feeders into the SAG (Semi-Autogenous Grinding) mill feed conveyor at a controlled feed rate. The feed ore to plant contains gold, silver and copper. The mill and crusher sections of the Plant are not considered to be cyanide facilities in terms of ICMI (International Cyanide Management Institute) definitions, as the solutions contain less than 0.5 mg/l WAD (Weak Acid Dissociable) cyanide. Solid sodium cyanide briquettes are brought onto site, dissolved and stored in tanks located outside in the open.

The feed grade is between 6.5–10.0 g/t (grams per ton) of gold and 0.3–0.5% copper. The sulphide minerals mined are mainly pyrite (FeS<sub>2</sub>) and chalcopyrite (CuFeS<sub>2</sub>). The plant recovers the metals using gravity, flotation, and Carbon-In-Leach (CIL) processes. Free-milling gold and electrum particles are recovered using gravity techniques and an intensive cyanide leaching reaction, followed by electro-winning to produce doré bars.

The primary cyclone overflow is sent to rougher flotation cells. The rougher tailings are thickened and disposed of at the tailings storage facility (TSF), or used as underground paste backfill material. There is a provision for sending rougher tailings to the CIL (Carbon-in-Leach) plant for leaching if not needed for underground paste backfill, and if the tailings grade is higher than desired. The rougher concentrate is sent to a Falcon concentrator for gravity gold recovery. The falcon concentrate is leached, using an intensive cyanide leach reactor (ICR), while falcon concentrator tailings are returned to the regrind mill cyclone closed circuit for regrinding and classification, before advancing to the cleaner flotation circuit. The ICR tailings are rinsed before being returned to the flotation cleaning circuit. All rinse water is directed to the CIL circuit. The ICR concentrate is sent to the electrowinning circuit, which is followed by smelting to produce the gold doré bars.

The cleaning circuit consists of 4 stages which operate in counter-current mode. The first stage cleaner tails are sent to the cleaner scavenger cells, while the concentrate is advanced to the second cleaner stage. The concentrate from the second cleaner is sent to the third cleaner, while the tailings are returned to the

---

first cleaner. The concentrate from the third cleaner is sent to the fourth cleaner, while the tailings are returned to the second cleaner. The fourth cleaner tailings are returned to the third cleaner, while the concentrate is directed to the concentrate thickener. The cleaner scavenger tails stream is fed to the CIL plant for gold extraction to produce doré.

The concentrate thickener underflow is pumped to a Larox filter via a stock concentrate storage tank to produce a cake of 8.0 -10% moisture content. The final concentrate is loaded into containers. Bulyanhulu Process Plant produces between 40.0 – 70.0 t of concentrate per day, containing approximately 80.0 - 280.0g/t gold, 150.0 – 250.0g/t silver and 11.0 – 25.0% copper. The recovery varies between 85.0 – 93.0% for gold and 75.0 – 95.0% for copper.

The tailings from the CIL circuit are directed to the cyanide destruction INCO (International Nickel Company) process, which destroys cyanide to less than 50ppm WAD cyanide before depositing it onto the TSF. The CIL plant operates 24 hours a day, 365 days a year, with 92% availability.



---

***Auditor's Finding***

**This operation is**

in full compliance

**X in substantial compliance**

not in compliance

with the International Cyanide Management Code.

This operation has experienced compliance issues during the previous three-year audit cycle, which are discussed in this Report under Standards of Practice 4.8 and 5.2.

Audit Company: Eagle Environmental

Audit Team Leader: Arend Hoogervorst  
& Technical Auditor

E-mail: [arend@eagleenv.co.za](mailto:arend@eagleenv.co.za)

Dates of Audit: 17<sup>th</sup> – 21<sup>st</sup> November 2025

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

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

Bulyanhulu Gold Plant



31<sup>st</sup> MARCH 2026

Facility

Signature of Lead Auditor

Date

---

Bulyanhulu Gold Plant

Signature of Lead Auditor

31<sup>st</sup> March 2026

---

**Acronyms and Abbreviations used in this Report**

CIL – Carbon-In-Leach  
CIP – Carbon-In-Pulp  
CPR – Cardiopulmonary Resuscitation  
Dw – Drawing  
ECSA - Engineering Council of South Africa  
ERB – Engineer’s Registration Board, Tanzania  
ERP – Emergency Response Plan  
ERT – Emergency Response Team  
FAT – Fraser Alexander Tailings  
GA – General Arrangement  
GISTM – Global Industry Standard on Tailings Management  
HCN – Hydrogen Cyanide  
HDPE – High-Density Polyethylene  
ICMC – International Cyanide Management Code  
ICMI – International Cyanide Management Institute  
ICOLD – International Commission on Large Dams  
ILR – In-line Leach Reactor  
JSEA – Job Safety and Environmental Analysis  
KPIs – Key Performance Indicators  
MDM – Metallurgical Design and Management PTY LTD, an engineering design company who design Gold Mine Processing Plants.  
Mg/L – Milligrams per litre  
MINTEK - Quasi-governmental organisation in South Africa providing accredited laboratory testing, equipment supply, and consulting services on cyanide and cyanide speciation  
MOU – Memorandum of Understanding  
NaCN – Sodium Cyanide  
NDT – Non-Destructive Testing  
PCD – Pollution Control Dam  
pH - relates to hydrogen ion concentration using a scale of 0 (highly acidic) to 14 (highly alkaline)  
P&ID – Piping and Instrumentation Drawing  
PMS – Planned Maintenance System  
PPE – Personal Protective Equipment  
ppm – Parts per Million  
PRV – Pressure Relief Valve  
PTO – Planned Task Observation  
PVC – Polyvinyl chloride  
PWB – Probabilistic Water Balance  
SAP – proprietary name. SAP is a German multinational software company, a global leader in enterprise resource planning (ERP) software. SAP stands for *Systemanalyse Programmentwicklung in German*.



---

SCADA - **S**upervisory **c**ontrol and **d**ata **a**cquisition display – Computerised Control Equipment

SCBA – Self-contained breathing apparatus

SDS – Safety Data Sheet

(sic) – The term “sic” comes from a longer Latin phrase: “sic erat scriptum,” which means “this it had been written,” and is used to note when a quotation may not be correct in terms of spelling or grammar

SIMM Report - **S**tructural **I**ntegrity **M**anagement **M**onitoring Report – corporate risk monitoring system for plant structures.

SMBS – Sodium metabisulphite

SOP – Standard Operating Procedure

SWD – Stormwater Dam

SWP – Safe Work Procedure

TORAS – Fraser Alexander **T**echnical and **O**perational **R**isk **A**ssessment **S**ystem (dashboard)

TSF – Tailings Storage Facility

TUF – Thickener Underflow

WAD – Weak Acid Dissociable

WIBC – Wooden Intermediate Bulk Container



---

***Auditor's Findings***

***Principle 1. PRODUCTION AND PURCHASE:***

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

**X in full compliance with**

**The operation is**  in substantial compliance with **Standard of Practice 1.1**

not in compliance with

***Basis for this Finding/Deficiencies Identified:***

Cyanide is currently supplied to Barrick Bulyanhulu by Hebei Chenxin Pty Ltd, an ICMI (International Cyanide Management Institute)-certified cyanide producer. (ICMI certified on 18 April 2023) and Draslovka Holdings (ICMI certified on 9 June 2025). Draslovka is currently “on trial” as an alternate supplier. It was confirmed during the site inspection that all cyanide stored in the cyanide warehouse is labelled as from Draslovka. Hebei Chenxin (Contract start date: 1 November 2019 and open-ended) may still supply cyanide, as required.

Barrick employs a Procurement Partner, TCL Supply Chain Limited, based in Mauritius, to manage the purchase of cyanide from Hebei Chenxin and Draslovka. TCL Supply Chain Limited is not involved in any of the product stewardship services and activities of cyanide purchase and transport. TCL Supply Chain Limited only handles the financial paperwork of the cyanide purchase and is paid a commission for the work done for Barrick. Thus, TCL Supply Chain Limited is not deemed to be an independent distributor of cyanide as defined by the ICMI.

***Principle 2. TRANSPORTATION:***

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

***Standard of Practice 2.1: Require that cyanide is safely managed through the entire transportation and delivery process from the production facility to the mine by use of certified transport with clear lines of responsibility for safety, security, release prevention, training, and emergency response.***



**X in full compliance with**

- The operation is**  in substantial compliance with **Standard of Practice 2.1**  
 not in compliance with

*Basis for this Finding/Deficiencies Identified:*

Barrick Bulyanhulu obtains sodium cyanide from ICMI-certified producers, Hebei Chenxin and Draslovka. The sodium cyanide is transported by Hebei Chenxin Transport (an ICMI-certified road transporter) from Yuanzhao Road Yuashi County, Shijiazhuang City, through China via road to the port of Quidad (Hebei Chenxin Transport China Supply Chain). It is then shipped to the Port of Dar es Salaam by Maersk. At the port of Dar es Salaam, it is transported to the Bulyanhulu Gold Mine by Mainline Carriers or Taifa, and by Transport & Logistic Ltd, both ICMI-certified road transporters. Freight Forwarders (Tanzania) Ltd only handles the financial paperwork of the cyanide purchase and is paid a commission for the work done for Barrick. Thus, TCL Supply Chain Limited is not deemed to be an independent distributor of cyanide as defined by the ICMI.

The Draslovka Global Ocean Supply Chain includes rail transport from Draslovka's Memphis production plant to U.S. ports of departure, including the Ports of Everglades, Long Beach, Los Angeles/San Pedro, New Orleans, Savannah and Seattle in the US, ocean carriers American Presidents Line (APL), Hamburg Sued, Maersk Line, Mediterranean Shipping Co. (MSC), Seaboard Marine and Hapag Lloyd. The supply chain also includes the following ports outside of the US:- Tanzania: Dar es Salaam. There are two Tanzanian transporters, Mainline Carriers and Taifa Transport and Logistics Ltd.

