September 2015

INTERNATIONAL CYANIDE MANAGEMENT CODE TRANSPORT AUDIT

PT. Nusa Halmahera Minerals-Gosowong Mine Supply Chain Recertification Audit Summary Audit Report

Submitted to:
International Cyanide Management Institute (ICMI)
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REPORT

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Distribution:

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Golder Associates

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1.0 INTRODUCTION

1.1 Operational Information

Name of Mine:	Gosowong Mine Supply Chain
Name of Mine Owner:	Newcrest Mining Limited
Name of Mine Operator:	PT Nusa Halmahera Minerals
Name of Responsible Manager:	Mark Kaesehagen, Deputy Operations Director
Address:	PT Nusa Halmahera Minerals Gosowong Gold Mine Halmahera Island
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1.2 Description of Operation

1.2.1 Sodium Cyanide Transportation

The Gosowong Mine Supply Chain (Supply Chain) covers the transportation of cyanide from both the Port of Ulsan in South Korea to NHM's Gosowong Gold Mine on Halmahera Island in North Maluku, Republic of Indonesia. Prior to 2014 this specifically included:

- Export port facilities:
  - Port of Ulsan, South Korea.
- Shipping (International):
  - Shipping between the Port of Ulsan, South Korea and the international Port of Surabaya, Republic of Indonesia by Wan Hai Lines (WHL).
- Road and shipping (Internally within Indonesia utilising the PT Trans Continent (PTTC) Supply Chain):
  - International Port of Surabaya
  - Road Transport between the International and Domestic Ports of Surabaya
  - Transit storage at the Domestic Port of Surabaya
  - Domestic Port of Surabaya
  - Shipping between the Domestic Port of Surabaya to the Port of Barnabas (including custom clearance and stevedoring operations)
  - Shipping between the Domestic Port of Surabaya to the Port of Barnabas via the Port of Bitung (alternative route)

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  - Port of Bitung.
- Discharge port facilities:
  - Port of Barnabas (owned and operated by NHM).
- Road transportation to mine site:
  - Road transport between the Port of Barnabas and Gosowong Gold Mine using NHM trucks.

Since 2014 this specifically included:

- Road and shipping (internally within Indonesia utilising the PTTC Supply Chain):
  - International Port of Surabaya
  - Road Transport between the International and Domestic Ports of Surabaya
  - Transit storage at the Domestic Port of Surabaya
  - Domestic Port of Surabaya
  - Shipping between the Domestic Port of Surabaya to the Port of Barnabas (including custom clearance and stevedoring operations)
  - Shipping between the Domestic Port of Surabaya to the Port of Barnabas via the Port of Bitung (alternative route)
  - Port of Bitung
- Discharge Port Facilities:
  - Port of Barnabas (owned and operated by NHM).
- Road Transportation to Mine Site:
  - Road transport between the Port of Barnabas and Gosowong Gold Mine using NHM trucks.

1.3 Newcrest Mining Limited

Newcrest Mining Limited (Newcrest) is headquartered in Melbourne, Australia and is the largest gold producer listed on the Australian Stock Exchange (ASX).

The origins of Newcrest date back to 1966, when Newmont Mining Limited established an Australian subsidiary, Newmont Australia Limited. In 1990, Newmont Australia Limited acquired Australmin Holdings Ltd, and subsequently merged with BHP Gold Limited in late 1990, changing its name to Newcrest Mining Limited. The Company has been listed on the ASX since 1987 – initially as Newmont Australia Limited.

Newcrest owns and operates six (6) mines including Gosowong. Two (2) of these are located in Australia; these include Cadia Valubstantialley near Orange in New South Wales and Telfer in the Pilbara region of Western Australia. Newcrest also has the Lihir and Hidden Valley Gold Operations in Papua New Guinea as well as the Bonikro operation in Côte d'Ivoire in West Africa.

1.4 PT. Nusa Halmahera Minerals

NHM is the joint venture company formed to manage the Gosowong Gold Mine. NHM is owned 75% by Newcrest, with PT. Aneka Tambang owning the remaining 25%. The Gosowong Gold Mine is located within the Gosowong gold province, which covers an area of approximately 30,000 ha. The mine is situated on Halmahera Island, in the North Maluku Province, Indonesia and is approximately 2,450 km north-east of the national capital, Jakarta.

Kencana is the third mine to be developed by Newcrest at the Gosowong site and the first underground mine. Kencana is located 1 km south of the original Gosowong pit. Underground development of the Kencana mine commenced in February 2005 with the first underground ore mined in March 2006.

The existing Gosowong processing plant is used to process Kencana ore. The processing plant comprises a primary jaw crusher followed by two units of SAG Mills and one unit of Ball Mill ahead of a cyanide leach circuit. Gold and silver is recovered from the pregnant solution using the Merrill-Crowe (zinc precipitation) process before smelting to produce doré bars.

Materials required for the operation of the mine are imported through the Port of Barnabas and trucked to the mine site. NHM owns and manages the Port of Barnabas as well as the vehicles used to transport products between the Port of Barnabas and the Gosowong Mine Site.

1.5 Tongsuh Petrochemical Corporation Limited (Tongsuh)

Prior to 2014, NHM coordinated the transport of cyanide from the Tongsuh production facility in South Korea to NHM on Halmahera Island in North Maluku, Republic of Indonesia.

The cyanide product was manufactured and packed by Tongsuh, an ICMC certified producer in South Korea. The product was packed firstly into intermediate bulk containers (IBCs) and then into shipping containers for transport to Tongsuh customers in Indonesia.

Tongsuh is certified as being fully compliant with the ICMC.

1.6 CSBP Limited (CSBP) and Australian Gold Reagents (AGR)

Since January 2014, NHM has coordinated the transport of cyanide from the AGR production facility in Kwinana, Western Australia to NHM on Halmahera Island in North Maluku, Republic of Indonesia.

AGR is the management company of the unincorporated joint venture between CSBP Ltd (CSBP) and Coogee Chemicals Pty Ltd (Coogee Chemicals). CSBP, a subsidiary of Wesfarmers Ltd., is the major participant in the venture and acts as both plant operator and sales agent. Coogee Chemicals is a local manufacturer and distributor of industrial chemicals.

The AGR cyanide production facility is located within CSBP's fertiliser and chemicals complex at Kwinana, some 40 km south of Perth within the state of Western Australia. AGR produces and transports two different forms of sodium cyanide from the Kwinana production facility, namely solution and solids. Sodium cyanide solution is produced as a 30% strength liquid and solid sodium cyanide as a >97% strength white briquette.

AGR, in its capacity as the sales agent, is the consignor and is responsible for the overall management of the sodium cyanide transportation activities.

The cyanide product is manufactured and packed by AGR, an ICMC certified producer in Western Australia. The product is packed firstly into IBCs and then into shipping containers for transport to AGR customers in Indonesia.

