

# Design for a better *future /*

New Porgera Limited

## **International Cyanide Management Code (ICMC)**

ICMC Certification Audit  
Porgera Gold Mine  
Summary Audit Report



27 November 2025

Public

# Question today *Imagine tomorrow* Create for the future

## International Cyanide Management Code (ICMC) ICMC Certification Audit Porgera Gold Mine Summary Audit Report

New Porgera Limited

WSP

Lvl 3, Mia Yellagonga Tower 2, 5 Spring St

Perth WA 6000

PO Box 7181



Cloisters Square WA 6850

Tel: +61 8 9489 9700

Fax: +61 8 9489 9777

wsp.com

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	Name	Date	Signature
Prepared by:	Edward Clerk	27/11/2025	
Approved by:	Ed Clerk	27/11/2025	

WSP acknowledges that every project we work on takes place on First Peoples lands.

We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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# 1 Summary audit report

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## 1.1 For Operational Gold Mines

<b>Name of Mine:</b>	Porgera Gold Mine (Porgera)
<b>Name of Mine Owner:</b>	Barrick Mining Corporation
<b>Name of Mine Operator:</b>	New Porgera Limited
<b>Name of Responsible Manager:</b>	Fiorenzo Guarino, Manager Sustainability, New Porgera Limited
<b>State/Province:</b>	Enga
<b>Country:</b>	Papua New Guinea
<b>Telephone:</b>	+675 544 3146
<b>Email:</b>	<a href="mailto:fiorenzo.guarino@npltd.com">fiorenzo.guarino@npltd.com</a>

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## 1.2 Operation location detail and description

### 1.2.1 *Porgera joint venture*

The New Porgera Limited (NPL) owns the Porgera Mine which is operated by Barrick (Niugini) Limited ("BNL") on behalf of the JV partners. BNL owns 49% of NPL while the remaining 51% is owned by PNG stakeholders (including state-owned Kumul Minerals Holdings Limited, local landowners and the Enga provincial government).

BNL is a company incorporated in Papua New Guinea. It is an independently managed company and is jointly owned through an equal partnership between Barrick Gold Corporation ("Barrick") of Canada (50%) and Zijin Mining Group Company Limited ("Zijin") (50%) of China.

### 1.2.2 *Porgera gold mine*

NPL, formally Porgera Joint Venture (PJV) is an open pit and underground gold mine located at an altitude of 2,200-2,600 m in the Enga Province of PNG, about 600 km north-west of Port Moresby and 680 km from Lae, the port of entry for most of the mine's supplies. The mine is situated in rugged, mountainous terrain on the floor of the Porgera Valley, which rises to 2,800 m at the rim. The annual rainfall is approximately 3.7 m, and daily temperatures range from 10°C to 25°C.

The Porgera Mine was placed into Care and Maintenance in April 2020, following the end of its special mining lease. Extensive negotiations for a new special mining lease were concluded in 2023, and production recommenced in January 2024.

### 1.2.3 Operation

The major components of the Porgera Processing Plant include:

- Crushing circuit and coarse and fine ore storage
- Grinding circuit
- Gravity and regrind circuit
- Flotation circuit
- Pressure oxidation and tailings neutralisation circuits
- Leaching (CIL) and adsorption circuits (CIP)
- Acid wash and stripping elution circuit
- Electrowinning and gold refinery
- Oxygen plant
- Reagent storage and mixing
- Cyanide destruction plant
- Tailings pipework and infrastructure
- Solid cyanide briquettes are delivered in sea containers by truck to site

The following cyanide facilities were included in the scope of this Recertification Audit:

- Flotation circuit
- Pressure oxidation and tailings neutralisation circuits
- Leaching and adsorption circuits
- Acid wash and stripping elution circuit
- Reagent storage and mixing
- Cyanide destruction plant
- Tailings pipework, infrastructure, and riverine discharge
- Incineration.

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## 1.3 Auditors findings

The Porgera Gold Mine is:

- ☒ in full compliance with
- ☐ in substantial compliance with
- ☐ not in compliance with

**The International  
Cyanide Management  
Code**

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## 1.4 Auditor information

Audit Company: WSP Australia Pty Ltd (WSP)

Audit Team Leader: Ed Clerk (ICMI Lead Auditor)

Email: [Ed.clerk@wsp.com](mailto:Ed.clerk@wsp.com)

Name and Signature of other Auditors:

Name	Position	Signature	Date
Ed Clerk	ICMI Technical Specialist and Lead Auditor		25 November 2025

The Certification Audit site visit was conducted between 19 and 23 March 2025

No potential conflicts of interest were anticipated or encountered during the Audit that necessitated the requirement for an independent Auditor.

This operation has not experienced any compliance issues or significant cyanide incidents since the Pre-operational Audit.

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## 1.5 Auditor attestation

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 (ICMI) 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 Certification Audit. I further attest that the Certification Audit was conducted in a professional manner in accordance with the International Cyanide Management Code's *Mining Operations Verification Protocol* (June 2021) and using standard and accepted practices for health, safety, and environmental audits.



## 2 Principles and standards of practice

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### 2.1 Principle 1 – Production and purchase

#### 2.1.1 *Standard of practice 1.1*

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 1.1

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 1.1, requiring the operation to purchase its cyanide from manufacturers certified as following the Code. Hebei Chengxin supplies cyanide to NPL from its facility based in Yuanshi County Shijiazhuang City, Hebei Province China, which was recertified as being compliant with the ICMC on 18 April 2023.

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### 2.2 Principle 2 – Transportation

#### 2.2.1 *Standard of practice 2.1*

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 2.1

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 2.1, requiring that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.

The operation has provided chain of custody records identifying all elements of the supply chain that have handled the cyanide brought to its site.



The supply chain is as follows:

- Hebei Chengxin Co., Ltd supplies cyanide to NPL from its facility based in Yuanshi County Shijiazhuang City, Hebei Province China, where it is transported to one of several port options by the ICMC certified transporter Hebei Chengxin Transport Co., Ltd.
- It is shipped from China to the Port of Lae in PNG under the ICMC Hebei Chengxin Transport Global Ocean Supply Chain.
- From the Port of Lae, it is then transported to the Porgera mine site by road via the ICMC certified transporter Mapai Transport Limited (Mapai).

The cyanide transporters are certified under the Code.

Hebei Chengxin Transport Co., Ltd has been recertified as being in full compliance with the Code on 18 April 2023. Hebei Chengxin Transport Global Ocean Supply Chain was recertified as being in full compliance with the Code since 30 October 2023. Mapai was recertified as being in full compliance with the Code on 22 May 2024.

In June 2024 a landslide blocked the transportation route (Highlands Highway in PNG). In accordance with NPL Change Management Procedure and in consultation with the ICMI, NPL and Mapai engaged Hevilift Limited to freight (via helicopter) the solid cyanide over the impacted area for an 8-month duration. Hevilift is a licenced dangerous goods transporter but is not ICMC certified.

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## 2.3 Principle 3 – Handling and storage

### 2.3.1 *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.**

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 3.1

☐ not in compliance with

#### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 3.1, requiring that cyanide unloading, storage and mixing facilities are designed and constructed consistent with sound, accepted engineering practices, quality control/quality assurance procedures, spill prevention and spill containment measures.

Facilities for unloading, storing and mixing cyanide have been designed and constructed in accordance with sound and accepted engineering practices for these facilities. No material changes have occurred to the site's unloading, storing and mixing facilities since the last recertification audit.

Solid cyanide arrives at Porgera in sea containers by truck. One container is delivered per truck. The sea container is unloaded from the truck by NPL personnel using a 30-t forklift and the container is placed directly onto a hardstand area.

The operation engaged consultants to review the design and construction of the cyanide unloading, storing and mixing facilities at Porgera. Unloading and storage areas for solid cyanide are located away from people and surface waters.



The mixing area is approximately 40m from the main entrance with a permanent security presence. The distance between the unloading, mixing, and storage facilities and the nearby surface waters is approximately 1.5 km. During a cyanide mix, the area is barricaded and fixed and portable monitors are used to check for HCN. No instances of elevated HCN have been detected outside the building during a mix.

No liquid cyanide is transported to and unloaded at Porgera.

Systems are in place to prevent the overfilling of cyanide storage tanks. Both the Cyanide Mixing Tank and Cyanide Holding Tank have level indicators and alarms, which are tied into local electronic displays that can be viewed by the control room operators. Mixing is undertaken in accordance with the Cyanide Mix procedure and the control logic is programmed into the process control system.

The volume of the Mixing Tank is intentionally designed to be less than the volume of the Holding Tank, so the risk of overfilling is inherently limited, and the Cyanide Transfer Pump (to transfer cyanide solution from the Mixing Tank to the Holding Tank) automatically shuts off when high level is reached in the Holding Tank to prevent overflow.

