SUMMARY AUDIT REPORT

International Cyanide Management Code Recertification Audit

Phu Bia Mining (PBM): Ban Houyxai Gold Mine Recertification Audit, Summary Audit Report

Submitted to:

International Cyanide Management Institute (ICMI)
1400 I Street, NW
Suite 550
WASHINGTON DC 20005
UNITED STATES OF AMERICA

Phu Bia Mining
7th Floor, Capital Tower, 23 Singha Road
PO Box 5559, Vientiane
Lao People's Democratic Republic

Submitted by:

WSP Australia Pty Limited
Mia Yellagonga, Level 3 Tower 2, 5 Spring Street, Perth, Western Australia 6005, Australia

+61 8 9213 7600

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Distribution List

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Summary Audit Report

FOR OPERATIONAL GOLD MINES

Name of Mine:	Ban Houayxai Gold Mine
Name of Mine Owner:	PanAust Limited
Name of Mine Operator:	Phu Bia Mining (PBM)
Name of Responsible Manager:	Tony Arena, Processing Manager
Address:	7th Floor, Capital Tower, 23 Singha Road, PO Box 5559
State/Province:	Longcheng District in Xaysomboun
Country:	Lao, Peoples Democratic Republic
Telephone:	+85620 222 154 78
Email:	tony.arena@pbm.panaust.com

LOCATION DETAIL AND DESCRIPTION OF OPERATION

PanAust Limited

PanAust is a copper and gold producer in Lao with pre-development opportunities in Lao, Papua New Guinea, Myanmar and Chile. PanAust's producing assets are the Phu Kham Copper-Gold Operation and the Ban Houayxai Gold-Silver Operation; both are located in the Company's 2,600 km^2 Phu Bia Contract Area in Lao.

PanAust is an Australian incorporated company that is owned by Guangdong Rising H.K. (Holding) Limited which is a wholly owned subsidiary of Guangdong Rising Assets Management Co Ltd (GRAM). GRAM is a Chinese state-owned company regulated under the State-owned Assets Supervision and Administration Commission, the People's Government of the Guangdong Province in China. GRAM operates as an investment company in mineral resource development, electronics, industrial waste management, real estate and finance.

Phu Bia Mining Limited (PBM)

Phu Bia Mining Limited (PBM), a Lao PDR registered company, is 90% owned by PanAust and the remaining 10% by the Government of Lao Peoples Democratic Republic (GoL). PBM has a Mineral Exploration and Production Agreement (MEPA) with the GoL to develop gold and copper resources in the northern region of the country. This agreement regulates exploration, development and mining within a contract area of 2,636 km^2 (the 'Phu Bia Contract Area'). PBM operate the Ban Houayxai Gold Mine.

Ban Houayxai Gold Mine

The Ban Houayxai Gold-Silver Operations (BHX) is one of PBM's operations and is located at the Longcheng District in Xaysomboun province, approximately 100 km north-east of Vientiane capital. The Ban Houayxai project development area (6,416 ha) was approved by the GoL in 2010 for construction and issued with an Environmental Compliance Certificate million tonnes per annum (MTPA) in March 2011. The site is about 25 km west of the Phu-Kham Copper-Gold operation.

The Ban Houayxai mining operations have been active since the first half of 2012 and the operation was Pre-Operationally certified with the Code on 18 January 2012 and achieved full certification in March 2013 and was recertified on 27 May 2016 and 12 July 2019.

The mining operation comprises an open pit with a conventional blast-load-haul mining technique to mine the Ban Houayxai open pit in multiple stages. The process plant for the Project is approximately 1 km south-west of the deposit. The plant is a conventional Carbon in Leach (CIL) process and has a throughout of approximately 4.0 Mtpa.

Sodium cyanide is delivered to the mine in solid form within intermediate bulk containers (IBCs) transported in shipping containers by road from the port of Da Nang in Vietnam. Once onsite the containers are placed in the reagent compound that has restricted access. The IBCs are removed from the shipping containers by the trained day services team and stored in a dedicated warehouse within the fenced reagent compound. Sodium cyanide is mixed with caustic solution in batches within the reagent compound to provide a 30% solution for addition into the mill. Cyanide is stored in tanks and delivered into the CIL circuit via pipework at the rate set by the site metallurgists.

Packaging (IBCs and internal packaging) is disposed of onsite under a permit system. No cyanide materials are permitted to leave the mine.

The gold in the Ban Houayxai deposit is solely present as a component of the mineral electrum (a naturally-occurring alloy of gold and silver with trace amounts of copper and other elements). Most of the silver is present as silver sulphide minerals in the oxidised and transitional ore. The primary ore contains native silver as its main silver mineral. The process for the recovery of gold and silver comprises five major steps:

- Carbon-in-leach: Gold and silver preferentially bind onto cyanide ions while non-target minerals and waste remain behind
- Carbon adsorption: Activated carbon is used to strip gold and silver from the cyanide
- Carbon desorption: Gold and silver are stripped from the carbon and enter solution
- Electrowinning: Gold and silver are removed from solution
- Smelting: The material produced by the electrowinning process is smelted at high temperature to concentrate the gold and silver.

Cyanide destruction of the thickened tailings slurry is undertaken using Air/SO_2 process. The detoxified tailings slurry is pumped via a pipeline to the tailings storage facility (TSF) when the 0.5 mg/L Weak Acid Dissociable (WAD) CN target has been achieved. The TSF is a valley impoundment and water collected on the surface of the TSF is released via a spillway. There is no recycling of process wáter from the TSF at this operation.

AUDITORS FINDINGS

The Ban Houayxai Gold Mine is:

☒ **in full compliance with**

☐ in substantial compliance with

☐ not in compliance with

The International Cyanide Management Code

This operation has not experienced any compliance issues or significant cyanide incidents during the previous three-year audit cycle.

Audit Company: WSP Golder

Audit Team Leader: Mike Woods, ICMI Lead Auditor and Technical Specialist

Email: mike.woods@wsp.com

Name and Signatures of Auditors:

The Certification Audit team was composed of:

- Mr Mike Woods (Lead Auditor and Technical Specialist)
- Mr Craig Currie (Auditor Trainee)

Name	Position	Signature	Date
Mike Woods	ICMI Lead Auditor & Technical Specialist		23 March 2023

Mr. Mike Woods is a Mining Technical Expert Auditor and Transport Technical Specialist. Mr. Mike Woods submitted both the Detailed and Summary audit reports initially but was unavailable to submit the final version of the report. Please refer to the notes provided under the signatory block on the signature page for more information.

Dates of Audit

The field component of the Recertification Audit was undertaken between 30 August and 1 September 2022.

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

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

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APPENDICES

1.0 PRINCIPLE 1 – PRODUCTION AND PURCHASE

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

Standard of Practice 1.1: **Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment.**

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 1.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

Phu Bia Mining (PBM) is in FULL COMPLIANCE with Standard of Practice 1.1, requiring the operation to purchase its cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide and to prevent releases of cyanide to the environment.

The cyanide purchased by the mine is manufactured at a facility certified as being in compliance with the Code. Australian Gold Reagents (AGR) has maintained full certification throughout the audit period.

The operations contract with the cyanide manufacturer does require that the cyanide be produced at a facility that has been certified as being in compliance with the Code. BHX sourced solid cyanide from AGR's Kwinana production facility that is certified as compliant with the Code. The AGR production facility was originally certified on 9 October 2007 and was last recertified on 22 September 2020.

The contract requires that the Seller must at all times comply with the International Cyanide Management Code and must provide cyanide from a production facility that has been certified as being in full compliance with the Code.

At the time of the audit the operation was in the process of negotiating a new contract with ICMC certified supplier Hebei Chengxin Co Ltd, but no cyanide from this supplier was received during the audit period.

2.0 PRINCIPLE 2 – TRANSPORTATION

Protect Communities and the Environment During Cyanide Transport

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 2.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

PBM is in FULL COMPLIANCE with Standard of Practice 2.1, requiring 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.

All identified transporters are individually certified as being in compliance with the Code.

The operations contract with the cyanide transporter(s) requires that the transporter(s) be certified under the Code. The operation has a contract with AGR for the supply and transport of cyanide to the site.

The contract with AGR details the seller may only utilise cyanide transporters that have been certified as being in full compliance with the Code.

BHX has certified supply chains that cover transport of cyanide from the production facility in Kwinana, Australia to site.