2.0 GOSOWONG MINE SUPPLY CHAIN

2.1 Port of Ulsan

The Port of Ulsan is used by NHM for the export of sodium cyanide from South Korea to the Port of Surabaya in the Republic of Indonesia. The Port of Ulsan lies on the south-eastern shores of South Korea, facing the Sea of Japan. The Port of Ulsan is about 50 kilometres northeast of the Port of Busan and about 60 kilometres south of the Port of Pohang. Located along the international arterial route of liquid cargo transportation between the American continents and the Asian region, the port has been fostered as a hub port of liquid cargo transportation in Northeast Asia by making the most of its geologically favourable conditions which involve well-developed industrial infrastructure such as liquid cargo storages.

The Port of Ulsan consists of the Ulsan Main Port, Onsan Port and Mipo Ship Yard with a total of 96 berths and wharves with capacity for general cargo vessels of up to 50 thousand tons, buoy moorings with capacity to handle crude oil carriers of up to 350 thousand tons, and dolphins that can accommodate oil tankers to 150 thousand tons. The Ulsan Regional Maritime Affairs and Fisheries Office (URMAFO) is responsible for developing, managing and operating the Port of Ulsan.

The Port of Ulsan handles a significant proportion of the nation's imports and exports. The Port of Ulsan handles more than half of South Korea's crude oil imports, almost half of the country's automobile exports, and over 40% of its shipbuilding exports. The Port of Ulsan handles over 161 million tonnes of cargo per annum.

The Port of Ulsan also has a warehouse covering with storage capacity for seven thousand cubic meters of cargo and open storage with capacity for over one million tons of cargo. During periods of transit at the Port of Ulsan containers of hazardous materials, including solid sodium cyanide, are stored in a dedicated Dangerous Goods storage facility at the Dong Bang Container Terminal.

2.2 Wan Hai Lines (WHL)

WHL transported cyanide by sea from the Port of Ulsan in South Korea to the International Port of Surabaya in the Republic of Indonesia.

WHL, headquartered in Taipei, Taiwan, operates a fleet of 75 vessels with shipping coverage throughout the Pacific and Indian Oceans. WHL has subsidiaries and agents over Asia's major cities and ports.

WHL states their operations and services committed to safety and pollution prevention. WHL implement a number of safety and environmental protection measures, including compliance with relevant articles of the International Safety Management Code and other international conventions and improving safety management skills of its personnel including emergency preparations related to safety and environmental protection.

2.3 PT. Trans Continent Supply Chain

PTTC was established in 2003 and provides freight forwarding, logistical, shipping agency, custom clearance and warehousing services for mining, oil and gas and project cargo. The operation has Indonesian offices in Jakarta, Balikpapan, Batam, Manado, Medan, Ternate and Surabaya. In addition, PTTC has overseas agents in Singapore, Japan and Australia.

The PTTC Supply Chain comprises the transportation of cyanide from the Port of Ulsan in the Republic of Korea to the international Port of Surabaya, Indonesia via Wan Hai Lines, road transport to the domestic Port of Surabaya by PT Trans Continent and PT Hacaca Setio Abadi, shipment to the Ports of Barnabas and Bitung, Indonesia by PT Pelayaran Bunga Mahakam Perkasa – Samarinda and PT Tanto Intim Line, and shipment by road from the Port of Bitung to mine sites by PT Misa Utara.

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The PTTC Supply Chain was recertified on 2 December 2014.

2.4 Port of Barnabas

The Port of Barnabas is owned and managed by NHM to service the Gosowong Gold Mine. The Port is capable of handling medium ships and LCT. Containers are unloaded directly from the LCT onto the trucks. Storage facilities are available at the Port; however, it is only used in case of emergencies.

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2.5 Auditors Findings and Attestation

The Supply Chain is:

☐ in full compliance with

☐ in substantial compliance with

☒ **not in compliance with**

The International Cyanide Management Code

Audit Company: Golder Associates Pty Ltd

Audit Team Leader: Mike Woods, Exemplar Global (113792)

Email: MWoods@golder.com.au

No significant cyanide incidents or releases were noted as occurring during the audit period.

Name and Signatures of Other Auditors:

Name	Position	Signature	Date
Mike Woods	Lead Auditor and Technical Specialist		14 September 2015
David Rushton	Auditor		14 September 2015

2.6 Dates of Audit

The Recertification Audit was undertaken over four days between 27 and 29 January and 22-23 April 2015.

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's *Gold Mining Operations Verification Protocol* and using standard and accepted practices for health, safety and environmental audits.

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.

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3.0 CONSIGNOR SUMMARY

3.1 Principle 1 – Transport

Transport Cyanide in a manner that minimises the potential for accidents and releases.

3.1.1 Transport Practice 1.1

Select cyanide transport routes to minimise the potential for accidents and releases.

	☒ **in full compliance with**	
The Supply Chain is	☐ in substantial compliance with	**Transport Practice 1.1**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Standard of Practice 1.1 requiring NHM to select cyanide transport routes to minimise the potential for accidents and releases.

PT. Nusa Halmahera Minerals

NHM has developed procedures for the selection of transport routes that minimise the potential for accidents and releases or the potential impacts of accidents and releases:

- *GSWP-SL-01 Cyanide Transportation*
- *GSWP-SL-04 Escort of Material from Port to Site*
- *GSWP-SL-03 Transport Route Selection and Transportation*

These procedures focus on road transportation on Halmahera Island between the Port of Barnabas and the mine site. They also consider elements between the supplier and mine site.

A risk assessment was conducted to determine the most suitable route of transporting cyanide from the supplier to Gosowong. The risk assessment considered the following factors:

- Population density along the road
- Bridges and proximity to surface waterways
- Proximity to marine waters
- Blind spots and bends
- Pitch of the road and areas of erosion
- Condition of the road.

A road survey (Port of Barnabas and mine site) is conducted as part of the risk assessment.

The Port of Barnabas is owned by NHM and managed using NHM processes and procedures. The Port was selected as part of the supply chain as it is owned and controlled by NHM and is the closest suitable port facility to the mine.

NHM implements a procedure to evaluate risks of selected cyanide transport routes and take the measures necessary to manage these risks. An initial Bowtie risk assessment exercise was conducted during the

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Certification Audit to identify and control the risk of the cyanide supply chain failure between the Port of Barnabas and the Mine. The controls were documented in the *GSWP-SL-03 Transport Route Selection* procedure. Following this initial assessment, the risks and controls were reviewed as per the procedural requirements. A process is also in place to continuously monitor risks along the route. The daily use of the route by the Supply and Logistics Department allows hazards to be reported and assessed as they arise and they appear to be managed appropriately.