The level transmitters in the mixing and holding tank are calibrated periodically.

The cyanide mixing and storage tanks are located on a concrete surface that can prevent seepage to the subsurface.

The area where cyanide in solid form is mixed to form cyanide solution is constructed from concrete. The Cyanide Mixing and Holding Tanks are on concrete plinths within a concrete bunded area. Any spillage is collected inside the bund and can be recovered. The secondary containments for cyanide storage and mixing tanks are constructed from concrete which provide a competent barrier to leakage.

Cyanide is stored in sea containers to minimise the potential for contact of solid cyanide with water.

Cyanide is stored with adequate ventilation to prevent the build-up of HCN gas. Procedures require containers to be vented for 15 minutes and tested for HCN before unloading cyanide boxes. A fan also extracts vapours from the headspace of both the Sodium Cyanide Mixing Tank and the Cyanide Holding Tank.

Cyanide is stored in a secure area where public access is prohibited. The cyanide sea containers and mixing and storage shed are kept locked. Both areas are within the Porgera operational area which is separated from public areas by a fence that is patrolled and monitored by security cameras.

No incompatible materials are stored within the cyanide mixing area or cyanide storage area. These facilities are separated from incompatible materials within the processing area via dedicated storage containers (including sea containers, tanks, walls and secondary containments), and dedicated drainage areas (including sump pumps and drains). No foods, animal feeds, and tobacco products are stored or allowed in the cyanide storage or mixing areas.

### 2.3.2 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.**

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 3.2

☐ not in compliance with

#### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 3.2, requiring it to 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.

With respect to empty cyanide containers:

- a Procedures require all used bags and timber lids to be placed inside the empty boxes and burnt. The procedure dealing with cyanide container inspection and clean out requires sea containers that have previously been used for storing cyanide not to be used for any other purpose.
- b Procedures require bags to be placed in the boxes and disposed in an environmentally sound manner by delivering the combination to the burn pit where they are burnt. The bags are rinsed.
- c Procedures require bags to be placed in the boxes and disposed in an environmentally sound manner by delivering the combination to the burn pit where they are burnt. The ashes are then disposed of appropriately.
- d Procedures require the inspection and cleanout of cyanide shipping containers. All sea containers are washed before they leave the site to ensure that they are free of cyanide contamination.

The operation has developed and implemented plans and procedures to prevent exposures and releases during cyanide unloading and mixing activities such as:

- a Procedures detail the steps required to make up a batch of cyanide reagent, illustrating the use of valves, instrumented controls and other equipment with the use of photographs and schematic diagrams. The procedure describes the protective measures, initial water charge, manual addition of caustic soda, manual addition of carmoisine dye, charging of the cyanide from a bulk bag using the crane and completion by charging the final volume of water (subject to high level over-ride). Reagent pipes, pumps and valves are covered by maintenance inspections.
- b Procedures address the handling of containers without rupturing or puncturing. These include requirements to place a ramp at the entrance of the sea container to enable forklift access, following an exact nominated route and carrying only one box at a time.
- c Procedures limit the number of cyanide boxes carried to one, and the number of boxes stored in the mixing area to two.
- d Procedures require operators to wash small spillages to sumps using hoses.
- e Procedures require all operators working on the cyanide mixing platform to wear the appropriate safety equipment and sets out the requirements of the standby person.



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## 2.4 Principle 4 – Operation

### 2.4.1 *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.**

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 4.1

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.1, requiring the operation implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

Written plans and procedures have been developed for cyanide facilities including unloading, mixing and storage facilities, leach plants, cyanide treatment and disposal systems. There are no heap leach operations, tailings impoundments, or cyanide regeneration facilities at the Porgera Mine.

The plans and procedures identify the assumptions and parameters on which the facility design was based, along with applicable regulatory requirements to prevent or control cyanide releases and exposures. Leach training and procedures identify HCN alarm limits and response actions. The pH limits are described in the pH Trigger Action Response Plan (TARP). CIP training and procedures identify design concentrations of cyanide in the tails stream being transferred to the neutralisation/precipitation circuit. Targets for the waste treatment facility (final tails) at the back end of the Neutralisation circuit are also specified.

All operational processing set points are documented in daily instructions. The set points are captured in log sheets and on process control room white board. These are reported daily in the Daily Guidelines Report and the Daily Refinery Checks produced by the Senior Metallurgist.

NPL operates in accordance with Environment Permits and other relevant PNG legislation. The Environmental Legal and Other Requirements Register contains a full list of the applicable legislation for NPL. This register also details how the commitments are documented and addressed, such as the relevant procedures.

The operation has plans or procedures that describe the standard practices necessary for the safe and environmentally sound operation of the facility including the specific measures needed for compliance with the Code, such as inspections and preventative maintenance activities.

Procedures have been developed to detail what is expected of operators when carrying out their daily duties including sampling and inspections when the plant is operating routinely.

The operation has developed a Cyanide Management Plan (CMP) which outlines a systematic approach for the responsible transport, handling, use and disposal of cyanide and cyanide contaminated equipment (including process streams containing cyanide). The CMP sets the framework for maintaining awareness and compliance with legal and other requirements pertaining to cyanide, assessing the risk of cyanide related activities, and links in with existing emergency response processes, consultation and communication with stakeholders regarding cyanide risks and training and monitoring requirements. The CMP has been guided by the Principles and Standards of Practice of the ICMC to enable NPL to maintain compliance with the Code requirements.



Detailed procedures have been developed for maintenance tasks required to manage risks of cyanide exposure or release such as the cyanide mix exhaust fan, cyanide pumps, cyanide inline filters and the cyanide metering system relief valve. Most maintenance tasks are documented within Oracle.

Preventive maintenance programmes have been developed in Oracle for the site, and these are conducted in accordance with the maintenance schedule. In addition to plant specific inspections, general area inspections (look, listen, feel) are also included within Oracle.

The facility conducts formal, documented inspections in the cyanide related work areas (CIL and CIP, cyanide detoxification, and Cyanide Reagent Shed). Work orders are generated for deficiencies identified during the inspections.

The operation has developed and implemented a procedure to review proposed changes to production processes, operating practices, and cyanide facilities to determine if they may increase the potential for cyanide releases and worker exposures, and incorporate any measures necessary to protect worker health and safety and the environment.

NPL has implemented a Management of Change (MoC) procedure to ensure risks are captured, evaluated, controlled and communicated before changes are implemented. The system requires the change initiator to select stakeholders for their consultation and involvement in the proposed change. Safety and Environment personnel are selected by default for all changes and cannot be excluded from the consultation and risk assessment of the change.

The operation has cyanide management contingency procedures for situations when there is an upset in a facility's water balance, when inspections and monitoring identify a deviation from design or standard operating procedures, and/or when a temporary closure or cessation of the operation may be necessary. NPL has incorporated contingency procedures into various procedures and management plans at the operation. In addition to these procedures, interlocks are in place to help control potentially adverse effects from abnormal operating conditions. Examples of abnormal operating conditions include upsets in loss of power, identified leakages and/or emergency plant shutdowns. Contingency procedures have been developed to address these and a variety of other conditions.

A temporary closure or cessation of operations would be managed under the shutdown procedures, emergency response system using operating procedures to shut down the plant and make safe during cessation of operations.

In addition, all inducted personnel are trained in Field Level Risk Assessment (FLRA) which provides basic risk management principles for responding to hazardous situations for which detailed procedural guidance may not be defined.

The operation does inspect the following at unloading, storage, mixing and process areas as applicable to the site.

**a** *Tanks holding cyanide solutions for structural integrity and signs of corrosion and leakage.*

The structural integrity of tanks is addressed by both the six-monthly mechanical area inspection and the annual program of non-destructive testing. The six-monthly test addresses the visual evidence of deterioration and leakage, and the annual program focusses on corrosion.

In addition, the Environment Department carries out monthly lysimeter monitoring program around the various process tanks.

**b** *Secondary containments for their integrity, the presence of fluids and their available capacity, and to ensure that any drains are closed and, if necessary, locked, to prevent accidental releases to the environment.*

Maintenance inspections are scheduled to inspect secondary containments. The inspections address the condition of the concrete, the integrity of the bund floor and walls as well as checking for evidence of distortion, spillage or the build-up of crystals.

*c Leak detection and collection systems at leach pads and ponds, as required in the design documents*

The Environment Department manage the monthly monitoring of the underliner detection systems in place at the Gold Room Spillage Pond and the CIP spillage pond for WAD cyanide.

*d Pipelines, pumps and valves for deterioration and leakage*

The deterioration of pipelines, pumps and valves is covered by preventive maintenance inspections. Weekly pump inspections focus attention on glands (as well as barrels and guards). Six monthly mechanical overview inspections also address seals as well as overall deterioration and evidence of leakage.

