Location detail and description of operation:

Overview of existing supply chains

PTTC Inbound shipments of cyanide containers consists of two supply chains for two mines sites as follows:

1. **PT Meares Soputang Mineral (MSM) / PT Tambang Tonando Nusajaya Gold Mines (TTN)**

PTTC imports cyanide in the form of intermediate bulk containers (IBCs) stored inside GP containers from TONGSUH in Korea port of Ulsan; CIF terms shipped via commercial vessel WAH HAI to PT Terminal Petikemas Surabaya (TPS). Thereafter these containers are being transported by Hacaca (Subcontractor) to Surabaya Tanjong Perak Domestic seaport; followed by loading onboard TANTO commercial vessel for sea transportation to Port of BITUNG. Upon arrival at Bitung; these containers will be stored at PTTC interim storage before land transportation for delivery to MSM/TTN in North Sulawesi by PTTC own transportation and drivers.

2. **PT Nusa Halmahera Minerals (NHM)**

PTTC imports cyanide in the form of intermediate bulk containers (IBCs) stored inside General Purpose (GP) containers from ORICA, Brisbane; Cost Insurance Freight (CIF) terms shipped via commercial vessel Mediterranean Shipping Company to PT Terminal Petikemas Surabaya (TPS). Thereafter these containers are being transported by Hacaca (Subcontractor) to Surabaya Tanjong Perak Domestic seaport; followed by loading onboard TANTO commercial vessel for sea transportation to Port of BITUNG. Upon arrival at Bitung; these containers will be stored at PTTC interim storage. Delivery to NHM is by sea transportation from Port of Bitung to Tanjong Barnabas Port by Landing Craft Tank (LCTs) operated by...
subcontractors; PT Pelayaran (samarinda LCT) and PT Perpesat LCT. NHM will take over the responsibility once the cyanide shipments via LCTs arrived at the Tanjong Barnabas Port. Tanjong Barnabas Port and subsequent truck transportation to Nusa Halmahera Minerals are not included within the current audit, as these are the responsibility of Nusa Halmahera Minerals.

Outbound shipments of cyanide containers

No return containers for the Cyanide Shipment, as all containers are Shipper Owned Containers (SOC). MSM/TTN & NHM purchased SOC from the Cyanide producer to minimise the change of contamination from the return empty container.
SUMMARY AUDIT REPORT

Auditor’s Finding

This operation is

☑️ in full compliance

☐☐ in substantial compliance *(see below)

☐☐ not in compliance

with the International Cyanide Management Code.

At the point of this recertification based on records reviewed, this operation has maintained full compliance with the International Cyanide Management Code throughout the previous three-year audit cycle.

During the previous three-year audit cycle, this operation experienced non-compliance with Code requirements, significant cyanide incidents requiring notification to ICMI and/or cyanide exposures or releases that would require disclosure under Item 9.3.3 of the Gold Mining Operations Verification Protocol.

Scope of Recertification (in accordance with International Cyanide Management Institute – Cyanide Transportation Verification Protocol; – Guidance for Recertification Audits dated December 2016)

1. PT Meares Soputang Mineral (MSM) / PT Tambang Tonando Nusajaya Gold Mines (TTN)

PTTC transportation supply chain starting from PT Terminal Petikemas Surabaya (TPS), thereafter these containers are being transported by PTTC own transportation and drivers to Surabaya Tanjong Perak Domestic seaport; followed by loading onboard TANTO commercial vessel for sea transportation to Port of BITUNG. Upon arrival at Bitung; these containers will be stored at Dangerous Goods yard located within Port of Bitung, before land transportation for delivery to MSM/TTN in North Sulawesi by PTTC own transportation and drivers.

2. PT Nusa Halmahera Minerals (NHM)

PTTC imports cyanide in the form of intermediate bulk containers (IBCs) stored inside General Purpose (GP) containers from ORICA, Brisbane; Cost Insurance Freight (CIF) terms shipped via commercial vessel Mediterranean Shipping Company to PT Terminal Petikemas Surabaya (TPS). Thereafter these containers are being transported by PTTC own transportation and drivers to Surabaya Tanjong Perak Domestic seaport; followed by loading onboard TANTO commercial vessel for sea transportation to Port of BITUNG. Upon arrival at Bitung; these containers will be stored at PTTC interim storage. Delivery to NHM is by sea transportation from Port of Bitung to Tanjong Barnabas Port by Landing Craft Tank (LCTs) operated by subcontractors; PT Pelayaran (samarinda LCT) and PT Perpesat LCT.

