

# INTERNATIONAL CYANIDE MANAGEMENT CODE

# **Pioneer Ocean Freight Transportation Certification** Audit (Amendment), Thailand, **Summary Audit Report**

#### Submitted to:

International Cyanide Management Institute 888 16th Street, NW-Suite 303 Washington, DC 20006 UNITED STATES OF AMERICA

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- 1 Copy ICMI (+1 electronic)
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- 1 Copy Golder Associates Pty Ltd







# **Table of Contents**

1.0	INTRODUCTION		
	1.1	Operational Information	1
	1.2	Description of Operation	1
	1.2.1	Pioneer Group of Companies	1
	1.2.2	Pioneer Ocean Freight	2
	1.2.3	Road Transportation	2
	1.2.3.1	Nanon Inter Freight	2
	1.2.3.2	Nava Inland Transport Ltd	2
	1.2.3.3	Tong Transmission Company Limited	2
	1.2.4	Marine Transportation	3
	1.2.5	Ports	3
	1.2.5.1	Port of Laem Chabang, Thailand	3
	1.3	Transit Storage	3
	1.4	Auditors Findings and Attestation	
	1.5	Name and Signatures of Other Auditors:	4
	1.6	Dates of Audit	2
2.0	CONSI	GNOR SUMMARY	5
	2.1	Principle 1 – Transport	5
	2.1.1	Transport Practice 1.1	5
	2.1.2	Transport Practice 1.2	8
	2.1.3	Transport Practice 1.3	10
	2.1.4	Transport Practice 1.4	12
	2.1.5	Transport Practice 1.5	14
	2.1.6	Transport Practice 1.6	15
	2.2	Principle 2 – Interim Storage	17
	2.2.1	Transport Practice 2.1	
	2.3	Principle 3 – Emergency Response	19
	2.3.1	Transport Practice 3.1	
	2.3.2	Transport Practice 3.2	
	2.3.3	Transport Practice 3.3	
	2.3.4	Transport Practice 3.4	
		•	





4.0	I IMITA	TIONS	27
	3.2	Auditor Review of Due Diligence	27
	3.1	Port of Laem Chabang	27
3.0	DUE DI	LIGENCE	27
	2.3.5	Transport Practice 3.5	25

APPENDICES
APPENDIX A
Limitations





#### 1.0 INTRODUCTION

### 1.1 Operational Information

Name of Transportation Facility: Pioneer Ocean Freight

Name of Facility Owner: Not Applicable

Name of Facility Operator: Pioneer Ocean Freight (Pioneer)

Name of Responsible Manager: Chamlong Phuncharoensin, General Manager

Address: Pioneer Ocean Freight

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**Telephone:** +662 3673655-68

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**E Mail:** Chamlong@PioneerGroup.in.th

# 1.2 Description of Operation

### 1.2.1 Pioneer Group of Companies

Pioneer Group of Companies (PCG) was founded in 1972 and today is now an international freight forwarder and multi-modal transport operator. The PGC consists of several companies specialising in a range of services including (but not limited to) the following:

- Air freight booking
- Sea freight booking
- Multi-modal Transport operations
- Customs clearance
- Packaging
- Warehousing
- Inland transportation
- Container haulage Services.

Pioneer Ocean Freight 5 April 2013

Name of Facility Signature of Lead Auditor Date



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#### PIONEER OCEAN FREIGHT, SUMMARY AUDIT REPORT

### 1.2.2 Pioneer Ocean Freight

Pioneer forms the Thailand transportation arm of PGC and has been established for 30 years. The company employs approximately 200 staff including 35 drivers, and has a dedicated fleet of 40 prime movers and trailers each capable of carrying up to 28 tonnes. Pioneer specialises in:

- Customs clearance
- International freight forwarding and multi-modal transport
- Export documentation
- Packing, crating and unpacking, warehousing
- Inland transportation, container trucking
- Air transportation and air courier services.

Pioneer currently transports approximately 2 400 tonnes per annum of cyanide from the Port of Laem Chabang to mine sites in Thailand and Laos.

Pioneer subcontracts the driving of trucks and convoy support vehicles, in part, to:

- Nannon
- Nava
- Tong Trans.

#### 1.2.3 Road Transportation

#### 1.2.3.1 Nanon Inter Freight

Nanon is a private company founded in 2000, under Nanon Group jointly owned and operated by its management team. Nanon provides freight and logistic services to companies and projects in Thailand and Indochina. Nanon transports cyanide to Ban Houayxai Gold Mine (operated by PanAust Limited) in Laos

#### 1.2.3.2 Nava Inland Transport Ltd

Nava Inland Transport Company was established in 1993 and has its head office in Bangkok. They also have a depot in Chonburi.

The depot is approximately 19 200 m<sup>2</sup> in size with container storage for approximately 1 400 TEUs and the rest of the depot is for general freight storage and truck and trailer maintenance.

Nava Inland Transport currently has a fleet of 30 trucks and in excess of 40 railers of various sizes for general freight and container transportation and a separate fleet for movement of heavy and outsize loads.

Nava has been a subcontractor of Pioneer Ocean Freight for over 10 years and has successfully transported all containers of cyanide to the Chatree Mine Site (operated by Akara Mining) in Thailand during this time with no incidents.

### 1.2.3.3 Tong Transmission Company Limited

Tong Trans Co Ltd (Tongtrans) was established in 1994 and has its head office in Chonburi Thailand. They also have a branch office in Samutprakarn.