*e Ponds and impoundments for the parameters identified in their design documents as critical to their containment of cyanide and solutions and maintenance of the water balance, such as available freeboard and integrity of surface water diversions.*

For unforeseen circumstances, the Gold Room and CIP Spillage Ponds are kept empty.

The operation inspects cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters. Process operators for the Leach, CIP and Strip areas inspect these areas daily. Process supervisors are scheduled to carry out housekeeping inspections on a weekly basis to meet statutory (“274”) occupational health and safety obligations.

Inspections are documented, including the date of the inspection, the name of the inspector, and any observed deficiencies. The nature and date of corrective actions are also documented. Records are maintained.

274 Inspections and associated safety equipment inspections are documented, including the date of the inspection, the name of the inspector, and any observed deficiencies.

Inspections by maintenance, engineers and Processing Department personnel (apart from the daily routines of process operators) are all scheduled within Oracle. Oracle is also used to record the completion of scheduled tasks along with new entries for repairs identified as necessary from those inspections.

Preventive maintenance programs are implemented and activities documented to ensure that equipment and devices function as necessary for safe cyanide management.

There is a comprehensive program of preventive maintenance that includes appropriate coverage of mechanical and instrumented systems particularly that must function effectively for cyanide management. The program includes tanks, vessels, pumps, fans, pipelines, valves, instruments and secondary containments that form part of NPL’s cyanide facilities.

The frequencies of activities currently scheduled are weekly, fortnightly, three-weekly, monthly, quarterly, half yearly, annually and four yearly.

The operation has the necessary emergency power resources to operate pumps and other equipment to prevent unintentional releases and exposures in the event its primary source of power is interrupted. The emergency power equipment is routinely maintained to ensure functionality during emergencies.

Primary power supply to the site is from gas-fired generators on-site. Gas is supplied from Hides. Backup power generating equipment is present on-site. Operation of the backup generators is scheduled by the power station maintenance fitter who ensures that each of the six installed backup generators operates for a period in every week.

Emergency power is not considered essential to prevent unintentional releases and exposures, as there are no identified situations in which cyanide inventories are lost in an uncontrolled manner when power supply is lost.

In an emergency power situation, all drives are automatically shut down. Any restart of the operation would be controlled, with the 14.4 MW of available backup power allocated to the priorities. Recognised priorities include lighting, the distributed control system and potable water.

## 2.4.2 Standard of practice 4.2

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 4.2

☐ not in compliance with

### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.2, requiring the operation introduce management and operating systems to minimise cyanide use, thereby limiting concentrations of cyanide in mill tailings.

New ore types are not typically tested for cyanide consumption rates as the blending of ore on the run of mine (ROM) pad, additional blending in the concentrate storage tanks and the oxidation process in the autoclaves produces a homogenous feed requiring a relatively constant cyanide addition rate.

The ore is categorised into mineralisation types, which are stockpiled separately on the ROM pad. The ore is then blended and crushed and conveyed to the coarse ore stockpile from which the ore is reclaimed and fed to the grinding circuit before being transferred by slurry pipeline to the Anawe plant-site for processing.

Although new ore types are not typically tested for cyanide consumption rates, operational assessments are conducted using bottle roll leach tests

Tests include daily diagnostic on CIP tails, daily profile checks and weekly diagnostics on composite samples. Process and operations personnel also conduct checks on WAD cyanide and pH at the CIL, CIP and Precipitation Tank 2 (tank prior to riverine discharge). The Environment Department test for WAD cyanide and pH twice per day at the cyanide detoxification tail and Precipitation Tank 2.

The NPL cyanide processing plant is a flow through system that ultimately discharges to a riverine disposal point at less than 0.5 mg/L WAD. The cyanide philosophy for the operation, is based on limiting cyanide addition to ensure environmental compliance criteria at the discharge point is achieved as a priority. Improved recoveries through increased cyanide addition are managed through the lens of the compliance criteria and increased costs associated with cyanide detoxification.

## 2.4.3 Standard of practice 4.3

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 4.3

☐ not in compliance with

### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.3, requiring the operation implement a comprehensive water management programme to protect against unintentional releases.

The operation has not developed a comprehensive, probabilistic water balance as one is not required to protect against unintentional releases

The operation's water related procedures and strategies are principally aimed at water conservation and reliability rather than the protection against unintentional releases of cyanide solutions.

The Porgera cyanide facilities are a flow through system ultimately discharging to a riverine disposal system at less than 0.5 mg/L WAD cyanide. As no cyanide solutions are contained outside of process tanks (and associated secondary containments during contingencies), there is no chance of unintentional releases and a probabilistic water balance is not required to protect against this.

NPL engaged consultants to assess the site's water balance against Code requirements. In their report, the consultants noted that the release of tailings to the wider environment (riverine discharge of tailings) is planned, intentional and fully in accordance with mine permits. The report also noted that there are no fluid impoundments containing cyanide outside of the plant area.

#### 2.4.4 *Standard of practice 4.4*

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 4.4

☐ not in compliance with

#### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.4 requiring the operation implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

The operation is managed to prevent the potential for wildlife and livestock to access open waters where WAD cyanide exceeds 50 mg/l. Currently there are no open water bodies where WAD cyanide exceeds 50 mg/l.

The operation can demonstrate that the cyanide concentration in open water in does not exceed 50 mg/l WAD cyanide. Monitoring is undertaken monthly for all open water bodies (where water is present) with the potential to contain cyanide. The operation does not have a tailings storage or leaching facility.

Maintaining a WAD cyanide concentration of 50 mg/L or less in open water is effective in preventing significant wildlife mortality. Notably cyanide concentrations in open water bodies were observed to be significantly less, typically below 0.2 mg/L. No wildlife mortalities had been recorded.

The operation does not have a heap leach facility.





## 2.4.5 Standard of practice 4.5

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 4.5

☐ not in compliance with

### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.5 requiring the operation implement measures to protect fish and wildlife from direct or indirect discharges of cyanide process solutions to surface water.

The operation has a direct discharge to surface water; however, it is managed to ensure a discharge concentration of less than 0.5 mg/L WAD cyanide and a concentration of less than 0.022 mg/L free cyanide at SG3 (end of mixing zone).

The operation does operation monitor for cyanide in surface water downgradient of the site and it can demonstrate that direct discharges to surface water will not cause the concentration of free cyanide in the receiving water to exceed 0.022 mg/l downstream of the established mixing zone.

The compliance point (SG3) is located on the Strickland River approximately 164 km from site. The compliance point at SG3 is referenced as the end of the designated mixing zone in Porgera's Environmental Permit as issued by the government. SG3 free cyanide monitoring results for 2024 were sighted and in all months were below the limit of detection for free cyanide of 0.005 mg/L.

NPL can demonstrate that indirect discharges to surface water will not cause the in-stream concentration of free cyanide to exceed 0.022 mg/l downstream of any established mixing zone All indirect discharges occur within a 1 km radius of the site. NPL has established local sites which are monitored monthly for free cyanide. The 2024 monitoring results were sighted and did not result in a concentration of free cyanide more than 0.022 mg/L.

Indirect discharges from the operation are unlikely to cause cyanide concentrations in surface water to rise above levels protective of a designated beneficial and consequently remedial action is not required.

Indirect discharges from the operation have not caused cyanide concentrations in surface water to rise above levels protective of a designated beneficial use for aquatic life. Management controls (TARP) are in place to prevent the releases of elevated cyanide concentrations.



## 2.4.6 Standard of practice 4.6

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 4.6

☐ not in compliance with

### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.6 requiring the operation implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.

NPL has implemented specific measures to manage seepage to protect the beneficial uses of groundwater beneath and/or immediately downgradient of the operation

Groundwater within the vicinity of Porgera has not been designated a beneficial use by the PNG Conservation and Environment Protection Authority (CEPA). This is supported through the Environmental Permit which does not refer to groundwater. Known groundwater expressions occur downstream of the operation at various water springs. These springs are known to be accessed by the local population for drinking water and other domestic requirements. As such, the use of these springs (groundwater) for drinking, has been determined as a beneficial use. NPV monitors the springs monthly for WAD and free cyanide to determine if seepage may be impacting these sources.

Management measures for seepage include operating a Cyanide Destruction Plant for tailings released to the riverine environment and by maintaining facilities that prevent the seepage of cyanide from the Processing Plant. Cyanide facilities are housed on concrete pads within adequate bunds. All pipelines containing cyanide or material containing cyanide traverse concrete areas. Collection ponds are lined and monitored weekly to ensure integrity. As there is no TSF or heap leach at Porgera, there is no requirement to manage seepage from such a facility.

NPL does monitor for cyanide in groundwater downgradient of the site and it can demonstrate that concentrations of WAD cyanide in groundwater at compliance points below or downgradient of the facility are at or below levels that are protective of identified beneficial uses of the groundwater.