Name of Facility: PTTC   Signature of Lead Auditor & Technical Expert   Date

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NHM will take over the responsibility once the cyanide shipments via LCTs arrived at the Tanjong Barnabas Port. Tanjong Barnabas Port and subsequent truck transportation to Nusa Halmahera Minerals are not included within the current audit, as these are the responsibility of Nusa Halmahera Minerals.

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: 14 to 16 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.
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 ☐ not in compliance with Transport Practice 1.1

Summarize the basis for this Finding/Deficiencies Identified:

Land transport from Bitung to MSM/TTN in North Sulawesi Mine

PTTC conducted a comprehensive route assessment for Bitung operations. Based on records 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 MSM/TTN). 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 MSM/TTN 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

Sea Transportation (TPS to Bitung domestic seaport)

PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. There are no known regulations pertaining to sea transportation of cyanide products but SOLAS regulations for safe sea passage is applicable.

Name of Facility: PTTC Signature of Lead Auditor Date
& Technical Expert 3rd Jan 2018
Sea Transportation (Bitung domestic seaport to NHM mine site)

PTTC subcontracts sea transportation from Port of Bitung to Tanjong Barnabas Port via Landing Craft Tank (LCTs) to PT Pelayaran (samarinda LCT) and PT Perpesat LCT. There are no known regulations pertaining to sea transportation of cyanide products but SOLAS regulations for safe sea passage is applicable. NHM will take over the responsibility once the cyanide shipments via LCTs arrived at the Tanjong Barnabas Port.

Land Transportation from TPS to Surabaya Tanjong Perak Domestic seaport

Due to change of PTTC business model, since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own drivers for transportation of cyanide.

PTTC had implemented due diligence procedure (P205) to ensure that subcontractors continue to make compliance with ICMC requirements. Due diligence investigations scheduled on a three-year stipulated in the PTTC Health, Safety and Environmental schedule. Due diligence investigations’ records conducted were verified and no significant lapses were noted.
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 Bitung to MSM/TTN in North Sulawesi Mine**

PTTC F102 HSEC Matrix (Training) spelt out the qualifications and internal training that is required for each employee. 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.

**Sea Transportation (TPS to Bitung domestic seaport)**

PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. Interview held with TANTO operations staff verified that assigned sea crews were trained on the specifics of cyanide handling and transportation. Training records and appropriate materials were reviewed to ascertain the relevancy and applications. PTTC had implemented due diligence procedure (P205) to ensure that subcontractors continue to make compliance with ICMC requirements. Due diligence investigations’ records conducted were verified and no significant lapses were noted.

Due diligence investigation for TANTO was conducted on 22 Jul 2017 and it was conclusive that TANTO had in place appropriate measures for safe sea transportation of cyanide.

**Sea Transportation (Bitung domestic seaport to NHM mine site)**

PTTC subcontracts sea transportation from Port of Bitung to Tanjong Barnabas Port via Landing Craft Tank (LCTs) to PT Pelayaran (samarinda LCT) and PT Persat LCT. Training records and appropriate materials were reviewed to ascertain the relevancy and applications. PTTC had implemented due diligence procedure (P205) to ensure that subcontractors continue to make compliance with ICMC requirements pertaining to sea crews were trained on the specifics of cyanide handling and transportation.

Due diligence investigations for LCT operators PT Pelayaran and PT Perpesat were conducted by PTTC on 26 Aug 2017 along with documented information.
SUMMARY AUDIT REPORT

Land Transportation from TPS to Surabaya Tanjong Perak Domestic seaport
Due to change of PTTC business model, since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own drivers for transportation of cyanide.

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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 ☐ not in compliance with Transport Practice 1.3

Summarize the basis for this Finding/Deficiencies Identified:

Land transport from Bitung to MSM/TTN in North Sulawesi Mine
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

Maintenance contracts and preventive maintenance are in place as verified as part of operation’s routine and preventive maintenance regime.

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.