External to Halmahera Island, the main process to minimise risks to the transportation of cyanide is through the procurement of cyanide from certified producers and the transportation of cyanide along ICMC certified supply chains which currently comprise:

- AGR West Australian Supply Chain,
- AGR Ocean Freight Supply Chain
- PTTC Supply Chain

NHM has implemented a procedure to periodically re-evaluate routes used for cyanide deliveries.

The *GSWP-SL-03 Transport Route Selection* procedure requires an audit of the roads and bridges to be completed periodically. The Transport Supervisor conducts a visual inspection 2-3 days before each shipment arrives at the Port. Drivers are to advise the Transport Supervisor of any changes or hazards to the route from the Port of Barnabas to Gosowong site on a daily basis. Hazards identified are reviewed, reassessed and closed immediately.

The *GSWP-SL-01 Cyanide Transportation* procedure states that cyanide shall not be transported during fog, bad weather or civil unrest between the Port of Barnabas and Gosowong Gold Mine.

NHM has documented the measures taken to address risks identified with the selected routes within procedures.

NHM seeks input from stakeholders (community leaders and police) and applicable government agencies as necessary in the selection of routes and development of risk management measures. NHM's operations have been assessed and approved by relevant Government Departments. The police have a permanent presence at the Gosowong site and work closely with NHM.

NHM has a Corporate Social Responsibility (CSR) Department, based at Gosowong, with responsibility for the development and implementation of a communications system, which incorporates stakeholder engagement with respect to cyanide. The CSR Department communicate directly with the community.

The CSR Team live within the surrounding communities; there are five subdistricts with two CSR members per subdistrict. Quarterly community meetings are held, which provide a platform for the local villages during which they can ask questions and raise concerns.

The transport route does not present special safety or security concerns. Despite this, NHM uses convoys to transport its cyanide from the Port of Barnabas to the Mine. The convoy process is described within GSWP-SL-04 Escort of Material from Port to Site.

The convoy is led by an escort vehicle with flashing lights on roof and siren sounding throughout the trip from the Port to the Mine. A fully equipped emergency response vehicle follows approximately 75 metres behind the convoy. Police accompany the convoy.

NHM has established self-sufficient emergency response capabilities on the island. As such, there are no external responders and medical facilities to consult in the cyanide emergency planning and response process. NHM has contracted ISOS to provide 24/7 medical coverage on site at the site clinic. The clinic is

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staffed with professional nurses and paramedic staff as well as a full time doctor. Equipment and capabilities at the clinic includes a basic medical laboratory, x-ray machine, audiometer, and spirometer machine, defibrillator, oxygen, cyanokits and two ambulances.

The community has not been allocated a role in the event of an emergency.

NHM does subcontract the transport of cyanide to PTTC between the Surabaya International Port and the Port of Barnabas. PTTC transports cyanide for NHM under a Services Contract. The text of the Services Contract does not specifically document all of the transportation responsibilities required in this question. However, Clause 1a of Appendix 4 of the Services Contract requires PTTC to comply with the ICMC.

Port of Ulsan

Golder conducted a due diligence assessment of the Port of Ulsan.

The Port of Ulsan is used as an export facility for cyanide manufactured by Tongsuh as it is located in close proximity to the cyanide manufacture and it is services by a shipping company that has routes to Indonesia.

The due diligence did not find new issues of concern in regards to the Port of Ulsan's management but it could not verify whether concerns identified in the previous due diligence relating to the storage of cyanide in proximity to incompatible materials had been addressed. NHM discontinued the use of WHL in 2014 after changing cyanide suppliers.

NHM discontinued the use of WHL in 2014 after changing cyanide suppliers.

Wan Hai Lines

Golder conducted a due diligence assessment of the WHL. WHL is a carrier service providing international shipping of containers on a fleet of their container vessels. Containers containing sodium cyanide are placed and secured on their vessels at the loading port by the port stevedoring company or service provider, and removed at the port of destination by the stevedoring company or service provider at that port. Simply put WHL provides a carrier service handling of containers is done by the stevedoring companies at each port.

The selection of WHL by NHM considered its shipping routes between the Port of Ulsan and Indonesia.

NHM does not have control of the routes taken by WHL between the Port of Ulsan and Indonesia. In selecting a route, shipping lines must take into account factors such as tides, currents, winds, storms and load compatibilities.

WHL operates a container booking and tracking system. The system is also the management tool for handling the dangerous goods cargo for the proper control of the stowage of hazardous cargo.

The due diligence did not find issues of concern in regards to WHL's management of solid sodium cyanide product. The assessment is not a final acceptance of WHL for future work and as with all service providers to NHM, NHM will continue to review and monitor their performance. NHM discontinued the use of WHL in 2014 after changing cyanide suppliers.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

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3.1.2 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 Supply Chain is	☐ in substantial compliance with	**Transport Practice 1.2**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Standard of Practice 1.2 requiring personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

PT. Nusa Halmahera Minerals

NHM only uses trained, qualified and licensed operators to operate its transport vehicles. Under Indonesian law, drivers are required to have a licence issued to them by the National Police for the classes of vehicle they intend to drive (NHM truck drivers require a B11 licence). Upon employment with NHM, drivers are required to pass an on-site driving test conducted by the Safety Department. Upon successful completion of the driving test, employees are given a site licence. A site licence will not be issued unless the member holds a valid Indonesian licence. Drivers must carry their licence with them at all times whilst driving.

NHM only uses trained, qualified and licensed operators to operate its mobile crane at the Port of Barnabas. This crane is the only piece of equipment used to unload cyanide containers from vessels and onto the transport vehicles.

NHM personnel operating cyanide transport equipment have been trained to perform their jobs in a manner that minimises the potential for cyanide releases and exposures. NHM has elected to give all permanent employees Sodium Cyanide Safe Handling Guideline training.

Selected personnel from across the site have also received training in the *Cyanide Emergency Response Plan* (CERP).

NHM subcontracts PTTC to transport cyanide to between the Surabaya International Port and the Port of Barnabas. The contract requires PTTC to comply with the ICMC.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

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3.1.3 Transport Practice 1.3

Ensure that transport equipment is suitable for the cyanide shipment.

	☒ **in full compliance with**	
The Supply Chain is	☐ in substantial compliance with	**Transport Practice 1.3**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Standard of Practice 1.3 requiring that transport equipment is suitable for the cyanide shipment.

PT. Nusa Halmahera Minerals

NHM only uses equipment designed and maintained to operate within the cyanide loads it will be handling at the Port of Barnabas and along the road transport route.

GSWP-SL-01 Cyanide Transportation notes only equipment that is fit for purpose shall be used in the transportation of cyanide to Gosowong.

The mobile crane container lift cradle had a safe working load rating of 35 tonnes.

Vehicle power, axle loadings and other parameters are set by the manufacturer and the single 20 foot container loads are within the capacities of the vehicles and legal capacities of the public roads.

NHM vehicles and equipment are subject to a preventative maintenance programme managed through SAP. Inspection and maintenance records for the duration of the Recertification Audit Period were viewed for trucks, cranes and light vehicles.