The Government of PNG has not set a numerical standard for cyanide levels in groundwater at the or downstream of the operation. The PNG National Department of Health adopted and World Health Organisation (WHO) Drinking Water Quality Guidelines as the PNG Drinking Water Quality Standards. The health-based value for long-term exposure given in these guidelines is 0.3 mg/L free cyanide.

NPL has an established monitoring program which includes the water sampling at 12 springs (9 of which are located downstream of the operations). The 12 springs are known to have interactions with groundwater are known to be accessed by the local population for drinking water and other domestic requirements.

Monitoring results reviewed for 2024 did not return any free cyanide levels above the limit of reporting of 0.1 mg/L.

Mill tailing is used as underground backfill and the potential impacts to worker health and the beneficial uses of groundwater have been evaluated. NPL operates a Cyanide Destruction Plant to reduce the cyanide concentration within tails to less than 0.5 mg/L WAD cyanide prior to discharge to Precipitation Tank 2 which feeds into the paste plant. NPL has an internal target of 0.2 mg/L WAD cyanide in tails which is generally achieved from the sample of results reviewed. Risks to worker health at this in relation to the low levels of cyanide have been assessed and deemed too low to pose any issues to workers.



Potential seepage from the operation has not caused cyanide concentrations of groundwater to rise above levels protective of beneficial use.

Monitoring of naturally occurring springs in the area (that are considered expressions of the groundwater table) has so far not recorded any results above the limits of detection for WAD and free cyanide.

#### 2.4.7 *Standard of practice 4.7*

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 4.7

☐ not in compliance with

##### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.7 requiring spill prevention or containment measures for process tanks and pipelines.

Secondary containments for cyanide unloading, storage, mixing and process tanks are sized to hold a volume greater than that of the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event. This has been supported by calculations.

Procedures are in place and being implemented to prevent discharge to the environment of any cyanide solution or cyanide-contaminated water that is collected in the secondary containment area. Sump pumps are associated with each of bunds. The configuration of the Area Sump Pumps allows them either to be manually controlled or to automatically pump accumulated material back to the selected areas of the process plant. In addition, good housekeeping practices are maintained to ensure that the bund capacity is as designed, i.e., there is no significant build-up of storm water, solution or slurry present in the bunds for extended periods of time.

All spillages are recovered/cleaned up as soon as practicable.

For cyanide process tanks without secondary containment, procedures are in place for the remediation of any contaminated soil such that adverse impacts on surface or groundwater are prevented. CIP and CIL are ring beam tanks and have lysimeters installed. These are monitored monthly. Detected leaks are reported to the maintenance team to prioritise repair.

Spill prevention or containment measures are provided for all cyanide process solution pipelines to collect leaks and prevent releases to the environment. Cyanide, process solution and slurry lines are contained within secondary containment, concrete bunding and/or concrete drains. Cyanide reagent piping are jacketed at the locations where it crosses unsealed ground. Weep holes are in place where those jackets are close to the ground level within the bunded areas or the jackets are left open at the discharge point to enable leakage from the inner pipe to be made visible under relatively safe conditions.

Since completion of the Cyanide Destruction Plant, tailings lines outside the secondary containment areas are not classified as cyanide solution pipelines.

Cyanide tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions. This was confirmed by an independent review of the facility.



#### 2.4.8 *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

##### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.8 requiring the implementation of quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

Verification of the quality assurance/quality control (QA/QC) program was undertaken during the original certification audit and in subsequent recertification audits. The documents provided as evidence during the certification audits were sighted during this audit but were not reviewed.

Quality assurance and quality control programs were implemented during construction and substantial modification of all cyanide facilities. Verification of the quality assurance/quality control (QA/QC) program was undertaken during the Original Certification Audit completed by a consultant and in subsequent recertification Audits.

The documents provided as evidence during the Certification Audit have been digitised and retained. They were sighted during this audit but were not reviewed.

Modifications to the processing plant were recommended and designed by and engineering consultancy. These recommendations are being worked through by NPL. All capital projects on site are managed through the IPRO project framework. Projects within IPRO cannot be completed without appropriate Closeout Reports being developed and approved. The Closeout Reports contain the necessary QA/QC documentation, including as-built drawings where appropriate.

Maintenance works are done by either engineering subcontractors or by NPL engineering staff. Tanks refurbished or replaced by NPL staff are managed using API650 (the IPRO project framework is not used during care and maintenance). Works conducted by subcontractors are supported by completion reports.

#### 2.4.9 *Standard of practice 4.9*

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 4.9

☐ not in compliance with

##### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 4.9 requiring the operation implement monitoring programmes to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.

Written standard procedures for monitoring activities have been developed.

NPL operates in accordance with the Environmental Monitoring and Management Plan (EMMP), approved by the government, and endorsed by the Environment Permit. The EMMP specifically describes site environmental management and monitoring programmes, including tailings, waste rock dumps, water quality, meteorology, hydrology and sedimentation, biodiversity and air. The EMMP also provides the site-specific monitoring location coordinates.

The Environmental Monitoring, Auditing & Reporting Plan (EMARP) has been implemented and provides additional information pertaining to the sample frequencies, analytical suites and gives reference to applicable procedures developed to support the plan.

Procedures have been developed to provide specific instructions for the monitoring programmes and where monitoring programmes have not been developed, the decision is made based on risk assessment as identified in the Environmental Aspects and Impacts Register.

The documents form part of the site's Environmental Management System (EMS), which has been ISO14001 certified.

Sampling and analytical protocols have been developed by appropriately qualified personnel. The site monitoring protocols have been developed primarily by the degree qualified site Environmental Manager. Development of analytical monitoring procedures is also undertaken by site Senior Chemists and require approval from the Environmental Manager before they are implemented. All documents developed undergo a review and authorisation process prior to implementation. Signatories for each stage of the process are documented in the document control table to be management plan or procedure. Procedures contain a reference section and reference the manuals of sampling and/ or analytical instrumentation utilised, published literature, guidelines and standards.

The operation also engages the CSIRO to peer review their Annual Environment Report, which contains all the scientific information gathered during the calendar year and make any recommendations for improvement.

The EMMP provides site specific monitoring location coordinates. The EMARP includes dedicated quality control and quality assurance requirements for each operational control sampling is undertaken for. The EMARP refers to supplementary procedures which specify how samples should be taken, sample preservation techniques, chain of custody procedures, shipping instructions, and cyanide species to be analysed.

All environmental procedures are documented in writing. All field sampling activities are recorded on Field Observation Worksheets that require the person undertaking the sampling to comment on conditions that may influence analysis, such as river flow, water and human activity.

There is a meteorological station associated with the mine, which is operated by Environment Department personnel. The automated station records hourly and is also read manually daily.

Monitoring is conducted at frequencies adequate to characterise the medium being monitored and to identify changes in a timely manner. Environmental monitoring requirements have been identified based on regulatory requirement, risk assessment or to comply with international standards and are regularly reviewed and updated. The EMMP, EMARP and procedures are reviewed every two years (unless otherwise specified in the document) or more frequently if triggered by an incident or required for quality purposes.

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## 2.5 Principle 5 – Decommissioning

### 2.5.1 Standard of practice 5.1

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 5.1

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 5.1 requiring the operation plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

The operation has developed written procedures to decommission cyanide facilities at the cessation of proposed operations. NPL has developed two primary documents, the Mine Closure Plan (MCP) which outlines the rehabilitation and closure objectives for the mine site and processing infrastructure and the Cyanide Decontamination and Decommissioning Plan (CDDP).

The CDDP details the decontamination and decommissioning of the Processing Plant and associated infrastructure. The CDDP develops guiding principles as well as area specific plans for the decontamination and decommissioning of specific infrastructure. Provisions are made in the CDDP regarding early closure and care and maintenance periods.

The MCP includes a high level closure schedule which includes indicative timeframes for phases of the closure plan implementation. The CDDP includes an implementation schedule for decommissioning activities.

The MCP commits to an annual review. The CDDP commits to a revision or update periodically as part of the review and update of the operations MCP. The document control section for the CDDP denotes the next review is due in February 2026 which is consistent with the MCP.

### 2.5.2 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

☐ in substantial compliance with

Standard of Practice 5.2

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 5.2 requiring the operation to establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

NPL has developed an estimate of the cost to fully fund third-party implementation of the cyanide-related decommissioning measures. NPL engaged a consultant in 2024 to undertake a review and update of the 2019 cost estimate. The estimate is now updated annually. Cyanide decontamination is included within this overall closure cost, but is itemised.

Annual cost estimates are reviewed internally by NPL and approved prior to acceptance.