Sighted Hebei Chengxin Co Ltd Chain of custody documentation identifying all transporters and supply chains responsible for transporting cyanide from the producer to the operation. Hebei Chengxin certificates of analysis, Bills of Lading, commercial invoices, TCL delivery notes, Freight forwarders International Delivery Manifests, Barrick Major Consumable Receipt Control sheets, Barrick Delivery Notes, and Barrick Warehouse Weigh tickets (The latter documents function as a final delivery note and include the name of the Tanzanian transporter, the driver and the receiving warehouse official.)

Draslovka Chain of Custody documentation consisting of Draslovka Quality certificates, Freight Forwarders Delivery manifests, Barrick Delivery Notes, TCL Supply Chain International Commercial Invoices, TCL Supply Chain International Delivery manifests, TCL Supply Chain International Packing Lists, Barrick Major Consumable Receipt Control sheets, Barrick Weigh tickets (These function as a final delivery note and includes the name of the Tanzanian transporter, the driver and the receiving warehouse official.) were sighted and reviewed.

Taifa Transport & Logistics was certified as an ICMI transporter on 24 September 2024, and Mainline Carriers Ltd was ICMI Transporter-certified on 26 January 2026. Hebei Chenxin Transport Pty Ltd, a certified cyanide transporter, was recertified on 18 April

2023, states that cyanide is supplied by Hebei Chenxin Pty Ltd, a certified cyanide producer, also recertified on 18 April 2023. Hebei Chenxin Pty Ltd's global ocean supply chain was recertified on 30 October 2023 and transports cyanide from the port in China to the Port of Dar es Salaam in Tanzania. It was confirmed that all relevant participants of the Cyanide Transport Supply Chain were ICMI-certified.

***Principle 3. HANDLING AND STORAGE:***

***Protect workers and the environment during cyanide handling and storage.***

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

**X in full compliance with**

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

***Basis for this Finding/Deficiencies Identified:***

The facilities' design has not materially changed, but some corrective improvements were made since construction, such as replacing mild steel pipes with pipe-in-pipe HDPE cyanide solution pipes and replacing the mild steel tank with a stainless steel tank. The original specifications and drawings were used for this.

Evidence included in the re-certification audit 2015 and 2022: A new cyanide mixing plant was constructed, and the new CIL Plant was built and commissioned in June 2014.

- The plant was designed by MDM Engineering and the original contract between African Barrick Gold and MDM required the plant to be designed for cyanide-specific use and to be ICMC (International Cyanide Management Code) compliant.

- Sighted design files P&ID (Piping & Instrumentation) Reagents in 2015.

- Cyanide and caustic drawing BH0084167PR000111, rev 10, 24 January 2014.

- Sighted the cyanide tank mechanical design drawing - detail of "Cyanide make up tank" number BH0084167M0012010, dated 13 March 2013. The drawing refers to mechanical and material specifications

- sighted tank foundation drawing number BH0084167C0001010 indicating the use of a reinforced impermeable concrete layer on the top of the foundation for the tanks.

During the site inspection, it was confirmed that the solid cyanide warehouse and the cyanide mixing and storage facility were located away from people and surface waters. No liquid cyanide is supplied or delivered. The Mine uses solid 98% cyanide briquettes and mixes them to the required solution strength. Solid cyanide briquettes are offloaded in double bags inside wooden crates and are delivered in marine containers. The marine containers are destuffed of their cyanide boxes on concrete, next to the warehouse building and store.



The cyanide mixing and storage tanks are all equipped with level sensors. A second sensor was installed on the Cyanide Makeup Tank as a backup verifier. (Sighted during site inspection.) CIL Plant Control Sensor Weekly PM inspection checklists on 14/11/2025 and 20/11/2025 were reviewed. The CIL Reagent Mixing Checklist requires that the level of reagent in reagent tanks be checked on the SCADA before and after mixing. CIL Reagent Mixing Checklists from 2023 and 2025 were sampled and reviewed.

During the site inspection, it was confirmed that cyanide mixing and storage tanks are located on a concrete surface, preventing seepage into the subsurface. This is no change from the 2015 and 2022 audits. The bunds for the cyanide mixing and storage areas were built with concrete and, during the site inspection, were observed to be in good condition with no significant cracks.

The solid cyanide store has a concrete floor, and the entry is equipped with humps to prevent water from entering. The sides of the galvanised sheeting routes rainwater to the outside of the cyanide storage floor area. No water in the store or water damage to the cyanide boxes was noticed during the site inspection. The dry solid cyanide box store is equipped with ventilation slots in the roof apex (which appear to be retrofitted to an old store). It is deemed sufficient for ventilation. No HCN gas was detected during the site inspection. The cyanide mixing facility is equipped with ventilation openings on top of the tanks. The building is open at the front, sides, and back to improve ventilation in the area.

During the site inspection, it was noted that the dry cyanide store is located in a high-security area and is double-locked. One key is kept in the security department, and the storeman keeps the other. They or their delegates must both be present when unlocking the store. During site inspections, it was confirmed that the cyanide store was locked and that the mixing area was fenced and locked, including the empty cyanide box store yard. It was confirmed during the site inspection that the cyanide store is located separately from oxidisers and explosives and apart from foods, animal feeds and tobacco products. Only cyanide boxes were stored in the dedicated cyanide storage facility.

***Standard of Practice 3.2:** Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.*

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

No liquid sodium cyanide is delivered, and all cyanide used is mixed from solid briquettes. No cyanide drums are used on the site. Sodium Cyanide Briquettes are packed in woven plastic 1-ton bags, wrapped in polythene bags, and delivered in a wooden box sealed with metal strips on a pallet. All empty cyanide boxes and cyanide bags are

incinerated in the onsite incinerator as per the Incinerator Standard Operating Procedure. During the site inspection, the incinerator installation and the empty cyanide storage yard within the cyanide mixing area were observed; the storage yard was locked.

In Section 6.2 Cyanide mixing, of the Mixing Sodium Cyanide procedure, the task steps do not mention rinsing of the cyanide plastic bags and liners. However, a risk assessment dated 23 June 2022 was conducted and revised in September 2025, indicating that the bags should not be rinsed to prevent the formation of HCN gas. The Risk Assessment Team included the Process Trainer, Safety Officer, Senior Environmental Officer, CIL Operator, and Instrument Technician.

The only cyanide containers returned to the vendor are the empty shipping containers. The CIL Unloading Sodium Cyanide Boxes Safe Work Procedure states that once the marine container is empty, the container floor is to be swept clean. Any rubbish from the container is stored in an empty cyanide box in the Cyanide shed. It further states that if any cyanide briquettes are observed on the floor, these must be reported to the supervisor so that the CIL Cyanide Cleaning Dry Spill procedure can be followed.

The Mixing Sodium Cyanide Safe Work Procedure includes the task sequence for opening and closing valves during the cyanide mixing process. There is a fitter 6-monthly Planned Maintenance (PM) inspection covering the mixing tank agitator bolt and blade. The CIL Reagents Mixing Checklist (including the cyanide mixing and storage tank area) includes checking for any leaks in tanks, pipes, valves, and pumps; checking for any spills; and checking the bund status. In the CIL Unloading Sodium Cyanide Boxes Safe Work Procedure, it states that only trained, competent and authorised personnel will be allowed to operate the mobile equipment used to move the cyanide boxes. The procedure also defines stacking practices, "...step 16. Stack each two-row column a maximum of three boxes high (Do not exceed three boxes high) and a maximum of nine rows (except the two first columns near the gate which will have a maximum of 7 rows). Any boxes damaged during offloading must be reported to (the) shift supervisor immediately. The supervisor in conjunction with (the) safety officer and cyanide coordinator will determine on (sic) how to proceed using the Dry Cyanide Spill Procedure..." The Mixing Sodium Cyanide Procedure requires that the mixing area be thoroughly hosed down after mixing is complete. There is also a Dry Cyanide Spill Management Procedure, should there be significant spills of dry cyanide or briquettes. The Mixing Sodium Cyanide procedure requires the presence of a sentry, not involved in the mixing process, to observe from a safe distance and notify the CRO (Control Room Operator) and Shift Supervisor in case of an emergency.

The Mixing Sodium Cyanide procedure includes the requirement of adding red food dye (carmoisine) to the mixing tank during the cyanide mixing process.

***Principle 4. OPERATIONS:***

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



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

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

There is a full and detailed set of over 300 Safe Work procedures covering all tasks on the Gold Processing Plant, including 15 cyanide-specific procedures. Engineering maintenance is subject to a permit to work, confined space entry permit, and hot work permit. Job Safety Environmental Analyses (JSEA) are undertaken using a template. Engineering uses cyanide-specific procedures.

A Paragon (TSF contractor, who took over on 1 May 2022) list of TSF procedures, including walkway installation, install freeboard poles, manual cleaning of solution trench, connecting and disconnecting of pipes and valves, opening, and closing of valves, installation of piezometer support poles, manual wall packing, penstock operation and penstock sleeving, Operation and Cleaning of silt trap, were sighted. The TSF Operation, Maintenance, and Surveillance Manual is in place and is periodically updated. Quarterly TSF reviews are done, and formal reports are issued for action. Annual TSF inspections and audits are done, and formal reports are issued for information, review and action, as appropriate. Bulyanhulu Tailings Storage Facility Annual Report 2024, authored by S Van Niekerk, Pr. Eng, (ECSA Number # 20010256), approved by A Macha Pr.Eng., Rusibamayila Pr. Eng. and A James Pr.Eng.(ECSA Reg. Number # 890393) and approved by Ndoli Rusibamayila Pr. Eng. In the Conclusions, the report indicated that, “..general operations and management of TSF 4 and the RWDs (Return Water Dams) is good...” Stability analyses were done in 2024, resulting in the building of rock buttresses on the North, South, West, and East walls, which are now complete. These analyses are currently being reviewed. The TSF4 – Operation, Maintenance and Surveillance Manual Bulyanhulu Gold Mine, describes the following parameters:-

- Design storm depth - 4150mm (72 hour 1:1000 year);
- Design freeboard TSF - 2.0 m minimum total freeboard.
- Design freeboard for return water dam 3 (measured from spillway invert to embankment crest) – 0.5 m.
- Process water quality arriving at TSF - WAD cyanide <50 ppm, pH 8-10.

