

**INTERNATIONAL CYANIDE MANAGEMENT CODE
GOLD MINING OPERATIONS**

**SUMMARY PRE-OPERATIONAL
AUDIT REPORT
*BAN HOUAYXAI GOLD-SILVER OPERATION***

***PREPARED FOR:
PHU BIA MINING LTD***

December 2011



SUMMARY PRE-OPERATIONAL AUDIT REPORT
Auditor's Findings

Mine: Ban Houayxai Gold-Silver Operation

Mine Owner: Phu Bia Mining Ltd
A MEMBER OF THE PANAUST GROUP
OF COMPANIES

Mine Operator: Phu Bia Mining Ltd

Responsible Manager: Ross Campbell
Process Manager
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Location and Description of Operation:

The Ban Houayxai (BHX) Gold-Silver Operation is located in Laos approximately 120 km north of the capital Vientiane and about 25km west of the existing Phu Kham Copper-Gold Operation. Access to the mine site is via the sealed Vientiane-Vang Vieng road and a 35 km gravel road linking the mine site to a turn off at Ban Namone approximately 12km south of Vang Vieng.

The BHX Operation is scheduled to commence some pre-commissioning in late 2011 followed by operations from late quarter 1 2012. Steady state operations will commence from mid 2012 onwards.

Once operational, BHX will comprise an open pit mine feeding ore to a conventional Carbon In Leach (CIL) process plant. The operation is expected to produce, on average, over 100,000oz of gold and 700,000oz of silver per annum over a nine year mine life based on 2011 reserves.

The BHX Process Plant flow sheet includes primary crushing, SAG milling, pebble crushing, ball milling, gravity concentration, CIL, tails thickening and cyanide detoxification. Initial processing will involve the treatment of oxide ore at throughput rates equivalent to 5.2 mtpa. Once oxide ores are exhausted throughput rates on harder transition and primary ores will be 4.0 mtpa.

The gravity circuit includes a gravity concentrator and an agitated leach tank for coarse gold extraction ahead of the CIL circuit. The CIL circuit consists of 6 tanks in series.

The associated carbon circuit has been designed to recover 18 tonnes of carbon per day. Precious metal desorption will be achieved using a dedicated AARL split acid wash and elution

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circuit. Barren carbon will be regenerated utilizing a dedicated carbon regeneration kiln. The circuit will be operated in a series of batch operations at a rate of one to two 9 tonne strips per day. Precious metal recovery will be achieved using 7 electrowinning cells in parallel. Gold and silver bearing sludge is filtered and oven dried prior to smelting.

Cyanide detoxification of thickened tailings slurry will be achieved using the Air/SO₂ process. The detoxified tailings slurry is pumped via pipeline to the tailings storage facility. The operation plans to use solid sodium cyanide, shipped and transported to site from a manufacturing facility in Kwinana, Western Australia. First cyanide deliveries are scheduled for January 2012.

At the time of the audit plant construction was 55% complete.



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This operation is

in full compliance

in substantial compliance

not in compliance

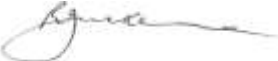
with the International Cyanide Management Code Gold Mine Operations Pre-Operational Verification Protocol

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Date(s) of Audit: Inclusive of the period from 8-12 August 2011

Audit Team Leader: John Miragliotta (john.miragliotta@sustainability.net.au)

Names and Signatures of Other Auditors:

<u>Name of Auditor</u>	<u>Signature</u>	<u>Date</u>
R. John McKenna		18 January 2012

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Pre-Operational 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 Pre-Operational Auditors.


I attest that this Summary Pre-Operational Audit Report accurately describes the findings of the pre-operational audit. I further attest that the pre-operational audit was conducted in a professional manner in accordance with the International Cyanide Management Code Pre-Operational Verification Protocol for Gold Mining Operations (October 2009) and using standard and accepted practices for health, safety and environmental audits.