The operation is not required to establish a financial mechanism approved by the applicable jurisdiction to cover the estimated costs for cyanide-related decommissioning activities. The Porgera operation was permitted in 1989. The Mining Act at this time did not contain a provision allowing the PNG Department of Mining to establish a financial mechanism for closure or decommissioning.

In 1992, the Independent State of PNG revised the Mining Act and Regulation. Section 150 (security) of the Mining Act 1992 allows the PNG Department of Mining to impose a Security for all tenements granted for compliance with the provision of the Act.

Section 172 of the Mining Act 1992 implies that the arrangements existing under the original Mining Act are not abated under the new Act. Consequently, Porgera is not required to arrange for a Security to be paid.

The operation has established a mechanism of self-guarantee to cover estimated costs for the cyanide-related decommissioning activities. Barrick Gold Corporation and Jinyu (H.K.) International Mining Company Limited (subsidiary of Zijin Mining Group, Co. Ltd) each own 50% of Porgera Jersey Limited (PJL). PJL, on behalf of Barrick and Zijin, has provided a commitment to self-finance cyanide decommissioning for the mine. This commitment was made in a letter co-signed signed by two directors behalf of Barrick Gold Corporation, and Jinyu (H.K.) International Mining Company Limited. The guarantee by Barrick and Jinyu are sufficient to cover the cyanide decommissioning and closure costs. A review of the 2024 audited accounts of Zijin and Barrick indicate that both companies are of sufficient financial strength to cover the obligation made in the letter cosigned by the directors representing Barrick and Zijin.

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## 2.6 Principle 6 – Work safety

### 2.6.1 *Standard of practice 6.1*

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 6.1

☐ not in compliance with

#### **Summarise the basis for this Finding/Deficiencies Identified:**

The operation is in FULL COMPLIANCE with the Standard of Practice 6.1 requiring the operation to identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce, and control them.

The operation has developed procedures describing how cyanide-related tasks such as unloading, mixing, plant operations, entry into confined spaces, and equipment decontamination prior to maintenance should be conducted to minimise worker exposure.

- Unloading – unloading boxed cyanide is managed through the Unloading Cyanide Boxes from Sea Container Procedure and Delivering Cyanide to Reagent Shed Procedure.
- Mixing – mixing cyanide is managed through the Cyanide Mixing Storage & Distribution Procedure.
- Plant Operations – There are more than 50 Processing/Milling Area procedures that address cyanide related tasks.
- Maintenance procedures – There are a series of seven main maintenance procedures that address cyanide related maintenance tasks.
- Confined Space entry is addressed in the Confined Space Entry site standard.



- Decontamination – The Working with Equipment Associated with Cyanide and Cyanide Decontamination and Decommissioning procedure deal with decontamination of cyanide contaminated equipment prior to maintenance.

The procedures are developed using a common format.

The formalised training program ensures process and maintenance personnel are trained and assessed in these procedures.

To supplement the procedures and training, there is signage to remind personnel of rules and PPE for cyanide related tasks.

The procedures require, where necessary, the use of personal protective equipment (PPE) and address pre-work inspections.

All procedures contain sections, which details the required equipment (e.g., HCN gas detector) and PPE (e.g., ear protection) required for the task. The minimum PPE standard for the site is steel-capped boots, hard hat, glasses, long sleeved collared shirt and long trousers and high-visibility vest.

Signage at the higher-risk areas also inform workers entering these areas what PPE is necessary.

Prior to commencing work at the Processing Plant, contractors and employees are required to complete a general induction and mill specific induction. During inductions, the appropriate PPE for the areas, and task specific PPE, is highlighted. A Cyanide Awareness Presentation is included within the induction for workers accessing cyanide areas. This presentation includes details on PPE for cyanide specific tasks.

Employees receive further training and assessment, using the procedures as the foundation of the training, prior to being considered competent and allowed to work on their own. These training packages identify what type of PPE is required for each area or task.

All employees and contractors working on the site are required to undertake an assessment prior to conducting tasks. The type of risk assessment undertaken is dependent on the task.

Pre-work inspections are conducted through a range of different mechanisms, including JHAs and FLRA. A FLRA is undertaken prior to conducting routine tasks. The process prompts workers to stop what they are doing, assess the risk and make any changes. A JHA or team-based risk assessment is conducted for non-routine or unfamiliar tasks, while a formal risk assessment is conducted for changes to processes or an introduction of new processes.

The operation does solicit and actively consider worker input in developing and evaluating health and safety procedures.

The risk assessment process (6.1.2) and the change management process (6.1.3) are used to identify where new procedures or revision to procedures are required.

Procedures are reviewed by team members within each department that the procedure specifically relates to. The team supervisor is responsible for coordinating the review with relevant stakeholders. Once comments have been considered the procedure is approved and incorporated into NPL's document control system. All approved procedures are available to employees via the intranet and any employee can propose changes to a procedure even if it is not due to be reviewed. Each procedure has a specified review period.



## 2.6.2 Standard of practice 6.2

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 6.2

☐ not in compliance with

### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 6.2 requiring it to operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

The operation has determined the appropriate pH for limiting the evolution of HCN gas during mixing and production activities. The metallurgists have determined that, based on its solution chemistry, a target pH of 10.5 shall be maintained throughout its operation to limit the evolution of HCN gas. The target pH is communicated to the operators as part of the Leach Circuit Training program and by way of a set point board in the control room.

The slurry entering the Conditioning Tank has a pH of 1.5 (which is raised to 10.5 prior to the addition of cyanide). The pH is monitored using an automated probe in the Conditioning Tank and Leach Tank 0. When the pH in Leach Tank 0 drops below the pH set point the lime actuator valve opens to dose more lime into the Conditioning Tank.

An interlock exists between the pH probe and the cyanide dosing pump. If the pH of the Conditioning Tank or Leach Tank 0 drops below a pH of 9.5 the Cyanide Pump will stop. The process will only restart if the pH is above the set point of 10.5.

Alarms inform the control room operator if pH is outside of set parameters. The process operators record pH values in the Leach Circuit log sheet every two hours.

The operation has identified areas and activities where workers may be exposed to cyanide more than 10 ppm on an instantaneous basis and 4.7 ppm continuously over an 8-hour period and require use of PPE in these areas or when performing these activities.

The site undertook a HCN survey to determine whether there are elevated levels of HCN in areas where no fixed HCN monitors are installed. The results indicated that all levels are well below the compliance limit of 4.7 ppm for 8-hours exposure or 10 ppm for immediate removal from the area.

Employees are made aware of these areas and activities through induction, procedure training and signage. All procedures note the PPE requirements.

Where the potential exists for significant cyanide exposure, the operation uses static and personal monitoring devices to confirm that controls are adequate to limit worker exposure to HCN gas.

HCN gas levels are monitored by fixed detectors mounted in key locations. There are 20 fixed detectors installed in the Processing Plant.

Personal monitors are required to be worn when accessing several areas around site or undertaking various cyanide-related activities. The requirement to wear a personal monitor is specified within the procedures, which were developed using a risk assessment process.

Both the personal and fixed monitors are set to alarm at 4.7 ppm and 10 ppm.



If HCN levels reach 4.7 ppm, the alarm is to alert personnel of HCN gas presence. Work may continue with an increased frequency of HCN monitoring. If workers are required to be in the area for a prolonged period, breaks are required to avoid exceeding exposure limits.

If HCN levels reach 10 ppm, a siren and flashing light is activated, and the area must be evacuated immediately by the safest route and secured to prevent re-entry. The area cannot be re-entered unless levels drop below 4.7 ppm.

The fixed HCN detectors and the personal gas detection monitors are maintained, tested and calibrated as per the manufacturer directions. The records relating to the fixed detectors are maintained by the Instrumentation Team. The operation has provisions to keep calibration records for hydrogen cyanide gas monitors for at least three years, as per the Code.

Inspection, testing and calibration of fixed and personal HCN monitors is done monthly. Personal units out of calibration are automatically disabled. Calibration records for monitors on-site were viewed.

Warning signs have been placed where cyanide is used advising workers that cyanide is present, and that smoking, open flames and eating and drinking are not allowed, and that, if necessary, suitable PPE must be worn.

Signage is provided in English and in Tok Pisin, a language used to facilitate communication amongst English speakers and those who speak the vernacular languages of PNG.

Access is restricted to the treatment plant area, with no one permitted to enter the processing area until they have completed the induction, area specific induction and cyanide hazard awareness training and assessment. These training packages stipulate no smoking, eating or drinking in the Processing Plant area. All treatment plant personnel and maintenance workers in this area receive this training.

There are signs and gates when entering the Processing Plant area noting cyanide is present, and that smoking, open flames and eating and drinking are not allowed.

High strength cyanide is dyed for clear identification.

Mixing of cyanide occurs in the Mixing Tank. Carmoisine dye is added to the mix to give the prepared cyanide solution a distinct red colour.

