

# SUMMARY AUDIT REPORT

Name of Cyanide Transportation Facility: PT Trans Continent  
Name of Facility Owner: Mr Ismail Rasyid  
Name of Responsible Manager: Mr Ismail Rasyid  
Address: Jl. Tebet Raya No. 22A, Tebet Barat  
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Location detail and description of operation:

## Overview

### **PT Bumi Suksesindo (BSI) Copper and Gold Mines**

PTTC imports cyanide in the form of intermediate bulk containers (IBCs) stored inside General Purpose containers from Australian Gold Reagents (AGR) in Australia port of Fremantle; Cost Insurance Freight (CIF) terms shipped via commercial vessel to PT Terminal Petikemas Surabaya (TPS). Thereafter these containers are being transported by PTTC own drivers and vehicles via road transportation estimated 350km East Jaya; Banyuwangi mine site which is owned by BSI.

### **Outbound shipments of cyanide containers**

No return containers for the Cyanide Shipment, as all containers are Shipper Owned Containers (SOC). BSI purchased SOC from the Cyanide producer to minimise the change of contamination from the return empty container.

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Signature of Lead Auditor

& Technical Expert



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## *Auditor's Finding*

This operation is

- in full compliance
- in substantial compliance \*(see below)
- not in compliance

with the International Cyanide Management Code.

## **Scope of Verification Audit**

### **PT Bumi Suksesindo (BSI) Copper and Gold Mines**

PTTC transportation supply chain starting from PT Terminal Petikemas Surabaya (TPS) dangerous goods yard prior to customs clearance, thereafter these containers are being transported by PTTC own transportation and drivers estimated 350km East Jaya; Banyuwangi mine site estimated 350km.

Audit Company: Danny Tan

Audit Team Leader and Technical Expert: Mr Danny Tan

E-mail: dannytan163@yahoo.com.sg

Names and Signatures of Other Auditors:

Date(s) of Audit: Audit Dates: 21<sup>st</sup> to 22<sup>nd</sup> Jul 2017

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

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

Name of Facility: PTTC

Signature of Lead Auditor

Date

& Technical Expert



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# SUMMARY AUDIT REPORT

Transport Practice 1.1: Select cyanide transport routes to minimize the potential for accidents and releases.

- in full compliance with
- The operation is  in substantial compliance with Transport Practice 1.1
- not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

PTTC conducted a comprehensive route assessment for BSI cyanide transportation. Based on documented information and on site verification, selection of route were based on the minimizing the potential accidents and releases or the potential impacts of accidents with due consideration given for the following:

- a) traffic conditions,
- a) road conditions,
- b) environmental impacts
- c) community relations and reactions
- d) daily commuting habits

Based on the route selected, PTTC conducted a Route Risk Assessment covering

- a) Population Density
- b) Infrastructure construction and condition
- c) Pitch and grading
- d) Prevalance and proximity of water bodies and fog

PTTC implemented a process and written document (P233 – Cyanide Route Risk Assessment Bitung Port to JRBM). These procedures address the evaluation of risks in the selection of the cyanide transportation routes with appropriate risk management controls. A process on collecting feedback on route condition from the PTTC drivers were verified in accordance with implemented road transport procedure (P209). Community consultation from local police, port authorities and village chiefs for Bitung route to JRBM was conducted as part of the route assessment.

Local police escorts and own transporters played the critical roles as both external and internal responders in notifying respective medical facilities and communities' communications during an emergency or in the event of safety and security incidents. This arrangement enhances the integrated respond and alertness required which demonstrated during audit interviews.

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Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

Since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own to transport laden cyanide containers from TPS to Surabaya BSI. Documented information on cyanide transportation by PTTC vehicles were reviewed with supporting information on delivery notes dated 19 Dec 2017, bill of lading and commercial invoices.

Route risk assessment was conducted in accordance with P234 – Cyanide Route Risk Assessment and P314 – TPS to BSI, to ascertain the required control measures for cyanide road transportation. Interview held with PTTC own drivers were conducted to verify that compliance with the Code requirements for transportation.