It was confirmed during site inspection that no discharge to surface water exists. The New CIL Cyanide Detoxification Process Upset Safe Work Procedure states, : "...If the concentration is confirmed in either Detox tank which feeds Detox tank #04 or at any TSF spigot discharge it be (sic) above 50ppm, the CIL plant operation should be stopped..."



A system of Plant and TSF inspections is in place. Plant inspections include:- CIL Log sheet, monitoring of pH and NaCN ppm at CIL every 2 hours; CIL & Detox Shiftly Start Checklists (including safety, cyanide, PPE, leakages on pipelines and valves, cyanide concentrations in tanks, pH readings, condition of gas detectors, safety showers and eye washes); WAD Cyanide analyser inspections; CIL Reagents Mixing Checklist including the cyanide mixing and storage tank area (The checklist includes HCN gas detector; safety showers and eye wash; check for any leakages in tanks, pipes, valves and pumps, any spills; appropriate PPE (Personal Protective Equipment) required for reagent mixing including OxySock (medical oxygen dispenser), check bund status, cyanide mixing tank level after water addition); Operational Bunds inspection checklists include all bunds in the plant and include cracks in walls, floors, contents of the bund, wildlife mortalities, sump pump, and bund capacities. Checklists were sampled and reviewed in 2023 and 2025.

TSF inspections include Paragon daily inspections sampled and reviewed in 2023 and 2025. The checklists include checking leaks on pipes, seepage, spillages, wildlife, rainfall, site access control, pipelines, penstock, underdrains, piezometers, freeboard, silt traps and HCN gas. The daily Barrick TSF inspections include checking for cracking, embankment failure, surface seepage, pipeline leakages, underground seepage, surface water collection structures, freeboard, and wildlife observations. Operational TSF Daily (consolidating Team Leader Shiftly Reports) Reports and Supervisor Daily Reports were sampled and reviewed for 2023 and 2025. Quarterly Site Inspections include the following: environment and issues; slurry delivery; basin slope; freeboard; deposition; pool control; penstock; underdrains; and return water dams. The quarterly memo on the quarterly site visit includes quarterly inspections. tracker system, piezometers, beach densities and particle size, movement beacons, water balance, and conclusions and recommendations. Plant cyanide facilities (as per the ICMI definition) and TSF equipment all form part of the site SAP (proprietary name) PMS (Planned Maintenance System).

The operation (including the TSF) has a Management of Change (MOC) Procedure in place. Final approvals for change implementation is signed off by the Head of Department, General Manager, and Regional Manager. Discipline-specific impact questions are completed by the Functional Area Representative (e.g., Environmental), indicating whether the person participated in the formal risk assessment, the review date, and any comments. The MOC exercises are signed off by both the Safety and Environmental officials. The MOC (July 2025) exercise for the replacement of the Acacia Reactor with a new Gekko ILR. (Intensive Leach Reactor) was sighted. Also sighted was the MOC for the addition and support of lysine in the cyanidation process (January 2024). Both were signed off by the Safety and Environmental officials. The Cyanide/Glycine Dosing Optimisation Procedure requires that the management of change procedure must be followed and documented when the Cyanide/Glycine dosage/set point change is above 200 ppm, to establish any changes in cyanide risk and take appropriate action.

The operation has various cyanide management contingency procedures for standard and non-standard operating situations that may present a potential for cyanide exposures and releases. Weekly TSF Operations meetings are held to make management decisions on

the actions required to manage water balance issues, based on inspections and monitoring. It is noted that the operation does not have a heap leach facility and therefore does not require procedures to address water balance issues associated with a heap leach. It must be noted that the plant's water balance is water negative. Start/stop procedures covering normal, abnormal, and emergency situations would be used as appropriate.

These include: -

- New CIL Elution Cycle (Elution Sequence and Shut Down) Safe Work Procedure,
- Detox Circuit Operation & Shutdown Safe Work Procedure,
- New CIL Circuit Start-up (Area 4131) Safe Work Procedure,
- CIL Emergency Action Procedure to an area known or assumed to have a high HCN level,
- CIL Cyanide Detoxification Process Upset Safe Work Procedure,
- CIL Circuit Start Up Safe Work Procedure, and
- CIL Circuit Shutdown Safe Work Procedure.

Any scenarios which include temporary closure or cessation of operations due to situations such as work stoppages, lack of ore or other essential materials, economics, civil unrest, or legal or regulatory actions will be evaluated by special Management meetings/workshops when anticipated to happen, and scenario-specific strategies, backed by cyanide, issue-based risk assessments, will be considered and implemented as appropriate. In addition, the Emergency and Crisis Management Plan contains Section 9, Prolonged Event, which details actions and responses such as:-

- Ensure a "Resources Officer" has been appointed to help in managing the "prolonged event" incident,
- Determine additional resources required (i.e., equipment, workforce, materials, supplies, facilities),
- General Manager to arrange for any additional assistance, and
- Develop rosters for ERT and Incident Control personnel to ensure "fitness for work." This may be required when obtaining external assistance or Mutual Aid.

Generally planned inspections are conducted daily across all areas of the Plant and reported weekly by boilermakers and fitters. These include visual inspections for leaks, corrosion, and physical damage in pipes, flanges, welds, and tanks. Operationally, there are pre-shift inspections, bund inspections (daily), and reagent mixing inspections (daily per shift).

### **Tanks**

All tanks (including cyanide mixing and storage tanks, CIL tanks, elution columns, detox tanks, and tailings tanks) undergo NDT (Non-Destructive Testing) thickness testing annually by mechanical engineers who assess tank thickness, welds, and associated pipes. The engineer's reports include thickness reports and observations on the condition of the tanks. Technicians conduct weekly visual inspections of all facilities, including tanks, for leaks, wear, physical condition, tank deformation, corrosion, pipe wear, and grating.

### **Secondary Containments**

Daily operational Bund inspection checklists include all bunds in the plant and cover cracks in walls, floors, contents of the bund, wildlife, sump pump, bund capacities, and the PVC (Polyvinyl chloride) liner condition. Mill tailings planned general inspections



cover the HDPE (High-Density Polyethylene) liners, the pipelines, joints, vegetation and other defects on tailings pipelines outside the TSF fence to the process plant.

#### **Leak Detection and Collection Systems**

Ponds 1, 2 and 3 have leak detection pumps that are inspected daily. The operation does not have leach pads but leak detection systems are used within the linings of the TSF. 3-monthly Electrical TSF leak detection pump inspections, checking electrical connections, amperage draw, and pump controls and alarms, were sighted and reviewed.

#### **Pipelines, Pumps and Valves**

It was confirmed that pipelines within the Cyanide/SMBS (Sodium metabisulphite) circuit are NDT Thickness tested. The NDT Report for the Cyanide & SMBS Solution Pipelines - Annual Statutory NDT Inspection, Weld Joints Integrity Check, Valves Pressure Test & Certification by Joseph Machota Makondo, PRV (Pressure Relief Valves), Welding Inspector & Authorised Plant Inspector, TESLA Engineering & Construction Ltd, and the Acid & Elution Solution Pipelines - Annual Statutory NDT Inspection Report, also by Joseph Machota Makondo, PRV, Welding Inspector & Authorised Plant Inspector of Genavian Engineering, were sighted and reviewed.

Daily Fitter and Boilermaker PM inspections are conducted on an area basis and include related infrastructure such as pipelines, valves, tanks and pumps. The daily operational inspection checklist also includes checks for leaks in pipelines and valves. The CIL & Detox Shift Start Checklist includes leakages on reagent dosing lines, leakages on critical valves, and slurry flow in CIL tanks. The Elution Shift Start Checklist includes the status of pumps, level of cyanide in the discharge solution, bunds, and pumps. The TSF pipeline, pumps and valves are inspected by Paragon (daily), Boilermaker (monthly), Environment (weekly), and Safety (weekly) for deterioration and leakage. The Mill tailings planned general inspections cover the HDPE liners, the pipelines, joints, vegetation and other defects on tailings pipelines outside the TSF fence to the process plant. The Elution Shift Start Checklist includes the HCN gas detector, the status of pumps, the level of cyanide in the discharge solution, the bunds, and the pumps. The Detox Tails Discharge Pipeline (Detox To TSF) NDT & Integrity Check Annual Report, by Joseph Machota Makondo, PRV, Welding Inspector & Authorised Plant Inspector, of Timbo Contractor Man Power And General Supply Co. Ltd, was sighted and reviewed. Valves are included in inspections. High-pressure valves are included in statutory inspections, which include pressure testing for heavy-duty valves.

#### **Ponds and Impoundments**

A combined team of Environmental, Process, Engineering, and TSF conducts a weekly environmental inspection of the TSF, including the return water ponds. If issues are identified during the inspection, appropriate team members will facilitate repairs, changes, or corrective actions. Checklist items include: - Condition of main embankment, condition of liner, pipeline and valves, monitoring boreholes, electrical and surface water collection structures, fence line, rehabilitation/reclamation work, fauna mortality, Health & Safety status, pool (freeboard, quality, depth, drains, piezometers, wall rise), and access control.

The auditor deems the TSF and the Process Plant are inspected on an established frequency sufficient to assure and document that it is functioning within design parameters.



A review of the artisans' document packs for planned maintenance inspections confirmed that they included: - the specific items to be observed, the date of the inspection, the name of the inspector, and any observed deficiencies noted. Any corrective actions are noted in the document, or a new repair job card is raised for them. The records are retained within the SAPS software system and in hard copy.

The site has had a SAP-based PMS (Planned Maintenance System) since April 2021, which includes both the Gold Processing Plant and the TSF. The PMS system includes all facilities classified as cyanide facilities under the ICMI Definitions. The system documents and keeps records of all PM (Planned Maintenance) activities. The PMS raises job cards for work to be done and keeps a history of the results.