Sea Transportation (TPS to Bitung domestic seaport)
PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. Vessel assigned deploys appropriate equipment, which is designed and maintained to operate within the permitted loads of cyanide shipments. Due diligence interview was conducted with relevant records to ascertain the relevancy and compliance. As part of continual assessment of subcontractor; PTTC had established a procedure to periodically audit TANTO that they comply with the Code requirement.

Sea Transportation (Bitung domestic seaport to NHM mine site)
PTTC subcontracts sea transportation from Port of Bitung to Tanjong Barnabas Port via Landing Craft Tank (LCTs) to PT Pelayaran (samarinda LCT) and PT Perpesat LCT. Due diligence interview was conducted with relevant records to ascertain the relevancy and compliance. PTTC had implemented due diligence procedure (P205) and LCT brief to ensure that LCT operators continue to make compliance with ICMC requirements.

Land Transportation from TPS to Surabaya Tanjung Perak Domestic seaport
Due to change of PTTC business model, since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own drivers for transportation of cyanide.

Name of Facility: PTTC  Signature of Lead Auditor  Date
& Technical Expert  3rd Jan 2018
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 Bitung to MSM/TTN in North Sulawesi Mine

PTTC had developed and implemented three overarching procedures to facilitate implementation of a safety program for transport of cyanide:

- 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 MSM/TTN 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.

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.

Sea Transportation (TPS to Bitung domestic seaport)

PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. Vessel deploys appropriate equipment, which is designed and maintained to operate within the permitted loads of cyanide shipments. Due diligence interview was conducted with relevant records to ascertain the relevancy and compliance. There is no manipulation of the packing as the tank containers are sealed and not opened. As part of continual assessment of subcontractor; PTTC had established a procedure to periodically audit TANTO that they comply with the Code requirement.

Name of Facility: PTTC   Signature of Lead Auditor & Technical Expert   Date
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SUMMARY AUDIT REPORT

Sea Transportation (Bitung domestic seaport to NHM mine site)

PTTC subcontracts sea transportation from Port of Bitung to Tanjong Barnabas Port via Landing Craft Tank (LCTs) to PT Pelayaran (samarinda LCT) and PT Perpesat LCT. Due diligence interview was conducted with relevant records to ascertain the relevancy and compliance. PTTC had implemented due diligence procedure (P205) and LCT brief to ensure that LCT operators continue to make compliance with ICMC requirements.

Land Transportation from TPS to Surabaya Tanjong Perak Domestic seaport

Due to change of PTTC business model, since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own drivers for transportation of cyanide.
SUMMARY AUDIT REPORT

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

☑ in full compliance with

☐ in substantial compliance with

☐ not in compliance with

The operation is

Summarize the basis for this Finding/Deficiencies Identified:

Sea Transportation (TPS to Bitung domestic seaport)

PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. Due diligence review was conducted to verify compliance with the prevailing IMDG code. At the point of audit, the following were verified for compliance:

- TANTO has the applicable IMDG Code requirements available and staff interviewed on site was able to verify compliance of DG shipments with the applicable IMDG Code requirements.

- Packaged as required by Part 4 of the IMDG Code and according to the packaging instructions and packaging provisions indicated on the DG List. Based on representative shipments samples compliance was demonstrated.

- Not applicable for Section 5.2.1 and 5.2.2 of the IMDG code as cyanide is being shipped in form of intermediate bulk containers (IBCs) stored inside GP containers

- Cyanide shipments were sampled with documents and appropriate records to verify that shipments are identified with required placard and marked as required by Chapter 5.3 of the IMDG Code

- Sampled dangerous goods transport document verified with records demonstrated compliance with requirements under Chapter 5.4 of the IM DG Code.

- Not applicable for Section 5.4.2 of the DG code as the cyanide is packaged by producer as well as for outbound empty tank containers.

- Vessel carrying the cyanide containers had a manifest identifying the presence of the cyanide. Based on the manifest the container location can be checked with the detailed stowage plan. Both documents complement and conform to Section 5.4.3.1 of the DG Code.

- Vessel carrying the cyanide containers was found to have an Emergency Response Plan in place.