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# SUMMARY AUDIT REPORT

Transport Practice 1.2: Ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

in full compliance with

The operation is  in substantial compliance with Transport Practice 1.2

not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

PTTC pool of drivers undergoes required qualifications and internal training that for each employee as aligned with PTTC F102 HSEC Matrix (Training). Documented copies of current licences, such as driving and forklift, are to be kept on file and records of internal training are reviewed. Refresher training is being implemented to ensure personnel are familiar with work requirements and emergency situations. Training records and appropriate materials were reviewed to ascertain the relevancy and applications. Interviews held with trainer and designated drivers are evident that drivers are trained in this aspect. PTTC do not subcontract any of the cyanide handling or transport.

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& Technical Expert



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Transport Practice 1.3: Ensure that transport equipment is suitable for the cyanide shipment.

in full compliance with

The operation is  in substantial compliance with Transport Practice 1.3

not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

PTTC deploys appropriate equipment, which is designed and maintained to operate within the permitted loads of cyanide shipments. P212 Vehicle Management Procedure addresses the following:

- Keep records of new and existing vehicles, such as maintenance schedule, log books, pre-start checklists, drivers handbook, update training programs as required;
- Ensure vehicle maintenance is kept up to date; and ensure vehicles are used to their rated capacity

Preventive maintenance schedule and scope of works in place and verified as part of operation's routine and preventive maintenance regime. PTTC do not subcontract any of the cyanide handling or transport.

PTTC has procedures and processes (P008 – Standard Operating Procedure for dangerous goods handling and P224 – Securing a Load) in place to make comparison and verification of gross weight of imported cyanide with maximum permitted vehicle loads as recommended by vehicle manufacture's specifications with regards to payload capacity. PTTC do not subcontract any of the cyanide handling or transport.

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# SUMMARY AUDIT REPORT

Transport Practice 1.4: Develop and implement a safety program for transport of cyanide.

in full compliance with

The operation is  in substantial compliance with Transport Practice 1.4

not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Java; Banyuwangi

PTTC had developed and implemented three overarching procedures to facilitate implementation of a safety program for transport of cyanide (Reviewed Mar 2017):

- P201 – HSEC Management System
- P203 – Cyanide Management Procedure
- P209 – Road Transport Procedure

These procedures were implemented to ensure integrity of product within sealed containers from origin. The product is not unloaded while in transport until final destination BSI Mine. Cyanide shipments are identifiable by Dangerous Goods (DG) placards required for cyanide transportation including Marine Pollutant placards.

Prior to cyanide transports, PTTC has implemented a vehicle inspection prior to each departure. The preventive maintenance program was checked for trucks and chassis. Maintenance schedule for these equipment are verified with documented records including vehicles change due to fair wear and tear. (Sampled vehicle B9299SEH and B9138)

The following are verified with established Road Transport Procedure:

- Rotating shifts for drivers
- Transportation can be modified depending on external conditions such as weather or community unrest
- Prevention of loads from shifting during transportation
- Alcohol test are being conducted on a random check basis

Implemented safety programs were established for the safe transportation commensurate with local operating conditions. Overall, verified documented records and on site assessment demonstrated respective compliance.

PTTC do not subcontract any of the cyanide handling or transport.

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Transport Practice 1.5: Follow international standards for transportation of cyanide by sea and air.

in full compliance with

The operation is  in substantial compliance with Transport Practice 1.5

not in compliance with

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

There are no sea and air transportation involved with PTTC ICMI cyanide transportation from TPS to BSI.

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Transport Practice 1.6: Track cyanide shipments to prevent losses during transport.

in full compliance with

The operation is  in substantial compliance with Transport Practice 1.6

not in compliance with

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

**(Due to the sensitivity of security issues regarding storage of cyanide, no descriptions of substantial or non-compliance with this aspect of the Transport Practice should be provided.)**

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

PTTC had implemented four overarching procedures to facilitate tracking of cyanide shipments to prevent losses during transportation:

- P201 – HSEC Management System
- P202 – Cargo Tracking Procedure
- P203 – Cyanide Management Procedure
- P209 – Road Transport Procedure

These implemented procedures mandated transport vehicles (convoy and escort vehicle) to have in place mobile phones to enable two-way communications with operations room.