The E & I (Electrical and Instrument) Supervisor reported that there were four standby generators in the Plant, which were used only for lighting, running the rakes in the leach tanks, and operating instrumentation and the SCADA in the event of a National Grid power failure. These are automatically activated when the Grid power fails and when it comes back on again. If the Plant needs more power to use pumps to manage Water Balance problems, assistance can be requested from the mine. The mine has over 25 generators of various sizes, capable of running the whole mine with ore hoisting or the mine and ore hoisting, but without the process plant, and not all facilities simultaneously. (No change)

The four generators are maintained and tested electrically using the Plant's SAP PMS system. The various Mine generators are all maintained and tested by the Mine's SAP PMS system, as the mine is the only employer of diesel mechanics.

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

**X in full compliance with**

- The operation is**
- in substantial compliance **with Standard of Practice 4.2**
  - not in compliance with
  - not subject to

***Basis for this Finding/Deficiencies Identified:***

The operation is currently experimenting with using glycine (GlyCat™) with sodium cyanide to reduce overall cyanide consumption. The action of the glycine is to complex the copper in the ore to reduce the amount of cyanide required to extract the gold from the ore. Currently, glycine is not being used in the main process. However, pilot work is being carried out separately using glycine due to difficulties achieving sufficient recovery rates with glycine added, and to confirm financial viability.

The Optimisation procedure has been revised to accommodate the use of glycine. The procedure provides guidelines for CIL Circuit Cyanide/Glycine dosing to avoid overdosing that might result in increased HCN gas formation or abrupt pH drops within the glycine window. Metallurgical Tests (bottle roll and pilot test work) are being

conducted on various ore sources to be fed into the process plant to optimise the dosing rates of sodium cyanide and glycine.

The management of change procedure must be followed and documented when the Cyanide/Glycine dosage/setpoint change exceeds 200 ppm to assess any changes in cyanide risk and take appropriate action.

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

**X in full compliance with**

- The operation is**
- in substantial compliance with **Standard of Practice 4.3**
  - not in compliance with

*Basis for this Finding/Deficiencies Identified:*

The Mine has used a spreadsheet-based model, a probabilistic water balance (PWB), since 2023, covering the entire mine area, the Processing Plant, TSF ponds, and all other water ponds. The model is updated daily, and data is loaded as it becomes available. A specialist consultant is available to advise on PWB issues and carry out ongoing maintenance on the model. Currently, the ponds are surveyed daily, and the results, along with other water balance data, are discussed at a TSF Operation Weekly Review meeting, where action plans and maintenance issues are discussed and finalised using an Action Tracker system. The meeting group will update a comprehensive dashboard that includes pond freeboard values, maximum volume for all water ponds that would prevent overtopping, capacity available before overflowing and targets for recycling rates for the plant and freshwater usage. The dashboard includes graphs to assist with pond volume management. The graphs show the maximum and minimum pond volumes for the dry and wet seasons on a weekly basis. The site provides 450,000 m<sup>3</sup> of containment capacity to manage variable water levels. Scenarios will be generated in the model, including evaporators, freshwater feed from Lake Victoria and other sources. The model uses real-time data from the mine's weather station, including precipitation and evaporation.

The PWB uses real-time tailings deposition data and allows input of different rainfall scenarios and storm events to predict outcomes and test operating parameters. The model uses a 1:10,000 storm event over a 72-hour period and has ensured that 450,000 m<sup>3</sup> of solution storage space is available at all times to cater for normal, abnormal, and emergency events, thereby preventing overflow of cyanide-containing solutions. The Bulyanhulu calibration weather station reports were used in the model, and the automatic weather station data is supported by a manual station at the airstrip, imported from a data file. The model uses a historical evaporation database (from 1999 to the present) to predict probable evaporation for the run date, along with automatic weather station data and the evaporation database.

There is no run-on from the surrounding area, which is not higher than the ponds. The adjoining TSF is a closed system which does not contribute run-on to the return water dams. There is no infiltration because all the return water ponds are lined. Recent updates



to the water balance have led to additional stormwater diversion arrangements to reduce the impact of run-on. No freezing or thawing conditions are experienced in Tanzania because the Equator is just north of the country.

The TSF return water dam pumps' power is supplied from the Tanzanian Grid. In case of a grid power failure, the site has sufficient standby generators to run the entire plant. The model uses a 1:10,000 storm event over a 72-hour period and has ensured that 450,000 m<sup>3</sup> of solution storage space is available at all times to cater for normal, abnormal, and emergency events, thereby preventing overflow of cyanide-containing solutions. No solution is discharged to surface waters.

The phreatic surface is measured in the TSF and incorporated in water management discussions. This is included in the PWB, as necessary. The Water Balance consultant has updated the PWB to include all new and modified water inputs and outputs to ensure adequate capacity. The survey department surveys the pond levels daily, and the ponds and pond levels are inspected weekly by the Environmental Department, Process Plant and Paragon Tailings. There is a TSF Operation Weekly Review meeting where water balance data is reviewed, and appropriate actions taken. The model is reviewed at least annually by an external specialist consultant and as appropriate, revised based on any identified changes in precipitation patterns.

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

**X in full compliance with**

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

***Basis for this Finding/Deficiencies Identified:***

There have been instances where the TSF WAD cyanide levels have been above 50 mg/L over the past three years. All of those exceedances have been recorded, reported on, investigated, and mitigating measures have been taken where possible. Twenty-nine investigations were conducted, with multiple exceedances recorded and investigated: Date, Time, Description of the Cause, Remedial Action taken to rectify the position, and Comments. (The difference in numbers is due to the fact that several exceedances may have been investigated during one investigation.)

**Exceedances**

A review of the exceedance investigation reports showed that the main causes of the exceedances were: -

1. 16 Exceedances at the end of November 2024 were caused by leaks in Detox tanks #1 & #3, resulting in short circuits of tanks, causing too little retention time for detoxification. Exceedances ranged from 25 ppm – 364 ppm WAD cyanide.
2. Detox tank numbers #2 & #03 were offline due to the gearbox and blade agitator failure.



3. Pieces of plastic bags were not removed and clogged the strainers (preventing the flow of SMBS (sodium metabisulphite) solution to detox tanks for the cyanide detoxification process). When plastic falls into the tank during dosing, operators forget to inspect the empty SMBS bags to ensure no bag pieces are left in the dosage tanks after removing the bags for disposal from the mixing area. 4 exceedances caused by strainer problems from plastic trash accumulation resulted in exceedances ranging from 102 -136 mg/l WAD cyanide, 3 – 4 March 2025, and 6, 17, and 18 January 2025.

4. The oxygen plant was down for repair, hence there was insufficient oxygen and detoxification due to the mechanical failure of the plant.

5. The non-return valve for the oxygen line to detox tank number #2 had failed earlier during the day, causing the line to choke and inhibiting the oxygen supply into the tank. As a result, WAD cyanide spiked above the ICMI limit to 98.01 ppm. Investigations showed the cause was a puncture and choking of the oxygen line to detox tank number #1, and a contributing power failure that choked the oxygen lines. These exceedances occurred between 10 and 16 December 2024.

6. The coating of cynoprobe probes with a thin layer of scales was the cause of 13 exceedances, ranging from 58–227 ppm WAD cyanide, between 3 and 19 March 2025. There were also further exceedances on 6, 17 and 18 January 2025. However, increased cleaning and higher cleaner concentrations have resulted in no incidents since then.

7. The two major recurring exceedances were strainer blockages by plastic and the coating of the Cynoprobe probe.

#### **Sustainable Solutions**

Sustainable solutions to the problems have been developed. For example, in order to minimise the problem of plastic particles causing blockages, strainers are being cleaned more frequently, once per week, and during shutdowns. Consideration is being given to long-term solutions to the problem, i.e. preventing the generation of small plastic particles during bag and inner splitting.

The occurrence of scales on the Cynoprobe was addressed by increasing cleaning frequency and the concentration of the cleaning agent. The gearbox and blade agitator failures were found to be caused by a loosening of bolts. These were tightened, and the problem has not reoccurred.

Since the corrective actions have been implemented, there have been no WAD cyanide exceedances.

#### **WAD Cyanide in Settling Pond and Return Water Ponds 1, 2, and 3**

An analysis of the three years of results shows one outlier of 21 ppm WAD cyanide, 2 higher levels of approximately 10 ppm WAD cyanide, and the remainder are all below 1 ppm WAD cyanide.

As the exceedances were managed and rectified, the Auditor deems the open waters to be at less than 50mg/L for most of the time. There have been no cyanide-related wildlife mortalities since the previous certification audit. The daily Barrick TSF inspections daily checklists were carried out by the Bulyanhulu Process Plant Foreman, and the checks include wildlife observations. No mortalities were recorded. Weekly Environmental inspections are conducted, and no wildlife mortalities were observed or reported. No open water ponds are present on the plant. (Note that at present, the Cyanide Code



focuses on wildlife mortalities in open waters and not mortalities in plants where no open waters are present.)

Based upon a review of the inspection records and the WAD cyanide levels, it would appear that maintaining a WAD cyanide concentration of 50 mg/l or less in open water is effective in preventing significant wildlife mortalities, even though there were ad hoc WAD cyanide exceedances.

There are no heap leach facilities on site.

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

**X in full compliance with**

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

***Basis for this Finding/Deficiencies Identified:***

No direct discharge to surface water was found during the site inspection of the process plant. This was also confirmed for the TSF, where the nearest river is 5 km away. There is no direct discharge to surface water, and no mixing zones have been established by the applicable jurisdiction.

The following sample values were sighted: -

- Cattle Pond values were sighted monthly for WAD cyanide: - results and graphs for 2023, 2024, 2025 to date of audit were sighted, and no sample exceeded 0.022 mg/L WAD cyanide. Values are less than the limits of detection.
- Sighted borehole values – below the limits of detection.
- Sighted the quarterly sample WAD cyanide levels for Buly river up- (W1) and downstream (W2). The results and graphs for 2023, 2024, 2025 to date of audit were sighted, and no sample exceeded 0.022 mg/L WAD cyanide. Values are less than the limits of detection of 0.002 mg/L WAD cyanide.
- Sighted quarterly sample WAD cyanide levels Lake Victoria (W4). Results and graphs for 2019, 2020, 2021, and 2022 to date of audit were sighted, and no sample exceeded 0.022 mg/L WAD cyanide. Values are less than the limits of detection of 0.002 mg/L WAD cyanide.