Tongtrans specialise in domestic transportation within Thailand and in transit transportation to Laos.

Pioneer Ocean Freight 5 April 2013

Name of Facility Signature of Lead Auditor Date





The current fleet consists of some 34 trucks and 50 trailers of various sizes, including low bed trailers, all of which are maintained by Tongtrans under a comprehensive maintenance programme.

Tongtrans has been a subcontractor of Pioneer Ocean freight for over 10 years and has made all deliveries of cyanide to the Sepon Mine Site (operated by MMG Limited) in Laos during this time with no incidents.

#### 1.2.4 Marine Transportation

#### 1.2.5 **Ports**

### 1.2.5.1 Port of Laem Chabang, Thailand

The Port of Laem Chabang is Thailand's premier deep sea port located on the Eastern Shore of the Upper Gulf of Thailand, approximately 110 km south of Bangkok. The port is under the overall management of The Port Authority of Thailand. It presently operates 11 terminals to accommodate various types of vessels including container ships, bulk carriers, pure car carriers and passenger liners.

The port currently handles approximately 3.5 million equivalent container units (TEUs) per annum, which include approximately 24 000 containers of Dangerous Goods.

AGR ships sodium cyanide to this port via MSC for end user mines in Thailand and Laos. A due diligence review of this port was undertaken on 18 October 2012 and concluded that AGR had no concerns regarding the handling of its product at Laem Chabang.

At the Port of Laem Chabang, AGR's sodium cyanide is unloaded the stevedoring company (Maersk Logistics) and temporarily stored at the Dangerous Goods Logistics Centre (the Centre) whilst the necessary customs clearances are obtained. The Centre is located within the Port area and is managed by JWD InfoLogistics Co Ltd to International Maritime Organisation Dangerous Goods (IMO DG) Code regulations, under a long term lease agreement with the port authorities. The JWD InfoLogistics have over 30 years' experience in the handling and storage of dangerous goods (DG), and have been operating at the Port for six years.

The Centre is laid out by DG Class and this allows the required segregation of products and classes. Each DG Class area is designated with signs and each container is allotted a bay within its DG Class area. The cyanide lay down area (Class 6) is segregated by distance from other DG Classes. The same segregation exists between different DG Classes.

### 1.3 Transit Storage

Within the scope of this audit, there are no trans-shipping depots or interim storage sites, as defined in the audit protocol. Storage in transit does occur at the Port of Laem Chabang while formalities such as customs clearance and carrier releases are performed. Once formalities are complete, the cyanide containers are collected from the Port of Laem Chabang and delivered to Chatree Mine in Thailand (operated by Akara Mining) and Sepon Mine in Laos. At no stage is cyanide removed from the trucks or containers prior to unloading at customer mine sites

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





# 1.4 Auditors Findings and Attestation

in full compliance with

Orica Papua New Guinea

Supply Chain is:

In substantial compliance with

Cyanide Management

Code

not in compliance with

Audit Company: Golder Associates

Audit Team Leader: Edward Clerk, CEnvP (112), RABQSA (020778)

Email: eclerk@golder.com.au

## 1.5 Name and Signatures of Other Auditors:

Name	Position	Signature	Date
Edward Clerk	Lead Auditor and Technical Specialist	L. bull.	5 April 2013

#### 1.6 Dates of Audit

The Certification Transport Audit of Pioneer was undertaken over three days (six person-days) between 7 and 9 September 2010.

The Certification Transport Audit (amendment) to incorporate the additional subcontractor (Nanon) was undertaken over two days (two person-days) between 1 and 2 November 2012.

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.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





Date

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#### 2.0 CONSIGNOR SUMMARY

### 2.1 Principle 1 – Transport

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

#### 2.1.1 Transport Practice 1.1

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

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

#### Summarise the basis for this Finding/Deficiencies Identified:

Pioneer is in FULL COMPLIANCE with Transport Practice 1.1 requiring cyanide transport routes to be selected to minimise the potential for accidents and releases.

#### Pioneer Ocean Freight

Pioneer, in consultation with its suppliers has implemented a procedure to guide the selection of transport routes to minimise the potential for accidents and releases or the potential impacts of accidents and releases. The process is to assess routes prior to commencement of the initial transport then monitor the operation through driver trip reports. Routes are selected by the General Manager in consultation with Orica and AGR Managers. A procedure is in place that prompts considerations of:

- Areas of population density
- Waterways
- Major intersections
- Road construction and condition (e.g. type of surface, condition, width; pitch and gradient)
- Medical facilities
- Border crossings
- Communications availability
- Other areas of note.

The evaluation and selection of routes is undertaken through a risk assessment process conducted in accordance with risk tables outlined in Pioneer Ocean Freight Procedure No. 3 - Route Assessments. The route risk assessment documentation contained a flow chart outlining the Risk Management Process as outlined in AS/NZS 31000:2009 Risk Management - Principles and Guidelines.

Route risk assessments have been undertaken for the transport of cyanide to Ban Houayxai, Chatree and to Sepon. The subcontractor companies are encouraged to participate in the risk assessment process and discussions with the Nanon Risk and Dangerous Goods Coordinator confirmed this.

The risk assessments observed also considered unloading and transit storage at the Port of Laem Chabang.

Pioneer Ocean Freight 5 April 2013

Name of Facility Signature of Lead Auditor Date



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#### PIONEER OCEAN FREIGHT, SUMMARY AUDIT REPORT

Pioneer has identified the stakeholders in Thailand and Laos, and seeks input from stakeholders and applicable governmental agencies as necessary in the selection of routes and development of risk management measures.