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Ban Houayxai Gold-Silver
Mine
Facility:


Signature of Lead Auditor

18 January 2012
Date:

Phu Bia Mining Ltd
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1. PRODUCTION: 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**
 in substantial compliance
 not in compliance

with Standard of Practice 1.1

Basis for this Finding/Deficiencies Identified:

BHX has drafted a Cyanide Management Plan which commits to purchase cyanide from a supplier certified as fully compliant to the ICMI cyanide production code of practice. Phu Bia Mining Ltd (PBM) has commenced negotiations with a certified supplier and has drafted a supply agreement which will be finalized prior to purchase of first cyanide. The draft agreement requires that the supplier maintain full Code compliance and requires any independent distributor(s) from which it purchases cyanide to provide evidence that the cyanide shipped to the gold mining operation is from a certified manufacturer.

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

Standard of Practice 2.1: Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

The operation is:

- in full compliance**
 in substantial compliance
 not in compliance

with Standard of Practice 2.1

Basis for this Finding/Deficiencies Identified:

PBM has drafted an agreement with a certified cyanide producer and transporter which will be finalized prior to purchase and delivery of first cyanide. The draft agreement includes conditions



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which clearly assign responsibilities for safety, security, release prevention, training and emergency response during all stages of production, distribution and transport of solid sodium cyanide to the BHX Operation. The draft agreement includes the requirement for transporters to be certified and that any sub contractor needs to be advised and approved by PBM and that the same compliance requirements apply to these sub contractors.

Standard of Practice 2.2: *Require that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.*

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 2.2

Basis for this Finding/Deficiencies Identified:

PBM has drafted an agreement with a certified cyanide producer and transporter which will be finalized prior to purchase and delivery of first cyanide. The draft agreement includes conditions which require all stages of transport of solid sodium cyanide to the BHX Operation to be carried out by certified transporters; therefore ensuring that the transporters will have appropriate emergency response plans and capabilities and will employ adequate measures for cyanide management.

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 and accepted engineering practices, quality control/quality assurance procedures, spill prevention and containment measures.*

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 3.1



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Basis for this Finding/Deficiencies Identified:

Facilities for cyanide unloading, storage and mixing were under construction at the time of the audit. Design review reports and verification documents completed indicate that unloading, storage and mixing facilities have been designed in accordance with criteria which are compliant with the ICMI Code of Practice for Gold Operations, including: to be located away from surface water and people; to ensure all cyanide handling areas and mixing tanks are located within concrete secondary containment designed to contain a minimum of 110% of the volume of the largest primary vessel; to ensure overflow protection on cyanide mixing and storage tanks; to allow sufficient ventilation to prevent the build up of HCN gas in the cyanide storage shed; to prevent the stored cyanide boxes coming into contact with water; to prevent storage of incompatible materials in the cyanide storage shed, and to ensure sufficient security of stored cyanide. Unloading facilities have been designed for the receipt of solid sodium cyanide only and include measures to recover spilled material on a concrete unloading area. PBM has implemented sound quality assurance and quality control procedures during construction to verify that facilities are being constructed in accordance with the legally approved design which specifies criteria for cyanide spill prevention and containment. BHX has committed to pre-operational and annual verification inspections by the cyanide producer/supplier to ensure that all cyanide unloading, storage and mixing facilities are compliant with the supplier's written guidance.

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.*

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 3.2

Basis for this Finding/Deficiencies Identified:

BHX has developed a draft Cyanide Management Plan and procedures which include operational requirements for cyanide unloading, storage and mixing facilities. The Project has developed plans and draft checklists for inspections of cyanide facilities and has commenced the development of a programmed maintenance system which includes maintenance strategies for cyanide equipment and facilities. The draft Cyanide Management Plan identifies and outlines contingency measures to contain and prevent the release of cyanide during unloading, storage and mixing activities. Draft cyanide unloading, storage and mixing procedures include measures for the use of personal protective equipment, safe disposal of cyanide bags and boxes, clean up of work areas, spill response and other measures to protect worker health..



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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.