All values were less than the limits of detection, indicating that there is no indirect discharge to the surface waters. In discussion with The SGS Laboratories, Mwanza Laboratory Manager, Mr Peter Mwangonye, he indicated that the laboratory was ISO 17025-accredited and the accreditation was valid until 2027. As part of that accreditation, they are required to implement Quality Assurance/Quality Control programs to verify the accuracy of their laboratory sample analysis. SGS Laboratories carries out analyses for Bulyanhulu. No indirect discharges from the operation have caused cyanide concentrations in surface water to rise above levels protective of a designated beneficial use for aquatic life.



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

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified*

The new CIL plant has concrete bunds and spillage recovery systems to prevent and manage seepage, as confirmed during the site visit. The rest of the plant also has concrete bunds and spillage recovery systems to prevent and manage seepage. All TSF return water dams are lined, and the process plant uses a detoxification section to reduce cyanide in the tailings to less than 50 ppm WAD cyanide. TSF4 is lined and equipped with underdrains to recover any seepage, which is pumped to return water ponds via the silt trap and underdrains. This was also confirmed during the site visit.

Beneficial uses for groundwater is primarily mining, with one borehole used for drinking water. The legal standard for groundwater in place in terms of the Environmental Management Act (Water Quality Standards Regulations 2007, indicates that the water standard for Cyanide (CN) is 0.2 mg/L cyanide. Quarterly Borehole samples up- and down-gradient of the facility (analyse for total, free and WAD Cyanide) for 2023, 2024 and 2025 showed that all values were below the limits of detection, 0.002mg/L WAD cyanide.

The backfill plant is fed with the mill float tailings, which do not contain any cyanide and thus is not a cyanide facility. No exceedances were recorded in samples from 2023 to date, and therefore, no remediation work was required.

**Standard of Practice 4.7:** *Provide spill prevention or containment measures for process tanks and pipelines.*

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

The following were confirmed during the 2015 certification audit of the new CIL.

- Sighted the civil drawing of cyanide mixing and storage tank and confirmed an impervious layer below the tanks.
- Sighted CIL civil drawings and confirmed that the two spare CIL tank civil foundations were equipped with a concrete impervious layer on top.



- Sighted the Detox tank civil drawings and confirmed impervious layer in the tank foundations.
- Pregnant and Barren solution tanks were reported to be placed on impervious concrete plinths by Daniel Kalemela, Acting Maintenance Section Leader. He was present during the construction of the tank foundations.
- Sighted the process water tank and confirmed an impervious layer in the tank foundations.
- Confirmed during site inspection that all tanks are placed inside bunds.

No changes have been made to spill prevention since 2015, as confirmed during the 2022 and 2025 site inspections.

The confirmed bund and tank volume data were included in the 2015 re-certification audit.

- CIL bund volume 1 800m<sup>3</sup>, largest tank 1 600m<sup>3</sup>, linked to the pre-leach thickener bund.
- Detox bunds Volume 850m<sup>3</sup>, Largest tank 550m<sup>3</sup>,
- Elution bund volume 80m<sup>3</sup>, Largest tank eluant 25m<sup>3</sup>,
- Cyanide mixing and storage bund volume 90 m<sup>3</sup>, largest tank 80m<sup>3</sup>,
- No changes were made to the spill prevention regime since 2015, as confirmed during 2022 and 2025 site inspections: water storage bund, 1450 m<sup>3</sup>; largest tank, Process Water Tank, 1000 m<sup>3</sup>.

The Pre-leach thickener bund is linked to the CIL bund, which has a capacity of 1800 m<sup>3</sup>. The Thickener volume is 1 600 m<sup>3</sup> and is ICMC compliant as it is linked to the CIL bund. No changes have been made to the bund designs or volumes since 2015, as confirmed during the 2022 and 2025 site inspections.

The new CIL plant was built with all sections placed inside bunds, equipped with sump pumps that return spillage to the process. All bunds in the plant have sumps and spillage pumps to pump any spillage back to the process and no tanks are used without secondary containment. Thus, no procedures are needed. This was confirmed during the site inspections. No planned discharge to the environment exists.

The cyanide dosing lines run in a pipe-in-pipe system that crosses bare soil, while the other pipes are installed above competent concrete bunds. The new cyanide line to the Barrick inline leach reactor and the cyanide line to the caustic cyanide tank are equipped with secondary containment pipe-in-pipe systems, as confirmed during the site inspection. All other low-strength cyanide-containing pipes are included in PMS inspections as a preventive measure.

No risk to surface waters from pipelines at the plant or the TSF exists, which was confirmed during the site inspection. The high-strength cyanide pipes and tanks are constructed of mild steel, and the HDPE pipes are used, and the TSF pipelines are constructed of HDPE.

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

in full compliance with



**The operation is  in substantial compliance with Standard of Practice 4.8**

not in compliance with

*Basis for this Finding/Deficiencies Identified:*

Previous recertification audit evidence indicated the following:-

"Quality control and quality assurance records have been retained for cyanide facilities.

Appropriately qualified personnel reviewed the construction of the cyanide facilities and provided documentation that the facility has been built as proposed and approved. The previous certification audit confirmed that there was documentation that the facility had been built as proposed and approved...."

Tailings Storage Facilities are "works in progress" and quality control and quality assurance are continuous processes managed and monitored by the Engineer of Record, A James Pr. Eng, (ECSA (Engineering Council of South Africa) No. 890393). Sighted the SLR Construction Quality Plan for Bulyanhulu TSF 4 Wall lift 4, 10 September 2019, the CECL TSF 4 – Lift 5 and North Diversion Berm As-Built Report, reviewed by SLR Consulting, dated September 2025. The report summarised the construction of Wall Raise 5 and the Northern diversion berm for TSF4 from 16th November 2022 to 23rd December 2023, and Bulyanhulu TSF 4 Wall Raise Design Lift 6, SLR Project No.: 710.02031.00008, Report No.: R04, Revision 0, dated April 2023. The Report includes a section on Construction Quality Assurance Requirements and confirms compliance with the TSF Construction Quality Plan. TSF QA/QC documents are available electronically, and the folder list on the Bulyanhulu Server was sighted, including TSF Design documents, drawings, and approvals by SLR. These were all signed off by the Engineer of Record, A James Pr. Eng.

A new Gekko ILR (Inline Leach Reactor) has been installed outside of the Gravity Circuit. There has been a problem locating the QA/QC and as-built drawings for this facility. However, a "fit-for-purpose" visual report has been prepared. The Gekko Plant Structural Audit Report, 2025, dated September 2025, was prepared by Resultant Consulting Engineers and issued on 29th October 2025 as Report No. BAR176.002\_FINAL\_REV 0.1. The report was undertaken by R Pretorius (Structural Engineer) and reviewed and approved by I van der Wat (Structural Engineer, Pr. Eng. ECSA Reg No. 20150501).

The report concluded that the Plant is generally in an acceptable condition except for a single missing support plinth and foundation issues. Key findings include a missing support plinth on N6, missing grout pads beneath the base plates of the Gekko System supports, several bracing members had been removed on the surrounding super-structure, and design non-conforming cut-outs were made on support beams.

The Report recommends: -

- a) A plinth beneath the N6 column should be installed as soon as possible.
- b) That the missing grout pads be reinstalled within 12 months.
- c) The removed bracing members be reinstated within the next 12 months.
- d) That support beams with cutouts be reinstated to original design specifications.



No evidence has been provided to the Auditor confirming that the critical corrective actions have been completed. This has resulted in a Substantial Compliance finding for this Standard of Practice with a Corrective Action Plan requiring evidence that the critical corrective actions outlined in the Report have been completed.

*Standard of Practice 4.9: Implement monitoring programs to evaluate the effects of cyanide use on wildlife, and surface and ground water quality.*

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

The operation has a Water Monitoring Manual Procedure which covers groundwater, surface water sampling, and species of WAD and Free cyanide. A Fauna Management procedure describes fauna management activities, including fauna deaths, their reporting and investigation. The sampling program was originally developed by Paul Agapiti (environmental officer - qualifications - BSc Environmental Sciences and Management, Sokoine University of Agriculture, and experience with SGS Laboratories in Mwanza). Revisions were done by Queen Tizeba, Senior Environmental Officer, who holds a B.Sc. in Environmental Science & Management.

The Water Monitoring Manual Procedure includes the following:-

- water monitoring sampling locations, as well as a PDF map indicating borehole locations;
- Section 4. Sampling Protocol details how samples are taken,
- Section 5.8 Surface water sampling for cyanide analyses
- Sample Preservation Table 7.2 (A and B),
- Container and transportation requirements (Cyanide requires the addition of NaOH to achieve pH 12)
- Chain of custody, Sections 8 to 10
- Table 3-1 Analyses Profile List: Sample species analysed include Total Cyanide, WAD Cyanide and Free Cyanide.

With regard to Quality Control for cyanide analyses, the Canadian Association for Laboratory Accreditation Inc. Certificate of Accreditation for African Assay Laboratories Ltd – Environmental & Geotechnical Laboratories SGS for ISO/IEC 17025:2017 - General requirements for the competence of testing and calibration laboratories, valid from 11/12/2024 to 5/12/2027. No 1004114 was sighted.

A completed field control sheet, which includes ICMI requirements to include weather, anthropogenic and Wildlife/livestock activities, was sighted.

No discharges to surface water take place. Samples from the Bulyanhulu River W1, W2, (upgradient) W3 (downgradient) and W 4 (downgradient in Lake Victoria) are taken on a quarterly basis. Boreholes upgradient TMB 01 and TMB 11 and downgradient (PMB05), verified on Google map included in sample results spreadsheet, are taken quarterly.

Wildlife mortality inspections are conducted daily. Given the absence of cyanide in these samples, and the absence of cyanide-related wildlife mortalities, the frequencies are deemed adequate to characterise the medium being monitored and to identify changes in a timely manner.