Daily pre-start and after-start checklists are also completed for the trucks and cranes.

The adequacy of equipment is verified through NHM's scheduled weekly service and maintenance programme. These include the structural integrity of the equipment to identify signs of stress or overloading.

NHM does have procedures to prevent overloading of the transport vehicle being used for handling cyanide at the Port of Barnabas and along the road transport route. The design of the vehicles that handle cyanide prevent overloading as the trucks and cranes can only handle one container at a time.

NHM subcontracts PTTC to transport cyanide to between the Surabaya International Port and the Port of Barnabas. The contract requires PTTC to comply with the ICMC.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

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3.1.4 Transport Practice 1.4

Develop and implement a safety program for transport of cyanide.

	☒ **in full compliance with**	
The Supply Chain is	☐ in substantial compliance with	**Transport Practice 1.4**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Standard of Practice 1.4 requiring an implemented safety program for transport of cyanide.

PT. Nusa Halmahera Minerals

NHM has procedures to ensure that the cyanide is transported in a manner that maintains the integrity of the producer's packaging at the Port of Barnabas and for the road transportation to Gosowong.

GSWP-SL-01 Cyanide Transportation requires the sea containers to be inspected whilst being loaded onto the truck for any damage, such as leakage, surface damage and signs of any other physical damage. If a container is suspected of damage or damaged during unloading, it is transferred to a temporary storage bund located within the compounds of the Port.

During transport, all containers are held in place on the vehicles using twist locks and they are not opened prior to arrival at the Gosowong Gold Mine.

NHM ensures placards or other signage used to identify the shipment as cyanide, as required by local regulations or international standards. All cyanide is purchased from ICMC certified suppliers and is packaged in accordance with the IMDG Code.

NHM implements a safety programme for cyanide transport that includes the following:

a) Vehicle inspections prior to each departure/shipment:

   GSWP-SL-04 Escort of Material from Port to Site states that all drivers must complete a pre-start check for each vehicle, and must check for MSDS.

   Weekly services are undertaken on trucks and cranes. The checks include structural integrity and signs of stress and overloading.

b) A preventive maintenance programme:

   NHM vehicles are subject to a weekly service and maintenance programme. NHM light vehicles are subject to monthly checks. Inspection and maintenance records for the duration of the Recertification Audit Period were viewed for trucks, cranes and light vehicles.

c) Limitations on operator or drivers' hours:

   Loads are transported periodically and convoys travel only during daylight hours. The route is 15.2 km long; therefore the need for driver breaks is not required.

d) Procedures to prevent loads from shifting:

   Cyanide is stowed into the freight containers by the manufacturer. Solid cyanide is packed into UN-approved composite IBCs that are stowed to minimise movement in transport. These are secured

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using twist locks. Observations of containers being unpacked showed appropriate use of strapping and dunnage to prevent movement during transport.

e) Procedures by which transportation can be modified or suspended if conditions such as severe weather or civil unrest are encountered:

The *GSWP-SL-01 Cyanide Transportation* states that cyanide shall not be transported during fog, bad weather or civil unrest between the Port of Barnabas and Gosowong Gold Mine.

f) A drug abuse prevention program:

Newcrest *100-900-HE-GUI-0004 Fitness for Work and Wellbeing Guideline* states that there is a zero tolerance policy for alcohol and illicit drug use in the workplace. NHM undertake random testing. The frequency of testing shall be sufficient to fulfil the function of random testing as a deterrent.

g) Retention of records documenting that the above activities have been conducted:

Records are maintained and were inspected.

NHM subcontracts PTTC to transport cyanide to between the Surabaya International Port and the Port of Barnabas. The contract requires PTTC to comply with the ICMC.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

3.1.5 Transport Practice 1.5

Follow international standards for transportation of cyanide by sea and air.

	☒ **in full compliance with**	
The Supply Chain is	☐ in substantial compliance with	**Transport Practice 1.5**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Transport Practice 1.5 requiring the operation follow international standards for transportation of cyanide by sea and air.

PT. Nusa Halmahera Minerals

All cyanide is purchased from ICMC certified suppliers and is transported in accordance with the IMDG Code. Containers transported by NHM were placarded at the Tongsuh cyanide production facility in South Korea or AGR's facility in Australia in accordance with the requirements of the IMDG Code.

All containers have documentation prepared in accordance with the IMDG code, which is faxed to the shipping agent. A copy of the marine documentation is retained with the cargo at all times.

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Port of Ulsan

Golder conducted a due diligence assessment of the port of Ulsan. During periods of transit at the Port of Ulsan, containers of hazardous materials, including solid sodium cyanide, are stored in a dedicated Dangerous Goods storage facility at the Dong Bang Container Terminal. The previous due diligence review of the Port of Ulsan found that the Port of Ulsan's Dong Bang Container Terminal stores cyanide in a suitable dangerous goods area, albeit with concerns regarding storage of cyanide in proximity to incompatible materials. The review concluded that the Port of Ulsan complies with the principles of the ICMI Cyanide Transportation Verification Protocol, subject to the exception described above for storage in transit at the Dong Bang Container Terminal. Subsequent to the review, a letter was written to the terminal operator to follow up the issue of dangerous goods storage/incompatible materials.

No evidence was provided for the purpose of this audit to demonstrate that this issue was addressed by the Port of Ulsan however NHM ceased exporting cyanide from the Port of Ulsan in February 2014.

The Ulsan Regional Maritime Affairs and Fisheries Office (URMAFO) is the port authority for the Port of Ulsan and is responsible for all port operations including emergency response. Although Golder's due diligence did not feature a review of the URMAFO specific emergency response plan the URMAFO has emergency response capabilities in accordance with IMDG Code requirements.

The due diligence did not find new issues of concern in regards to the Port of Ulsan's management but it could not verify whether concerns identified in the previous due diligence relating to the storage of cyanide in proximity to incompatible materials had been addressed. NHM discontinued the use of WHL in 2014 after changing cyanide suppliers.

Wan Hai Lines

Golder conducted a due diligence assessment of WHL. As with the initial due diligence of WHL conducted for the Certification Audit, it was not possible during this due diligence to physically inspect a WHL cyanide shipment. Based on a review of the initial due diligence, shipping documentation and the company's website, it was similarly concluded that WHL appeared to transport cyanide in compliance with the IMDG Code. With specific reference to 1.5.1 g-i, the following was noted:

- *g) Does the ship carrying the cyanide have a list or manifest identifying the presence and location of the cyanide or a detailed stowage plan including this information, as required under Section 5.4.3.1 of the DG Code?*

  WHL ships have systems in place to ensure that they comply with the SOLAS Convention, including the IMDG Code.