The contract with AGR also details the seller's responsibilities including:

- Packaging as required by the United Nations
- Labelling of the product
- Storage and security at ports of entry
- Evaluation and selection of routes
- Safety and maintenance of the means of transport
- Emergency response through-out transport

The certified supply chains that cover transport of cyanide from the production facility in Kwinana, Australia to site are:

- AGR Ocean Freight Supply Chain; certified 8 February 2011 and recertified 23 September 2020.
- AGR Australian Supply Chain; certified 27 September 2006 and recertified on 9 November 2022.
- AGR Asian Supply Chain; certified 29 September 2014 and recertified on 26 July 2021.

Due to impacts on supply chain arising from the COVID-19 pandemic and changes in transport approvals in Thailand, the supply route was changed to Vietnam in January 2020. In July 2022, the contract with AGR ceased and the last cyanide shipment by AGR under this certified supply chain was completed in May 2022 by PBM personnel and subcontractors. AGR notified the ICMI of the change in subcontractors in line with their responsibilities.

Phu Bia Mining Logistics, Asia Supply Chain was certified to the Cyanide Code on March 23, 2023.

3.0 PRINCIPLE 3 – HANDLING AND STORAGE

Protect workers and the environment during cyanide handling and storage.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 3.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

PBM 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 cyanide producers' guidelines, applicable jurisdictional rules and/or other sound and accepted engineering practices for these facilities. No changes to the cyanide storage and mixing facility have been undertaken during the audit period. A remote assessment of the condition of the storage and mixing facility was undertaken by AGR due to COVID travel restrictions and concluded that the facility remained fit for use.

Unloading areas for solid cyanide are located away from people and surface waters. The operation has a dedicated storage and mixing area with a fully enclosed warehouse for storage of cyanide Intermediate Bulk Containers (IBC) within the plant area. The cyanide mixing and storage compound is fully fenced and located away from normal work areas/offices.

The storage and mixing area has a concrete bund that drains to a sump within the facility to contain releases should they occur. There is also a drainage containment system for the broader plant area which drains to an event pond due to the proximity of the plant to the Nam Ngam 2 Reservoir.

Liquid cyanide is not delivered to the site. BHX only receive solid cyanide within wooden IBCs within shipping containers. The IBCs are unloaded from the shipping container on a concrete surface and stored in a dedicated area, the concrete floor allows for collection and clean-up of spills, in the event that an IBC is damaged.

There is a method to prevent overfilling of cyanide storage tanks, such as a level indicator and high-level alarm. The mixing and transfer of cyanide to storage tanks is automated by the sites digital control system (DCS) and there are low, low-low and high, high-high alarms on mixing and storage tanks that are monitored by control room operators. There are level set points in procedures for mixing that control when mixes and transfers occur which also prevent overfilling. Checks on the level indicators under undertaken by the operation through the DCS and comparison with other levels and trends.

Cyanide mixing and storage tanks are located on a concrete surface that can prevent seepage to the subsurface. Cyanide mixing and storage tanks are installed in a designated area on concrete plinths within a concrete bund. The bund is fitted with a sump to allow for recover of spillages or leaks should it occur. The site inspection confirmed the concrete bund was free of obvious defects that would allow seepage.

Solid cyanide, once removed from locked shipping containers, is stored in a dedicated warehouse, no other chemicals are stored within the compound and the compound is segregated from other chemical storage areas. The storage warehouse is elevated to prevent ingress of storm water or other materials. There is passive ventilation in the form of louvers in the walls and the roof design allows for air movement but prevents ingress of water to the warehouse building.

The warehouse is located within a fully fenced and locked facility within the process plant. Access to the process plant is controlled via security gates and access control system and access to the warehouse and mixing area is further restricted. The cyanide storage tanks are installed in a dedicated open-air bund that prevents mixing with other materials.

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:

PBM is in FULL COMPLIANCE with Standard of Practice 3.2, requiring the operation of unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

BHX has in place procedures for managing the interim storage and disposal of empty cyanide boxes. The empty boxes with packaging inside are labelled in large red with the letters “MT” and placed in a designated area of the cyanide shed for transport and burial at the BHX landfill facility. A log of the boxes sent for disposal is maintained by the Day Services team.

The preparation of packaging for transport to the disposal area is undertaken by the Day Service Team wearing the following personal protective equipment:

- Safety Boots
- Rubber gloves
- HCN Monitor
- Disposable coveralls
- Full face respirator with ABEK filter

Following consolidation of packaging for disposal the area is washed down and the rinse water collected and pumped into the CIL circuit and eventually discharged via the cyanide destruction circuit to the TSF. Treated water is not permitted to be sent to the TSF until the 0.5 mg/l weak acid dissociable cyanide (WAD CN) set point is achieved.

Personal protective equipment (PPE) used in the mixing process is disposed of via this method. Cyanide packaging is not returned to the vendor.

BHX has developed and implemented plans and procedures to prevent exposures and releases during cyanide unloading and mixing activities.

BHX has a procedure for mixing operations. The transfer of cyanide solution from mixing to storage tanks is automated via the site’s DCS and control room operators.

IBCs of solid cyanide are moved from the storage warehouse by trained operators using a forklift. Access to the area is restricted to those that have been authorised and trained for the activities.

Cyanide IBCs are stored in the dedicated warehouse and stored a maximum of four high. An inspection of the warehouse confirmed boxes are stored in accordance with this requirement.

BHX has procedures to undertake timely clean-up of spills that may occur during a mix. Clean-up is undertaken by mixing staff for small-contained spills. Clean up of larger spills is undertaken by the emergency response team. The site inspection confirmed spill clean-up equipment was readily available to the crew undertaking mixing activities.

The procedures for mixing solid cyanide do provide for an observer and detail the personal protective equipment needed. Workers performing a mix wear protective disposable coveralls, gloves and a respirator with a hydrogen cyanide (HCN) gas monitor.

The cyanide bag is lifted from the box using an overhead winch and a bag splitter is used to release the cyanide into the mixing tank. Once the required number of bags are added, the mixing process is automated. Once complete the resulting solution is pumped into the storage tanks.

Colorant dye is added by the producer AGR at the point of packaging.

4.0 PRINCIPLE 4 – OPERATIONS

Manage Cyanide Process Solutions and Waste Streams to Protect Human Health and the Environment

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

☒ **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:

PBM is in FULL COMPLIANCE with Standard of Practice 4.1, requiring that 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 management and operating plans or procedures have been developed for cyanide facilities including unloading, mixing and storage facilities, leach plants, tailings impoundments, and cyanide treatment systems.

BHX has document controlled and approved procedures available in English and Lao on the operations intranet system. The documents are available electronically to the workers.

There are plans and procedures covering cyanide related activities at BHX including:

- Cyanide unloading and storage
- Mixing
- TSF operations
- Cyanide Destruction
- Cyanide packaging disposal.

BHX does have plans or procedures that identify the assumptions and parameters on which the facility design was based and any applicable regulatory requirements. BHX has a monitoring plan that provides the basis for wildlife protection measures and compliance for direct and indirect discharge from the TSF.

The process plant design criteria detail the engineering design for the facility including throughput and cyanide addition rates.

BHX does have 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.

BHX has a fixed plant preventative maintenance (PM) program that is administrated through the systems applications and products (SAP) platform and a review of work orders and interviews with personnel confirmed preventative maintenance activities are scheduled and undertaken.

In parallel with preventative maintenance activities, operators can trigger repairs by raising work orders (WO) to have facilities inspected and repaired. These are tracked through the SAP system.

The operation does have a procedure to identify when changes in processes or operating practices may increase the potential for the release of cyanide and incorporate the necessary prevention measures. A new procedure has been implemented in 2022 that includes a Mandatory Change Table that details any changes related to cyanide must involve the Process Superintendent and Environment Superintendent as subject matter experts in addition to the other stakeholders that may be relevant to the proposed change. The Process Superintendent is responsible for process safety and worker exposure related aspects of the change.

The operation is yet to use the new procedure for cyanide related changes, however the operation did undertake Management of Change (MOC) assessments during the audit period under the previous procedure and copies of the paper based change management form where reviewed. Personnel were also interviewed on the change management process and confirmed that worker exposure and environmental releases are considered as part of the process.

The BHX operation has a DCS that is used to monitor the operation of the facility together with in field monitoring carried out by process operators. There are a series of procedures covering:

- Tails Line Failure
- Site Power Outage
- Abnormal Excessive Rain Fall
- Thickener Overload
- Detoxification WAD Response.

The operation also has an emergency management plan that addresses overall emergency shutdown of the facility including non-routine temporary cessation of activities. This Plan is supported by processing department procedures that provide instructions for shutdown of the leaching circuits and associated components of the plant.

This process includes the consumption of reagents in the circuit, controlled shutdown of the CIL circuit including drain down of the tanks and pipelines so that the process plant is in a fail-safe condition. The procedures do include care and maintenance arrangements such as inspections and maintenance should there be an extended shutdown of the operation. Once the mill has been shutdown there is no longer discharge to the TSF.