Showers, low-pressure eyewash stations and dry-powder fire extinguishers were located at strategic locations throughout the operation in the cyanide areas, and are maintained, inspected and tested on a regular basis.

The planned inspection checklists are completed by the operators on a weekly rotational schedule and the checklist prompts the inspections of safety showers, the low-pressure eyewash stations and fire extinguishers. Any issues identified are actioned through the work order system.

A more detailed inspection and tagging of the fire extinguishers is undertaken on-site by ERT. This includes routine maintenance, such as verifying the nozzles are clear and performing pressure testing.

Unloading, storage, mixing and process tanks and piping containing cyanide are identified to alert workers of their contents, and the direction of cyanide flow in pipes is designated.

Tanks and piping containing high and medium strength cyanide are adequately labelled. The tanks are painted with a lilac band and accompanying signage. The pipe was either painted lilac and/or had a lilac stick-on label with arrows indicating the direction of flow.

Low strength cyanide pipes are addressed through several signs located in the process area that state "Warning – treat all vessels, tanks, slurry and solution lines inside area as if containing cyanide".

MSDS, first aid procedures or other informational materials on cyanide safety in the language of the workforce is available in areas where cyanide is managed.

MSDSs and first aid instructions are posted at all designated cyanide areas. An electronic MSDS database, Chemwatch, is available via the intranet. In addition, the cyanide awareness training is presented to all personnel at induction.

The company has a minimum requirement for all personnel working in the cyanide plant to have a level of education that will allow them to read English.

Procedures are in place and being implemented to investigate and evaluate cyanide exposure incidents to determine if the operation's programmes and procedures to protect worker health and safety, and to respond to cyanide exposures, are adequate or need revising.

In the event of a cyanide release and or exposure incident, the Safety and Health Incident Reporting and Investigation Standard is in place to investigate and evaluate cyanide incidents to identify root causes and implement corrective actions. This procedure is tied into INX (integrated HSE management system) and guides personnel through the investigation process and ensures that adequate levels of review and approvals take place. The level of investigation required is scaled based on the seriousness (and serious potential) of the incident. Incident investigations involve the relevant departments.

A review of the effectiveness and adequacy of the cyanide procedures plans and or work instructions relevant to the incident is conducted as part of the incident investigation. The documents are updated if the review highlights that revision to either administrative or process controls and or task methodology is required.

No cyanide exposure related incidents have occurred.

### 2.6.3 *Standard of practice 6.3*

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 6.3

☐ not in compliance with

#### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 6.3 requiring the operation develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

The operation does have oxygen, a resuscitator, antidote kits and a radio, telephone, alarm system or other means of communication or emergency notification readily available for use at cyanide unloading, storage and mixing locations and elsewhere in the plant.

There are numerous showers and eyewash stations located strategically around the site along with emergency cabinets equipped with emergency response equipment, including oxyvivas.

There is a radio system (Channel 1) and telephone (4222) which can be used to raise the alarm in an emergency. The emergency notification procedure is detailed in the induction training.

Radios, telephones and a public announcement system are available throughout the Processing Plant, which can be used to raise the alarm in an emergency. This identified as the first step in incident response.

The Emergency Response Team (ERT) have dedicated equipment that they maintain. The oxygen was present in the form of Oxyvivas, oxyports and medical cylinders. All systems have "on demand" valved mouth pieces replacing the need for separate resuscitators.

The operation also has an onsite Medical Centre staffed by medical officers (doctors), and nurses. Cyanide antidote kits are stored at the Medical Centre within a go bag to bring to an infield location if needed. Five cyanide antidote kits were



available on site at the time of audit. The emergency equipment within the plant is inspected on a regular basis by both processing staff. The Medical Centre personnel complete regular inspections of the equipment stored in the centre, with all equipment including cyanide antidotes being appropriately stored. ERT undertakes inspections of their equipment on a weekly basis.

NPL has developed Emergency Response Plans and supporting protocols and procedures to respond to potential accidental releases of cyanide and cyanide exposure incidents. The Cyanide Emergency Response Plan (CERP) provides high level details regarding the response to various cyanide incidents, specifically, guidelines for first response and treatment in the form of decontamination, oxygen and antidotes for personnel suspected of suffering the effects of cyanide poisoning. A protocol has also been developed with detailed instructions for responding to cyanide exposure through ingestion, inhalation and absorption through the skin and eyes. An adequate supply of cyanide antidote is maintained at the on-site Medical Centre. Further details for the response to reasonably foreseeable incidents are provided in the Emergency Management Team Plan and Emergency Response Tactical Plans.

The operation does have its own on-site capability to provide first aid or medical assistance to workers exposed to cyanide. The operation has an on-site Medical Centre that is staffed by medical officers and nurses. The Medical Centre maintains five Cyanokits (cyanide antidote kits).

NPL has developed procedures to transport workers exposed to cyanide to off-site medical facilities should the need arise. The operation had a formalised agreements in the form of Memorandum of Understanding (MOU) with the Hospitals. Transportation off site is undertaken by fixed wing or helicopter aircraft.

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## 2.7 Principle 7 – Emergency response capabilities.

### 2.7.1 Standard of practice 7.1

#### **Prepare detailed emergency response plans for potential cyanide releases.**

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 7.1

☐ not in compliance with

#### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 7.1 requiring it to prepare detailed emergency response plans for potential cyanide releases.

NPL has Emergency Response Plans and supporting protocols and procedures to respond to potential accidental releases of cyanide and cyanide exposure incidents. The CMP is the operation's overarching comprehensive guidance document that provides a systematic approach for the responsible transport, handling, use and disposal of cyanide and cyanide contaminated equipment and establishes a framework for maintaining awareness and compliance with legal and other requirements pertaining to cyanide.

The CERP provides high level details regarding the response to various cyanide incidents. Further details for the response to reasonably foreseeable incidents are provided in the Emergency Management Team Plan and Emergency Response Tactical Plans.

NPL has identified the scenarios that present the highest risk of a spill or release of cyanide or cyanide bearing material occurring within or on the way to the operations.



NPL has determined that there are unlikely to be potentially affected communities near the operation. The NPL workforce is the main group at risk from an on-site cyanide emergency. Identified scenarios will not impact downstream or nearby communities.

The emergency response documentation provides clear response actions for the emergency response team. More detailed response actions are provided in the Emergency Response Tactical Plans.

The CERP provides clear guidance about first aid measures and the use of cyanide antidotes, with more detailed instructions provided in the Cyanokit (Hydroxocobalamin) and procedure.

The CERP and Emergency Response Tactical Plans describe the need to control and isolate releases if safe to do so and provide options to do so based on the type and or scale of the incident. The CERP details the requirement to undertake Incident Debriefing and Investigation following the incident, in accordance with the site Incident Reporting and Investigation Standards.

NPL has developed Emergency Response Plans and supporting protocols and procedures to response to potential accidental releases of cyanide and cyanide exposure incidents. The CMP is the operations overarching comprehensive guidance document that provides a systematic approach for the responsible transport, handling, use and disposal of cyanide and cyanide contaminated equipment and establishes a framework for maintaining awareness and compliance with legal and other requirements pertaining to cyanide.

NPL has identified the scenarios that present the highest risk of a spill or release of cyanide or cyanide bearing material occurring within or on the way to the operations. The CERP considers the following potential scenarios for plausible cyanide release or exposure incidents which includes:

- An accident during transport resulting in shipping container damager or fire.
- A catastrophic release from a high strength cyanide solution tank or pipeline
- A large quantity spill during unloading of sea containers and or transport of cyanide boxes to the reagent mixing shed.
- Large process slurry spills and or leaks outside of secondary containments.
- Personnel exposed to hydrogen cyanide.
- A fire event with cyanide or cyanide contaminated equipment involved.

An emergency response action plans has been developed to detail the emergency response for cyanide spill/uncontrolled release/cyanide transport release, HCN release >50ppm, fire.

Uncontrolled seepage is not specifically covered within the emergency response documentation, but it is not considered an applicable risk to the operations. NPL processing controls are equipped to handle the failure of cyanide treatment, destruction or recovery systems, with 2-hourly sampling undertaken at discharge points and responses triggered based on the appropriate TARP.

The emergency response documentation provides clear response actions for the emergency response team including the evacuation of site staff. NPL has determined that there are unlikely to be potentially affected communities near the operation. The NPL workforce is the main group at risk from an on-site cyanide emergency. Identified scenarios will not impact downstream or nearby communities.

The CERP provides clear guidance about first aid measures and the use of cyanide antidotes.

The CERP and Emergency Response Tactical Plans describe the need to control and isolate releases if safe to do so and provide options to do so based on the type and or scale of the incident. The CERP details the requirement to undertake Incident Debriefing and Investigation following the incident.