  As far as can be ascertained, WHL arrange suitable stowage plans based on the dangerous classifications and segregation requirements. Containers containing solid sodium cyanide are placed and secured on WHL vessels at the loading port (Port of Ulsan) by the stevedoring company and removed at the port of destination (Port of Surabaya) by the stevedoring company at that port. It appears that WHL prepare stowage plans and manifests; refer to emergency response actions; and to segregation and separation requirements as required under the IMDG Code.

- *h) Does the ship carrying cyanide have cyanide emergency response information, as required under Section 5.4.3.2 of the DG Code?*

  WHL ships have been issued Safety Management Certificates indicating that the vessels are in compliance with the International Convention for the Safety of life at Sea (SOLAS), which includes the IMDG Code (Chapter 7) and the ISM Code (Chapter 9). Ships are surveyed annually and records are kept for each ship.

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Part of the documentation and associated systems used by WHL align with systems on their ships to prepare stowage plans and manifests as required by 5.4.3.1 of the IMDG Code; refer to emergency response actions as required by 5.4.3.2 of the IMDG Code; and to segregation and separation requirements in Part 7 of the IMDG Code. SOLAS Documents of Compliance for Special Requirements for Ships Carrying Dangerous Goods were sighted confirming segregation requirements.

WHL also has current certificates for its vessels under the International Code for the Security of Ships and port Facilities (ISPS Code).

- *i) Does the ship comply with the stowage and separation requirements of Part 7 of the DG Code?*

  The due diligence noted that WHL has systems in place to ensure compliance with the SOLAS Convention, which includes the IMDG Code (Chapter 7) and the ISM Code (Chapter 9). Ships are surveyed annually and records are kept for each ship. Part of the documentation and associated systems used by WHL align with systems on their ships to prepare stowage plans and manifests as required by 5.4.3.1 of the IMDG Code.

The due diligence did not find issues of concern in regards to WHL's management of solid sodium cyanide product. The assessment is not a final acceptance of WHL for future work and as with all service providers to NHM, NHM will continue to review and monitor their performance. NHM discontinued the use of WHL in 2014 after changing cyanide suppliers.

NHM discontinued the use of WHL in 2014 after changing cyanide suppliers.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

3.1.6 Transport Practice 1.6

Track cyanide shipments to prevent losses during transport.

	☒ **in full compliance with**	
The Supply Chain is	☐ in substantial compliance with	**Transport Practice 1.6**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Standard of Practice 1.6 requiring Tracking of cyanide shipments to prevent losses during transport.

PT. Nusa Halmahera Minerals

NHM has processes and equipment to ensure transport vehicles have means to communicate with the mining operation and emergency responders.

The shipment is transported in convoy. Communication is coordinated by the escort vehicle. The truck drivers carry hand held radios, while the escort vehicle has a radio and mobile telephone. The Lead Driver communicates with the Port and Mine when in transit, and in an emergency it is the responsibility of the Lead Driver to contact the Emergency Response Team (ERT).

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GSWP-ST-04 Escort of Material from Port Site details the requirement use of radio communication between the vehicles and Project Safety Officer before commencing a convoy.

NHM tests the communication equipment through continuous use.

NHM has identified communication blackout areas and these are detailed within *GSWP-SL-O1 Cyanide Transportation* procedure. The ERT and/or Lead Driver of the convoy communicate to Site Safety and Security that trucks have departed the Port of Barnabas using a two-way radio and mobile phone, which have coverage at the Port of Barnabas. The ERT and/or the Lead Driver will communicate by mobile phone to Site Safety and Security when the trucks leave the communication blackout area.

NHM does track of the progress of cyanide shipments through communications using two-way radios and mobile telephones. NHM keep up to date of the scheduled arrival of the shipment up to three months in advance. Shipping vessels are tracked with GPS, as only vessels with GPS are contracted by the Freight Forwarding Agent (PTTC). PTTC is responsible for updating NHM on the progress of the cargo voyage by email and mobile phone.

Vessels are obligated to report their positions to the Indonesian Navy, and Port Authority daily.

NHM does implement inventory controls and/or chain of custody documentation to prevent the loss of cyanide during shipment. The operation has chain of custody records identifying all elements of the supply chain (producer and transporter) that handle the cyanide brought to its site. The cargo weights are verified against the manifest by the Port Supervisor. During truck loading at the Port of Barnabas, containers are inspected for any damage such as leakage, surface damage or signs of any other physical damage.

Shipping records indicating the amount of cyanide in transit and Material Safety Data Sheets are available during transport. The MSDS is available in both Bahasa and English. .

NHM subcontracts PTTC to transport cyanide to between the Surabaya International Port and the Port of Barnabas. The contract requires PTTC to comply with the ICMC.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

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3.2 Principle 2 – Interim Storage

Design, construct and operate cyanide trans-shipping depots and interim storage sites to prevent release and exposures.

3.2.1 Transport Practice 2.1

Store cyanide in a manner that minimises the potential for accidental releases.

	☒ **in full compliance with**	
The Supply Chain is	☐ in substantial compliance with	**Transport Practice 2.1**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Standard of Practice 2.1 requiring cyanide to be stored in a manner that minimises the potential for accidental releases.

PT. Nusa Halmahera Minerals

Storage facilities are available at the Port of Barnabas; however, these are only used in case of emergencies.

Warning signs advising workers that cyanide is present and that, if necessary, suitable Personal Protective Equipment (PPE) must be worn, are located at the Port of Barnabas. Additional signs are displayed at the entrance to the storage area to prohibit smoking, eating and drinking. These messages are reinforced in the Cyanide Storage Induction. Observations made during the audit were consistent with these prohibitions.

Security measures are in place to prevent unauthorised access to cyanide, such as lockouts on valves, and fenced and locked storage of solids.

When a vessel arrives at the Port of Barnabas, cyanide is either unloaded directly onto a truck for transport to the Gosowong Mine Site or it is stored on the LCT until transport resumes. No cyanide containers are stored at the Port of Barnabas during normal operational activities.

The Port of Barnabas area is fenced, with guards placed at the entry point. Correct identification is required to gain access to the Port of Barnabas.

All containers are kept locked until they are unloaded at the Gosowong Gold Mine.

Cyanide is separated from incompatible materials. All cyanide is packed by a Code certified producer into IBCs and placed with shipping containers. No other product is stored within the containers.

At no point during transport are the containers opened.

Cyanide is stored in a manner designed to minimise the potential for contact of solid cyanide with water. Cyanide is stored in IBCs within fully enclosed shipping containers. There is negligible potential for contact with water.

The Port of Barnabas containment area is located in an open yard with suitable separation distances for buildings and other containers, which allows natural ventilation to prevent the build-up of hydrogen cyanide gas.

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PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

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3.3 Principle 3 – Emergency Response

Protect communities and the environment through the development of emergency response strategies and capabilities.

3.3.1 Transport Practice 3.1

Prepare detailed Emergency Response Plans for potential cyanide releases.