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 4.1

Basis for this Finding/Deficiencies Identified:

The BHX draft Cyanide Management Plan describes the management systems that are planned for the operation of the Mine which includes Standard Operating Procedures, operational strategies, and inspections and preventative maintenance to protect human health and the environment. Not all procedures had been drafted at the time of the audit, although BHX had identified and planned all procedures to ensure that these are in place prior to the commencement of operations. Inspections have also been identified with draft inspection checklists being developed and frequencies of inspections planned. Operating strategies have been identified, in the Cyanide Management Plan, and draft documents commenced for plant water management, emergency power supply to essential facilities, cyanide detoxification plant operation and tailings management to ensure operational contingency measures are in place to contain cyanide, prevent release and protect human health and the environment. The operational strategies are planned to identify and address legal compliance requirements relevant to cyanide management at the Mine. The tailings management plan has been developed and includes the requirements, procedures and contingencies for tailings discharge from the tailings storage facility not to exceed 0.5 mg/L WAD CN. PBM is implementing operating systems which are already in place at its existing gold and copper operations in Laos and are adapting these systems for the BHX operation. The systems under development include environmental, safety and occupational health management systems, training management systems, maintenance planning systems and change management processes.

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

The operation is:

- in full compliance**
- in substantial compliance



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not in compliance

with Standard of Practice 4.2

Basis for this Finding/Deficiencies Identified:

BHX has identified proposed gold processing cyanide addition rates from metallurgical studies completed for project feasibility studies. Pre operational metallurgical test work was ongoing at the time of the audit with the results proposed to confirm the operational optimized cyanide addition rates with consideration of ore variability, process tailings detoxification technology and legal approval requirements for cyanide concentrations in tailings discharge. The test work program is expected to be complete prior to commissioning of the plant. The draft Cyanide Management Plan includes a commitment to undertake a comprehensive operational metallurgical test program and advance an ore test program to verify optimization of cyanide addition rates and respond to operational changes in the process plant.

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

The operation is:

- in full compliance**
 in substantial compliance
 not in compliance

with Standard of Practice 4.3

Basis for this Finding/Deficiencies Identified:

BHX has developed a comprehensive probabilistic water balance for the operation and incorporated the results of the model in the design of impoundment facilities, Tailings Disposal Operation Manual and the draft Plant Water and Event Pond Management Procedure. The probabilistic water balance includes 1:100 and 1:1000 year return 24 hour storm events as a basis for facility design and draft operational procedures. The draft operational procedures consider plant upset conditions, extreme rainfall events and power outages and identify contingencies to manage these events to prevent the unintentional release of cyanide solutions and protect human health and the environment. The Tailings Disposal Operation Manual includes operational strategies and contingencies to ensure discharge of water from the tailings storage facility is within compliance limits, 0.5 mg/L WAD CN at the spillway, and does not exceed 0.022 mg/L free cyanide concentration in surface waters downstream of the identified mixing zone in the surface waters below the spillway. The operation has committed to measuring precipitation during operations and revising operational procedures and facility design/storage criteria on the basis of measured data.



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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 4.4

Basis for this Finding/Deficiencies Identified:

BHX has implemented a design strategy and has developed an environmental management plan to maintain all open waters associated with the Mine below 50 mg/L WAD CN with the tailings being treated at a cyanide detoxification plant to ensure the TSF will contain material with an overall concentration < 0.5 mg/L WAD CN in accordance with the legally binding approval commitments. A process plant event pond provides tertiary containment in case of emergency and is planned to be designed and operated to ensure contents are less than 50 mg/L WAD CN in the event of loss of secondary containment within the process plant. A draft Plant Water and Event Pond Management Procedure has been developed to describe the implementation of contingencies during the operation of the process plant event pond.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 4.5

Basis for this Finding/Deficiencies Identified:

The BHX tailings storage facility is designed to have a direct discharge to the environment via the spillway overflow. The plant will operate a cyanide detoxification plant for tailings such that discharge from the tailings storage facility will not exceed 0.5 mg/L WAD CN in accordance with its Environmental Compliance Certificate as issued by the Ministry for Natural Resources and Environment (MNRE) within the Lao Government. Compliance requirements have also been established, via the Environmental and Social Mine Management Plan, for the surface water quality downstream of the specified mixing zone and are yet to be approved by the MNRE. BHX has commissioned test work on the predicted operation of the cyanide detoxification plant and the results have been used to model the cyanide concentrations in the tailings supernatant



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pond and the discharge water from the tailings facility. The model outcomes have been used to define operational strategies to ensure compliance with the legally binding conditions and for the protection of fish and wildlife from the tailings facility discharge to surface waters. BHX has also designed the process plant water management facilities and drafted operational procedures to prevent the discharge of cyanide containing materials from the process plant to downstream surface waters.