The General Manager stated that within Thailand and Laos it is the responsibility of the government to consult with the community on the issue of cyanide transportation. For this reason Pioneer has not directly consulted with the community in regards to route selection.

Convoys are used as a means of managing the risks of the road conditions and responding to emergencies. The route risk assessments identify convoys as a means of managing risks and the convoy procedures are described within the *Transport Management Plan* (TMP) and in the *Minimum Requirements for Implementation of Convoys and Minimum Standards for Convoy Operations Procedure* (Convoy Management Procedure).

In addition to convoys, security measures are implemented including the use of locked and sealed containers.

Pioneer has advised external responders, medical facilities and communities as necessary of their roles during an emergency response. Pioneer has sent the ERP to external stakeholders who have a role in emergency response.

Pioneer has implemented individual Service Level Agreements with Nava, Tongtrans and Nanon which are signed off by the Pioneer General Manager. Included in the agreement is the requirement for, amongst other regulatory requirements, compliance with the Code.

In addition to the formal contractual arrangements and assessments, ongoing performance of subcontractors is also managed through the convoy process. All convoy personnel, including subcontractors, are under the direct control of the Escort Supervisor who is a Pioneer employee.

#### Tong Transmission Company Limited

Tongtrans is contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

#### Nava Inland Transportation Limited

Nava is contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

#### Nanon Inter Freight Limited

Nanon is contracted by Pioneer to transport cyanide manufactured by AGR from the Port of Laem Chabang to the Sepon and Ban Houayxai Gold Mines in Laos. The cyanide is transported in convoys comprising Nanon trucks and led by a Nanon escort vehicle. A Pioneer escort vehicle tails the convoy. The convoy is managed in accordance with Pioneer procedures.

The Nanon Risk and Dangerous Goods Coordinator advised that morning tool box information sessions are conducted by the Convoy Escort with truck drivers. The sessions cover a range of health and safety topics including route conditions.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





#### Port of Laem Chabang

Pioneer does not have control over the handling of shipping lines and their cargo at the Port of Laem Chabang. The Port Authority's Harbour Master oversees the operation of the overall Port operations, including entities contracted to perform port operations.

Pioneer has undertaken a review of the port operations that the transportation, handling and storage of its sodium cyanide is to acceptable standards. The Pioneer due diligence report concludes that:

"The ongoing review as a service provider and this due diligence report has found no issues of concern in regards to The Port Authority of Thailand and its lease operators..."

Pioneer Ocean Freight

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5 April 2013





#### 2.1.2 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 operation is ☐ in substantial compliance with ☐ not in compliance with
 ☐ not in compliance with

#### Summarise the basis for this Finding/Deficiencies Identified:

Pioneer is in FULL COMPLIANCE with Transport Practice 1.2 requiring personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

#### Pioneer Ocean Freight

Pioneer does not directly operate transport vehicles (excluding escort vehicles) as this function is undertaken by its contractors. Pioneer does, however, require that its transport contractors use only trained, qualified and licensed operators to operate its transport vehicles.

Pioneer has established a process requiring its subcontractors (Nava, Tongtrans and Nanon) to maintain a list of dedicated drivers approved by Pioneer. Approved drivers have appropriate training and vehicle licences to transport cyanide. The Drivers detailed on the list cannot be amended without authorisation from Pioneer.

Pioneer has developed and implemented a training scheme for its contractors and escort personnel. The training programme developed by Pioneer includes mandatory training for all staff and contractors involved in cyanide transportation. A review of training records confirmed that at the time of the audit drivers and escort personnel had completed the mandatory training.

Pioneer has implemented individual Service Level Agreements with Nava, Tongtrans and Nanon which are signed off by the Pioneer General Manager. Included in the agreement is the requirement for, amongst other regulatory requirements, compliance with the Code.

In addition to the formal contractual arrangements and assessments, ongoing performance of subcontractors is also managed through the convoy process. All convoy personnel, including subcontractors, are under the direct control of the Escort Supervisor who is a Pioneer employee.

#### Tong Transmission Company Limited

Tongtrans Transport Supervisors check the licence currency of all drivers used by Pioneer on a monthly basis.

Tongtrans drivers are trained in accordance with the Pioneer minimum training requirements and their training is tracked by Pioneer.

#### Nava Inland Transportation Limited

Nava Transport Supervisors check the licence currency of all drivers used by Pioneer on a monthly basis.

Nava drivers are trained in accordance with the Pioneer minimum training requirements and their training is tracked by Pioneer.

Pioneer Ocean Freight

5 April 2013

Name of Facility

Signature of Lead Auditor

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#### Nanon Inter Freight Limited

Nanon maintains its own database to track the currency driver permits and licences. Nanon convoy drivers are required to carry valid passports, licences and vehicle registrations to enable them to cross the border into Laos.

Nanon drivers are trained in accordance with the Pioneer minimum training requirements and their training is tracked by Pioneer.

#### Port of Laem Chabang

Pioneer does not have control over the handling of shipping lines and their cargo at the Port of Laem Chabang. The Port Authority's Harbour Master oversees the operation of the overall Port operations, including entities contracted to perform port operations.