This integrated system helps to mitigate the risk of communication blackouts and feedback system to review the chain of custody of cyanide shipments and ongoing risk assessment.

This includes periodically testing of communication equipment is in proper working conditions spelt out in P209.

Blackout area are being identified and in accordance with P209 procedures are implemented to address in handling during periods of blackouts along the supply chain..

Shipments inventory controls are in place to prevent loss of cyanide shipments during land transportation as verified with cargo management records. There are no transfers of shipments during the entire of land transportation.

On site route assessment and interviews with branch manager, yard manager, transport manager and escort leader were held. Along with respective delivery orders and accompanying MSDS verified with shipments records; are indicative that system is in place to ensure tracking of cyanide shipments and loss prevention. PTTC do not subcontract any of the cyanide handling or transport.

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## ***2. INTERIM STORAGE: Design, construct and operate cyanide trans-shipping depots and interim storage sites to prevent releases and exposures.***

Transport Practice 2.1: Store cyanide in a manner that minimizes the potential for accidental releases.

in full compliance with

The operation is  in substantial compliance with Transport Practice 2.1

not in compliance with

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

Interim/transshipment storage is situated within TPS which serves as depot for laden inbound shipments prior to land transportation of cyanide. Security is being ensured with security post managed by outsourced security services as observed during on site visit. Visitors access control is in place and monitored for entrance to TPS yard including areas designated for cyanide storage.

Site review of interim/transshipment storage conducted with the following observations:

- warning signs are visible around the yard indicative of the presence of toxic material and cyanide.
- within the interim storage, indicative segregation and separation of the dangerous goods and dedicated cyanide storage.
- at the actual storage area there are placards indicating the exact area in which the cyanide is stored. In addition to the placard there is also the SDS reflected in both English and Bahasa Indonesia.

At the entrance gates into the yard the following signs were clearly displayed; No Smoking and Eating

Stringent Personal Protection Equipment (PPE) requirements are enforced in the yard indicated by signs at the entrance:

- Helmet
- Safety Shoes
- Chemical Glasses
- Overall/PPE clothing

Dedicated in house security officers are stationed at the yard for access controls and movement of containers. This augments well for the prevention of planned and accidental access by general public. Control tower also has a clear view of the DG storage area.

There is no possible build-up of hydrogen cyanide as the storage is in the open air and thus well ventilated. This outdoor storage is built on a concrete ground provides the assurance that cyanide containers will not come in contact with water and soil.

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Overall, interviews with TPS personnel together with safety and environmental management systems in place demonstrate compliances and alertness to the presence of cyanide and its related risks.

PTTC had established a procedure (P205 and F203 to periodically audit TPS as transshipment/interim (for transshipment prior to shipment to mine) that they comply with the ICMI and contractual requirements for interim storage.

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## **3. EMERGENCY RESPONSE: Protect communities and the environment through the development of emergency response strategies and capabilities**

Transport Practice 3.1: Prepare detailed emergency response plans for potential cyanide releases.

- in full compliance with
- The operation is  in substantial compliance with Transport Practice 3.1
- not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

PTTC had implemented procedure (P235 – Cyanide Emergency Response Plan) in place for emergency response plans (ERP) for potential cyanide releases to address both ERP for interim storage and land transportation. Management of the following identified incidents leading to potential cyanide release derived were from risk assessment:

- Chemical Spillage at Interim Storage
- Chemical Spillage during land transportation
- Vehicle accidents
- Loading and unloading accidents
- Fire at interim storage

Respective classifications of incidents correspond with incident response structure taking into account the physical and chemical form of cyanide during accidental release. Requirements of transport infrastructure are considered as part of the overall ERP:

- Recovery vehicle
- Evacuation zones
- Communications with external responders
- Respective roles and integrated response with local communities, medical facilities, local authorities, fire departments and Port authorities
- Design of trailers and interim storage areas to minimize the risks

PTTC do not subcontract any of the cyanide handling or transport.