	☒ **in full compliance with**	
The Supply Chain is	☐ in substantial compliance with	**Transport Practice 3.1**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Standard of Practice 3.1 requiring a detailed emergency response plan for potential cyanide releases.

PT. Nusa Halmahera Minerals

NHM has developed a *Cyanide Emergency Response Plan (*CERP*)* that encompasses response to cyanide emergencies at the mine, along the transport route and at the Port.

This plan is dedicated to cyanide emergencies. The CERP sits beneath the overarching *Emergency Management Plan* (EMP), which regulates the management of all emergencies involving the site at Gosowong, Manado office and Jakarta office. The CERP is appropriate for emergencies which falls within Gosowong Gold Mine's area of responsibility and where PT Nusa Halmahera Minerals (NHM) has legal, ethical or community responsibilities. The CERP covers responses to emergencies involving cyanide at the mine, along the transport route and at the Port.

The CERP considers port facilities and road transportation of solid cyanide via truck to the mine. The CERP details response actions for ERT personnel.

The CERP considers aspects of transport infrastructure and design of the transport vehicle.

The CERP describes the response actions for various transport emergency situations, including:

- Solid sodium cyanide spill to water
- Uncontained spills
- Contained spills.

The plan considers both offsite and onsite transport emergencies.

NHM has established self-sufficient emergency response capabilities on the island. As such, there are no external responders and medical facilities used in the cyanide emergency planning and response process.

The community has not been allocated a role in the event of an emergency.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

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3.3.2 Transport Practice 3.2

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

The Supply Chain is
☐ in full compliance with
☐ in substantial compliance with **Transport Practice 3.2**
☒ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

NHM is in NON COMPLIANCE with Standard of Practice 3.2 requiring designated appropriate response personnel and committed resources for emergency response.

PT. Nusa Halmahera Minerals

Each convoy includes an ERT which is responsible for responding to all transport emergency incidents, including those related to cyanide. Non-ERT members (such as drivers and Port employees) are not required to respond to cyanide incidents if they have not been appropriately trained to do so.

NHM has provided some evidence; however the material provided is not sufficient to demonstrate full compliance with the CERP training commitments or Code requirements that Emergency Response Coordinators and members of the Emergency Response Team are trained in the procedures included in the CERP regarding cyanide. NHM is now considered Non-Compliant with this Standard of Practice.

The EMP designates the General Manager (GM) as the Emergency Management Team (EMT) Leader or a suitable/appointed Department Head as an alternate if the GM is unavailable. The EMT Leader retains overall control of the event and site/operations, including the activation of resources.

The CERP lists the equipment that should be available for emergency response during transport and unloading at the Port. This includes:

- PPE
- Containment equipment
- Treatment chemicals
- Communication equipment
- Monitoring equipment.

In addition, several inspection sheets maintained by the ERT and site clinic list the equipment available to them.

NHM does have the necessary emergency response and health and safety equipment available during transport. The ERT escort vehicle carries PPE, containment and communications equipment to allow first response in the event of a cyanide emergency. In addition, further equipment is available on-site, which is approximately 15.2 km from the Port.

Each convoy includes an ERT escort that is responsible for responding to all transport emergency incidents, including those related to cyanide. Non-ERT members (such as drivers and Port employees) are not required to respond to cyanide incidents if they have not been appropriately trained to do so.

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NHM has been unable to provide sufficient evidence to demonstrate that transport vehicle operators or other transport personnel with assigned emergency response roles receive initial and periodic refresher training in emergency response procedures including implementation of the Emergency Response Plan; therefore NHM is now considered Non-Compliant with this Code requirement.

Evidence was observed to show that NHM does inspect its first aid equipment regularly to ensure that it is available when needed, and materials are stored and/or tested as directed by their manufacturer.

Medical staff in the clinic inspect the cyanokits daily and monthly. The medical staff inspect the contents of the ambulances on a weekly basis.

Oxygen is inspected on a daily and monthly basis by medical staff (those located in the clinic and ambulance), whilst the ERT inspect oxygen at all other locations on a weekly basis. During the first week of every month, the ERT inspects the ERT equipment.

NHM subcontracts PTTC to transport cyanide to between the Surabaya International Port and the Port of Barnabas. The contract requires PTTC to comply with the ICMC.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

3.3.3 Transport Practice 3.3

Develop procedures for internal and external emergency notification and reporting.

	☐ in full compliance with	
The Supply Chain is	☒ **in substantial compliance with**	**Transport Practice 3.3**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in SUBSTANTIAL COMPLIANCE with Standard of Practice 3.3 requiring procedures for internal and external emergency notification and reporting.

PT. Nusa Halmahera Minerals

NHM's emergency documentation includes procedures and contact information for notifying management, regulatory agencies, outside response providers and medical facilities of the cyanide emergency during transport.

In the event of an emergency, personnel are instructed to raise the alarm via the emergency radio channel or the emergency phone number. These contact points are manned 24 hours a day by ERT members, who assess what facets of emergency response are required. The ERT Captain is then required to contact the Duty Safety Officer, who will in turn contact the EMT Leader (GM or appointed Department Head). A decision will then be made on whether the EMT requires activation. The EMT has personnel responsible for internal and external communication.

Key internal and external contact information is contained within the CERP. Contact information for ISOS is contained within the Medical Evacuation Plan. Whilst not specifically referring to internal and external contact information, section 1.2 of the CERP states:

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The cyanide emergency plan shall be reviewed every year to ensure that it is current and applicable to changes to other procedures, plant and equipment.

The CERP document revision history demonstrates that the CERP was not reviewed between 8 April 2011 and 2 October 2014. The most recent version of the CERP (version 7) was provided on 22 May 2015.

NHM has subsequently expressed that there was no change to the process and that the document still remained suitable to operations during this period. However sufficient evidence has not been supplied to confirm that NHM evaluates the cyanide related elements of its emergency response plan for adequacy on a regular basis, therefore the NHM is considered in Substantial Compliance with this Standard of Practice.

In making this determination it was noted that:

- NHM had shown a good faith effort by conducting one of the three required reviews and noting that there was no change to the process and that the document still remained suitable to operations during this period.
- The deficiency is readily correctable within one year.
- The deficiency does not represent an immediate risk to personnel or the environment as the document still remained suitable to operations during this period.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

3.3.4 Transport Practice 3.4

Develop procedures for remediation of releases that recognise the additional hazards of cyanide treatment.

	☒ **in full compliance with**	
The Supply Chain is	☐ in substantial compliance with	**Transport Practice 3.4**
	☐ not in compliance with	

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in FULL COMPLIANCE with Standard of Practice 3.4 requiring procedures for remediation of releases that recognise the additional hazards of cyanide treatment.

PT. Nusa Halmahera Minerals

The CERP contains procedures during transport and cyanide handling at the Port for remediation, such as recovery or neutralisation of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill clean-up debris.