The Due Diligence states that all new personnel are trained in dangerous goods handling practices with refresher courses every six months for all staff.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013

Date



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### 2.1.3 Transport Practice 1.3

	in full compliance with	
The operation is	in substantial compliance with	<b>Transport Practice 1.3</b>
	not in compliance with	
Summarise the basis	for this Finding/Deficiencies Identified:	
Pioneer is in FULL COMPLIANCE with Transport Practice 1.3 requiring that transport equipment is suitable for the cyanide shipment.		

#### Pioneer Ocean Freight

Pioneer does not directly operate transport vehicles (excluding escort vehicles) as this function is undertaken by its contractors. Pioneer does, however, require that its transport contractors use equipment designed and maintained to operate within the loads it will be handling when transporting cyanide.

Pioneer requires that subcontracts send maintenance records maintains of vehicles used in the transportation of cyanide.

The Escort Supervisor conducts an inspection of all vehicles prior to convoy departure.

Ensure that transport equipment is suitable for the cyanide shipment.

Pioneer and its subcontractors have procedures to verify the adequacy of the equipment for the load it must bear.

The Escort Supervisor conducts an inspection of all vehicles prior to convoy departure. This inspection is recorded on the Pre-Departure Vehicle Checklist, which is located in Appendix G of the Transport Management Plan.

The pre-departure inspection includes visual observations on the prime mover and trailer for signs of stress and overloading.

Procedures are in place to prevent overloading of the transport vehicle being used for handling cyanide.

Pioneer has a developed *Procedure No 8 - Minimum Equipment Standards for the Carriage of Cyanide*, which details the minimum equipment specifications for the transport of cyanide, including load capacities.

Pioneer has implemented individual Service Level Agreements with Nava, Tongtrans and Nanon which are signed off by the Pioneer General Manager. Included in the agreement is the requirement for, amongst other regulatory requirements, compliance with the Code.

In addition to the formal contractual arrangements and assessments, ongoing performance of subcontractors is also managed through the convoy process. All convoy personnel, including subcontractors, are under the direct control of the Escort Supervisor who is a Pioneer employee.

# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Nava, Tongtrans and Nanon each have six prime movers and semi-trailers dedicated for cyanide transportation. A review of the equipment specifications confirmed they are designed to transport a full container of cyanide and the configuration conforms to the maximum gross weight allowed within ASEAN member countries (45 tonnes).

Pioneer Ocean Freight

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Signature of Lead Auditor Date



5 April 2013

Name of Facility



Nava, Tongtrans and Nanon maintain their fleet of trucks in accordance with the servicing frequency specified within the respective maintenance manuals for Volvo, Nissan and Isuzu. The servicing is undertaken by authorised Nissan, Volvo and Isuzu service agents.

There are several checks and inspections in addition to scheduled services.

The combined weight of the prime movers (7.5 tonne), trailers (6.8 tonne) and a single 20 foot container (25 tonne) is within the load 45 tonne load limit.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





### 2.1.4 Transport Practice 1.4

Develop and implement a safety program for transport of cyanide.

	a a carety program for manoport or cyania	
	oxtimes in full compliance with	
The operation is	in substantial compliance with	<b>Transport Practice 1.4</b>
	not in compliance with	
Summarise the basis for	or this Finding/Deficiencies Identified:	
Pioneer is in FULL COM a safety program for tran	PLIANCE with Transport Practice 1.4 requiringsport of cyanide.	ng the operation develop and implement

#### Pioneer Ocean Freight

Pioneer has procedures to ensure that the cyanide is transported in a manner that maintains the integrity of the producer's packaging. These comprise checks at the Port, along the route, border crossings and checks and the mine site prior to unloading.

The loading of containers at the Port of Laem Chabang is the responsibility of the Port Authority. Once the containers are loaded onto the trucks at the Port, the Escort Supervisor conducts a visual inspection of the containers to ensure they are intact and undamaged in accordance with Pioneer *Procedure No. 1 Container Collection*.

Pioneer uses placards or other signage to identify the shipment as cyanide, as required by local regulations and international standards. The following placarding is required within Thailand:

- United Nations European Agreement about International Transport of Hazardous Goods by road (UN ADR) regulation plate on the front and rear of the truck
- Emergency Information Panel on each side of the container

The *Pre-Departure Check List* details the placarding standards and requires the Escort Supervisor to confirm the placarding is present.

Pioneer has implemented a safety programme for cyanide transport that includes the following:

- Pre-departure inspections of vehicles (e.g. brakes, lights, indicators, wipers, tyres and communication equipment).
- Preventative maintenance in accordance with the servicing frequency specified within the respective maintenance manuals for Volvo, Nissan and Isuzu. The servicing is undertaken by authorised Nissan, Volvo and Isuzu service agents.
- Limitations on driver hours through management by the Escort Supervisor. The routes have been appropriately planned with scheduled breaks and designated overnight stops. Driving is conducted during daylight hours and does not typically exceed 200 km or 3 hours without a break. Scheduled breaks typically are of 20 minute duration.
- Procedures to prevent loads from shifting. The TMP states that all containers are fixed to the trailers using twist-locks. No chains or straps are allowed. Prior to loading, the Escort Supervisor checks the condition of the trucks and the trailers. Following loading, the Escort Supervisor checks that the load is secured properly.

