December 2016

INTERNATIONAL CYANIDE MANAGEMENT CODE TRANSPORT AUDIT

Hebei Chengxin Transport Recertification Audit - Summary Audit Report

Submitted to:
International Cyanide Management Institute
1400 I Street, NW, Suite 550
WASHINGTON DC 20005
UNITED STATES OF AMERICA

Hebei Chengxin Transport Co Ltd
CHINA

REPORT

Report Number. 1650269-005-R-Rev1

Distribution:

1 Copy – International Cyanide Management Institute (+1 Electronic)
1 Electronic Copy – Hebei Chengxin Transport Co., Ltd.
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Golder Associates

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1.0 INTRODUCTION

1.1 Operational Information

Name of Transporter: Hebei Chengxin Transport Co., Ltd.

Name of Transport Owner: Hebei Chengxin Transport Co., Ltd.

Name of Transport Operator: Hebei Chengxin Transport Co., Ltd.

Name of Responsible Manager: Mr. Song Guofang

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Shijiazhuang City

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1.2 Description of Operation

Hebei Chengxin Transport Co., Ltd. (hereinafter referred to as “Chengxin Transport”) was established in 2002 and is located in Yuanshi County approximately 30 km south of the Hebei Province capital of Shijiazhuang City. Chengxin Transport is approved by the Shijiazhuang City Bureau of Transport for road transportation and handling of dangerous goods. Chengxin Transport employees over 400 people for the transport operation and has a fleet of 140 vehicles that are licensed and certified to transport dangerous goods.

The sodium cyanide product is manufactured and packaged by Hebei Chengxin Co., Ltd. (the production company). Solid cyanide is packaged in 50 kg drums or 1 tonne intermediate bulk containers and then into shipping containers. Liquid cyanide is package in iso-containers. All packaging is undertaken by the production company and when sealed Chengxin Transport collect and transport the product. Both companies are based at the same location.

Table 1 provides a summary of Chengxin Transport’s main routes for both liquid and solid cyanide. Chengxin Transport uses 12 main transport routes (including three ports) to their customers within China.

Table 1: Summary of Main Transportation Routes

Destination	Distance	Product
Tianjin Port	427 km	Solid
Shanghai Port (commenced November 2015)	1 150 km	Solid
Qingdao Port (commenced November 2015)	625 km	Solid
Anqing City, Anhui Province	1 135 km	Solid
Nantong City, Jiangsu Province	1 107 km	Solid
Shangyu City, Zhejiang Province	1 270 km	Liquid

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Destination	Distance	Product
Shijiazhuang City, Hebei Province	25 km	Solid
Xiantao City, Hubei Province	991 km	Solid
Dongyang City, Zheijiang Province	1 392 km	Solid
Hangzhou City, Zheijiang Province	1 210 km	Liquid
Zhangjiakou City, Hebei Province	545 km	Liquid
Baotou City, Inner Mongolia	1 170	Liquid

Cyanide is loaded onto the trucks at the production facility and from there is transported directly to the customer or port.

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 may occur in the event that receipt at the port is delayed. In this event containers will not be removed from the trailers and the vehicles will only be parked for a maximum of 24 hours.

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1.4 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

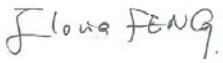
Audit Company: Golder Associates Pty Ltd

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		28 July 2016
Floria Feng	Auditor/Translator		28 July 2016

1.5 Dates of Audit

The Recertification Audit was undertaken over two days between 24 and 25 June 2016.

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.

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Signature of Lead Auditor

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Date

2.0 TRANSPORT 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

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:

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

Chengxin Transport has implemented a process for selecting transport routes that minimises the potential for accidents and releases or the potential impacts of accidents and releases.

Chengxin Transport has developed and implemented a management system for transportation and there is a specific written procedure that details the process and the parameters to be assessed when identifying, selecting and assessing potential transport routes.

The procedure does include the assessment of schools, factories, infrastructure, intersections, towns and city, construction activities, sharp turns and steep gradients, bridges, tunnels, area known for instability, rivers, lakes, speed limits, seasonal weather conditions (snow, ice, flooding, fog), medical facilities and service stations. The road need to be approved dangerous goods road by the local authority.