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Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response.

in full compliance with  
The operation is  in substantial compliance with Transport Practice 3.2  
 not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya, Banyuwangi

PTTC implemented procedure (P235 – Cyanide Emergency Response Plan) was reviewed to examine the ERP training as part of the DG Awareness Training conducted for personnel involved in port, yard and transportation operations covering the following:

- Specific roles and responsibilities during activation of ERP
- Media liaisons
- Loading/unloading, yard and transportation designated emergency response equipment
- Personal Protective Equipment (PPE)

This includes specific cyanide emergency response duties and responsibilities assigns to its personnel and outside responders during response to emergency incidents such as leakage

- To carry out initial action to contain the leakage
- To alert branch manager
- To minimize the risk to people and environment

Maintenance regime was established to ensure the assurance on the functionality of the emergency response equipment. Records are maintained for this regime along with the list emergency response required for ERP for transportation operations.

PTTC F102 HSEC Matrix (Training) spelt out the qualifications and internal training that is required for each employee. Refresher training is being implemented to ensure personnel are familiar with work requirements and emergency situations.

Training records (Emergency and Critical Response Training for Cyanide and Other Hazards) and appropriate materials were reviewed to ascertain the relevancy and applications. PTTC do not subcontract any of the cyanide handling or transport.

PTTC keeps emergency response equipment during transportation in Emergency Response Vehicle (B9798J) as verified with accompanied list of equipment such as full face respirator, gas detector and spill kits.

PTTC provides refresher training in emergency response procedures for cyanide handling personnel such as drivers on an annual basis. The current training was conducted in Mar

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2017 focusing on cyanide emergency response and handling of chemicals.

Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.

in full compliance with

The operation is  in substantial compliance with Transport Practice 3.3

not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

PTTC had in place procedures (P235) and contact information for respective notification of emergencies in the event of emergencies that occur during transportation. Implemented ERP procedure covers both internal and external emergency notification and reporting as part of the incident response structure. This is being reviewed during tool-box meeting prior to land transportation. Contact lists are currently updated during these meetings.

Records are maintained with the list emergency response contacts required for ERP for yard and transportation operations. On site interviews held with respective personnel verified that the implemented ERP and associated contact lists.

PTTC do not subcontract any of the cyanide handling or transport.

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Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

in full compliance with

The operation is  in substantial compliance with Transport Practice 3.4

not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

PTTC ERP procedures (P235) outline the spill contingency plan in the event of accidental spillage; dictates the agreement with mine site to respond. P235 also outline procedures for remediation, such as recovery or neutralization of solutions or solids and decontamination of soils or other contaminated media.

P235 addresses the prohibition on the use of chemicals such as sodium hypochlorite, ferrous sulphate and hydrogen peroxide to treat cyanide that has been released into surface waters. Interviews held with incident response team members on the implementation and understanding of Emergency Response Plan for transport of hazardous chemicals. Interviewed staff is able to describe the responsibilities and appropriate actions required when an emergency occurred during transportation.

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Transport Practice 3.5: Periodically evaluate response procedures and capabilities and revise them as needed.

in full compliance with

The operation is  in substantial compliance with Transport Practice 3.5

not in compliance with

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

Land transport from PT Terminal Petikemas Surabaya (TPS) to PT Bumi Suksesindo (BSI), East Jaya; Banyuwangi

PTTC implemented ERP procedure covers periodic review for the suitability, adequacy and effectiveness of the ERPs. This is being also being reviewed during pre-loading meeting with port operator and tool-box meeting prior to land transportation. Contact lists are currently updated during these meetings.

Mock drill was conducted in Sep 2016 and follow up ERP training was conducted on 14 Mar 2017. Mock drills schedule is being drawn up for year to include the scenarios of land transportation with respective external responders. PTTC do not subcontract any of the cyanide handling or transport.

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