Pioneer Ocean Freight

Signature of Lead Auditor Date



5 April 2013

Name of Facility



- Procedures for the modification or suspension of transport. The TMP notes that unforeseen circumstances such as inclement weather, civil unrest or road works can result in modifications being made to the original trip plan after the journey has commenced.
- An Alcohol and Drug Policy advising of the dangers and discouraging its uses. The Policy requires supervisors to observe drivers for the effects of drugs and alcohol and take action including counselling if usage is suspected. The Policy requires an annual drug and alcohol check as part of the annual medical check-up.
- Record retention, documenting the above safety programme.

Pioneer has implemented individual Service Level Agreements with Nava, Tongtrans and Nanon which are signed off by the Pioneer General Manager. Included in the agreement is the requirement for, amongst other regulatory requirements, compliance with the Code.

In addition to the formal contractual arrangements and assessments, ongoing performance of subcontractors is also managed through the convoy process. All convoy personnel, including subcontractors, are under the direct control of the Escort Supervisor who is a Pioneer employee.

# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Tongtrans, Nava and Nanon are contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





#### 2.1.5 Transport Practice 1.5

Follow international standards for transportation of cyanide by sea and air.				
	$oxed{oxed}$ in full compliance with			
The operation is	in substantial compliance with	<b>Transport Practice 1.5</b>		
	not in compliance with			
Summarise the basis for this Finding/Deficiencies Identified:				
Pioneer is in FULL COMPLIANCE with Transport Practice 1.5 requiring the operation follow international standards for transportation of cyanide by sea and air.				

#### Pioneer Ocean Freight

Pioneer does not directly transport consignments of cyanide by sea or air within the scope of this audit. The Port of Laem Chabang is utilised as part of Pioneer's cyanide supply chain within Thailand and Laos. Pioneer has conducted due diligence reviews annually of the Port of Laem Chabang since September 2009 (Version 0). A Due Diligence of the Port of Laem Chabang dated 25 September 2012 (Version 3) was reviewed in November 2012.

# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Tongtrans, Nava and Nanon do not transport cyanide by sea or air within the scope of this audit.

#### Port of Laem Chabang

Upon arrival at the Port of Laem Chabang the stevedoring company and the DG handlers receive the ships manifest prior to unloading. During the unloading process and throughout the handling of the product at the Port, all labelling in place during shipping is maintained.

Software programmes control container placement and movement. It is this programme that identifies containers with hazardous cargo and allows for all containers with hazardous cargo to be moved immediately after discharge of the vessel to the Centre, which located within the port confines.

The dangerous goods yard is laid out by DG Class and this allows the required segregation of products and classes. Each Class area is designated with signs and each container or isotainer is allotted a bay within its Class area. The cyanide lay down area is segregated by distance from other Classes.

Both the Port Authority and the Centre maintain an Emergency Response Plan, which adequately covers responses to potential cyanide emergencies.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





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#### 2.1.6 Transport Practice 1.6

Track cyanide shipments to prevent losses during transport.			
	⊠ in full compliance with		
The operation is	in substantial compliance with	Transport Practice 1.6	
	not in compliance with		
Summarise the basis for this Finding/Deficiencies Identified:			

# prevent losses during transport.

Pioneer Ocean Freight

Pioneer Procedure No. 8 describes the communication equipment available to all drivers of the convoy, and the communications procedure that is to be followed.

Pioneer is in FULL COMPLIANCE with Transport Practice 1.6 requiring the tracking of cyanide shipments to

Communication equipment is periodically tested to ensure it functions properly.

Pioneer has undertaken communication assessments along its transport routes. The availability of the cellular network along a route is checked as part of the initial route assessment process.

Pioneer Procedure No 8 states that, at the border point of Savannakhet in Laos, the Escort Supervisor ensures all drivers change their sim cards to the Laos communication system. Procedure No 8 also states that no communication black out zones have been identified on routes to Chatree or Sepon.

Pioneer has systems to track the progress of cyanide shipments. These include the use of a cellular phone and email by the Escort Supervisor to contact the General Manager to report progress along the routes. The call up points for each route is specified within the TMP. The General Manager advises the consignee when shipments leave Laem Chebang and estimated time and date of arrival of the consignment.

In Laos, Akara Mining accompanies the escort and in the process, issues a GPRS to each vehicle to allow the mine site to track the convoy process via website.

Pioneer implements chain of custody procedures to prevent loss of cyanide during shipment. All containers collected at the Port of Laem Chabang must be checked to ensure that the correct container has been loaded onto the vehicle. The container number and seal number is verified in accordance with Pioneer *Procedure No. 1 Container Collection.* Once delivered, a mine site representative signs the *Pre-Departure Checklist* confirming the consignment was received in good condition and unopened.

Shipping records indicating the amount of cyanide in transit and Material Safety Data Sheets are available during transport. A Bill of Lading is carried on each truck, which records the contents and weight of each container. The TMP requires that each truck have a MSDS on board.

Pioneer has implemented individual Service Level Agreements with Nava, Tongtrans and Nanon which are signed off by the Pioneer General Manager. Included in the agreement is the requirement for, amongst other regulatory requirements, compliance with the Code.