The probabilistic water balance provides model results that support the design objectives to ensure discharge water from the tailings facility with a concentration of < 0.5 mg/L WAD CN at the spillway.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 4.6

Basis for this Finding/Deficiencies Identified:

The BHX Mine Environment and Social Management and Monitoring Plan (ESMMP) has not identified any beneficial uses of groundwater in the vicinity of the mine. However, it is likely that groundwater will discharge to downstream surface waters which surround the process plant and are immediately downstream of the tailings storage facility. The project design includes measures to: minimize seepage or spills from the plant area facilities, including secondary and tertiary containment, tailings pipeline and the tailings storage facility. The tailings storage facility is located within a valley and will not be cleared and compacted during embankment wall construction and the supernatant pond will be managed to ensure WAD CN concentrations do not exceed 0.5 mg/L. Groundwater monitoring bore locations are being planned for the tailings storage facility and the process plant in accordance with BHX confirmed environmental management commitments.

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

The operation is:

- in full compliance**
- in substantial compliance



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- not in compliance

with Standard of Practice 4.7

Basis for this Finding/Deficiencies Identified:

BHX has implemented verification and QA/QC procedures to ensure that operational discharges, spills and leaks from process plant tanks and pipelines are minimized through compliance with design criteria. BHX has designed for secondary and tertiary containment facilities for the process plant and has used high quality HDPE lined steel pipe for the tailings pipeline. All tanks are designed with level indicators to alert operators of high tank levels and all tanks and pipelines containing cyanide materials are to be constructed with materials compatible with high pH and cyanide. Process plant pipe work for cyanide containing solutions has been designed to allow containment of spilled contents if spills or leaks occur. High risk cyanide containing pipelines have been identified and designed for "pipe in pipe" containment where appropriate. The tailings pipeline is proposed to be buried but will be regularly inspected and monitored for any loss in tailings material from leaks or pipeline failures. The cyanide detoxification plant will minimize the risk posed by a tailings pipeline failure as the concentration of tailings at the discharge to the tailings facility is proposed to be < 0.5 mg/L WAD CN. All process tanks are being designed with leak detection and will be subjected to regular inspection through the planned preventative maintenance system.

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.

The operation is:

- in full compliance**
 in substantial compliance
 not in compliance

with Standard of Practice 4.8

Basis for this Finding/Deficiencies Identified:

BHX has implemented a Project Quality Plan which includes implementation of quality control and quality assurance during the construction and commissioning phase of the project. The Quality Plan specifies design and engineering verification checks at specific frequencies and/or at construction milestones. The Quality Plan includes measures to ensure verification of soil compaction of containment areas and the use of compatible materials for cyanide handling, storage and mixing areas and facilities. These checks have been developed to verify construction is taking place in compliance with the approved design and to identify where design changes may be necessary. The Plan requires the relevant responsible manager to sign-off that

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construction has occurred in accordance with the approved design. The QA/QC records are currently maintained on Project related databases.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 4.9

Basis for this Finding/Deficiencies Identified:

A Monitoring Plan has been developed by suitably qualified BHX personnel to evaluate the effects of cyanide use on wildlife, and surface and groundwater quality. This Monitoring Plan has been submitted for approval to the Lao government through the ESMMP approvals process. BHX has partially developed and is continuing to refine monitoring manuals, procedures and monitoring records management systems which prescribe monitoring frequency, locations, sample preservation, shipping, chain of custody and the cyanide species to be analyzed. These are being modified and adapted from PBM's existing monitoring materials used at the other Lao gold mine operations (currently in the decommissioning phase).