Chengxin Transport has implemented a procedure to evaluate the risks of selected cyanide transport routes and take the measures necessary to manage these risks. The procedure involves the collection of route data and hazards by safety and dispatch personnel from driving the potential routes. The hazards are assessed against scoring system to generate the risk assessment. The assessment includes population density, proximity of water bodies, seasonal weather conditions. For all customer destinations there is a primary and alternative route. The primary route is selected on the basis of the lowest overall score and the alternative route will be used in the event the primary route is compromised (e.g. major construction, accident).

The assessment is signed off by the drivers, coordinators and safety supervisors. Once this review is completed the route is approved by the general manager. Once this pre-assessment is completed, approval must be sought from the local government for use of the route. There is an annual review and update of the route assessment that is then used to provide a briefing to drivers on the route and control measures. Records of route assessments were reviewed and training records were available for the driver briefings. The attendance records note the agenda for the session. In addition drivers and escorts can provide feedback through the delivery records.

Two new routes to the ports of Shanghai and Qingdao were introduced in 2015 as a result of the incident at Tianjin Port. Annual route assessment documentation was reviewed and confirmed that Chengxin Transport is completing assessment and reviews in accordance with their procedures.

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The route assessment document details the measures taken to address risks identified with the selected routes. This is then communicated to drivers verbally during briefing sessions with attendance records retained.

Copies of route assessment were reviewed and confirmed to contain details on the control measures such as speed limitations, using low gears on steep gradients etc that drivers should take for the identified risks. Chengxin Transport does seek input from communities, other stakeholders and applicable governmental agencies as necessary in the selection of routes and development of risk management measures. As noted, the approval of the local authority is required prior to the transport and are provided with a copy of the route assessment.

Each shipment requires a permit "Road Transportation Permission for Highly Toxic Chemicals" to be issued by the local authority allowing transport of cyanide along the designated route within a specified timeframe.

Chengxin Transport has assessed it routes and considered that no routes require specific additional control measures for special safety or security considerations. Typically deliveries are undertaken in convoys of two or more vehicles but this is not related to security risks. Chengxin Transport has two drivers for each vehicle with the off-duty driver assuming the role of escort. The emergency response plan is carried in the cabin of the vehicle and contact is to be made with the local police in the event of an incident. Chengxin Transport system provided that should an area be identified as presenting a security risk the local police are to be contacted to provide and escort through the area. This procedural control has not been required to date.

Chengxin Transport has advised external responders, medical facilities and communities of their roles and/or mutual aid during an emergency response. Chengxin Transport has identified and contacted hospitals along the transport route and provided information on cyanide transport, exposure and treatment. Through the Road Transportation Permissions for Highly Toxic Chemicals system, Chengxin Transport has advised the government.

Chengxin Transport does not subcontract the road transportation and does not undertake cyanide handling.

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

Summarise the basis for this Finding/Deficiencies Identified:

Chengxin Transport 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.

Chengxin Transport only uses trained, qualified and licensed operators to operate its transport vehicles.

The Worker Management procedure details minimum requirements including government certification to operate particular vehicle and purpose. To operate a transport vehicle the operators must have:

- Dangerous Chemical Transport Vehicle Driving Licence, issued by Shijiazhuang transportation authority
- Dangerous Chemical Transport Vehicle Driving Training, organized by Shijiazhuang transportation authority

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- Annual Training organized by Chengxin Transport.
- 3 level entry training on cyanide awareness and protection, organized by Hebei Chengxin Co. Ltd and Chengxin Transport.

Interviews with drivers and a review of training records and delivery records confirmed that drivers had received the designated training and had current driver's licences. All personnel operating cyanide transport equipment been trained to perform their jobs in a manner that minimises the potential for cyanide releases and exposures. Chengxin Transport takes responsibility once the container or iso-container has been loaded, checked and sealed. Chengxin training focus on managing transport to prevent release and subsequent exposure.

Chengxin Transport develops and implements an annual training plan that provides monthly topics covering elements of their management system on a rotational basis. The content of these sessions includes information and instruction on driving risks, transporting dangerous goods, briefing on cyanide transport route assessment and controls.

A review of training attendance records, training files and interviews with drivers confirmed that training is provided.

Chengxin Transport does not subcontract cyanide transport or handling.

2.1.3 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:

Chengxin Transport is in FULL COMPLIANCE with Transport Practice 1.3 requiring that transport equipment is suitable for the cyanide shipment.