The CERP prohibits the use of chemicals to treat cyanide that has been released into surface water along the transport route. Section 4.5 of the CERP states:

"Treatment of any spill of cyanide, whether in pellet form or in solution, to flowing water sources other than water which is contained within the metallurgical water circuit should not be attempted. Such interventions are generally ineffective due to the inability to ensure effective mixing or treatment

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chemicals with contaminated water [sic]. *Treatment chemicals themselves are also harmful to aquatic fauna and water users. Emergency response efforts should in such cases be aimed at emergency management measures to limit the effects of the spill on humans and biota."*

The CERP allows the use of sodium hypochlorite to neutralise spills to soil. However, it prohibits the use of this chemical or other neutralising agents in surface drainage areas.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

3.3.5 Transport Practice 3.5

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

The Supply Chain is
☐ in full compliance with
☐ in substantial compliance with **Transport Practice 3.5**
☒ **not in compliance with**

Summarise the basis for this Finding/Deficiencies Identified:

The NHM Gosowong Mine Supply Chain is in NON COMPLIANCE with Standard of Practice 3.5 requiring periodically evaluating response procedures and capabilities and revising them as needed.

PT. Nusa Halmahera Minerals

As noted in 3.3.2, the CERP contains provisions for periodic review and evaluation, however they are not being implemented.

A passage in the CERP requires it to be reviewed on an annual basis. The CERP document revision history demonstrates that the CERP was not reviewed between 8 April 2011 and 2 October 2014. The most recent version of the CERP (version 7) was provided on 22 May 2015.

NHM has subsequently expressed that there was no change to the process and that the document still remained suitable to operations during this period. However sufficient evidence has not been supplied to confirm that NHM evaluates the cyanide related elements of its emergency response plan for adequacy on a regular basis.

NHM has not been able to demonstrate that the ICMC requirements for periodically conducting mock drills have been met for the duration of the Recertification Audit Period; therefore the operation is now considered to be Non-Compliant with this Code requirement.

NHM only conducted a single cyanide transportation emergency drill (13 December 2014) for the duration of the Recertification Audit Period. This drill involved the ERT responding to a cyanide transportation incident. Meeting minutes of the drill debriefing and evaluation session were kept.

The CERP states:

"Cyanide Emergency Response Training including mock drills shall be conducted annually to provide adequate skills to respond to a cyanide incident on-site and offsite".

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The CERP has a requirement for review following its activation for a cyanide related emergency. There have been no transport incidents requiring the activation of the CERP for the duration of the audit period.

PT. Trans Continent Supply Chain

The PTTC Supply Chain was recertified as being in full compliance with the ICMC on 2 December 2014.

Port of Barnabas

Refer to NHM section above.

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4.0 DUE DILIGENCE

4.1 Shipping

4.1.1 Wan Hai Lines (WHL) – Recertification Audit Period Desktop Due Diligence Review

Golder conducted a due diligence of WHL on 18 May 2015. Ed Clerk meets the ICMI requirements for a Transport Expert.

The following items were addressed within the due diligence:

- Introduction
- ICMC Transport Verification Protocol Assessment
  - Transport Practice 1.1 (Questions 1-4 and 6)
  - Transport Practice 1.5.1 (Question 1, items g - i)
  - Transport Practice 2.1
- Conclusion

Due to access restrictions, the due diligence was conducted as a desktop process.

4.1.1.1 Introduction

WHL was founded in 1965 and is engaged in international shipping services throughout the Pacific and Indian Oceans. WHL, headquartered in Taipei, Taiwan, operates a fleet of 75 vessels with shipping coverage throughout the Pacific and Indian Oceans. WHL has subsidiaries and agents over Asia's major cities and ports.

WHL's shipping routes include Taiwan, Kanton and Kansai areas of Japan, Korea, Mainland China, Hong Kong, Philippines, Thailand, Malaysia, Indonesia, Singapore, Vietnam, Burma, Cambodia, India, Pakistan, Sri Lanka, and the Middle East. WHL provides full-container shipping services with regular routes among these areas. Its network includes subsidiaries and agents in all of Asia's major cities and ports.

WHL is certified to ISO 14001:2004 for fleet management and marine operation of sea going vessels and cargo transportation. The initial certification date was 22 September 2005.

WHL states their operations and services are committed to safety and pollution prevention. WHL implement a number of safety and environmental protection measures, including compliance with relevant articles of the International Safety Management Code and other international conventions and improving safety management skills of its personnel including emergency preparations related to safety and environmental protection.

4.1.1.2 Transport Practice 1.1

WHL is a carrier service providing international shipping of containers on a fleet of their container vessels. Containers containing sodium cyanide are placed and secured on their vessels at the loading port by the port stevedoring company or service provider, and removed at the port of destination by the stevedoring company or service provider at that port. Simply put WHL provides a carrier service handling of containers is done by the stevedoring companies at each port.

The selection of WHL by NHM considered its shipping routes between the Port of Ulsan and Indonesia.

NHM does not have control of the routes taken by WHL between the Port of Ulsan and Indonesia. In selecting a route, shipping lines must take into account factors such as tides, currents, winds, storms and load compatibilities.

WHL operates a container booking and tracking system. The system is also the management tool for handling the dangerous goods cargo for the proper control of the stowage of hazardous cargo.

4.1.1.3 Transport Practice 1.5 (1.5.1 g-i)

Containers of cyanide are received at the Port of Ulsan already sealed for transport by the cyanide manufacture. Consequently, the due diligence was limited to the ICMI Transport Practices that specifically referenced provisions of the IMDG Code, namely 1.5.1 g-i. WHL appears to comply with these requirements.

As with the initial due diligence of WHL conducted for NHM by Ken Price of Riskom International on 11 February 2011, it was not possible during this due diligence to physically inspect a WHL cyanide shipment. Based on a review of the initial due diligence, shipping documentation and the company's website, it was similarly concluded that WHL appeared to transport cyanide in compliance with the IMDG Code. With specific reference to 1.5.1 g-I, the following was noted:

- *g) Does the ship carrying the cyanide have a list or manifest identifying the presence and location of the cyanide or a detailed stowage plan including this information, as required under Section 5.4.3.1 of the DG Code?*

  WHL ships have systems in place to ensure that they comply with the SOLAS Convention, including the IMDG Code.

  As far as can be ascertained, WHL arrange suitable stowage plans based on the dangerous classifications and segregation requirements. Containers containing solid sodium cyanide are placed and secured on WHL vessels at the loading port (Port of Ulsan) by the stevedoring company and removed at the port of destination (Port of Surabaya) by the stevedoring company at that port. It appears that WHL prepare stowage plans and manifests; refer to emergency response actions; and to segregation and separation requirements as required under the IMDG Code.