Once the controlled shutdown of the mill has been completed the presence of cyanide remaining on the site is limited to solid cyanide within the reagent storage area warehouse. Solid cyanide will remain in the access-controlled storage area or could be re-stuffed into shipping containers for removal offsite (if necessary).

In relation to the water balance, the operation no longer uses a water balance for the prevention of release. The operation has a flow through system and the revised design for the TSF and spillway prevent overtopping of the impoundment and accordingly.

The operation does inspect cyanide facilities at an established frequency that is sufficient to assure and document that facilities are functioning within design parameters. BHX has a series of inspections ranging from informal shift inspections by operators to more formalised inspections and documentation of operating parameters. The facility is operated via a DCS where operating parameters are monitored continuously.

Tanks holding cyanide solutions are inspected for structural integrity and signs of corrosion and leakage. Area inspections are completed on a monthly basis and recorded in INX InControl.

Secondary containments are inspected informally on a shift by shift basis and there is a formal monthly inspection program that considers the integrity of the secondary containment. A site inspection found the bunds to be in reasonable condition with evidence of on-going repairs and maintenance indicating inspections are completed and actions are taken to rectify identified defects.

BHX do not have a leach pad and there is no process water pond. There is a containment pond installed at the process plant to collect spillage should it occur outside of the plant secondary containments.

BHX has processes in place to inspect pipelines, pumps and valves for deterioration and leakage. BHX has a preventative maintenance system that includes checks on pumps for leakage, corrosion and deterioration. In addition to the maintenance checks, operators complete daily inspections checking for leaks and monthly formalised inspections.

Whilst the operation no longer utilises a probabilistic water balance, daily inspections of the TSF are conducted and the freeboard on the embankment is checked. There are no other ponds or impoundments that ordinarily contain cyanide solution.

Inspections are documented including the date of the inspection, the name of the inspector, and any observed deficiencies. BHX has developed and implemented an area inspection program that prompts the inspector to check items throughout the plant and where deficiencies are observed these are noted on the forms. Where corrective actions are required, these are documented on the inspection form and either tracked through INX InControl or via SAP for maintenance requests.

The SAP maintenance system generates work orders that include details on the plant or equipment to be inspected, checked and/or repaired/replaced. These are signed off by the personnel completing the work and checked by the supervisor. A review of completed inspection forms confirmed they are documented and retained.

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

BHX does have the necessary emergency power resources to operate pumps and other equipment to prevent unintentional releases and exposures in the event of a power failure. Site power is supplied by two powerlines and BHX has procedures in place to switch over between the two supply lines in the event of an interruption to the primary supply. BHX also have emergency generators that support critical functions and these are checked weekly.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation has implemented programs to determine the appropriate cyanide addition rates in the mill and continue to evaluate and adjust addition rates as necessary when ore types or processing practices change cyanide requirements.

BHX has online free cyanide analysers along the circuit that are used to automate cyanide addition rates. Manual titrations are also undertaken, and trend analysis is conducted.

No changes to the leach circuit/process have been made and there have been no significant changes to processing practices during the audit period.

The operation has evaluated various control strategies for cyanide addition. Cyanide addition at the BHX plant is automated and there are online real time analysers that are used to monitor cyanide in the circuit. The operation has implemented a strategy to control its cyanide addition. The strategy has not changed from previous audits and is a combination of automation, manual sampling and assays. Process operators collect slurry samples for free cyanide analysis on an hourly basis in conjunction with the online analysers.

BHX has a future ore test work program that includes leach test work that trials various addition rates for the ore to process so that addition rates and recovery can be assessed. BHX also have in place planning meetings with mining and process operations teams to facilitate the planning of ore to be processed through the plant and the adjustment of addition rates based on grade.

BHX have adjusted the cyanide addition points to better control dosage through their automated system. The circuit is now monitored in real-time through the Cyanoprobe system allow monitoring of cyanide levels leaving the circuit and quicker response to grades. The levels in the strip circuit have also been reduced, with ongoing work to reduce this further.

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:

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

The operation developed a probabilistic water balance (PWB) when the operation was first commissioned. However, due to the TSF operating as a flow through system and subsequent design changes to the main embankment and spillway structure, BHX has ceased the use of the PWB as it is no longer applicable to prevent unintentional releases. BHX has a spillway, commonly referred to as the Concrete Rock Faced Dam (CFRD) or flow over weir.

The updated design of the TSF includes the spillway which is designed to handle the probable maximum flood (PMF) event without overtopping the adjacent main impoundment wall. Accordingly, the PWB to prevent unintentional release, i.e. overtopping of the impoundment wall was no longer applicable to the operation of this facility and use of the PWB ceased in 2016.

BHX monitors water levels in the TSF and commissioned a dam breach assessment for the Life of Mine (LOM) arrangement of the TSF. The dam breach assessment has been used to inform the BHX TSF emergency response plan which details actions to take in the event of significant blockage of the spill way which may lead to overtopping of the impoundment.

BHX has a cyanide destruction facility that treats cyanide prior to discharge to the TSF. Once the WAD CN concentration in the tailings stream reaches the acceptable level of 0.5 mg/L, the treated slurry is pumped to the TSF via the tailings pipeline.

The operation has in place monitoring programs to test the water downgradient from the TSF spill way at the point of discharge to surface water and the mixing zone at the entry to the Nam Ngum 2 Reservoir to verify receiving waters are below 0.5 mg/L WAD CN and 0.022 mg/L free cyanide respectively.

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:

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

The operation does not have open water bodies that exceed 50 mg/L WAD CN. There is an event pond that may contain cyanide in the event of an incident but under normal operating conditions does not contain cyanide.

There is a cyanide destruction circuit that treats process discharges prior to placement in the TSF. The TSF facility is an open water body flow through system with a direct discharge via a designed spill way. The supernatant water in the TSF has WAD CN levels typically well below the Code compliance point of 50 mg/L.

The operation can demonstrate that the cyanide concentration in open waters of the TSF does not exceed 50 mg/L WAD CN. Monitoring data shows WAD CN levels are consistently below 0.5 mg/L WAD CN in the TSF and at the point of discharge.

BHX does not have leach facilities or solution ponds.

Maintaining a WAD CN concentration of 50 mg/L or less in open water appears effective in preventing significant wildlife mortality. Monitoring data indicates WAD CN levels are consistently below 0.5 mg/L and wildlife mortalities have not been observed associated with cyanide levels.

Standard of Practice 4.5: **Implement measures to protect fish and wildlife from direct or 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:

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

The operation does have a direct discharge to surface water from the TSF spill way into the Nam Ngum 2 Reservoir. The operation monitors the WAD CN levels in the TSF prior to discharge and at the point of discharge downstream of the spill way; weekly monitoring data shows WAD CN levels are consistently below 0.5 mg/L WAD CN.

WAD CN monitoring is undertaken inhouse and via by third party National Association of Testing Authorities (NATA) accredited laboratories in Australia.

BHX has an ambient water quality compliance location at the point of discharge from the spillway into the Nam Ngum 2 Reservoir where the 0.022 mg/L free cyanide level applies. This is lower than the local regulatory limit of 0.07 mg/L free cyanide at this location.

BHX monthly monitoring data shows that free cyanide levels are consistently below the 0.022 mg/L compliance criteria. Compliance sampling analysis is undertaken by third party NATA accredited laboratories in Australia.

The operation does have an indirect discharge to surface water. There is an underdrainage system and seepage collection system for the TSF embankment that then flows via surface flow to join the direct discharge from the TSF and into the Nam Ngum 2 reservoir. Sampling locations include water quality from both direct and indirect discharges and shows free cyanide levels are below 0.022 mg/L. Accordingly, the indirect discharge does not cause instream concentration to exceed the compliance criteria.

The discharges from the TSF have not caused concentrations to rise above levels protective of a designated beneficial use for aquatic life. Accordingly, BHX has not engaged in remedial activities.

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:

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

The operation does implement specific management measures to protect the beneficial use beneath or immediately down gradient of the operation.

As noted previously, BHX has a cyanide destruct circuit that reduces cyanide content in the tailings to 0.5 mg/L WAD CN prior to discharge from the destruction circuit into the tailings pipeline and subsequent deposition in the TSF.

There are currently no beneficial uses of groundwater beneath or immediately downgradient of the operation. However, local regulations (National Environmental Standards 2017) stipulate a total cyanide level in groundwater of not more than 0.2 mg/L total cyanide.