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 the cyanide facilities to protect human health, wildlife and livestock.

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 5.1

Basis for this Finding/Deficiencies Identified:

The Project has developed a draft Cyanide Closure Plan within the framework of the Mine Closure Plan which includes a preliminary and conceptual description and schedule of activities for decommissioning cyanide facilities to protect human health, wildlife and livestock at the



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cessation of mining activities. The Cyanide Closure Plan includes a schedule for review and discusses temporary closure cyanide management measures.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 5.2

Basis for this Finding/Deficiencies Identified:

The draft Cyanide Management Plan includes a commitment to complete a cost estimate for third party decommissioning of cyanide facilities by an independent consultant prior to commencement of operations and plans to revise the cost estimate every 5 years. BHX has made commitments and plans to self insure as a financial mechanism for funding of cyanide decommissioning activities and will use an independent financial auditor to provide a statement of financial strength to fulfill this obligation.

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

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 6.1

Basis for this Finding/Deficiencies Identified:

BHX has identified procedures, and commenced drafting these procedures, that describe how cyanide-related tasks such as unloading, mixing, plant operations, entry into confined spaces, and equipment decontamination prior to maintenance should be conducted to minimize worker exposure. A safety management system is planned to be implemented for the BHX operations which is planned to provide a framework for risk assessment, change management, and communication with workers. Safety risk assessments have been completed for the Mine and have been used to identify operational controls, including the use of personal protective



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equipment, necessary for cyanide unloading, storage, mixing and for maintenance of cyanide facilities. Proposed change management procedures for BHX require risk assessment of changes to cyanide facilities, procedures or cyanide management. BHX has draft procedures in place for existing Phu Bia gold (currently in decommissioning phase) and copper operations in Laos which will be used for BHX. These include use of personal protective equipment where necessary, and address pre-work inspections, emergency response, cyanide monitoring, communications and documentation. BHX plans to consult with its workforce during the development and implementation of cyanide related operational procedures.

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.

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 6.2

Basis for this Finding/Deficiencies Identified:

The BHX draft Cyanide Management Plan describes the plans and procedure that will be developed prior to operations to operate and monitor cyanide facilities to protect worker health and safety and periodically review these procedures and plans to ensure effectiveness is maintained. BHX has determined the appropriate operating parameters to minimize the evolution of hydrogen cyanide gas during mixing and throughout process operations and has identified the type and location of monitors necessary to provide early warning of hydrogen cyanide gas in areas where workers may be exposed. Calibration and inspection requirements for hydrogen cyanide monitors have been identified and planned in the BHX preventative maintenance system. The location and type of cyanide warning signs, low pressure eye wash stations and dry powder/ non-acidic fire extinguishers have been identified and planned by BHX during the construction period. BHX has planned for dual language MSDS and identified MSDS hard copy locations. BHX has procedures developed which require an incident investigation to be completed for any cyanide exposure incident and include the requirements to consider a review of procedures and emergency response plans as part of the investigation outcomes.

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**

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- in substantial compliance
- not in compliance

with Standard of Practice 6.3

Basis for this Finding/Deficiencies Identified:

A draft Cyanide Emergency Response Plan has been developed by BHX within the framework of an overarching Emergency Response Plan for the Mine. The Cyanide Emergency Response Plan identifies potential emergency scenarios and the plans required to respond to such scenarios including measures to protect worker health during cyanide exposure emergencies. The Plan is proposed to be finalized and implemented prior to operations and includes the training for an emergency response team, planning of emergency response drills, emergency response equipment and the internal and external medical needs that will be necessary during a cyanide emergency. The BHX Cyanide Emergency Response Plan and the Cyanide Management Plan include commitments to have water, oxygen, a resuscitator, antidote kits, radio, and alarm systems available on site as required to respond to cyanide incidents. The Emergency Response Plan includes the need to check for the replacement, and ensure correct storage, of the equipment in accordance with manufacturer's specifications.

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.