Chengxin Transport has details of each vehicle combination (prime mover and trailer) including the type, registration, load bearing capacity. Values on the maximum load are provided by the manufacturer and verified through the vehicle certification process.

Load sizes for solid cyanide are 9.6, 32, 33, 33.9 tonnes for solid and 23 and 35 m3 for liquid cyanide.

Pre-inspection will cover roadworthy items of vehicles including:

- Vehicle number
- Mechanical parameters (brakes, types, lights, alarm, steering, transmission, chassis, fire extinguishers, antistatic, signs, power cut, battery, GPS, rain wiper etc.)
- Inspector driver and escort signatures.

Pre-inspection records (checklist) of shipping containers

- Package, labels
- Seals series number

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- Actual loading versus maximum loading capacities
- Emergency response equipment (MSDS, anti-dotes, chemical preventive suits, full-face masks, driver physical conditions)
- Inspector signature.

There is an annual inspection process (Level 2 maintenance conducted by a licensed third party) for vehicles transporting dangerous goods. A quality warranty certificate is issued to each individual vehicle.

There are procedures to verify the adequacy of the equipment for the load it must bear. There are procedures for maintenance which include compliance with annual inspection process for vehicle certification for the transport of dangerous goods issued by the local government. Part of the inspection process is to confirm vehicles are meeting manufacturer's specifications for load bearing.

Pre-inspection records denote the load bearing capacity and actual load. A review of completed convoy documentation confirmed shipments are within the load capacity of the vehicles.

The pre-departure checks compare design capacity with actual load together with other required items and recorded in the inspection log book. A review of the completed log book confirms that loads were within the capacity of the vehicles.

There are two types of vehicles use for transport of cyanide, ridged flatbed trucks for the transport of small consignments (9.6 tonnes) of solid cyanide. Otherwise prime movers and trailers are used for consignments of solid and liquid cyanide. Chengxin Transport has different containers sizes, however the maximum load for a single container and truck does not exceed vehicle capability. Chengxin Transport operate with a single container load per vehicle.

Chengxin Transport does not subcontract cyanide transport or handling.

2.1.4 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:

Chengxin Transport is in FULL COMPLIANCE with Transport Practice 1.4 requiring the operation develop and implement a safety programme for transport of cyanide.

Chengxin Transport has procedures in place so that cyanide is transported in a manner that maintains the integrity of the producer's packaging.

Hebei Chengxin Co., Ltd is responsible for the packaging and labelling of the cyanide product various manners:

- Solid product into plastic bags and then into metal barrels which are locked and sealed (50kg). These are package and locked in a shipping container.
- Solid product into plastic bags and then into wooden crates which a nailed and strapped to from an intermediate bulk container (IBC) (1 tonne). These are then package and locked in a shipping container.
- Liquid product into iso-container.

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Once the product packed in the bulk container the transporter takes over. There are procedures in place to regularly check the integrity of packaging during transport and report damage or spillage. There are single use seals placed on the door and on the iso-container valves are checked regularly throughout transport. The unique serial number is recorded on the check sheets.

Placards and signage used to identify the shipment as cyanide meet local and international standards. Diamonds placed at front and rear of the vehicle identify load as cyanide and the containers also have labelling that identifies the contents of the container. An inspection of the vehicles and interviews with drivers confirmed that placarding is used.

Chengxin Transport has implemented a safety programme for cyanide transport that includes:

- Vehicle inspections prior to each departure are undertaken by the driver and escorts. Inspections include mechanical roadworthiness and particular items.
- A preventative maintenance plan involves a 120 day third party inspection and servicing with certificate for government compliance purposes. A monthly plan is prepared to enable compliance with the servicing intervals. Maintenance records indicate routine basic maintenance is regularly performed and there is pre-convoy checks.
- Daily driving limit is 8 h, with a 4 hourly maximum driving shift without a break. And a maximum of 72 hours in a week. There are two drivers per vehicle to allow for rotation and the vehicle must be parked up between 1 am to 5 am for both drivers. In practice, for the current routes the hours driven are well below the limits set.
- Solid cyanide product is packaged by the manufacturer into metal drums or IBCs which are in turn loaded into sea container. The sea containers are secured to vehicles by twist locks.
- Liquid cyanide iso-containers are filled to set levels and these are checked prior to departure. Containers are secured to the trailers by twist locks.
- The Dangerous Goods Transport procedure provides the measures for modifying or suspending if conditions such as severe weather or civil unrest are encountered. The procedure outlines the actions to take and who must be contacted.
- There is a blood alcohol test prior to employment and prior to each convoy. The drivers are observed by the security personnel to assess fitness for work.