BHX has installed two water monitoring bores at the process plant and three at the TSF. The monitoring bores at the plant are located on the north-east and south-west of the plant site between the process plant and the ridge down to the reservoir. The three bores at the TSF are installed downgradient of the facility.

Water monitoring data for the period 2019 to Q1 2022 shows that WAD CN levels are consistently below 0.02 mg/L when detected. Laboratory analysis is undertaken by NATA accredited third party laboratories in Australia.

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

WAD CN concentrations in groundwater are below the levels for total cyanide, as specified under the National Environmental Standards 2017.The operation does not use mill tailings as underground backfill.

No remedial activity to prevent groundwater degradation due to cyanide levels has been necessary to date.

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:

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

Spill prevention or containment measures have been provided for cyanide unloading, storage, mixing and process solution tanks. There have been no changes to the operations spill prevention or containment measure since the previous audit which found the containment to conform to Code requirements.

The Carbon in Leach (CIL) tanks are installed on ring beams with leak detection system installed beneath the tanks. The tell tails of the ring beams are checked and work orders raised to inspect/repair tanks where leaks are observed.

A site inspection confirmed that containment measures are in place and systems are implemented to maintain them.

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.

Procedures are in place for cyanide containment facilities to prevent discharge to the environment of any cyanide solution or cyanide-contaminated water that is collected in the secondary containment area.

The operation has a series of sumps that allow for solutions collected within the sumps to be returned to the plant. Should there be a discharge outside of the secondary containment of the plant there is a line event pond that collects run off from the plant area and has been designed to contain overflow and rainfall from the process plant.

All cyanide process tanks have secondary containments. Nonetheless, in the event that a spill reaches soil, the site has procedures, as contained in the Cyanide Emergency Response Plan (CERP), for testing and remediation of contaminated soil.

Spill prevention or containment measures are provided for cyanide process solution pipelines to collect leaks and prevent releases to the environment. Cyanide solution pipelines within the plant are installed above concrete containment areas that drain back to sumps for return to the process.

The TSF pipeline has pressure sensors detecting sudden drop in pressure and this information is relayed to the control room.

Areas where cyanide pipelines present a risk to surface water have been evaluated for special protection needs. The only pipeline outside of secondary containment is the TSF pipeline which carries tailings from the cyanide destruction plant to the TSF. Accordingly, this pipeline has not been identified as needing special protection in relation to cyanide content as the tailings contains <0.5 mg/L WAD CN and the pipeline is located away from surface water.

Cyanide tanks and pipelines are constructed of steel that materials compatible with cyanide and high pH conditions. Material compatibility was assessed during the previous audit and there have been no changes to the tanks (reagent, elution or process tanks) since then.

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:

PBM 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.

QA/QC assurance programs have been implemented during both construction of new cyanide facilities and when undertaking modifications to existing facilities.

There have been no changes to physical infrastructure of cyanide facilities at the operation with the exception of the TSF, where raises to the embankment and changes to spill way were completed. BHX has undertaken QA/QC assessments for the construction of the embankment raise and weir modification and records of the inspection have been retained. QA/QC assessments have included suitability of materials and compaction.

The operation has undertaken tank repairs and BHX completed non-destructive test work using magnetic particle instrumentation (MPI) on the weld joints to the tank floors as part of the rectification works and these are recorded in the inspection reports and recorded in SAP.

BHX completed non-destructive test work using MPI on the weld joints for tank floor repair works completed during the audit period and these are recorded in the project documentation. The QA/QC process on the TSF works did include soil compaction testing.

QA/QC records have been retained for cyanide facilities. QA/QC records confirm that the facility has been built as proposed and approved. Records cover construction activities as well as works that have occurred during the recertification period. Records contain TSF Construction Certificates of Compliance that are signed by the engineering consultant (Chartered Professional Engineer).

Evidence of QA/QC or as-built certification documentation was available for the cyanide facility.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.9**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation has developed written standard procedures for monitoring activities. PBM has developed an overarching Environment and Social Management and Monitoring plan that sets out environmental monitoring for the BHX operation including assessment of surface and groundwater quality and wildlife monitoring. The operation is situated in the greater Mekong Basin which has high diversity in freshwater fish species and freshwater fauna. The The monitoring plan establishes the sampling locations for groundwater and surface water. PBM also conducts biannual aquatic surveys to examine diversity and abundance of aquatic species.

In addition to the monitoring plan, there are task level procedures for surface water and groundwater monitoring that detail preparation, collection of samples, field measurements, chain of custody and reporting. These tasks also include observations and reporting should wildlife impacts be identified.

Sampling and analytical protocols have been developed and reviewed by appropriately qualified personnel. BHX has a structured document control process and the monitoring procedures have been formally reviewed and approved by a university degree qualified environmental professional (Bachelor of science, BSc).

Where appropriate, the operation's procedures specify how and where samples should be taken, sample preservation techniques, chain of custody procedures, shipping instructions, and cyanide species to be analysed. Quality control and assurance is managed in two aspects. Field blanks and duplicates are collected, and third-party laboratories are also used for quality control and assurance purposes.

Sampling conditions (e.g. weather, livestock/wildlife activity, anthropogenic influences, etc.), and procedures are documented in writing. A review of completed sampling forms and procedures confirmed sampling conditions are documented.

The operation does monitor for cyanide in discharges of process water to surface water. BHX has a direct discharge from the TSF into the Nam Ngam 2 reservoir and has established environmental surface water quality monitoring locations both up and downstream from the point of discharge and at the point of discharge itself.

There are groundwater bores installed in and around the plant site and groundwater is monitored for cyanide.

Wildlife mortalities, mainly fish kill incidents, are monitored and recorded. Cyanide levels in the TSF are ≤0.5 mg/L WAD cyanide minimising risk to wildlife. Checklists for water quality monitoring include the requirement to record any wildlife mortalities, sightings or observations. Water quality sampling is taken daily. Incidents are recorded and investigated by BHX environment personnel. The potential for wildlife interaction with cyanide solutions is low due to the cyanide destruction system and operational monitoring of cyanide levels prior to discharge from the plant to the TSF.

Monitoring is conducted at frequencies that are adequate to characterise the medium being monitored and to identify changes in a timely manner. Given the operating circumstances and the online monitoring within the plant, environmental monitoring is considered to be undertaken at an adequate frequency and the operation undertakes trend analysis on the data. Records of monitoring undertaken during the audit period were available for review.

5.0 PRINCIPLE 5 – DECOMMISSIONING

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

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 5.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

PBM is in FULL COMPLIANCE with Standard of Practice 5.1 requiring the operation to 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 operations. BHX has developed a Cyanide Closure Plan that addresses all cyanide facilities at the site. The plan outlines the activities leading up to and during decommissioning of the plant and TSF pipelines including management of reagents, decontamination, residue management, detailed task planning, risk assessment and environmental protection during decommissioning and closure activities.

BHX has an implementation schedule for decommissioning activities. Decommissioning of the processing plant is integrated into overall site closure activities and described in the Cyanide Closure Plan. The level of detail in is considered reasonable for the remaining life of mine at the time of the audit.

The operation has established a system to review its Cyanide Closure Plan during the life of the operation and revise it as needed. The plan was updated in 2018 and again in 2022.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 5.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

PBM 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.

The operation has developed an estimate of the cost to fully fund third-party implementation of the cyanide-related decommissioning measures. A third-party cost estimation has been developed and the domains for the process plant and TSF pipelines provide an estimate cost of decommissioning activities which includes the site cyanide facilities.

BHX does review and update the cost estimate at least every five years and when revisions to the plan are made that effect cyanide related decommissioning activities. No changes to cyanide related decommissioning activities have been made in the recent plan review and the third-party cost estimate was last updated in 2018.

No change since the previous audit. BHX has not established a financial mechanism approved by the applicable jurisdiction to cover the estimated costs for cyanide-related decommissioning activities, BHX has instead established a self-guarantee to cover cyanide related decommissioning costs.

BHX has established a self-insurance as a financial assurance mechanism and has a statement provided by a qualified financial auditor that it has sufficient financial strength to fulfil this obligation. Klynveld, Peat, Marwick and Goerdeler (KPMG) have undertaken a financial audit of PBM for the year ending 31 December 2021 which includes provisioning for closure (including cyanide decommissioning at BHX) in excess of the amount calculated for BHX operations. The General Manager of Finance of PanAust has confirmed that the provision within audited financial statements is available for, and more than sufficient, to fund the estimated cost of cyanide related decommissioning activities for the BHX operations.

6.0 PRINCIPLE 6 – WORKER SAFETY

Protect Workers' Health and Safety from Exposure to Cyanide

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

PBM is in FULL COMPLIANCE with 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.