### 2.7.2 Standard of practice 7.2

#### Involve site personnel and stakeholders in the planning process.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 7.2

☐ not in compliance with

#### Summarise the basis for this Finding/Deficiencies Identified:

NPL is in FULL COMPLIANCE with Standard of Practice 7.2 requiring it to involve site personnel and stakeholders in the planning process.

NPL involved its workforce in the cyanide emergency response planning process during the initial development of the plan which has not had material changes since its inception. NPL has engaged with Mapai for the development the CERP and the transporters Cyanide Transport Emergency Management Plan.

NPL has not engaged with communities outside of the operations as it has been determined that there are no potentially affected communities near the operation. Mechanisms are in place to improve community awareness about cyanide and to communicate with them should an onsite incident occur that impacts downstream receptors.

NPL has determined there are no potentially affected communities and has consequently not made communities aware of the nature of the incident scenario risks involving cyanide.

The workforce is the main group at risk from an on-site cyanide emergency, as an anticipated incident will not involve potentially affected downstream or nearby communities.

The operation has developed and implemented a cyanide awareness training session as part of the site induction program which is compulsory for all persons on the operation's site. The training covers the nature of the risks associated with accidental cyanide releases and what action to take in the event of an emergency.

NPL has identified external entities having emergency response roles and involved them in the cyanide emergency response planning process. NPL is a remote site that is largely self-reliant in the event of an emergency. NPL has contracted medical professionals, police and army personnel employed on site to assist with incident and emergency response.

The operation has agreements in place with hospitals to treat patients exposed to cyanide. In the event of a significant cyanide related injury, it is likely that the injured personnel will be airlifted to Cairns Base Hospital (Australia) via fixed wing or helicopter aircraft.

NPL communicates with stakeholders to keep the Emergency Response planning current. The main stakeholder for the operation is its workforce and the operation engages through mock exercises and through safety meetings where revisions to procedures and plans are discussed and implemented.



### 2.7.3 Standard of practice 7.3

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 7.3

☐ not in compliance with

#### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 7.3 requiring it designate appropriate personnel and commit necessary equipment and resources for emergency response.

The NPL emergency documentation addresses the requirements for cyanide related Emergency Response Plans:

- a The CERP gives explicit authority to the Emergency Response Superintendent (alternatively Health and Safety Superintendent) to commit resources necessary to implement the emergency plan.
- b The operation has an on-site ERT comprised of full-time personnel.
- c The CERP describes the training requirements for NPL ERT Personnel. Full time ERT members must complete the national Australian certification PUAFIR320 – Render Hazardous Materials Incidents Safe. Processing plant personnel training requirements are described in the CMP.
- d The CERP describes the incident notification procedure which is consistent with site induction and cyanide awareness training. All emergency calls are received by the site Security Control Centre (SCC). This office is manned 24 hours a day. SCC will then activate the relevant pager systems for responders based on the incident location, nature and severity. The CERP contains key contact numbers.
- e The CERP describes the responsibilities of each role of the ERT.
- f The CERP provides a full list of emergency response equipment. Individual procedures list the required PPE to be worn for workers to carry out the task with minimum PPE standards also enforced for the site.
- g The CERP notes the ERT foreman's role is to inspect equipment regularly. Inspection forms have been developed and implemented.
- h NPL is a remote site that is largely self-reliant in the event of an emergency. NPL have contracted medical professionals, police and army personnel employed on site to assist with incident and emergency response. The CERP does include details for the involvement of Mapai personnel in the relation of cyanide incidents during transportation.

The operation has confirmed that outside entities included in the CERP are aware of their involvement and are included as necessary in mock drills or implementation exercises.

The Porgera Mine Site is a remote operation that is largely self-reliant in the event of an emergency. The CERP considers the responsibilities and involvement of Mapai in response to cyanide incidents during transportation.

NPL also has mechanisms in place to transport workers exposed to cyanide to qualified, off-site, medical facilities. In the event of a significant cyanide related injury, it is likely that the injured personnel will be airlifted to Cairns Base Hospital via fixed wing or helicopter aircraft.

The CERP states that external parties, where possible, will be included in mock drills. At the time of audit, NPL were in the process of arranging a drill with Mapai.



Give the location of the operation and the travel time to medical assistance, cyanide exposure incidents would be decontaminated and treated on site and then the patient would be sent for ongoing medical care if needed.

#### 2.7.4 *Standard of practice 7.4*

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 7.4

☐ not in compliance with

#### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 7.4 requiring the development of procedures for internal and external emergency notification and reporting.

The emergency documentation includes procedures and contact information for notifying management, regulatory agencies, external response providers and medical facilities of an emergency or incident involving cyanide. The CMP states that if external agencies are required to be contacted, the CERP shall be consulted. The CERP includes contact information. The Emergency Management Plan outlines responsibilities for the incident management team on duty cards which include specific cards for communications and government relations that address the process for contacting stakeholders. The contact information is maintained by The Sustainability Department and Security.

Emergency management documentation does contain procedures and contact information for notifying potentially affected communities of the cyanide related incident and any necessary response measures, including communication with the media in the event of a cyanide emergency.

Emergency management documentation does contain procedures or contact information for notifying potentially affected communities of the cyanide related incident and any necessary response measures, including communication with the media in the event of a cyanide emergency. NPL has a dedicated social and community relations team who is responsible for making contact.

The CMP requires the ICMI be contacted within 24 hours of a relevant cyanide incident via email stating the date of the incident, nature of the incident, and contact information of the NPL representative. Further information, such as root cause, health, safety and environmental impacts, and any mitigation or remediation is requested to be provided within seven days of the incident.

NPL notified ICMI in response to near miss incident on 23 February 2025.





### 2.7.5 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.**

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 7.5

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 7.5, requiring it develop procedures for internal and external emergency notification and reporting.

The emergency documentation does describe specific remediation measures as appropriate for the likely cyanide release scenarios address all the required items:

- The CERP includes the location of ferrous sulphate bags (Emergency Response), the guideline for the quantities to utilise on dry/liquid cyanide and the procedure to use ferrous sulphate on a spill.
- The CERP specifies the concentrations of hydrogen peroxide and ratio with water to use for decontamination, the decontamination process and the location hydrogen peroxide is stored (Warehouse).
- Disposal of contaminated soils and wastes from neutralisation and decontamination process. Contaminated soil will be taken to the crusher for safe disposal. The remediation procedures include the maximum acceptable level of residual cyanide in soil for disposal.
- Decontamination of Waterways, including the prohibition of sodium hypochlorite, ferrous sulfate and hydrogen peroxide in treatment.
- The provision of alternate drink water supplies is not required. Residents do not drink from rivers within the vicinity of the mine due to the turbidity of the water and instead obtain drinking water from its tributaries and installed rainwater tanks. The mine itself does not source its drinking water from this area. It is highly unlikely that the operation could adversely impact any groundwater drinking sources.

Additional information regarding spill clean-up, neutralisation, decontamination and disposal is included in Cyanide Spill Clean-up SOP and Emergency Response Tactical Plans.

The CERP explicitly prohibits the use of sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water or that has the potential to reach surface water.

The CERP does address the potential need for environmental monitoring to identify the extent and effects of a cyanide release, and it includes sampling methodologies, parameters and, where practical, possible sampling locations. The Environment Department has suitably developed procedures for environmental monitoring, including specific procedures for sampling and analysing for cyanide.



### 2.7.6 *Standard of practice 7.6*

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 7.6

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 7.6, requiring it periodically evaluate response procedures and capabilities and revise them as needed.

NPL reviews and evaluates the cyanide related elements of its emergency response plan for adequacy on a regular basis. The CMP is required to be reviewed annually. The CERP is reviewed every three years but states it will be reviewed and revised (if required) following all cyanide related emergencies and exercises (in the absence of incidents, review and revision should occur after a cyanide emergency exercise) actions arising from review should be tracked to completion and revision information kept on file.

The CMP and CERP state that a review of the effectiveness and adequacy of the cyanide procedures plans and or work instructions relevant to an incident is conducted as part of the incident investigation. The documents are updated if the review highlights that revision to either administrative or process controls and or task methodology is required.

Mock cyanide emergency drills are conducted periodically to test the suitability of procedures, equipment and training. The mock drills conducted covered both cyanide exposures and release scenarios. The field-based exercises tested the entire cyanide emergency response process from the initial emergency callout notification through to the close-out of the response process.

It is further noted in the CERP that ERT personnel must be involved in a minimum of one cyanide specific drill annually.

The CERP is required to be reviewed and updated after a cyanide emergency and mock drills and this has been undertaken.



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## 2.8 Principle 8 – Training

### 2.8.1 Standard of practice 8.1

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 8.1

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 8.1 requiring it trains its workers to understand the hazards associated with cyanide use.