Overall, TANTO was found to be in compliance with the stowage and separation requirements of Part 7 of the IMDG Code concerning cyanide shipments

Name of Facility: PTTC
Signature of Lead Auditor & Technical Expert
Date 3rd Jan 2018
PTTC had implemented due diligence procedure (P205), LCT brief to ensure that LCT operators and requirements of an independent marine surveyor’s validation to ensure LCT operations comply with relevant IMDG. Due diligence was conducted for PT Perpesat – LCT Tuna Maritim on 26 Aug 2017 for PT NHM sea transportation that covers the following:

- Sea route risk assessment
- ERP and related spillage equipment and LCT crew cyanide training
- LCT seaworthiness and lashing down of cyanide containers on board LCT.

Due diligence investigation was conducted for PT Perpesat – LCT Tuna Maritim on 26 Aug 2017 and was concluded that the LCT operators have appropriate measures in place for safe transportation of cyanide.

PTTC does not transport cyanide by air transportation.
SUMMARY AUDIT REPORT

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

☑ in full compliance with

☑☐ ☐☐ 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 Bitung to MSM/TTN in North Sulawesi Mine

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.

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.

PTTC periodically tests communication equipment to ensure proper functioning. Assigned supervisor always communicates with cyanide transportation driver to monitor position, with regards to arrival time of cyanide transportation vehicles as it relates to arrival time / arrival which had been agreed with client as per procedural requirement in Standard Operating procedures (P111 and P112).

No blackout areas have been indentified. Currently, PTTC has a Command Center which is also monitor the movement of vehicles and their positions. If there are matters relating to operational issues, responses will be handled by the command center duty personnel.

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.

Land Transportation from TPS to Surabaya Tanjong Perak Domestic seaport

Due to change of PTTC business model, since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own drivers for transportation of cyanide.

Name of Facility: PTTC Signature of Lead Auditor Date
& Technical Expert 3rd Jan 2018
SUMMARY AUDIT REPORT

Sea Transportation (TPS to Bitung domestic seaport)
PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. TANTO tracked the vessel movements and status such as vessel port of departure, daily situation reports and vessel ETA at port of destination.

Based on interview held with operation staff, there are no known blackout spots for the communication at sea during the planned voyage. TANTO maintains inventory control of cyanide shipments by means of the shipping manifest along with designated loading areas for DG cargoes. The cyanide information is made available with updated MSDS during voyages.

As part of continual assessment of subcontractor; PTTC had established a procedure to periodically audit TANTO that they comply with the ICMI and contractual requirements.

Sea Transportation (Bitung domestic seaport to NHM mine site)
PTTC subcontracts sea transportation from Port of Bitung to Tanjong Barnabas Port via Landing Craft Tank (LCTs) to PT Pelayaran (samarinda LCT) and PT Perpesat LCT. Inventory control of cyanide shipments were maintained by means of the shipping manifest along with designated loading areas for DG cargoes. The cyanide information is being made available with updated MSDS during voyages. Due diligence was conducted with relevant records to ascertain the relevancy and compliance. PTTC had implemented due diligence procedure (P205) and LCT brief to ensure that LCT operators continue to make compliance with ICMC requirements.
SUMMARY AUDIT REPORT

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:

The interim storage is situated within the Port of Surabaya (TPS) and Port of Bitung (TPB) for PT MSM and NHM.

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 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.
SUMMARY AUDIT REPORT

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.

Overall, interviews with TPS and TPB 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. TPS due diligence was conducted on 21 Jul 2017.

Interim Storage at Port of Bitung

Warning signs are visible in both Indonesian and English language at the entrance of the Dangerous Goods (DG yard) as reviewed during the onsite visit to Port of Bitung DG yard.

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 DG yard including areas designated for cyanide storage.

Segregation of cyanide storage in DG yard managed by Port of Bitung as observed during on site visit to DG yard in accordance with Port of Bitung. DG location plan as part of safety management plan for DG storage. Cyanide is being stored outdoor which is designed for DG storage.