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

***Standard of Practice 5.1: Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife, livestock, and the environment.***

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

The Bulyanhulu Gold Mine Limited, Cyanide Decontamination and Decommissioning Plan was sighted and reviewed. The Plan contains important sections covering cyanide decontamination and decommissioning. These include: - Site Description, Cyanide Management, Health & Safety Considerations, Decontamination and Decommissioning, Cyanide Destruction Tank, Area-Specific Plans, High-Cyanide Areas, Implementation Schedule, Financial Provisions, and Audit and Review. Section 11 Implementation Schedule is included in the Plan. In the Plan in Section 13.1 – Internal Review, it states that the Plan “...will be revised/updated every three years, or earlier if needed, in line with the mine closure plan...”

***Standard of Practice 5.2: Establish a financial assurance mechanism capable of fully funding cyanide-related decommissioning activities.***

in full compliance with

**The operation is**                    **X in substantial compliance with Standard of Practice 5.2**  
  
 not in compliance with

*Basis for this Finding/Deficiencies Identified:*

In the Bulyanhulu Gold Mine Limited Cyanide Decontamination and Decommissioning Plan, dated 15 January 2025, there is a Section 12, Financial Provisions. Third-party implementation costs for decontamination and decommissioning are listed as: -

- Process Plant and Associated Infrastructure - US\$ 4,911,595
- Tailings – US\$ 5,212,036
- Decontamination and Decommissioning Plant – US\$487,353

- Training of contractors & Barrick employees on decontamination and decommissioning works for cyanide facilities – US\$ 2,114,093
- Total – US\$ 12,725,077

Also sighted and reviewed was the Digby Wells Environmental Annual Closure Cost Assessment 2025 Update - Bulyanhulu Gold Mine, Project BAR9817, by Oratile Mokoto, reviewed by Leon Ellis, October 2025. The Closure Cost Update included the decontamination and decommissioning costs identified by the Cyanide Code. Closure costs (including cyanide decontamination and decommissioning costs) are reviewed annually.

There is an agreement between the Tanzanian Ministry of Minerals and Bulyanhulu Gold Mine that an Insurance Bond covering the cost of Closure and Decontamination for 12 months, with annual renewal thereafter, is acceptable. The agreement was dated 2016, and Bulyanhulu has paid subsequent renewals since then, up to 2022. A dispute arose between the Ministry of Minerals and the NEMC (National Environmental Management Council), over who was responsible for managing Rehabilitation Bonds. This disagreement led to delays in the payment of the due bonds, as NEMC asserted that it held the mandate to oversee these bonds due to its role in enforcing environmental laws. Since rehabilitation is related to environmental issues, this became a point of contention.

Additionally, a requirement was established stating that institutions issuing the bonds must be based in Tanzania. However, the ministry faced challenges in finding a suitable insurance company or bank to guarantee the mines, resulting in a stalemate. As a consequence, the mines were instructed to wait while the ministry worked on a solution.

A subsequent letter was received from the Ministry of Minerals, dated 13 January 2023, requesting a meeting to discuss the identification of the appropriate methodology and agreement on the proper way to deposit. Several changes have occurred within the government, and it has yet to respond to Bulyanhulu.

A Barrick Draft Letter, Proposal for Posting of Rehabilitation Bond, addressed to the Permanent Secretary, Ministry of Minerals, Dodoma, Tanzania, laying out the provisions to comply with the Government Directive for financial assurance to cover Mine Closure and Decommissioning (including cyanide decontamination and decommissioning) was sighted.

The withholding of the 2023, 2024 and 2025 premiums is a contravention of the 2016 agreement and means, technically, there was no financial provision for closure and decommissioning in 2023, 2024 and 2025. The agreement is intended to be negotiated each year and is not permanent; the law requires that a new agreement be established before the deposit of a new bond. Barrick initiated a discussion, but the government did not respond.

In the absence of confirming documentation and proof of premium payments for 2023, 2024 and 2025, there is no clarity on whether the financial mechanism used is accepted by the Government. The premiums were not paid for the reasons mentioned above.

At the time of the audit, this question was non-compliant. However, this matter can likely be resolved administratively. For that reason, a Corrective Action Plan has been

compiled to give the parties involved 12 months to finalise the documentation. It would appear that, should Bulyanhulu be required to initiate the Closure Plan in the short to medium term, the funding would have to come from Barrick Corporate.

A letter from MUA Insurance (Tanzania) to the Tanzanian Ministry of Mines, dated 16 January 2026, was sighted, posting Guarantee Number 3080/26/HO/N for a Rehabilitation Bond to finance the rehabilitation of Bulyanhulu Mine. The Guarantee is dated 26th January 2026 and is valid until 26th January 2027.

**Deficiencies**

- As the mechanism to pay the Rehabilitation Bond annually has to be renegotiated with the Tanzanian Government every year, there is no fallback solution to guarantee Closure Cost financing whilst annual negotiations are underway. Thus, there may be periods when funding is potentially unavailable or not guaranteed.
- Historically, there needs to be clarity from Barrick Corporate that, if the Closure Plan would have been required to be initiated during 2023, 2024, and 2025, the parent company would have funded the Plan, in the absence of Rehabilitation Bonds to fund it. Otherwise, historically, there were no guarantees for funding for the Closure Plan over the past three years since the last recertification audit.

**Corrective Action**

- As the mechanism to pay the Rehabilitation Bond annually has to be renegotiated with the Tanzanian Government every year, there needs to be a fallback solution to guarantee Closure Cost financing (including the cyanide decontamination and decommissioning) whilst annual negotiations are underway.
- There needs to be written confirmation from Barrick Corporate that, in the absence of all the Guarantee premium payments since the last ICMI recertification audit, if Bulyanhulu had had to initiate its Closure Plan for abnormal or emergency reasons, Barrick Corporate would have underwritten the costs of the Closure Plan (including the cyanide decontamination and decommissioning) that may have occurred.

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

***Standard of Practice 6.1: Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce or control them.***

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

The following procedures were sampled and reviewed and confirmed to promote safe working and minimise worker exposure: -



- 
- Mixing Sodium Cyanide (Area 4167 New CIL) Safe Work Procedure,
  - CIL Unloading Sodium Cyanide Boxes Safe Work Procedure,
  - Confined space entry procedure,
  - Permit to work procedure,
  - New CIL Chemical Pumps Change Over Safe Work Procedure,
  - New CIL Reagent Line Decontamination (Flushing for Maintenance) Procedure,
  - CIL Cyanide Detoxification Process Upset Safe Work Procedure, and
  - CIL cleaning out cyanide storage or mixing tanks procedure.

All procedures specify the PPE (Personal Protective Equipment) and pre-work inspections, as appropriate to the tasks and situations. Use is made of the Barrick Field Level Risk Assessment card before any work is done.

The operation solicits and actively considers worker input in developing and evaluating health and safety procedures through various means. Toolbox talks are held every morning to raise and resolve safety issues. New and revised procedures are discussed during the toolbox talks as appropriate. Tool Box talks files were reviewed, and various examples were sighted. Weekly Safety meetings are held where feedback is recorded, and issues are raised for action. This includes all safety and health issues as well as procedures. Minutes are produced. Minutes were sampled and reviewed. Job Safety Environment Analyses (JSEA) and risk assessments may also generate worker inputs, but there are no recent examples available. A repeat risk assessment of whether bag rinsing was safer than handling the cyanide bags dry was conducted on 23/09/2025. Employees involved included the Process Trainer, the Safety Officer, a Senior Environmental Officer, a CIL Operator, and an instrument technician.

***Standard of Practice 6.2:** Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.*

**X in full compliance with**

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

***Basis for this Finding/Deficiencies Identified:***

In order to limit the evolution of hydrogen cyanide gas during mixing and production activities, the CIL pH set point is set at 10.5. The mixing procedure requires sodium hydroxide solution or barren solution addition to the mixing tank water before adding the dry solid cyanide. The pH should be controlled above 10.5.

The cyanide gas and dust hotspots were identified earlier and resulted in the installation of fixed HCN gas monitors. Fixed HCN gas Monitors are installed at the Refinery (2), CIL (1), Cyanide mixing (1), Elution bund (1), Gekko (1) and Detox (1), totalling 7 fixed gas monitors in the plant. These are deemed as potential cyanide “hot spots”. Design P&IDs (Pipe and Instrumentation Drawings) identified potential HCN risks, and fixed monitors were installed at the areas indicated above. Locations of hotspots for HCN gas

are included in the cyanide awareness training material. Signage is in place at the hotspots, e.g., Cyanide mixing, dry cyanide store, CIL entrance, and Detoxification, which was confirmed during the site inspection.

Personal gas monitors are used throughout the Plant. A total of 38 portable HCN monitors are available with 38 in use in the Plant. Issue records of HCN gas monitors are maintained, and units are issued against a name list. The TSF team holds two HCN gas personal monitors. The HCN gas monitors are set to the first alarm at 4.7 ppm. Practice is for persons to move away from the area upon the sounding of the 1st alarm, and to inform the Operator and Supervisor, who investigate the cause (e.g., check pH). The second alarm is at 10 ppm, and the area is immediately evacuated by all. Procedures include actions to take when alarms are activated.

In the Refinery Access Procedure, under Item 3, under General Refinery Entry, before entry/work, the refinery supervisor must go around the refinery room with a cyanide measuring HCN gas instrument (Monotox) to confirm if there is any HCN gas. The personal gas monitor is carried by the Supervisor or the Operator at all times while in the Refinery. There must be at least two people present in the refinery at all times. An emergency exit section is included in the procedure. An OxySock (Medical Oxygen Dispenser) and personal HCN gas monitors are kept in the refinery for cyanide monitoring and emergencies. The refinery is under constant CCTV observation.

The HCN gas monitor manufacturer requires calibration every 6 months. The plant has replaced the old, fixed monitors with Dräger units, with full support from the local Dräger agent. All monitors are calibrated simultaneously, with the Dräger technician visiting the site to calibrate all instruments. Calibration records were viewed for 2023, 2024 and 2025. Maintenance is carried out by the manufacturer's technicians, but a stock of batteries is kept for replacement by site instrument technicians.