Records are maintained that the above activities have been conducted. Maintenance records, inspection and convoy records were sampled from the audit period and found to be complete.

Chengxin Transport does not subcontract cyanide transport or handling.

2.1.5 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:

Transport Practice 1.5 requiring the operation follow international standards for transportation of cyanide by sea and air is NOT APPLICABLE to Chengxin Transport.

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Chengxin Transport does not intend to transport consignments of cyanide by sea within the scope of this audit.

Chengxin Transport does not intend to transport consignments of cyanide by air within the scope of this audit.

2.1.6 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:

Chengxin Transport is in FULL COMPLIANCE with Transport Practice 1.6 requiring the operation track cyanide shipments to prevent losses during transport.

Chengxin Transport vehicles have the means to communicate with the transport company, cyanide producer and emergency responders. There are a range of communication systems available and the management system defines the communication methods. All vehicles carry the emergency response plan which includes telephone numbers for each province and hospitals on the transport route.

The primary means of communication is via mobile phone between vehicles and between the convoy and the office. GPS is used to track progress of the convoy throughout the journey.

The convoy will contact the transport coordinator in the event of an emergency and the coordinator will handle communication with the customer (mine) and supplier/producer.

There is a 24 hour manned contact centre that the drivers can contact to initiate emergency response. The contact details for local police and fire authority are also available to the drivers. Chengxin Transport does periodically test communication equipment to ensure it functions properly. Checks are complete prior to dispatch as part of part of pre-departure inspections. Mobile (cell) phones are checked and the GPS tracking system on a group of trucks are checked at random each day to confirm the tracking system is working. Mobile phone numbers are recorded on a register of contacts.

Chengxin Transport has assessed blackspots along transport routes. There is good mobile coverage along current transport routes with black outs identified in tunnels. The blackout areas are relatively short distances (1km) and there is GPS tracking of the vehicles.

Chengxin Transport has systems and procedures to track the progress of cyanide shipments. There are two GPS tracking systems installed on the vehicles, the DITONG system is linked to the government tracking system and Chengxin Transport have their own tracking system that also provides information the vehicles performance including speed and fuel consumption.

The position the vehicles is tracked in real time and the transport coordinator also makes daily contact with the convoy. Chengxin Transport has implemented inventory controls to prevent the loss of cyanide during shipment. Both the solid and liquid cyanide vehicle dispatch records list provides a register of cyanide delivered, the amount and customer, scheduled and actual delivery. This register is based on the completed delivery sheets.

Each vehicle carries a delivery confirmation docket that incudes date of vehicle, cargo, weight, unique seal number, signature of receiver (on arrival), sales and coordinator (on dispatch). Seals are applied to the iso-container or shipping container with unique serial numbers.

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Chengxin Transport has procedures for GPS tracking and checking of physical security (seals) on the route to provide inventory control. Shipping records do indicating the amount of cyanide in transit and Material Safety Data Sheets available during transport. A review of delivery documentation together with pre-departure security checks confirmed that the amount of cyanide on each vehicle is recorded.

There is a copy of the emergency response plan with the MSDS booklet held within the cabin of each vehicle.

Chengxin Transport does not subcontract cyanide transport or handling.

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

Summarise the basis for this Finding/Deficiencies Identified:

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

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 may occur at the event that transport is delayed. In this event, containers will not be removed from the trailers and the vehicles will only be parked for a maximum of 24 hours.

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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 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:

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

Chengxin Transport has an emergency response plan (ERP). The ERP includes information on:

- Scope and targets
- Basic principles
- Potential hazards evaluation
- Organization structure and responsibilities
- Prevention and warning
- Reporting process
- Emergency disposal
- Emergency rescue requirements
- Post-disposal after accidents
- Emergency facilities and resources
- Emergency rescue capability evaluation & ERP revision
- Emergency response training and drills
- ERP management
- Appendix 3: emergency response equipment list.

A copy of the ERP is kept in each vehicle that is used to transport cyanide. The ERP is appropriate for the transportation route and Chengxin Transport does not have an interim storage facility. The ERP includes details on the actions to be taken in the event of:

- Breakdowns
- Incidents on highways, roads and tunnels
- Emergency scenarios where cyanide (liquid or solid) has been released.