The operation does train all personnel who may encounter cyanide in cyanide hazard recognition.

Risk to cyanide exposure is introduced to all employees through the site general induction. More detailed inductions and awareness training is compulsory for employees who are more likely to be exposed to cyanide facilities and cyanide.

All personnel working on the Processing Plant are required to complete Cyanide Safety Awareness training as part of their onboarding and inductions. This training consists of both theory and practical components and each section must be successfully completed to be deemed competent. If personnel work with equipment associated with cyanide they are also required to complete this training package.

The operation's cyanide awareness training thoroughly covers cyanide hazards, the health effects of cyanide, symptoms of cyanide exposure, and the procedures to follow in case of exposure. Cyanide Safety Awareness refresher training is required on an annual basis. A sample of training records reviewed identified that Cyanide Awareness is provided to personnel working on the Processing Plant and that refresher training is completed annually.

NPL use Employee Training Assessment Management System (ETAMS)/ Oracle to manage the competencies, compliances and procedures/work instructions that each role requires for a person to undertake their job safely and effectively.

NPL retains hard copies of completed training attendance and assessments.

### 2.8.2 Standard of practice 8.2

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 8.2

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 8.2 requiring it to train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

NPL trains workers to perform their normal production tasks, including unloading, mixing, production and maintenance, with minimum risk to worker health and safety and in a manner that prevents unplanned cyanide releases.

NPL use a range of administrative and procedural methods to define the risks associated with individual cyanide tasks, minimise hazards arising from cyanide storage, handling and use in operations and ensure worker safety when completing their regular tasks. These include:

- Inductions
- Training manuals
- Procedures
- Task Based Observations (TBOs)
- JHA
- FLRA
- MoC procedures.

Training is based on a Competency Based Assessment process (CBA) that includes a mentoring or buddy system and before employees are allowed to perform a task solo.

TBOs are used to verify an employees' competency before they are signed off and permitted to work in each area and or undertake a particular task unsupervised.

Training is undertaken by qualified personnel. The training program are delivered by nationally certified trainers. Field trainers that complete the TBO are specifically knowledgeable to each plant area. All assessment record sheets are signed off by a supervisor or department subject matter expert.

The operation trains all personnel prior to working with cyanide

All personnel working on the Processing Plant are required to complete Cyanide Safety Awareness training as part of their onboarding and inductions. Cyanide Safety Awareness refresher training is required on an annual basis. The operation also provides refresher training specific to cyanide related work tasks.

NPL has task element checklists suitable for different work areas of the cyanide facilities. Employees are required to be verified as competent against each SOP applicable to the work area. All assessment record sheets are signed off by a supervisor or department subject matter expert.

Personnel training is indicated on their competency card which employees must always keep with them. Competency cards are checked before employees can start work.

Training records are retained throughout an individual's employment documenting the training they receive. Both hard copy and electronic records are maintained for each employee. Electronic records are stored in ETAMS and hard copies on each person's file in relevant department office. Records include the names of the employee and the trainer, the date of training, the topics covered, and if the employee demonstrated an understanding of the training material.

### 2.8.3 Standard of practice 8.3

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

☒ in full compliance with

The operation is

☐ in substantial compliance with

Standard of Practice 8.3

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 8.3 requiring it train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

Cyanide unloading, mixing, production and maintenance personnel are trained in the procedures to be followed if cyanide is released. All personnel working in the processing area complete the cyanide awareness training, followed by further area specific training, which includes information on actions to take if cyanide is released in their work area.

All personnel receive instruction and training on emergency response and raising the alarm. The primary response actions for processing and maintenance personnel are to raise the alarm and evacuate the area.

The ERT are responsible for emergency response, along with the support of experienced personnel in the emergency. The ERT members have completed HAZMAT training in accordance with Australian Training Qualifications Framework.

Site cyanide response personnel, including unloading, mixing, production and maintenance workers, are trained in basic decontamination and first aid procedures and take part in routine drills to test and improve their response skills.

The ERT receive more advanced training in decontamination and first aid and generally facilitate the drills to test and improve skills. The ERT train daily and this training includes response to chemical incidents.

Mock drills involving process workers are conducted.

Site cyanide response personnel, including unloading, mixing, production and maintenance workers, are trained in the use of response equipment and related procedures and take part in routine drills to test and improve their response skills.

The ERT receive more advanced training in decontamination and first aid and generally facilitate the drills to test and improve skills. The ERT train daily and this training includes response to chemical incidents.

NPL is a remote site that is largely self-reliant in the event of an emergency. However, formalised agreements/arrangements have been made with relevant hospitals.

All employees and contractors that work at the NPL site undertake Cyanide Awareness training at the commencement of their employment/contract and then annually (as a refresher course). This training is coordinated by the Process Safety Department and includes details with respect to Emergency Response.

Records are retained documenting the cyanide training, including the names of the employee and the trainer, the date of training, the topics covered, and how the employee demonstrated an understanding of the training materials. Training records are updated in ETAMS. Various training records were sighted during the audit.



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## 2.9 Principle 9 – Dialogue and disclosure

### 2.9.1 Standard of practice 9.1

**Promote dialogue with stakeholders regarding cyanide management and responsibly address identified concerns.**

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 9.1

☐ not in compliance with

**Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 9.1 requiring it to provide stakeholders the opportunity to communicate issues of concern.

The operator provides the opportunity for stakeholders to communicate issues of concern regarding the management of cyanide. The operation has a Grievance Procedure, which allows members of the local community to liaise with the operation about concerns. The Grievance Procedure and other stakeholder information is advertised through a variety of means amongst local stakeholders.

The site employs Community Relations Officers (CROs) who liaise with the communities nearby the mine site, along the river downstream of the mine and along the highway which provides access to the site. The CROs have ongoing and regular discussions of an informal nature with community members about all aspects of the mine operation and provide any feedback to the operation. The CROs liaise with populations along the highway route to discuss the meaning of the signage, maintaining distance from containers, and to provide contact details of CROs and Security.

The CROs can converse in five separate languages used in the area: English, Pidgin, Enga, Tari and Ipili. All CROs also complete the mill induction and Cyanide Awareness training so that they gain a greater awareness of the use of cyanide on site and can communicate information about this.

There is also a Grievance Office at Yoko, which is publicly accessible for stakeholders.

The site invites members of the local community to visit the site and provides a tour for these visitors. Visitors have included councillors (village leaders), teachers and students.

External stakeholders include government, non-government organisations, Mineral Resource Authority, University groups and Porgera District Women's Association. Information on cyanide use is presented at these meetings.

Internally, site inductions, which includes information on cyanide, are required for all employees, contractors and visitors prior to working on the site. Questions are encouraged during the site induction.



## 2.9.2 Standard of practice 9.2

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with

Standard of Practice 9.2

☐ not in compliance with

### **Summarise the basis for this Finding/Deficiencies Identified:**

NPL is in FULL COMPLIANCE with Standard of Practice 9.2 requiring it to make appropriate operational and environmental information regarding cyanide available to stakeholders.

The operation has developed written descriptions of how their activities are conducted and how cyanide is managed, and these descriptions are available to communities and other stakeholders.

NPL has made the descriptions available via internal and external mechanisms. The operation has disseminated information on cyanide in verbal form where a significant percentage of the local population is illiterate.

Written information, such as contained in site induction, Cyanide Awareness training and monthly safety topic are also discussed in internal and external working groups and meetings.

Community consultation is completed verbally in the language of the community. The CROs can converse in four separate languages used in the area: English, Pidgin, Enga and Ipili.

The operation has processes and procedures to make to make information publicly available following cyanide incidents that result in hospitalization or fatality, off site releases requiring response or remediation, on or off site releases resulting in significant adverse effects to health or the environment, reporting under applicable regulations, and applicable limits for cyanide to be exceeded.

No cyanide exposure incidents or releases meeting these requirements have occurred during the audit period.

NPL is required to submit an Annual Environmental Report (AER) to government regulators. The AER details environmental incidents that occurred onsite during the reporting period, including off site releases requiring response or remediation, on or off-site releases resulting in significant adverse effects to health or the environment, reporting under applicable regulations, and applicable limits for cyanide to be exceeded. The AER is publicly available.

As the local communities surrounding Porgera operations typically do not have access to the internet or television and may have no comprehension of written or verbal English, accurate communication of an incident can often be difficult.

Following an incident relating to cyanide, NPL would:

- Adhere to all regulatory and corporate reporting requirements
- Communicate and consult directly with any community regarding a cyanide incident where not to do so would increase the risk to that community
- Not deliberately mislead the community as to consequences resulting from an incident involving cyanide
- Report all incidents through established internal reporting protocols.

NPL plan to communicate incidents of cyanide exposure resulting in hospitalization or fatality through a variety of channels, including newsletters, the annual environmental report, and regular community awareness campaigns.