Signage was observed during the site inspection, including no smoking, no open flames, and no eating or drinking permitted. Required PPE signage is posted at the plant, including the dry cyanide store, the cyanide mixing and storage area, CIL, Detoxification, and pregnant tanks. The induction programmes include that no eating and drinking is allowed outside dedicated drinking and eating areas in the plant.

Cyanide signage at the TSF gate, including no-eating-and-drinking signs, was confirmed during the site inspection. The TSF is situated within a barbed-wire security fence, with access controlled by a manned security gate. The comprehensive induction programmes detail PPE requirements for the plant and TSF. Eating and drinking are only allowed in designated areas and form part of the induction training.

High-strength cyanide solution is dyed red with food dye (carmoisine) added to the cyanide mixing tank during mixing for clear identification.

In the CIL, showers and eye-wash stations were observed installed at appropriate locations. Weekly inspection records for two months in 2023 and 2025 were sampled. The locations of fire extinguishers were confirmed during the site inspection, and quarterly fire extinguisher inspection records from 2023 and 2025 were sampled.

During the site inspection, it was confirmed that the labelling of the cyanide pipelines and the Tailings line included the flow direction. The cyanide observed in the store was supplied by the Draslovka production facility (ICMI certified producer) from Czechoslovakia. The SDS document sighted at the cyanide store was confirmed to be



hospitals or clinics are used for patients with cyanide exposure. The Emergency and Crisis Management, Section 19.3 Medical Evacuation, details the procedure, Medical Emergency Evacuation Procedure, referring to Amref Flying Doctors for transport of medical patients to offsite medical facilities. The medical advisor or most senior doctor will make the decision. The agreement with Amref Flying Doctors (Sighted a letter from Amref Flying Doctors Medical Director, Dr Joseph Lelo, confirming willingness and capability to evacuate cyanide patients.) includes the understanding that there may be cyanide-exposed patients to be transported, and provisions will be made to protect the pilots and other passengers from cyanide exposure. The Mine has on-site medical facilities capable of handling cyanide exposures. The Doctor in charge would decide whether to evacuate patients to off-site, qualified medical facilities if required.

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

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

**X in full compliance with**

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

***Basis for this Finding/Deficiencies Identified:***

The site has an Emergency and Crisis Management Plan, which addresses potential accidental releases of cyanide and cyanide exposure incidents. The Plan includes scenarios such as catastrophic release of HCN, hazardous materials event, release of cyanide during dry conditions, release of cyanide during wet conditions, cyanide spill off Site, explosions and fires involving cyanide, cyanide pipe rupture, cyanide valve rupture or failure, cyanide tank rupture or failure, overtopping of cyanide ponds and impoundments failure, power outages at CIL plant, uncontrolled seepage of cyanide, failure of cyanide treatment destruction or recovery systems, and responses to these various occurrences. The Plan also addresses clearing site personnel, emergency evacuation of the mine site and the process plant, clearing potentially affected communities from the area of exposure, and cyanide release affecting the community. The use of cyanide antidotes and first aid measures for cyanide exposure, and First Aid guidelines are also included. The Plan includes control of releases at their source; containment, assessment, mitigation, and future prevention of releases; and Decontamination of a solid or liquid cyanide spill into soil, as well as cyanide soil sampling.

With regard to the TSF, the TSF4 – Operation, Maintenance and Surveillance Manual Bulyanhulu Gold Mine includes a section, Tailings Facility Emergency Plan. There is also a TSF Failure Emergency Response Plan, which outlines a series of TSF emergency



situations that may occur, as per the identified TARPs (Trigger Actions Response Plans). These include: - maximum Rate of Rise and Deposition Rate, Drain Flows, Slurry and density Measurements, Piezometer Levels, Survey, Deformation and wet areas, Pipe Burst and Slurry Backwash, Overtopping, and Outflow of Tailings. Specific actions for each scenario are outlined and categorised into Green, Yellow, Orange and Red levels, based on severity.

**Standard of Practice 7.2:** *Involve site personnel and stakeholders in the planning process.*

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

The ECMP (Emergency and Crisis Management Plan) is briefed to the workforce via the management system, such as safety meetings and toolbox meetings. Post-drill briefing sessions are used to provide information and feedback on the plan. The appropriate cyanide emergency response is included in the induction program. The workforce is involved in mock drills. Communities are not involved in the Plan but are appropriately briefed on its contents. External stakeholders are only involved in those aspects of the Plan that would affect them, and not necessarily the whole Plan. Camp family members are briefed on emergencies during their site induction.

No local response agencies are involved in the emergency plan, as the medical clinic is situated inside the Mine security area. The onsite clinic is involved with the full cycle cyanide mock drills and debriefing sessions following drills. Consultation or communication with the stakeholders is undertaken to keep the ECMP current. Periodic dialogue with any additional external responders is not required in this situation as the ECMP does not designate any additional off-site responsibilities. However, there is currently an informal liaison with external response agencies.

**Standard of Practice 7.3:** *Designate appropriate personnel and commit necessary equipment and resources for emergency response.*

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

The Plan uses Duty Cards to communicate roles and tasks during an emergency. Duty cards include:- Incident Controller, Operations Officer, Planning Officer, Logistics

Officer, and Emergency Officer. Also included in the Plan are details on the Emergency Response Team (ERT) and their training requirements. There is an activation processes flow chart which includes callout guidance. There is a Consolidated inventory HAZMAT and Cyanide equipment section and detailed checklists for all the ERT equipment which is available for each equipment room and first aid facilities, including the process plant First aid container. The Emergency Response Coordinator is responsible for maintaining a list of all equipment and the required checks for each piece. Equipment checklists were sighted and two months each were sampled for 2023 and 2025.

No local response agencies are involved in the emergency plan as the medical clinic is located inside the Mine security area. The onsite clinic is involved with full-cycle cyanide mock drills and de-briefing sessions following drills. Amref is involved, as per its contract, in evacuating patients to outside medical facilities. In a letter dated 17 December 2025, Professor John Wern, Chief Medical Officer & Associate Dean, Clinical Services, of the Aga Khan University Hospital, Nairobi, Kenya, confirmed that the hospital has the clinical capacity and expertise to manage cases of cyanide poisoning, including advanced resuscitation, supportive critical care and management of metabolic and acid-base derangements.

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

**X in full compliance with**

- The operation is**
- in substantial compliance with **Standard of Practice 7.4**
  - not in compliance with

***Basis for this Finding/Deficiencies Identified:***

The Plan includes sections covering internal and external communication, and a section with the telephone numbers of key contacts. The Plan cross-references the Incident/Injury Reporting and Investigation Procedure, a Corporate Environmental Reporting Standard that contains classifications of environmental incidents and appropriate reporting requirements, and the Environmental Communication Procedure, under which information is released to the Barrick Corporate legal and Corporate Affairs department, who will release it publicly, as appropriate. The site is not allowed to release information publicly.

The Plan includes a section for notifying ICMI in the event of any significant cyanide incidents. There have been no significant cyanide incidents to report to ICMI during the past three years.

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

**X in full compliance with**



**The operation is**  in substantial compliance with **Standard of Practice 7.5**  
 not in compliance with

*Basis for this Finding/Deficiencies Identified:*

In the Plan, the section called Decontamination of a solid or liquid cyanide spill into soil, states, "...The general response to a spill of solid sodium cyanide onto soil should be to attempt safe recovery of as much cyanide in the dry form as is reasonably practicable. This will minimise the amount of product requiring subsequent in-situ neutralisation..." For the treatment of contaminated ground, Sodium Hypochlorite (Hypo) is the preferred reagent, as there is no problem with sludge formation. For small spills, the pH should remain high in the relatively undiluted reaction in the soil. The section includes detailed steps for dealing with contaminated soil and groundwater, including chemical mixing and appropriate concentrations. Contaminated water will be reintroduced to the CIL circuit. The top soil will be excavated and removed to the nearest safe area (e.g., the mine site) for disposal.

In the case of cyanide releases affecting the community, the Plan states, "...Bulyanhulu will supply potable water to any people who may be affected by the incident or who have access to their drinking water restricted as a result of the incident. Water from the Fresh Water Makeup pond is treated on site and can be supplied to people on site and to the community as potable water..."

The Plan specifically prohibits the use of treatment chemicals, such as sodium hypochlorite, ferrous sulphate, and hydrogen peroxide, in surface water, unless there is a direct threat to human life. The Plan covers the requirement for cyanide soil sampling, where appropriate.

**Standard of Practice 7.6:** *Periodically evaluate response procedures and capabilities and revise them as needed.*

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

The Plan needs to be reviewed at least annually or when there are significant changes. With regard to emergency drills, the Plan states, "...

- The General Manager is responsible for ensuring that emergency drills are periodically conducted in all work areas. This is recommended at bi-annual intervals.
- The Department Managers are responsible for coordinating the emergency drills in the areas under their direction and implementing recommendations.
- Emergency Response personnel are responsible for assisting in conducting these drills and assisting with recommendations.



- The scenarios used in emergency drills will be realistic and based on current operating conditions. The primary event (fire, spill, rock fall, etc.) is to be determined based on the objective of the exercise...”

**Mock Drill 1**

An outside the plant Cyanide drill involving a cyanide spill was conducted at Bulgarama on 15 July 2025. The scenario was that a Box of cyanide briquettes (maize flour and soda lime) fell from a truck in a cyanide convoy and spilt. The convoy truck drivers worked together to barricade the area and cover the spill with a tarpaulin. The Plant ERT was summoned along with security management and the transporter (Swala Solutions). The spill was cleaned up. Community members approached too closely and, when challenged, acknowledged they were aware of the risks.

**Mock Drill 2**

A Cyanide Poisoning Simulation Drill was held on 19th April 2025. The Scenario was that someone collapsed on top of the CIL Plant, using a dummy, to test reaction. The findings from the drill were: - 1) no personal gas monitor available (Mult Gas detector ordered for ERT Team), 2) First Responder Container not in good condition. (Container subsequently repaired).