There is a Cyanide Management Plan that details the measures to be implemented to manage cyanide from delivery on the site through to destruction and placement of tailings. There is a series of standard operational procedures (SOPs) that have been implemented at the site and these are periodically reviewed.

There is a permit system for high-risk activities onsite including the entry into confined spaces. The confined space entry system requires the area to be isolated, hazards including atmospheric hazards to be monitored by trained personnel prior to entry and during works. The operation has a confined space register that includes a risk assessment of the identified confined space, entry controls and rescue plans.

There are procedures for isolation and lock out and tagging out equipment for maintenance activities and the site inspection confirmed this system was being used. The site has calibrated monitoring equipment for monitoring HCN gas within confined spaces. There is a specific procedure for decontaminating cyanide pumps and pipelines for handover to maintenance personnel.

The procedures require, where necessary, the use of PPE and addresses pre work inspections. Each of the SOPs detail a pre-task inspection of the area and detail the PPE applicable to the task. BHX has implemented a Take 5, job safety assessment (JSA) and a field-based risk assessment process to identify and address hazards that may occur at the time of completing the work, and those additional to the standard hazards noted in the SOPs.

The operation does solicit and actively consider worker input in developing and evaluating health and safety procedures. There are multiple mechanisms available to seek and obtain feedback at the operation including planned task observations (PTOs), toolbox meetings and site safety committee meetings. Toolbox meetings are undertaken on a weekly basis and the safety committee meets on a monthly basis.

The document review process at the site is a structured process where procedures are sent out to various departments for comments and then reviewed by supervisors and superintendents. Where changes are made, the documents are sent through to document control for manager approval and signoff.

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**

PBM Gold Mine
Name of Facility

Signature of Lead Auditor

5 May 2023
Date

The operation is ☐ in substantial compliance with **Standard of Practice 6.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

PBM is in FULL COMPLIANCE with Standard of Practice 6.2 requiring the operation 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 pH set point for mixing is 11 and the pH set point for the CIL circuit is 10 which is sufficient to limit the evolution of HCN gas.

There are online pH probes installed on the process plant that provide a local reading and inform the supervisory control and data acquisition (SCADA) system in the control room. pH set points are established and monitored. The operation uses monitoring to confirm that controls are adequate to limit worker exposure to HCN and sodium, calcium or potassium cyanide dust to 10 ppm on an instantaneous basis and 4.7 ppm continuously over an 8-hour period.

BHX has identified the cyanide mixing and storage, CIL tanks, trash screen and carbon safety screen circuit as having the potential for HCN exposure and has installed fixed monitors in these locations that provide local alarms if trigger levels are exceeded. The monitors report to the SCADA system and are continuously monitored in the control room.

Personal monitors are used on site and personnel are required to leave an area where a reading is obtained in excess of 4.7 ppm – on either a personal or fixed monitor. Personal monitors and fixed are set to alarm at 4.7 ppm and 10 ppm. Personal monitors are calibrated, and a register of monitors is kept on the site.

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

The operation has identified the cyanide mixing and storage, CIL tanks, trash screen and carbon safety screen areas as those with the potential to expose workers to HCN gas. Static or "fixed" HCN detectors are located in these areas and provide continuous monitoring via digital read out on the system. BHX has developed and implemented procedures, which require a portable HCN monitor to be available to all process operators and maintenance personnel entering or working within the cyanide mixing and storage area, grinding area, CIL tanks, trash screen and carbon safety screen areas. Personnel are required to leave an area when a HCN gas reading in excess of 4.7 ppm is recorded by either the personal or fixed HCN monitor alarms.

BHX has installed signage to notify personnel in which areas HCN monitors are needed and SOPs detail the additional PPE that is to be worn for specific tasks. Cyanide Mixing is an activity at the site where additional PPE in the form of coveralls and respirators are required. The site inspection and interviews with personnel confirmed that PPE was being worn as detailed in BHX SOPs.

Hydrogen cyanide monitoring equipment is maintained, tested and calibrated as directed by the manufacturer, and records are retained for at least three years. The site utilises both fixed and personal HCN monitors and a review of Drager servicing and calibration certificates confirmed devices are serviced on a 6-monthly basis and records for the preceding three years were reviewed confirming they are retained. The site also has the capability to calibrate devices where faults arise and the units are serviced on site.

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. Warning signs are placed at the entrances to the cyanide mixing and storage and at entry points to the process plant. Cyanide warning signage is not provided for the TSF pipeline or TSF as the mill tailings are subject to a destruction circuit that reduces WAD CN levels to below 0.5 mg/L prior to discharge into these facilities. The pipeline is labelled so that operators understand what is in the pipeline.

High strength cyanide is dyed for clear identification. All cyanide currently stored at the site has been purchased from AGR, an ICMC certified producer. AGR add red dye to cyanide during the production process. PBMs mixing procedure also includes the addition of dye in the box mixing process. Cyanide addition points within the CIL Plant were observed to have dye solution.

The PBM operation is in the process of switching supplier to ICMC certified supplier Hebei Chengxin Co Ltd, but no cyanide from this supplier was received during the audit period.

Showers, low-pressure eyewash stations and dry powder or non-acidic sodium bicarbonate fire extinguishers located at strategic locations throughout the operation and are maintained, inspected and tested on a regular basis.

A site inspection confirmed that showers were operational and that fire extinguishers were charged and tagged. A review of inspection records stored in the INX InControl database confirmed that routine inspections and routine maintenance are conducted.

The operation has identified unloading, storage, mixing and process tanks and piping containing cyanide to alert workers of their contents.

The cyanide mixing tanks are labelled and painted for identification. Cyanide reagent lines are coloured and labels detailing content and direction of flow are attached enabling tracing of pipelines through the plant. Process tanks and slurry pipelines are also identified with content labels and direction of flow. The site induction training material includes information on the various pipelines within the plant. The site inspection confirmed that labels were present, content could be identified, and workers were aware of the labelling system and what it means.

Safety data sheets (SDS), first aid procedures and informational materials on cyanide safety were available in the language of the workforce in areas where cyanide is stored, handled and managed. SDS are provided in Lao and English and first aid information is provided in Lao and English. Information and pictograms are displayed around the cyanide storage and mixing area and at entry points to the processing plant.

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

No incidents of worker exposure to cyanide were reported during the period. A review of the INX InControl database and interviews with personnel confirmed that incidents are reported and investigated.

Standard of Practice 6.3: **Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.**

The operation is
- ☒ **in full compliance with**
- ☐ in substantial compliance with **Standard of Practice 6.3**
- ☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

The operation has the necessary equipment to respond in the event of a worker's exposure to cyanide. BHX has a site wide alarm system for the processing plant to enable evacuation and radio coverage of the site with dedicated emergency channel. Supplementary communication is provided by the site phone and mobile phone systems. Operators on the plant carry a radio with them and there are phones throughout the plant area.

The BHX medical clinic is located outside the security gate entrance to the plant and has an equipped two bed triage area and three bed clinic area. The triage area is equipped with oxygen, cyanide antidote kits (hydroxocobalamin), resuscitation equipment, Electrocardiography (ECG) and Automated External Defibrillators (AED). The medical clinic is staffed 24/7 with a doctor and paramedic.

Around the plant there is potable water for decontamination via emergency showers and eyewash facilities, water is available from fire hoses and medical oxygen at the permit hut adjacent to the cyanide storage and mixing facility. The operation conducts inspections of its first aid equipment regularly to ensure that it is available when needed and materials such as cyanide antidotes are stored and/or tested as directed by their manufacturer and replaced on a schedule to ensure that they will be effective when needed.

Weekly inspections of the medical clinic are undertaken by the Paramedic and recorded in INX InControl. The inspections include checks on the four cyanide antidote kits and medical oxygen. The Fire and Emergency Services (FES) team undertake weekly inspections of their first aid equipment and these are stored in hard copy folders and recorded in INX InControl. An inspection of the Medical Clinic and Emergency response equipment confirmed equipment was available and ready for use.

The operation has developed and implemented specific written emergency response plans or procedures to respond to cyanide exposures. The CERP is the primary reference for responding to cyanide incidents and details worker exposure response including use of oxygen, decontamination and administration of cyanide antidotes.

The operation does have its own on-site capability to provide First Aid or medical assistance to workers exposed to cyanide. The BHX medical clinic is located outside the security gate entrance to the plant and has an equipped 2 bed triage area and 3 bed clinic area. The triage area is equipped with oxygen, cyanide antidote kits (confirmed in date), resuscitation equipment, ECG and AED. The medical clinic is staffed 24/7 with a doctor and paramedic.