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The ERP details the emergency numbers for Police, Fire Authority and Ambulance. The ERP also includes contact details for the hospitals along the route. The ERP response actions are based on the scenarios developed from the hazards identified through the route assessment process. The ERP does consider both the physical and chemical form of cyanide. Chengxin Transport delivers solid sodium cyanide in 50 kg steel drums or 1 tonne intermediate bulk containers (IBCs) and liquid sodium cyanide in iso-containers. The ERP details response actions to incident scenarios for liquid and solid cyanide including the necessary response equipment and is based on the road transportation with a single container per vehicle. Emergency scenarios and response actions are based on the method of transport and the type of packaging.

The ERP does consider the aspects of transport infrastructure. The ERP response actions are based on the scenarios developed from the hazards identified through the route assessment process. The ERP has response actions for incidents on different parts of the road infrastructure such as highways, tunnels, or locations close to surface waters.

The ERP does consider the design of the transport vehicle and includes descriptions of response action for the anticipated emergency situation. The ERP contains response actions for:

- Truck breakdown
- Incident
- Incident with injury
- Incident where cyanide is leaking
- Incident with roll over and leaking
- Incident involving surface water.

The ERP details response for solid and liquid release and details the actions for the driver and escort at the scene and the emergency response team depending on the scale of the incident. The ERP does identify the roles of outside responders including Police, Fire Authority and medical facilities. In the event of an incident the driver's first duty is to contact emergency services.

The role of the emergency services are detailed as follows:

- Transport Police are responsible for keeping the public away from the incident scene and traffic control.
- The Police are responsible for crowd control and communication with media and the public.
- The Fire Authority is responsible for rescue, clearing the scene and cleaning up spills. The Chengxin emergency response team would work with the Fire Authority in cleaning up cyanide.

Local hospitals and ambulance are responsible for treating cyanide exposure at the scene and in hospital.

2.3.2 Transport Practice 3.2

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

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

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Summarise the basis for this Finding/Deficiencies Identified:

Chengxin Transport is in FULL COMPLIANCE with Transport Practice 3.2 requiring they designate appropriate response personnel and commit necessary resources for emergency response.

Chengxin Transport does provide emergency response training of appropriate personnel. Training is provided on a monthly basis and topics include:

- Driver Briefing on Cyanide Transport Controls
- Regulations on Dangerous Chemical Transport
- Safety Management System
- Duties and Operations Procedures
- Specification Dangerous Chemicals and Personal Protective Equipment.
- Seasonal Driving Risks (Flooding)
- Fire Flighting Knowledges
- Medical Rescue Knowledges (poisoning, chemical burnt, wound, heatstroke)
- Vehicles Maintenance.

The Chengxin Emergency Response Team are part of parent company and production facility. The production facility (Hebei Chengxin Co., Ltd.)is certified under the Code, www.cyanidecode.org/sites/default/files/pdf/HebeiChengxinSAR2015.pdf

A review of driver training files and the annual training plan confirmed that drivers received training in emergency response. Interviews with drivers confirmed that they have been trained in the emergency response procedures and were aware of the hazards cyanide presents. The duties of the two drivers includes:

- Calling the emergency services
- Clearing the public from the scene
- Contacting Chengxin Transport's control centre
- Administering first aid
- Assisting emergency services
- Responding, containing and cleaning up small scale spills (Level 1 incidents).

For larger scale incidents the emergency response team (ERT) are deployed and will assist emergency services at the scene. The plan outline the responsibilities of the ERT.

The emergency contact centre is responsible for contacting the Managing Director who assumes responsibility for liaising with the government and other stakeholders. There is a list of emergency response equipment that should be available during transport. The ERP in Appendix 4: Emergency Response Equipment List details the equipment within emergency rescue truck and Appendix 3 of the ERP: Emergency Response Equipment List details the equipment within each transport vehicle.

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Pre-inspection records (checklist) includes:

- Emergency response equipment (MSDS, anti-dotes, chemical preventive suits, full-face masks, driver physical conditions)
- Inspector signature.

Chengxin Transport has available the necessary emergency response and health and safety equipment, including personal protective equipment during transport. A selection of transport vehicles were inspected and the necessary emergency response equipment was found to be present and in serviceable condition and a copy of the current ERP was available.