**Mock Drill 3**

An HCN gas Evacuation Siren Drill in the Process Plant was carried out on 1st April 2023. The Cyanide alarm was activated, and the Process Supervisor informed security control while employees evacuated to the Emergency Assembly Points. Two ERT First Responders were assigned to investigate the root cause and inform employees at the assembly point. The drill was aimed at testing plant employees' responses. As a result of the drill, the emergency cabin and the safety shower were moved to better locations. The Plan will be revised in line with recommendations from emergencies, emergency drill debriefs, and Emergency Plan reviews at other operations. However, no changes have been made to the Plan as a result of findings from cyanide drills.

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

***Standard of Practice 8.1: Train workers to understand the hazards associated with cyanide use.***

**X in full compliance with**

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

*Basis for this Finding/Deficiencies Identified:*

The Process plant training procedure is in place. The procedure covers a chemical and cyanide awareness course (part of site induction), entry-level. Section 4 - Chemical and cyanide awareness defines requirements. A written test is required. The course takes 5

hours, and a pass mark of 75% is required. A Chemical and Cyanide Awareness training matrix is in place, including plant induction covering cyanide awareness and required task training modules. The system will prevent contractors and employees from entering the plant without an ID card. The ID card is issued only after the cyanide awareness course is completed. A data capture form is used to issue the cards. There is also a Temporary Contractor Matrix covering short-term contractors. For returning temporary contractors, the training is only valid for 3 months. If the contractor is on-site continuously, his training is valid for 12 months. Annual cyanide refresher training is undertaken. All contractors receive a cyanide awareness induction when returning to or starting at the Plant, unless it has been less than 3 months since their previous training. OxySok medical oxygen training is refreshed every 6 months. Short-term contractors are automatically retrained when returning to work on the plant. All Paragon TSF staff (permanent) receive cyanide awareness and induction training from Plant trainers. Attendance registers are kept, and the training matrix is updated. The Chemical and Cyanide Awareness training matrix from the last recertification audit to date was reviewed. Paragon Tailings staff receive an induction that includes cyanide awareness. The records are kept with the Plant records, and Paragon also maintains its own records.

***Standard of Practice 8.2:*** *Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.*

**X in full compliance with**

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

***Basis for this Finding/Deficiencies Identified:***

All staff (Operational and maintenance) receive a process plant induction before starting Safe Work Procedures (SWP) training. All workers are trained using SWP for their specific jobs. A training matrix is in place for each shift, inside the plant and outside the plant - six in total. Paragon Tailings conducts task training using its standard operating procedures.

Cyanide training elements are included in the Cyanide Safe Work Procedures. The matrix includes all SWP training and lists the requirements for different jobs, along with each employee's completed training. Each employee has their own training matrix, which includes all the procedures they need to be trained on and demonstrate competence in. To advance in seniority or move to other areas, he must be shown to be fully competent in all procedures.

The Training Foreman, Deogratias Primus, has a Degree in Education, has undertaken a Train-the-Trainer course, been trained in the Fundamentals of front-line management, hazardous chemical and cyanide awareness, and Training and presentation skills. He has a Certificate IV in Training and Assessment (TAE 40110) and various other courses on



operations. His experience includes 4 years in operations and 4 years in training. Four process plant trainers are assisting with training:-

- Gerald Kawana - Training Assessment course, 10 years of plant experience
- Deogratias Runigangwe - Training Assessment course, 15 years of plant experience.
- Kulwa Malunga - 17 years of plant experience.
- Respicious Makanga - 15 years of plant experience.

Paragon Training is conducted by a combination of Site Managers, the Safety Officer, and an Operational Expert. All staff involved in the training are experienced TSF staff. Pascal Nzumbi, Site Manager, has 15 years' experience in tailing operations and Tailings Skills Management. Jefson Matunhu, Operational Expert, is a Mine Residue Specialist with 22 years' experience.

The new employee discusses the task procedure with his supervisor, who counsels him on understanding and content. When the supervisor is satisfied with the employee's understanding, he accompanies the employee to undertake the task. Upon completion of the task, the supervisor will either confirm his competence or counsel him until he is deemed competent. Thereafter, periodic PTOs (Planned Task Observations) will be conducted to assess employees' continuing competence.

Refresher task training is based on task observations, identifying the need for such training on an individual basis. Refresher training is also given after investigations identifying a lack of competency or training issues. Refresher training may be given after an accident where the investigation identifies training as an issue. Paragon Tailings conducts refresher training on all tasks performed every 12 months. Planned Task Observations are conducted, and each supervisor must conduct at least two PTOs per week. This applies mine sitewide, not only at the processing plant. PTOs are also conducted on Paragon staff. PTOs from the Plant and the TSF were sampled and reviewed.

Records are kept electronically and in hard-copy files, and are retained as long as a person is in employment and for 5 years after the person leaves employment. General training attendance registers for 2023 and 2025 were sampled and reviewed. Paragon is committed to keeping training records for the life of the project. Annual refresher training is assessed using a PTO.

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

**X in full compliance with**

- The operation is**
- in substantial compliance with Standard of Practice 8.3
  - not in compliance with

*Basis for this Finding/Deficiencies Identified:*

Process staff act as the first responders and are trained in cyanide spillage, first aid, OxySok and evacuation procedures. However, it is the trained Emergency Response

Team (ERT) that will further respond to any cyanide emergencies. The Rescue Board, with the ERT Members' identity cards on the plant, was sighted.

The shift-based Emergency Response Teams (ERTs), consisting of trained members throughout the mine, are called upon by the Supervisor for specialised responses. At least four ER team members (two from Operations and two from Engineering) should be present on every shift.

The ERT is internally trained in 7 areas, including Hazmat (Hazardous materials), confined space rescue, road rescue, firefighting, first aid, vehicle rescue, and SCBA (Self-contained breathing apparatus). External training for the ERT Members is being planned. The ERT Training assessment test mark results are kept and a 75% pass mark is required. Training presentations cover the use of emergency equipment: firefighting, first aid level 1, SCBA sets, confined-space rescue, Hazmat presentation, and rope rescue.

Local fire brigades and ambulances are kept informed of the Plan. The Emergency Coordinator has all the contact details of key officials. The Mine has its own Emergency Response Team and Hospital on site to respond to cyanide emergencies.

ERT training is conducted continuously and through participation in mock drills. ERT Training includes weekly refresher training covering various topics and includes as many shift members as possible. First responders at the plant (members of the ERT) also receive refresher training weekly on Saturdays.

Hard-copy training records are kept, and it was confirmed that they are maintained for five years (also in training matrices).

***Principle 9. DIALOGUE AND DISCLOSURE: Engage in public consultation and disclosure.***

***Standard of Practice 9.1: Provide stakeholders the opportunity to communicate issues of concern.***

**X in full compliance with**

**The operation is**  in substantial compliance with **Standard of Practice 9.1**

not in compliance with

***Basis for this Finding/Deficiencies Identified:***

A dedicated Sustainable Communities Department (SCD) is in place. The Department is responsible for site-specific communication between the Mine and Communities. Mine Community Facilitators based in the villages provide information on Mine activities, including cyanide and cyanide awareness. Cyanide awareness training is provided by the Mines Training Officers. The appropriate affected parties have the Mine's contact information so they can reach out with any questions or other important issues.

Sixteen villages closer to the Mine are included in the communication system. Eight Villages are potentially affected by the road transport of cyanide and covered by the SCD. Meetings are scheduled monthly to cover all aspects of the mine, and cyanide is

appropriately included, but meetings may be held more frequently on demand from the Villages or the Mine. Cyanide awareness presentations are conducted twice per year, between May and June and November and December. The team has meetings with the District Commissioner, who is the head of the Security Committee of the District, who would be responsible if any cyanide incidents occurred on the roads. There are small village committee meetings of (approx. 6) discussing many issues, including cyanide. Meetings are minuted in Swahili.

A series of cyanide awareness training meetings was held in several villages, for example, at Kijiji Cha Shilele on 30 May 2023, attended by 72 people. Questions include: “Why are the trucks transporting cyanide marked “danger”?”, and “Why is the mine using cyanide?” A meeting on cyanide awareness was held at Segese on 20th June 2025, attended by 110 people.

The Mine conducts surface and underground tours. The tours are conducted according to the Communities' schedules and requests. Examples include: - Community group (teachers) tour held on 9 September 2025, attended by 25. 30 Community members attended a tour held in June 2025, and 11 Local Government officials attended a tour held on 20 September 2025. A Community meeting on 7 June 2025 was attended by 30. Community questions are answered. Questions about the trucks passing through were raised, and perceptions of the Mine were also clarified during the meetings.

***Standard of Practice 9.2: Make appropriate operational and environmental information regarding cyanide available to stakeholders.***

**X in full compliance with**

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

***Basis for this Finding/Deficiencies Identified:***

A written description of the mine operation, including cyanide use, based on the PowerPoint presentation, is available for distribution to local community Leaders. A written presentation is also available in Swahili, the local spoken and written language. The presentation printout is used together with a flyer (summarising the PowerPoint presentation) as handouts.

A PowerPoint presentation is available to distribute to the local communities, and the presentations are primarily in Swahili. In addition, there is another spoken tribal language, Sukuma, which is used in the presentations when requested or needed. The majority of Community members can read and write in Swahili, the local language. Pictures of presentations given verbally in Swahili and translated into Sukuma, on request, were sighted.

A Corporate Environmental reporting standard contains classifications of environmental incidents and appropriate reporting requirements. The Environmental Communication Procedure covers the Internal and External Communication Procedure. Information is forwarded from the site to the Corporate Legal and Corporate Affairs Department, who

---

will release the information publicly, as appropriate. The site is not allowed to release information directly to the public.

The site Environmental Incident, Accident Reporting and Investigation Procedure includes incident and accident classification, investigation process, immediate response, investigation by outside agencies, recommendations, and requirements for formal reports. Any relevant health, safety or environmental incidents relating to cyanide that might occur, will be included in the Barrick Sustainability Report, (<https://www.barrick.com/English/sustainability/default.aspx>), but none have occurred since the last certification audit. Offsite, the ICMI-certified transporter is responsible, and will liaise with Barrick Bulyanhulu Mine.