The operation has developed procedures to transport workers exposed to cyanide to locally available, qualified off-site medical facilities. Day time primary transport is via helicopter (Lao skyways) to Vientiane and then onward to Thailand. There is a site ambulance that could be used as a backup if necessary. There is a 24/7 manned clinic at the site with capability to provide interim care.

The operation has made formalised arrangements with regional hospitals, clinics, etc., so that these providers are aware of the potential need to treat patients for cyanide exposure. The operation is confident that the medical facilities have adequate qualified staff, equipment and expertise to respond to cyanide exposures. The operation has undertaken visits to the Alliance Medical Centre and Bangkok Hospital to confirm the level of care available. Given the location of the mine and the time to transport exposed personnel offsite, decontamination and initial treatment would be undertaken on site and the patient then transferred to other facilities for monitoring and recovery.

There have been no incidents involving worker exposure to cyanide during the audit period.

7.0 PRINCIPLE 7 – EMERGENCY RESPONSE

Protect Communities and the Environment through the Development of Emergency Response Strategies and Capabilities

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

☒ **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:

PBM is in FULL COMPLIANCE with Standard of Practice 7.1 requiring an operation prepare detailed emergency response plans for potential cyanide releases.

The operation has developed and implemented a CERP to address potential accidental releases of cyanide. The plan is part of the PanAust Asia (PAA) emergency management system and is supported by additional emergency response documentation such as the PBM Logistics CERP (in draft) and the Responding to an Offsite Incident procedure. The CERP is specific to the BHX operation though it does cover transport related incidents whereby PBM emergency responders may be required to provide assistance for incidents occurring along logistical routes where cyanide is transported within Lao People Democratic Republic (PDR).

The plan(s) addresses:

- Roles and responsibilities
- Call out procedures
- Notification and escalation
- Worker exposure response
- Environmental management and monitoring
- Scenario responses

The plan is required to be reviewed and updated annually and this was last completed in August 2022.

The operation has developed a tiered emergency response system to respond to plausible site-based emergency events, including those involving cyanide. The emergency response system has been developed to respond to anticipated emergency events, including those involving cyanide, such as:

- Catastrophic release of hydrogen cyanide from storage or process facilities
- Transportation accidents
- Releases during unloading and mixing
- Releases during fires and explosions
- Pipe, valve and tank ruptures
- Power outages and pump failures

- Uncontrolled seepage
- Failure of cyanide treatment, destruction or recovery systems
- Failure of tailings impoundments.

Planning for response actions has considered transportation, the physical and chemical form of cyanide and the method of transport. The plan has been developed around the transport of solid cyanide within IBCs within shipping containers transported by trucks. The cyanide is delivered to a designated compound for storage and unloading.

The emergency response documentation does describe specific response actions (as appropriate for the anticipated emergency situations) such as clearing site personnel from the area of exposure, use of cyanide antidotes and first aid measures.

Cyanide on site is contained within the process plant area and there a no communities within proximity of the facility that would be impacted by an onsite incident. The plan addresses the foreseeable cyanide emergencies detailing the evacuation of site personnel and the actions needed to control releases at the source and treat those that may be exposed.

The plan is supported by dedicated emergency services personnel that are trained in first aid, Hazmat response, firefighting and the use of emergency response equipment such as emergency oxygen and breathing apparatus.

PBMs incident management and emergency response processes do address containment of spills, assessment of the situation, mitigation measures and review of the how the release occurred, response actions and prevention of releases. The release containment measures have been integrated into the design and position of the plant due its close proximity to the Nam Ngam 2 reservoir. The whole processing plant area is graded to drain to a lined containment sump providing an additional spill containment safeguard to the secondary containments within the plant area.

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

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

Summarise the basis for this Finding/Deficiencies Identified:

PBM is in FULL COMPLIANCE with Standard of Practice 7.2 requiring an operation to Involve site personnel and stakeholders in the planning process.

The operation has involved its workforce and stakeholders in the cyanide emergency response planning process. The original plan was based on cyanide related components of the hazard and operability study (HAZOP) outcomes and team-based risk assessments prior to operations. No significant changes to the emergency planning provisions have been undertaken during the audit period.

There are no potentially affected communities within proximity of the operation that would be impacted by an onsite incident, the nearest village is approximately 15 km from the operation. Notwithstanding, the operation does undertake regular consultation with the community including cyanide management measures through village visits undertaken by the Community Department.

The primary stakeholders are the workforce and the operation uses mock drills as part of the engagement process and the FES team work with the Processing Management team in the review and development of the emergency planning process. Interviews with personnel confirmed that consultation is undertaken.

Changes and updates on the emergency preparedness and response planning are circulated to the management team and the workforce through weekly safety toolbox meetings.

The operation has considered its plausible emergency scenarios and has not identified any communities that would be impacted from a cyanide related emergency on the site. The nearest community is approximately 15 km from the operation and there are strict security protocols in place that would prevent inadvertent access to the mining area. There are no specific actions identified for the community.

The operation has identified and considered the involvement of local response agencies such as outside responders and medical facilities in the cyanide emergency planning and response process. Due to the operations remote location, there are no external responders to an onsite cyanide related emergency other than Lao Skyways for post incident medical evacuation if and when required.

The operation has engaged in consultation or communication with stakeholders to keep the CERP current.

There is an annual review process and the FES team consults with representatives of the processing and environment department on updates to the plan. The plan has been reviewed and updated 12 times since initial development (September 2011), with the most recent review undertaken in August 2022.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 7.3**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

The CERP does:

- Details the roles and responsibilities including authority to commit resources necessary to implement the plan. Authority is given to the Fire and Emergency Services Superintendent and Safety and Health Superintendent.
- BHX has dedicated full time emergency response personnel. The team consists of a rotation of up to 12 personnel, five on day shift, five on night and a reserve contingent. Additional resources are available from PBMs neighbouring Phum Kham operation. The emergency response plan notes in the responsibilities section that '*The Fire and Emergency Services department is responsible for all cyanide emergency response protocols and, as process owner, for maintenance of this procedure*'. Duties for the personnel are outlined in the plan.
- BHX has established standard training requirements for emergency response team members based on the Australian Certificate III Mine Rescue training program. Minimum requirements include Hazmat Response, Use of Breathing Apparatus, First Aid and Fire response training.
- Section 10 of the CERP addresses communication. BHX has established procedures for activating emergency response and security is manned 24/7 with call out procedures for the Emergency Response Team. There is a day crew and night crew based on site adjacent to the process plant.

- Roles and responsibilities are detailed in Section 6 of the CERP and include the Regional Emergency Services Superintendent, Process Manager, Fire and Emergency Service (FES) Team leader, FES members, Safety Superintendent and Environment Superintendent
- Section 13 of the CERP details emergency response equipment for onsite cyanide related emergencies. Equipment available on site includes medical oxygen, cyanide antidote kits, chemical splash suits, HCN monitors, spill response kits, self-contained breathing apparatus (SCBA).
- Section 13 of the CERP states that the FES team at BHX have established weekly inspection procedures for emergency equipment and these are conducted by both the FES crew and the medical centre and recorded in INX InControl database. Paper copies of the recent inspections are retained in files in the FES office and medical centre.

No outside responders are designated a role within the CERP other than Lao Skyways for post incident medical evacuation. Cyanide transporters have responsibility for cyanide incidents during transport and BHX may respond following *PAA Responding to Offsite Incident Procedure.*

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

The operation is

☒ **in full compliance with**

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

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

BHX emergency documentation includes procedures and contact information for notifying management, regulatory agencies, outside response providers and medical facilities of the cyanide emergency.

The emergency response documentation includes procedures and contact information for notifying potentially affected communities of the cyanide related incident and any necessary response measures, and for communication with the media.

The emergency response plan details the call out and escalation procedures for internal communication. BHX has a communication and reporting procedure that details external communication protocols including reporting to external stakeholders, government and media.

While there are no potentially affected communities identified in relation to onsite related cyanide incidents, BHX has in place protocols for contacting the regional community. The Community Department is responsible for contacting the communities with the nearest village approximately 15 km from the site.

The operation does have a procedure for notifying ICMI of any significant cyanide incidents, as defined in ICMI's *Definitions and Acronyms* document.

BHX has a communication and reporting procedure that details external communication protocols including reporting to external stakeholders, government and media. This procedure would apply to any communication with the ICMI regarding significant cyanide incidents.

No such incidents have occurred during the audit period.

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.**

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 7.5**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

PBM is in FULL COMPLIANCE with Standard of Practice 7.5, requiring an operation incorporate remediation measures and monitoring elements into response plans and account for the additional hazards of using cyanide treatment chemicals.