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 7.1

Basis for this Finding/Deficiencies Identified:

The draft Cyanide Emergency Response Plan has been developed as a subset of the BHX emergency response planning framework and identifies the procedures, equipment and resources necessary to adequately respond to potential cyanide emergencies on site and off site during operations such that communities, workers and the environment are protected from cyanide exposure scenarios. Cyanide emergency scenarios have been identified through a comprehensive risk based assessment of possible cyanide release situations for all aspects of cyanide handling, storage and use during operations. The draft Plan identifies responsibilities for response between BHX and its cyanide supplier for transport related emergency scenarios. BHX plans to communicate with potentially affected communities and relevant external agencies on its



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emergency response plans such that external response resources are aware of these plans and are adequately prepared to participate effectively in the case of an emergency. The draft emergency response plans identify the scheduling of emergency response training, communication and resourcing to ensure adequate capability prior to operations.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 7.2

Basis for this Finding/Deficiencies Identified:

BHX has planned for and commenced a program of engagement with relevant stakeholders, including workers and potentially affected communities, on the response measures required during a cyanide emergency such that stakeholder concerns and input are included in the final emergency response plan that will be implemented prior to operations. A program of community and external agency meetings has been planned and commenced in regards to cyanide emergency response, including transport emergencies for those communities that may be affected by an emergency that occurs along the dedicated mine access road. The draft Cyanide Emergency Response Plan commits to a process of ongoing consultation on emergency response with site personnel and stakeholders.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 7.3

Basis for this Finding/Deficiencies Identified:

The draft BHX Cyanide Emergency Response Plan includes a description of the proposed organizational arrangements for emergency response such that responsibilities and resources are defined. BHX has drafted incident management plans which include responsibilities and authorities. These plans are in place at the existing nearby PBM gold (currently in the decommissioning phase) and copper operations in Laos and are being adapted for site specific



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requirements and scenarios. The emergency response planning at BHX includes the identification of training needs of emergency response personnel, including coordinators and response teams, and a schedule to complete this training prior to operations. The roles of external emergency responders, primarily local hospitals, are planned to be incorporated within the emergency response and incident management plans on the basis of planned communications with these responders. The draft Cyanide Emergency Response Plan includes identification and planning for emergency response equipment, the training required for use of this equipment and maintenance and inspection requirements to ensure that response equipment is effective.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 7.4

Basis for this Finding/Deficiencies Identified:

The BHX Cyanide Emergency Response Plan references the PBM Incident Management Team Manual for notification of various internal and external parties including hospitals, regulators and communities. Contact details of the required internal and external parties are planned to be included in the final Cyanide Emergency Response Plan developed prior to operations. The PBM Incident Management Team Manual includes the process for notification triggers for various incident types/scenarios. Senior management contacts are provided and the process for escalation of emergency response coordination from site based management to corporate incident management has been described. The requirements for notification of emergency incidents to regulators as required to comply with the Environmental Compliance Certificate are referenced in the draft plans.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 7.5

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Basis for this Finding/Deficiencies Identified:

The BHX draft Cyanide Emergency Response Plan includes a description of cyanide decontamination measures and clean up processes that may be implemented during and following an emergency incident. The Plan includes a description of treatment chemicals that may be used and procedures to ensure that the use of these treatment chemicals is completed in a manner that protects the environment and human health. The Plan specifically prohibits the use of such chemicals near waterways or where these chemicals may be released into natural waterways. Cyanide monitoring requirements during and following cyanide emergency incidents have been planned for in the draft Cyanide Emergency Response Plan.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 7.6

Basis for this Finding/Deficiencies Identified:

The BHX draft Cyanide Emergency Response Plan includes provisions for periodic review of the emergency response plans, capabilities and procedures and specific review triggers following planned emergency drills and following actual emergency response incidents. Periodic emergency response drills to test response capability are planned and described in the Cyanide Emergency Response Plan and will be subject to scheduling and detailed planning prior to operations.