An inspection of the Emergency Response vehicle found the necessary response equipment was present and in serviceable condition and a copy of the current ERP was available.

Chengxin Transport does provide initial and periodic refresher training in emergency response procedures including implementation of the emergency response plan.

Drivers attend training specifically for emergency response annually with the course run twice to capture the workforce. A review of driver training files confirmed that drivers attended the training and that the training was conducted on an annual basis. Interviews with drivers confirmed that they were aware of the actions to take in the event of an emergency.

The emergency response team are employed by Hebei Chengxin Co., Ltd. who are certified under the Code. The production facility is certified under the Code, www.cyanidecode.org/sites/default/files/pdf/HebeiChengxinSAR2015.pdf

There are procedures to inspect emergency response equipment to assure its availability when required. The inspections are completed as in the pre-departure checks and there is a checklist that details each item of emergency response equipment that is signed by the driver and safety supervisor. A review of completed checklists and interviews with drivers confirmed that procedures are in place and being followed.

Chengxin Transport does not subcontract cyanide handling or transport.

2.3.3 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:

Chengxin Transport is in FULL COMPLIANCE with Transport Practice 3.3 requiring that they develop procedures for internal and external emergency notification and reporting.

There are procedures and current contact information for notifying the shipper, the receiver/consignee, regulatory agencies, outside response providers, medical facilities and potentially affected communities of an emergency. The contact information is provided within the ERP and includes contact information for emergency services and hospitals along the route.

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The drivers are responsible for contacting Chengxin control centre who will contact the Managing Director. The managing director is responsible for liaising with the government and other stakeholders including the mine and supplier. This escalation process together with contact details is provided in the ERP. Personnel interviewed described the escalation process provided in the ERP and contact numbers are updated during the annual route assessment process. Systems are in place to ensure that internal and external emergency notification and reporting procedures are kept current. The ERP is reviewed on an annual basis and personnel interviewed confirmed that the contact details are checked as part of the review and updated as needed.

2.3.4 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:

Chengxin Transport is in FULL COMPLIANCE with Transport Practice 3.4 requiring that they develop procedures for remediation of releases that recognise the additional hazards of cyanide treatment.

There are 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 details the actions to be taken in the event of a solid or liquid cyanide spill. The ERP provides that solid cyanide is to be collected and placed back into container or tanker and taken back to the production facility for disposal.

The ERP describes neutralisation techniques using hydrogen peroxide for spills onto soils or ground. It provides the amount of hydrogen peroxide per metric tonne of spilt cyanide. All neutralised soil is to be excavated and taken back to the production facility for disposal.

The ERP does prohibit the use of chemicals such as sodium hypochlorite, ferrous sulphate and hydrogen peroxide to treat cyanide that has been released into surface water. Section 7.4 of the ERP states “When sodium cyanide is released into water body, it is prohibited to use bleaching powder, hydrogen peroxide, sodium hypochlorite, or ferrous sulfate etc. chemical to do water disinfection”.

2.3.5 Transport Practice 3.5

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

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

Summarise the basis for this Finding/Deficiencies Identified:

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

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There are provisions for periodically reviewing and evaluating the Plan's adequacy and they are being implemented. The Cyanide Transport Accident Response and Rescue plan was updated in 2014 and mock drills have been undertaken as planned over the three year period. The mock drill process includes a debrief process and review of what went well and opportunities to improve response.

The Chengxin Emergency Response Team attended the Tianjin Port incident and while not specifically related to Transport response has undertaken a review of response actions and planning following the incident. A learning record was provided on the explosive accident that happened in Rui Hai Warehouse at Tianjin Port and the forum was held by Hebei Chengxin Co., Ltd. and covered "improve safety awareness, strengthen the production safety management, improve the emergency response capacity, study the chemicals' properties".

The operation does conduct emergency response drills annually for both liquid and solid cyanide related scenarios. A review of mock drill reports and interviews confirmed that mock drills have been completed in accordance with commitments.

There is a procedure to evaluate the ERP's performance after its implementation and revise if necessary. The ERP details that the plan will be updated after an incident or if there is a change in process or equipment. Following the annual mock drill a review of the ERP is undertaken and updated as required.

No incidents involving cyanide transport have occurred during the audit period.

3.0 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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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.

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