The BHX emergency documentation describes specific remediation measures as appropriate for the likely cyanide release scenarios, such as:

- Likely cyanide release scenarios outside of containment are limited at the BHX operation due to design and layout of the processing plant.
- Section 12 of the CERP details the recovery or neutralisation of solutions or solid cyanide as it applies to the plausible emergency scenarios, whilst Section 11 and 12 addresses assessment and neutralisation/removal of impacted soil. Neutralisation, should it be deemed necessary would be undertaken using ferrous sulphate which is stored in a designated sea container near the reagent yard.
- Environmental sampling will be coordinated by the Environment Superintendent based on the nature of the release. Appendix G of the plan provides the established contaminated site assessment template which will be used to guide the development of any land-based sampling and analysis plan. The guide includes sampling techniques, parameters, QA/QC based on Australian Standard AS4482.1 2005 Guide to the investigation and sampling of sites with potentially contaminated soil - Non-volatile and semi-volatile compounds.
- Section 12 of the Cyanide Emergency Response Plan details response to foreseeable scenarios on the site including decontamination of soils or other media.
- Section 11 and 12 of the Cyanide Emergency Response Plan details disposal of clean-up of debris.
- Impacted soil will be managed through the mill discharge sump that will direct the soil via the destruction circuit prior to discharge into the TSF. This process will be coordinated with the Process Superintendent.

  Recovered product will be managed through the box mixing system.
- Provision of an alternative drinking water supply is not identified as a plausible scenario related to a cyanide incident on the site. However, the plan does consider the provision of alternative drinking water in Section 12.

The CERP does prohibit the use of chemicals such as sodium hypochlorite, ferrous sulphate and hydrogen peroxide to treat cyanide that has been released into surface water. The CERP provides:

"Calcium hypochlorite, sodium hypochlorite or ferrous sulphate must never be used to treat cyanide that has been release into natural surface water bodies…" The emergency documentation does address the potential need for environmental monitoring to identify the extent and effects of a cyanide release, and include sampling methods, parameters and, where practical, possible sampling locations.

The CERP details the environmental management and monitoring protocols to follow in the event of a cyanide release outside of containment and Links and references are provided to guide the reader back to PBM Environment Department management documentation such as environmental media sampling procedures..

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:

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

The operation does review and evaluate the cyanide related elements of its emergency response plan on a regular basis.

- Section 3 of the CERP states that the plan is required to be reviewed annually and this was last completed in August 2022.
- Mock emergency drills are conducted periodically to test response procedures for various cyanide exposure scenarios, and lessons learned from the drills are incorporated into response planning. BHX has conducted regular mock exercises over the audit period covering spill response and worker exposure. The drills are recorded on a debrief form and loaded into INX InControl and where actions are identified these are lodged and tracked through the INX InControl system.
- The FES team are the primary responders to a cyanide event, the processing team are to identify and report the incident. The process team will evacuate to a designated area and would provide technical and logistical support as requested by the FES team.
- The simulated drills did address worker exposure and release scenarios at the site and response actions. These field practical drills are assessed, and the debrief reports and associated actions are entered into the INX InControl database. The Regional Emergency Services Superintendent is involved in reviewing the drill outcomes and reviewing and updating the CERP. The nature of the exercises and content of the drills is considered reasonable in the context of cyanide management and use at the operation.
- In addition to the ERT combat level exercises the organisation conducts desktop exercises for the site and corporate teams testing the coordination of higher-level response for the wider organisation.
- There have been no incidents involving worker exposure to cyanide during the audit period.
- Provisions are in place to evaluate and revise the emergency response plan after a cyanide related emergency. Post incident management states that BHX will engage with stakeholders and seek feedback and an Emergency Preparedness Checklist is used to guide the assessment of equipment, procedural and critical control elements. BHX has not had to implement the plan during the audit period.

Several internal reviews of the plan have been conducted during the audit period and the plan was updated following those reviews..

8.0 PRINCIPLE 8 – TRAINING

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

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 8.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

PBM is in FULL COMPLIANCE with Standard of Practice 8.1 requiring that an operation 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.

The operation has a tiered induction process that needs to be completed prior to working on site, and further, within the ore processing – or cyanide containing parts of the plant. For personnel that will be working in the process plant the Processing Induction needs to be completed, this induction outlines the hazards associated with process chemicals including cyanide.

The operation has implemented a cyanide induction program that expands on the details provided in the Processing Induction including cyanide hazards, products on site, labelling, health effects, cyanide exposure and response actions, location of emergency equipment and raising the alarm. This package includes a knowledge assessment that needs to be completed by the participant. An annual refresher on cyanide is undertaken by personnel visiting the process plant that is linked to the access control system of the process plant area.

A review of training records confirmed that cyanide hazard recognition, and refresher, training is provided.

Cyanide hazard recognition and refresher training has been completed for all required personnel. The operation completes refresher training on an annual basis, and this is tracked via a spreadsheet which is also linked to access control permissions to enter the plant.

Refresher training is completed by the Process Trainer and records of course completion are entered into the SuccessFactors database; paper copies of the assessment are also retained by year. A review of training records and files confirmed that refresher training is completed. The processing trainer also maintains a series of spreadsheet training matrices, as applicable for a given role, detailing the status of personnel training.

The operation does retain cyanide training records. These assessments are retained in the operator's files, and the completion is noted within SuccessFactors and the local training matrix.

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:

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

The operation 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. BHX has developed training packages covering operation of the plant including mixing, leaching and cyanide destruction. Workers are trained in the theory of the process component by the processing trainer and once completed the Shift Supervisors provide on the job training and assessment of SOPs. Once the worker has demonstrated understanding of the plant and procedures the operation undertakes a competency assessment that includes written and practical assessment. This is recorded on the Processing Training Matrix and SuccessFactors Database. The Processing Trainer retains the paper copies of the assessments.

The training elements necessary for each job involving cyanide management are identified in training materials. The operation has developed training packages for the operation of each part of the plant with assessment sheets. Planned task observations (PTOs) and SOPs are also used by the operations as part of the training and assessment process for workers.

Appropriately qualified personnel provide task training related to cyanide management activities. The operation has a formalised training program where initial training is provided through induction training and by the Processing Trainer. Once induction and theory training has been completed the worker is mentored by a senior operator who demonstrates and trains personnel in the relevant tasks. Once trained, a formalised assessment of competency is undertaken, and records are retained.

The Processing Trainer and Shift Supervisors have been trained and assessed as competent in plant operations. The Processing Trainer and Shift Supervisors are supervised by the Processing Superintendent that has over 20 years' experience in process plant operations and cyanide management activities.

Employees are trained prior to working with cyanide. To enter the processing plant workers must complete the Processing Induction and if working in cyanide areas the Cyanide Induction. Access to the plant is via an access control system and evidence of completion of these requirements is need for access to be enabled.

Once the workers have completed the induction training they are not permitted to work unsupervised until the shift supervisor is satisfied that they have been trained and can demonstrate how to undertake tasks safely. Formalised competency assessment (theory, verbal and practical) is undertaken.

BHX has also developed a Shutdown Induction which is a combined version of the Processing and Cyanide Inductions that needs to be completed for shutdowns. Shutdown workers are supervised by inducted BHX operational personnel.

Refresher training on cyanide management has been provided to employees that work with cyanide. BHX provide refresher training through the annual Cyanide Induction refresher training program. BHX also undertake PTOs that include observation and verification of workers performing tasks in accordance with the SOPs.

The operation evaluates the effectiveness of cyanide training by testing, observation or other means. There is a formalised competency assessment process that includes written, verbal and work place observation and assessment of the worker. Assessments are recorded and retained on the workers training file. The outcome of the assessment is recorded in SuccessFactors.

Records are retained throughout an individual's employment documenting the training they receive. The records do 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 materials. A review of training records confirmed that records are retained and meet the requirements outlined above.

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:

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

Cyanide unloading, mixing, production and maintenance personnel trained in the procedures to be followed if cyanide is released. Initial training on what to do in the event of an emergency is provided through the induction process and via the cyanide awareness training. The cyanide awareness training provides details on how to respond to solid and liquid releases. Refresher training is provided annually.

In addition to the induction training material, operators and maintenance personnel are trained in more targeted elements applicable to their role. A review of training records confirmed that operators involved in mixing activities had been trained in spill response and the site inspection confirmed equipment for spill response was available during mixing activities.

Emergency Response Coordinators and members of the Emergency Response Team are trained in the procedures included in the CERP regarding cyanide, including the use of necessary response equipment.