In addition to the formal contractual arrangements and assessments, ongoing performance of subcontractors is also managed through the convoy process. All convoy personnel, including subcontractors, are under the direct control of the Escort Supervisor who is a Pioneer employee.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013

Date



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# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Tongtrans, Nava and Nanon are contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

In addition to the Pioneer procedures, Nanon has installed a GPRS system in each of its vehicles. The units transmit using the mobile telephone network. Due to mobile data carrier incompatibilities data obtained in Laos is not transmitted until the convoy is within range of Thailand mobile carriers.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





# 2.2 Principle 2 – Interim Storage

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

#### 2.2.1 Transport Practice 2.1

Store cyanide in a manner that minimises the potential for accidental releases.			
	☐ in full compliance with		
The operation is	in substantial compliance with	Transport Practice 2.1	
	not in compliance with		
	⊠ not applicable		

#### Summarise the basis for this Finding/Deficiencies Identified:

Transport Practice 2.1 requiring transporters design, construct and operate cyanide trans-shipping depots and interim storage sites to prevent release and exposures is NOT APPLICABLE to Pioneer.

#### Pioneer Ocean Freight

Storage in transit does occur at the Port of Laem Chabang. There are no interim storage sites between the Port of Laem Chabang and the customer mine sites.

# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

There are no interim storage sites between the Port of Laem Chabang and the customer mine sites.

### Port of Laem Chabang

The Dangerous Goods Warehouse is managed under Thailand Regulations by JWD InfoLogistics Co Ltd to IMO DG Code regulations. It handles all types of containers and goods. The dangerous goods yard is laid out by DG Class and this allows the required segregation of products and classes. Each Class area is designated with signs and each container or isotainer is allotted a bay within its Class area. The cyanide lay down area Class 6 has is segregated by distance from other Classes; the same segregation exists between all Classes. The cyanide bays are allocated from the warehouse computer system which captures the container, its container number, the number of product packages in each container, the product and the UN reference number. The nature of the product also captured in the reference material.

JWD InfoLogistics Co Ltd policies dictate smoking, open flames and eating and drinking areas and required PPE.

The Dangerous Goods Warehouse is enclosed with security fencing on the wall. The entrance is gated and guarded. Security cameras cover the yard area and gates. The full yard area is also fully lit.

Additionally, all cyanide is stored in sealed containers, which are not opened until final delivery at the destination mine sites.

Containers at the dangerous goods yard are stored in the open air, which allows adequate ventilation around each container. Containers are not opened until their arrival at the destination mine sites.

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Name of Facility

Signature of Lead Auditor

5 April 2013





The warehouse yard area is concreted with drainage channels that collect and convey stormwater and spills to sumps. Any solid spill will be contained on the concrete pad and a liquid spill will drain to the collection channels. JWD InfoLogistics Co Ltd's Emergency Response Plan includes steps for a chemical spills. The emergency response team conducts regular training and exercises with Port Authorities and Fire and Rescue. The emergency response team has been trained by US Coastguard.

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Name of Facility Signature of Lead Auditor

5 April 2013





### 2.3 Principle 3 – Emergency Response

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

#### 2.3.1 Transport Practice 3.1

Prepare detailed Emer	gency Response Plans for potential cyani	de releases.
	⊠ in full compliance with	
The operation is	in substantial compliance with	Transport Practice 3.1
	not in compliance with	

#### Summarise the basis for this Finding/Deficiencies Identified:

Pioneer is in FULL COMPLIANCE with Transport Practice 3.1 requiring the operation prepare detailed Emergency Response Plans for potential cyanide releases.

#### Pioneer Ocean Freight

Pioneer has developed an Emergency Response Plan (ERP) for the management of cyanide related emergencies associated with the cyanide transportation. The ERP has been developed to provide information in a suitable format, which can be used to minimise the adverse effects of a cyanide emergency on people, property and the environment. The ERP was developed by Pioneer with the assistance of Orica and AGR to ensure the ERP is consistent with emergency response guidance issued to Pioneer by the suppliers. Orica and AGR provide oversight of the ERP and are provided opportunity to comment on revisions to the ERP.

The emergency documentation is appropriate for the selected transportation routes.

The route assessment/risk assessment process, and operational experience was used by Pioneer to identify three likely emergency scenarios:

- Vehicle roll over with no product loss
- Vehicle roll over with product loss
- Vehicle roll over with product loss to water.

These scenarios are used for training purposes.

The emergency documentation considers the physical and chemical form of cyanide. The ERP is specifically drafted around solid cyanide, as it is the only material transported. Section 3.1 of the ERP states that the company transports solid cyanide and refers to UN 1689 and dangerous goods class 6.1.

The emergency documentation considers the method of transport. Transportation to the mine sites are via generally well maintained sealed and roads using a convoy. The emergency response actions detailed in the ERP are relevant to road transportation between the Port of Laem Chabang and the Ban Houay Xai, Chatree and Sepon mine sites. Transportation by rail or interim storage does not occur.

The emergency documentation considers all aspects of the transport infrastructure as they were developed using the route evaluation and risk assessment process referred to in Transport Practice 1.1. This process describes aspects of the transport infrastructure in sufficient detail as well as associated hazards with the respective routes.

Pioneer Ocean Freight

5 April 2013

Name of Facility

Signature of Lead Auditor





The emergency documentation considers the design of the transport vehicles. The documentation was specifically drafted around the transport of solid cyanide on trucks with four axle trailers with a weight capacity of 45 tonnes, equipped with twist locks and designed to carry one 20 foot container.

The emergency documentation includes descriptions of response actions, as appropriate for the anticipated emergency situation.

The ERP contains specific descriptions of responsibilities and actions Pioneer and its stakeholders, including hospitals, fire and rescue, police, governments and the mine site customer. The communities have not been allocated an emergency response role by Pioneer and have not been consulted.

# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Tongtrans, Nava and Nanon are contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

#### Port of Laem Chabang

Both the Port Authority and the Centre operators maintain and Emergency Response Plan. Solid spills will be contained on the concrete pad and a liquid spill will drain to the collection channels, which collect and are handled within the sump area. JWD InfoLogistics Emergency Response Plan includes steps for a chemical spills. The emergency response team conducts regular training and exercises with Port Authorities and Fire and Rescue and a mock 'dangerous goods incident' exercise is held once every year to test the emergency response procedures. The emergency response team has been trained by the US Coastguard.

Pioneer does not have control over the handling of shipping lines and their cargo at the Port of Laem Chabang. The Port Authority's Harbour Master oversees the operation of the overall Port operations, including entities contracted to perform port operations.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





#### 2.3.2 Transport Practice 3.2

response.	e response personnel and commit necessa	ary resources for emergency
	oxtimes in full compliance with	
The operation is	in substantial compliance with	Transport Practice 3.2

not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The Pioneer is in FULL COMPLIANCE with Transport Practice 3.2 requiring the operation designate appropriate response personnel and commit necessary resources for emergency response.

#### Pioneer Ocean Freight

Pioneer provides emergency response training of appropriate personnel. Pioneer has developed and implemented a training scheme for its drivers (including subcontractors) and escort personnel. The training programme includes mandatory training for all staff involved in cyanide transportation, with components focusing on emergency response and first aid.

Descriptions of the specific emergency response duties and responsibilities are detailed within the ERP for police, ambulance, fire service, government agencies, drivers, escort supervisors, mine site customers and Pioneer management.

Pioneer maintains a list of all of the emergency response equipment that should be available during the transport route. Section 6.5 of the ERP contains a list of emergency equipment to be held at the transport contractors depots (checked monthly) and also a list of response equipment per convoy (checked prior to departure of every trip). These lists are focused on the serviceability of the equipment as well as its presence.

Pioneer has the necessary emergency response and health and safety equipment, including personal protective equipment during transport. Pioneer also has a Pre-Departure Vehicle Checklist, which includes a check of the emergency response equipment. The checklist is completed by the Escort Supervisor prior to the departure of the convoy.

Drivers were interviewed, and when asked, they could produce the equipment and demonstrate its use. Pioneer also has a Pre-Departure Vehicle Checklist, which includes a check of the emergency response equipment. The checklist is completed by the Escort Supervisor prior to the departure of the convoy. Drivers were interviewed, and when asked, they could produce the equipment and demonstrate its use.

Pioneer provides initial and periodic refresher training in emergency response procedures including implementation of the ERP. Pioneer has developed and implemented a training scheme for its drivers and escort personnel. The training programme developed by Pioneer includes mandatory training for all staff involved in cyanide transportation. A training matrix details when training was conducted and also records when future training is required.

Pioneer has implemented individual Service Level Agreements with Nava, Tongtrans and Nanon which are signed off by the Pioneer General Manager. Included in the agreement is the requirement for, amongst other regulatory requirements, compliance with the Code.

In addition to the formal contractual arrangements and assessments, ongoing performance of subcontractors is also managed through the convoy process. All convoy personnel, including subcontractors, are under the direct control of the Escort Supervisor who is a Pioneer employee.

<u>Pioneer Ocean Freight</u> <u>5 April 2013</u>

Name of Facility Signature of Lead Auditor Date





# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Tongtrans, Nava and Nanon are contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





#### 2.3.3 Transport Practice 3.3

Develop procedures f	or internal and external emergency notifica	ation and reporting.
	oxtimes in full compliance with	
The operation is	in substantial compliance with	<b>Transport Practice 3.3</b>
	not in compliance with	
Summarise the basis	for this Finding/Deficiencies Identified:	
	COMPLIANCE with Transport Practice 3.3 re and external emergency notification and repo	

#### Pioneer Ocean Freight

Pioneer has developed a procedure for notifying the shipper, the receiver/consignee, outside response providers, and medical facilities of an emergency. The internal and external contact numbers are listed in the *Emergency Contact List* in Appendix 3 of the ERP, which is located in all trucks and escort vehicles.

There are provisions to ensure that internal and external emergency notification and reporting procedures are kept current.

The key contact numbers within the ERP are updated annually. The document history section of the ERP details the date of publication, the author, the new revision number and a description of the revision. The revision comments noted that the ERP was updated on 8 November 2012. This update incorporated the key contact numbers.

In addition to the formal review process, the *Delivery Procedure Control Sheet* (Appendix M of the TMP) requires the Escort Supervisor to note any end of delivery remarks, which may include observed changes in contacts and respective telephone numbers during each convoy.

# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Tongtrans, Nava and Nanon are contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

#### Port of Laem Chabang

Pioneer does not have control over the handling of shipping lines and their cargo at the Port of Laem Chabang. The Port Authority's Harbour Master oversees the operation of the overall Port operations, including entities contracted to perform port operations. The Due Diligence that was conducted states that all new personnel are trained in dangerous goods handling practices with refresher courses every six months for all staff. The Emergency Response Team (ERT) conducts regular training and exercises with Port Authorities and Fire & Rescue. The ERT has been trained by the US Coastguard.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





#### 2.3.4 Transport Practice 3.4

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

oxtimes in full compliance with	
in substantial compliance with	Transport Practice 3.4
not in compliance with	

#### Summarise the basis for this Finding/Deficiencies Identified:

Pioneer is in FULL COMPLIANCE with Transport Practice 3.4, which requires the operation to develop procedures for remediation of releases that recognise the additional hazards of cyanide treatment.