- *h) Does the ship carrying cyanide have cyanide emergency response information, as required under Section 5.4.3.2 of the DG Code?*

  WHL ships have been issued Safety Management Certificates indicating that the vessels are in compliance with the International Convention for the Safety of life at Sea (SOLAS), which includes the IMDG Code (Chapter 7) and the ISM Code (Chapter 9). Ships are surveyed annually and records are kept for each ship.

  Part of the documentation and associated systems used by WHL align with systems on their ships to prepare stowage plans and manifests as required by 5.4.3.1 of the IMDG Code; refer to emergency response actions as required by 5.4.3.2 of the IMDG Code; and to segregation and separation requirements in Part 7 of the IMDG Code. SOLAS Documents of Compliance for Special Requirements for Ships Carrying Dangerous Goods were sighted confirming segregation requirements.

  WHL also has current certificates for its vessels under the International Code for the Security of Ships and port Facilities (ISPS Code).

- *i) Does the ship comply with the stowage and separation requirements of Part 7 of the DG Code?*

  The due diligence noted that WHL has systems in place to ensure compliance with the SOLAS Convention, which includes the IMDG Code (Chapter 7) and the ISM Code (Chapter 9). Ships are

surveyed annually and records are kept for each ship. Part of the documentation and associated systems used by WHL align with systems on their ships to prepare stowage plans and manifests as required by 5.4.3.1 of the IMDG Code.

4.1.1.4 Conclusion

The due diligence did not find issues of concern in regards to WHL's management of solid sodium cyanide product. The assessment is not a final acceptance of WHL for future work and as with all service providers to NHM, NHM will continue to review and monitor their performance. NHM discontinued the use of WHL in 2014 after changing cyanide suppliers.

4.2 Ports

4.2.1 Port of Ulsan – Certification Audit Period Due Diligence Review

Golder conducted a due diligence of WHL on 18 May 2015. Ed Clerk meets the ICMI requirements for a Transport Expert.

The following items were addressed within the due diligence:

- Introduction
- ICMC Transport Verification Protocol Assessment
  - Transport Practice 1.1 (Questions 1-4 and 6)
  - Transport Practice 1.5.1
  - Transport Practice 2.1
- Conclusion

Due to access restrictions, the due diligence was conducted as a desktop process.

4.2.1.1 Introduction

The Port of Ulsan is used by NHM for the export of sodium cyanide from South Korea to the Port of Surabaya in the Republic of Indonesia. The Port of Ulsan lies on the south-eastern shores of South Korea, facing the Sea of Japan. The Port of Ulsan is about 50 kilometres northeast of the Port of Busan and about 60 kilometres south of the Port of Pohang. Located along the international arterial route of liquid cargo transportation between the American continents and the Asian region, the port has been fostered as a hub port of liquid cargo transportation in Northeast Asia by making the most of its geologically favourable conditions which involve well-developed industrial infrastructure such as liquid cargo storages.

The Port of Ulsan consists of the Ulsan Main Port, Onsan Port and Mipo Ship Yard with a total of 96 berths and wharves with capacity for general cargo vessels of up to 50 thousand tons, buoy moorings with capacity to handle crude oil carriers of up to 350 thousand tons, and dolphins that can accommodate oil tankers to 150 thousand tons. The Ulsan Regional Maritime Affairs and Fisheries Office (URMAFO) is responsible for developing, managing and operating the Port of Ulsan.

The Port of Ulsan handles a significant proportion of the nation's imports and exports. The Port of Ulsan handles more than half of South Korea's crude oil imports, almost half of the country's automobile exports, and over 40% of its shipbuilding exports. The Port of Ulsan handles over 161 million tonnes of cargo per annum.

The Port of Ulsan also has a warehouse covering with storage capacity for seven thousand cubic meters of cargo and open storage with capacity for over one million tons of cargo. During periods of transit at the Port of Ulsan containers of hazardous materials, including solid sodium cyanide, are stored in a dedicated Dangerous Goods storage facility at the Dong Bang Container Terminal.

4.2.1.2 Transport Practice 1.1

The Port of Ulsan is used as an export facility for cyanide manufactured by Tongsuh as it is located in close proximity to the cyanide manufacture and it is services by a shipping company that has routes to Indonesia.

4.2.1.3 Transport Practice 1.5

It was not possible during this due diligence to physically inspect this facility. The due diligence was completed based on a review of the initial due diligence, shipping documentation and the company's website.

During periods of transit at the Port of Ulsan, containers of hazardous materials, including solid sodium cyanide, are stored in a dedicated Dangerous Goods storage facility at the Dong Bang Container Terminal. The due diligence review of the Port of Ulsan conducted by Riskom International Pty Ltd in February 2011 comprised of a site visit and inspection of relevant port facilities (including the Dong Bang Container Terminal), interviews and discussions with appropriate personnel and review of applicable documentation.

This assessment found that the Port of Ulsan's Dong Bang Container Terminal stores cyanide in a suitable dangerous goods area, albeit with concerns regarding storage of cyanide in proximity to incompatible materials. The review concluded that the Port of Ulsan complies with the principles of the ICMI Cyanide Transportation Verification Protocol, subject to the exception described above for storage in transit at the Dong Bang Container Terminal. Subsequent to the review, a letter was written to the terminal operator to follow up the issue of dangerous goods storage/incompatible materials.

No evidence was provided for the purpose of this audit to demonstrate that this issue was addressed by the Port of Ulsan however NHM ceased exporting cyanide from the Port of Ulsan in February 2014.

The Ulsan Regional Maritime Affairs and Fisheries Office (URMAFO) is the port authority for the Port of Ulsan and is responsible for all port operations including emergency response. Although Golder's due diligence did not feature a review of the URMAFO specific emergency response plan the URMAFO has emergency response capabilities in accordance with IMDG Code requirements.

4.2.1.4 Conclusion

The due diligence did not find new issues of concern in regards to the Port of Ulsan's management but it could not verify whether concerns identified in the previous due diligence relating to the storage of cyanide in proximity to incompatible materials had been addressed. NHM discontinued the use of WHL in 2014 after changing cyanide suppliers.

5.0 IMPORTANT INFORMATION

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

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Name of Facility	Signature of Lead Auditor	Date

Report Signature Page

GOLDER ASSOCIATES PTY LTD

Mike Woods
ICMC Lead Auditor/Technical Specialist

DCR/EWC/eh

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APPENDIX A

Important Information

IMPORTANT INFORMATION RELATING TO THIS REPORT

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

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

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

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

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

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

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

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

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

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

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

At Golder Associates we strive to be the most respected global company providing consulting, design, and construction services in earth, environment, and related areas of energy. Employee owned since our formation in 1960, our focus, unique culture and operating environment offer opportunities and the freedom to excel, which attracts the leading specialists in our fields. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees who operate from offices located throughout Africa, Asia, Australasia, Europe, North America, and South America.

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