FES team members undertake regular training activities to respond to cyanide emergencies and are responsible for decontamination. The operation has established training packages covering key disciplines of emergency response include first aid and hazmat that are available in English and Lao. The participants are assessed via a combination of theory and practical assessment and then skills are maintained via regular drills and exercises.

The primary responsibility for responding to cyanide related emergencies is with the sites full time FES team that receive emergency response training based on the Australian Certificate III Emergency Rescue including responding to hazardous material incidents and first aid. BHX has full time dedicated emergency response personnel at the site that are responsible for responding to worker exposures or cyanide releases, during the audit it was confirmed that there are five FES personnel per day- and night shift. Operations workers are trained in the need to use safety showers and eyewash stations for decontamination.

The operation has considered off-site responders and due to the remote location of the mine and location of the villages there are no identified response actions for off-site responders or the community. BHX does have in place a medical evacuation procedure with Lao Skyways and has undertaken drills for medical evacuation. In relation to cyanide the assessment and administration of cyanide antidote would be undertaken by the onsite medical team. Decontamination would be undertaken by the FES prior to transfer to the on-site medical clinic where the patient would be stabilised and monitored to determine whether offsite evacuation is required.

Refresher training for response to cyanide exposures and releases is conducted regularly. The FES team cover response disciplines on a weekly basis and participate regularly in larger drills. Interviews with personnel confirmed there is a structured process for training and a review of training attendance records confirmed responders receive refresher training.

Records are retained throughout an individual's employment documenting the training they receive.

A review of training records confirmed 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 materials.

9.0 PRINCIPLE 9 – DIALOGUE AND DISCLOSURE

Engage in Public Consultation and Disclosure

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:

PBM is in FULL COMPLIANCE with Standard of Practice 9.1 requiring the operation to promote dialogue with stakeholders regarding cyanide management and responsibly address identified concerns.

BHX has developed procedures and forms and has implemented processes for stakeholder communication of issues of concern which may include cyanide issues during operations. These have not changed since the operational certification audit in 2012 and continue to be implemented.

There are seven villages within the area of the mine that the operation has established regular dialogue with. Of these seven villages, five are located along the transport route to the site (Phonsavang, PhonKeo, Ngiew, NaLao and Nasoysavang) and the operation provides an annual cyanide presentation and opportunity for the villages to ask questions and communicate issues of concern regarding cyanide management. The Community team mobile phone number is advertised as the best contact method as many local villages do not have internet access. Written letters can also be received by the operation.

Notice boards are provided in communities that have drop boxes where community members can put forward concerns. These are then transferred by BHX onto grievance forms. All grievances are entered into the action/event tracking system – INX.

The closest village is 19 km by road and all communities are along the access road. Chief of Village meetings are scheduled on a regular basis with identified communities.

For internal stakeholders a magazine is produced quarterly by PanAust called Panorama (in Lao language). A site-specific presentation developed by PBM is distributed monthly to employees and contractors.

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:

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

BHX has written descriptions of how their activities are conducted and how cyanide is managed. The operation has developed a Cyanide Awareness for Communities Presentation which details how cyanide is managed on the site and this is presented to stakeholders in the different villages on an annual basis. Additional information on cyanide management is available via community notice boards or direct request made to the PBM Community Affairs team.

BHX recognise that some members of the local population may be illiterate and use an annual in-person meeting to disseminate information verbally.

A BHX Cyanide Awareness for Communities Presentation has been developed and includes the use of visual and pictorial information. Evidence of this was observed during the site audit.

The operation has the required mechanisms in place to make information publicly available, where applicable, following a cyanide release or exposure incident.

There are guiding plans and procedures in place that require the communication and reporting of cyanide exposure or release events by the site personnel to the PBM Country Affairs personnel, who then report to relevant community, government or other stakeholders as identified in the applicable procedures and plans.

The operation is aware of the Code's criteria for public reporting:

- Cyanide exposure resulting in hospitalisation or fatality
- Cyanide releases off the mine site requiring response or remediation
- Cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment
- Cyanide releases on or off the mine site requiring reporting under applicable regulations
- Releases that are or that cause applicable limits for cyanide to be exceeded

The operation has not had a worker exposure or reportable cyanide release incident reported during the audit period.

10.0 IMPORTANT INFORMATION

Your attention is drawn to the document titled – “Important Information Relating to this Report”, which is included in Appendix A of this report. The statements presented in that document are intended to inform a reader of the report about its proper use. There are important limitations as to who can use the report and how it can be used. It is important that a reader of the report understands and has realistic expectations about those matters. The Important Information document does not alter the obligations Golder Associates has under the contract between it and its client.

PBM Gold Mine
Name of Facility

Signature of Lead Auditor

5 May 2023
Date

Signature Page

WSP Australia Pty Ltd

Mike Woods
ICMI Lead Auditor & Technical Specialist

Edward Clerk
Principal, Mining Environment Division Lead EMEA and APACMike Woods
Date: 28 April 2023

Notes:

The audit for PanAust Limited's Ban Houayxai Mine was conducted by Mr. Michael Woods as the Lead Auditor and Mining Technical Expert Auditor.

The Detailed Audit Findings Report and Summary Audit Report was submitted by Mr. Michael Woods initially however, he is not available to submit the final version of the report.

The final version of the Detailed Audit Findings Report and Summary Audit Report is being submitted by Mr. Edward Clerk on behalf of WSP. Mr. Edward Clerk is an approved Lead Auditor and Mining Technical Expert Auditor for Cyanide Code certification audits.

CC/MCW/ds

https://wsponline-my.sharepoint.com/personal/sonam_wangchuk_wsp_com/documents/icmi/21497065-004-r-rev1 2022.docx

APPENDIX A

Important Information

The document ("Report") to which this page is attached and of which this page forms a part has been issued by Golder Associates Pty Ltd ("Golder") subject to the important limitations and other qualifications set out below.

This Report constitutes or is part of services ("Services") provided by Golder to its client ("Client") under and subject to a contract between Golder and its Client ("Contract"). The contents of this page are not intended to and do not alter Golder's obligations (including any limits on those obligations) to its Client under the Contract.

This Report is provided for use solely by Golder's Client and persons acting on the Client's behalf, such as its professional advisers. Golder is responsible only to its Client for this Report. Golder has no responsibility to any other person who relies or makes decisions based upon this Report or who makes any other use of this Report. Golder accepts no responsibility for any loss or damage suffered by any person other than its Client as a result of any reliance upon any part of this Report, decisions made based upon this Report or any other use of it.

This Report has been prepared in the context of the circumstances and purposes referred to in, or derived from, the Contract and Golder accepts no responsibility for use of the Report, in whole or in part, in any other context or circumstance or for any other purpose.

The scope of Golder's Services and the period of time they relate to are determined by the Contract and are subject to restrictions and limitations set out in the Contract. If a service or other work is not expressly referred to in this Report, do not assume that it has been provided or performed. If a matter is not addressed in this Report, do not assume that any determination has been made by Golder in regards to it.

At any location relevant to the Services conditions may exist which were not detected by Golder, in particular due to the specific scope of the investigation Golder has been engaged to undertake. Conditions can only be verified at the exact location of any tests undertaken. Variations in conditions may occur between tested locations and there may be conditions which have not been revealed by the investigation and which have not therefore been taken into account in this Report.

Golder accepts no responsibility for and makes no representation as to the accuracy or completeness of the information provided to it by or on behalf of the Client or sourced from any third party. Golder has assumed that such information is correct unless otherwise stated and no responsibility is accepted by Golder for incomplete or inaccurate data supplied by its Client or any other person for whom Golder is not responsible. Golder has not taken account of matters that may have existed when the Report was prepared but which were only later disclosed to Golder.

Having regard to the matters referred to in the previous paragraphs on this page in particular, carrying out the Services has allowed Golder to form no more than an opinion as to the actual conditions at any relevant location. That opinion is necessarily constrained by the extent of the information collected by Golder or otherwise made available to Golder. Further, the passage of time may affect the accuracy, applicability or usefulness of the opinions, assessments or other information in this Report. This Report is based upon the information and other circumstances that existed and were known to Golder when the Services were performed and this Report was prepared. Golder has not considered the effect of any possible future developments including physical changes to any relevant location or changes to any laws or regulations relevant to such location.

Where permitted by the Contract, Golder may have retained subconsultants affiliated with Golder to provide some or all of the Services. However, it is Golder which remains solely responsible for the Services and there is no legal recourse against any of Golder's affiliated companies or the employees, officers or directors of any of them.

By date, or revision, the Report supersedes any prior report or other document issued by Golder dealing with any matter that is addressed in the Report.

Any uncertainty as to the extent to which this Report can be used or relied upon in any respect should be referred to Golder for clarification.


GOLDER