#### Pioneer Ocean Freight

The operation is

Pioneer has procedures 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 ERP is focussed on first response procedures in the event of an emergency. This covers the recovery, and to a lesser degree, the neutralisation of solutions and solids, as well as decontamination of equipment. The ERP notes that technical issues relating to the decontamination of soils and management and disposal of clean-up debris are conducted under the advice of the cyanide manufactures (Orica and AGR).

Pioneer prohibits the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water. This is stated in the ERP and reinforced in training.

# Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Tongtrans, Nava and Nanon are contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013





#### 2.3.5 **Transport Practice 3.5**

Periodically evaluate response procedures and capabilities and revise them as needed.				
	oxtimes in full compliance with			
The operation is	in substantial compliance with	<b>Transport Practice 3.5</b>		
	not in compliance with			
Summarise the basis for	or this Findina/Deficiencies Identified:			

Pioneer is in FULL COMPLIANCE with Transport Practice 3.5 requiring the operation periodically evaluate response procedures and capabilities and revise them as needed.

#### Pioneer Ocean Freight

The ERP contains provisions for annual review or from learnings garnered from emergency response exercises and drills, incidents or additional information obtained from other external sources (e.g. manufacturers). A review of the document history shows that there have been four reviews of the ERP since 2010.

Pioneer has provisions for periodically conducting mock emergency drills and they are being implemented. An Emergency Response Roles and Responsibilities course is used to train Pioneer and subcontractors in their roles and responsibilities for the three identified emergency scenarios:

- Vehicle roll over with no product loss
- Vehicle roll over with product loss
- Vehicle roll over with product loss to water.

A review of training records confirmed that at the time of the audit drivers and escort personnel had completed the mandatory training.

The training matrix details when training was conducted and also records when future training is required.

The ERP contains provisions for periodically reviewing and evaluating the ERP's adequacy and they are being implemented. Section 1.1 (Purpose) of the ERP states the emergency response procedures are to be reviewed and evaluated following any incident that triggers implementation of the ERP, training drills and audits. Recommendations arising from the investigation following an incident are to be included in the ERP.

#### Tong Transmission Company Limited, Nava Inland Transportation Limited and Nanon Inter Freight Limited

Tongtrans, Nava and Nanon are contracted by Pioneer to provide vehicles and drivers to transport cyanide. The trucks are managed in a convoy coordinated by a Pioneer lead escort vehicle. The convoy is managed in accordance with Pioneer procedures.

Tongtrans, Nava and Nanon drivers are trained in accordance with the Pioneer minimum training requirements and their training is tracked by Pioneer.

#### Port of Laem Chabang

Pioneer does not have control over the handling of shipping lines and their cargo at the Port of Laem Chabang. The Port Authority's Harbour Master oversees the operation of the overall Port operations, including entities contracted to perform port operations.

Pioneer Ocean Freight 5 April 2013 Name of Facility Signature of Lead Auditor Date





A Due Diligence of the Port of Laem Chabang stated that the site emergency response team conducts regular training and exercises with Port Authorities and Fire and Rescue and a mock 'dangerous goods incident' exercise is held once every year to test the emergency response procedures. The emergency response team has been trained by the US Coastguard.

Pioneer Ocean Freight

Name of Facility Signature of Lead Auditor

5 April 2013



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#### PIONEER OCEAN FREIGHT, SUMMARY AUDIT REPORT

#### 3.0 DUE DILIGENCE

### 3.1 Port of Laem Chabang

Pioneer has conducted due diligence reviews annually of the Port of Laem Chabang since September 2009 (Version 0). The Port of Laem Chabang is utilised as part of Pioneer's cyanide supply chain within Thailand and Laos. A Due Diligence of the Port of Laem Chabang dated 25 September 2012 (Version 3) and prepared by Pioneer was reviewed in November 2012.

The following items were addressed within the due diligences:

- Summary of Port Operations
- Vessel arrival
- Stevedoring (Including container handling, port security, container collection control systems).
- Dangerous Goods Logistics centre (including training, emergency response and security)
- Other
- Overview
- Compliance with ICMC
  - Transport Practice 1.1
  - Transport Practice 1.5 (1.5.1)
  - Transport Practice 1.6
  - Transport Practice 2.1 (including segregation, security and emergency response).

The due diligence review was compiled through discussion with AGR and Orica and a review of their respective due diligence documentation. Physical visits and interviews of port personnel were also conducted by Pioneer.

The due diligence concluded that no issues of concern were observed with regards to The Port Authority of Thailand and its lease operators. It was also noted that Pioneer would continue to review and monitor the Port Authority of Thailand's performance. This will include ongoing and regular contact to maintain awareness and preparedness.

# 3.2 Auditor Review of Due Diligence

The due diligence review was found by the Auditor to sufficiently evaluate the port operations and additional management measures by the consigner were not considered necessary.

#### 4.0 LIMITATIONS

Your attention is drawn to the document - "Limitations", which is included as Appendix A to this report. This document is intended to assist you in ensuring that your expectations of this report are realistic, and that you understand the inherent limitations of a report of this nature. If you are uncertain as to whether this report is appropriate for any particular purpose please discuss this issue with us.

Pioneer Ocean Freight

5 April 2013

Name of Facility

Signature of Lead Auditor

E. buhl.





# **Report Signature Page**

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# **APPENDIX A**

Limitations





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