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**
- in substantial compliance
- not in compliance

with Standard of Practice 8.1



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Basis for this Finding/Deficiencies Identified:

The draft BHX Cyanide Management Plan includes plans for cyanide induction and awareness training for all personnel, including emergency response personnel and contractors. More detailed site specific training packages are planned to be developed for process and maintenance personnel in a training needs analysis. Personnel will be required to undertake refresher training for cyanide management and training records are planned to be managed within a PBM training management system which is proposed to be implemented prior to operations.

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.*

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 8.2

Basis for this Finding/Deficiencies Identified:

The draft BHX Cyanide Management Plan outlines the training process planned to be implemented at the Mine to ensure personnel training needs are identified and training programs are available which provide for protection of human health, the community and the environment. The proposed training programmes are planned to be based on the operating systems and procedures and these training modules were being developed by BHX at the time of the audit such that personnel can be effectively trained prior to the commencement of operations. All training is proposed to include evaluation of competency through class room and on the job testing. Dedicated and appropriately trained trainers have been recruited by BHX and further Senior Supervisor/ Trainers and Supervisor Trainer positions are proposed to be recruited. BHX will retain training records in accordance with the existing PBM training and record management systems.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 8.3

Phu Bia Mining Ltd
Ban Houayxai Gold-Silver Mine



23 December 2011

Signature of Lead Auditor

SUMMARY PRE-OPERATIONAL AUDIT REPORT
Auditor's Findings

Basis for this Finding/Deficiencies Identified:

The training requirements for personnel involved in cyanide emergency response, including process plant personnel, coordinators and the Emergency Response Team, have been included in the BHX draft Cyanide Management Plan and the draft Cyanide Emergency Response Plan. These Plans include a description of the training needs and minimum competency levels for operational personnel, emergency coordinators and the emergency response teams subject to detailed training needs analysis being completed. A cyanide training schedule is planned to be developed by the process department for the workers who handle or manage cyanide. The training is planned to include all cyanide response personnel, including unloading, mixing, production, environment and maintenance workers, in decontamination and first aid procedures. All BHX personnel will have first aid training and records will be maintained for training completed. Emergency response information will be provided to external emergency responders to ensure familiarity and coordination in the event of a cyanide incident.

9. DIALOGUE: Engage in public consultation and disclosure.

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

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 9.1

Basis for this Finding/Deficiencies Identified:

BHX has developed draft procedures and forms and has already implemented processes for stakeholder communication of issues of concern which may include cyanide issues during operations. Phone numbers for BHX contact personnel are provided to local communities. Notice boards and communication boxes are in place in all seven villages within the identified project potential impact area.

Standard of Practice 9.2: *Initiate dialogue describing cyanide management procedures and responsively address identified concerns.*

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

Phu Bia Mining Ltd
Ban Houayxai Gold-Silver Mine



23 December 2011

Signature of Lead Auditor

SUMMARY PRE-OPERATIONAL AUDIT REPORT
Auditor's Findings

with Standard of Practice 9.2

Basis for this Finding/Deficiencies Identified:

Procedures for interacting with project stakeholders have been identified and drafted by BHX. The procedures include provision of cyanide management related information to local stakeholders prior to and periodically during operations via verbal and written information packages in local language.

Standard of Practice 9.3: *Make appropriate operational and environmental information regarding cyanide available to stakeholders.*

The operation is:

- in full compliance**
- in substantial compliance
- not in compliance

with Standard of Practice 9.3

Basis for this Finding/Deficiencies Identified:

BHX has committed to providing identified community and other stakeholders with information regarding its cyanide management procedures and practices and cyanide emergency response plans and has prepared materials to be presented during community meetings and drafted materials for release to stakeholders. BHX has planned community engagement and written materials to ensure that operational and environmental information regarding cyanide use at BHX is available to identified stakeholders prior to operations commencing and periodically during operations. Village meetings are used to disseminate information from monthly meetings verbally via loud speaker in local communities. BHX cyanide related information material for communities has been developed and includes the use of visual and pictorial information. The Draft BHX Cyanide Emergency Response Plan includes post incident community and other stakeholder consultation and reporting with specific reference to significant cyanide incidents.