Cyanide is stored outdoor which is designed for DG storage with effective and adequate ventilation as part of the overall hazard management with regards to build-up of hydrogen cyanide gas.
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

☐ in substantial compliance with Transport Practice 3.1

☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Land transport from Bitung to MSM/TTN in North Sulawesi Mine

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

Sea Transportation (TPS to Bitung domestic seaport)

PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. Due diligence review and interview held with operations staff highlighted the contents of the ERP as follows:

- Emergency Committee
- Operation of Emergency Committee
- Drill to encounter an Emergency Hazard
- Emergency Committee Contact List
- Escalation processes

The ERP as part of shipboard management plan covers the voyage route under TANTO responsibility.
SUMMARY AUDIT REPORT

Sea Transportation (Bitung domestic seaport to NHM mine site)

PTTC subcontracts sea transportation from Port of Bitung to Tanjong Barnabas Port via Landing Craft Tank (LCTs) to PT Pelayaran (samarinda LCT) and PT Perpesat LCT. Due diligence was conducted with relevant records to ascertain the relevancy and compliance. PTTC had implemented due diligence procedure (P205) and LCT brief to ensure that LCT operators continue to make compliance with ICMC requirements.

Land Transportation from TPS to Surabaya Tanjong Perak Domestic seaport

Due to change of PTTC business model, since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own drivers for transportation of cyanide.
SUMMARY AUDIT REPORT

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 Bitung to MSM/TTN in North Sulawesi Mine

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

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

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 yard and transportation operations.

PTTC F102 HSEC Matrix (Training) spelt out the qualifications and internal training that is required for each employee. PTTC provides refresher training in emergency response procedures for cyanide handling personnel on an annual basis.

Refresher training is being implemented to ensure personnel are familiar with work requirements and emergency situations. Training records dated 4 Mar 2017) and appropriate materials were reviewed to ascertain the relevancy and applications. Interviews during on site impromptu ERP exercise held with trainer and designated emergency responders demonstrated required competencies.
SUMMARY AUDIT REPORT

Sea Transportation (TPS to Bitung domestic seaport)
PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. Due diligence review and interview held with operations staff ascertain that emergency response training of their vessel were provide for personnel covering the following:

- Emergency Committee
- Operation of Emergency Committee
- Drill to encounter an Emergency Hazard
- Emergency Committee Contact List
- Escalation processes

The Emergency Equipment and PPE available on the vessel focus mainly on firefighting at sea and liquid spills. There is regular training for the vessel crew and the captain and designated persons have been trained on cyanide requirements.

Sea Transportation (Bitung domestic seaport to NHM mine site)
PTTC subcontracts sea transportation from Port of Bitung to Tanjong Barnabas Port via Landing Craft Tank (LCTs) to PT Pelayaran (samarinda LCT) and PT Perpesat LCT. Due diligence was conducted with relevant records to ascertain the relevancy and compliance. PTTC had implemented due diligence procedure (P205) and LCT brief to ensure that LCT operators continue to make compliance with ICMC requirements.

Land Transportation from TPS to Surabaya Tanjong Perak Domestic seaport
Due to change of PTTC business model, since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own drivers for transportation of cyanide.
Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.

- ☑ in full compliance with
- in substantial compliance with Transport Practice 3.3
- ☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Land transport from Bitung to MSM/TTN in North Sulawesi Mine

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 (P250). 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.

Land Transportation from TPS to Surabaya Tanjong Perak Domestic seaport

Due to change of PTTC business model, since Dec 2017, PTTC do not subcontract any of the cyanide handling or transport and had utilised own vehicles and own drivers for transportation of cyanide.

Sea Transportation (TPS to Bitung domestic seaport)

PTTC subcontracts TANTO commercial vessel for sea transportation from TPS to Port of Bitung. On site verification with operations staff ascertained that ERP provides the following communications links and means with internal and external contacts during activation of ERP:

- Communication with External Parties
- Emergency Committee Contact List
Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

☑ in full compliance with
☐ in substantial compliance with Transport Practice 3.4
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Land transport from Bitung to MSM/TTN in North Sulawesi Mine

PTTC ERP procedures (P235) outline the spill contingency plan in the event of accidental spillage; dictates the agreement with mine site to respond.

For treatment of cyanide that has been released into the water, is not applicable for PTTC as responsibility to treat contaminated product and material is under MSM/TTN responsibility. 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.
SUMMARY AUDIT REPORT

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

☑ in full compliance with

☐☐ ☐☐ in substantial compliance with Transport Practice 3.5

☐☐ ☐☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Land transport from Bitung to MSM/TTN in North Sulawesi Mine

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 drills and ERP training was conducted on 26 Sep 2016 and 10 Oct 2017 involving MSM/TTN and NHM participants.

Subsequent mock drills schedule is being drawn up for year to include the scenarios of land transportation with respective external responders.