

Hebei Chengxin Transport Co Ltd

Submitted to:

International Cyanide Management Institute (ICMI) 1400 I Street, NW - Suite 550 Washington, DC 20005 UNITED STATES OF AMERICA Hebei Chengxin Transport Co Ltd Yuanzhao Road Yuanshi County Shijiazhuang City Hebei Province

REPORT



Report Number. 12514140070.500/B.1 **Distribution:**

ICMI - 1 copy (pdf) Hebei Chengxin Transport Co Ltd- 1 copy (pdf) Golder Associates (UK) Ltd - 1 copy





Table of Contents

| 1.0 | SUMM | SUMMARY AUDIT REPORT FOR TRANSPORTATION1 | | | |
|------|-------------------------------|--|----|--|--|
| 2.0 | LOCAT | ION DETAIL AND DESCRIPTION OF OPERATION | 1 | | |
| | | Facility Location | | | |
| | 2.2 | Background | 1 | | |
| SUN | | AUDIT REPORT | | | |
| | Auditor | s Findings | 3 | | |
| | | Name of Other Auditors | | | |
| | Dates o | Pates of Audit | | | |
| PRIN | NCIPLE 1 – TRANSPORT4 | | | | |
| PRIN | RINCIPLE 2 – INTERIM STORAGE9 | | | | |
| PRIN | ICIPI F | R _ FMERGENCY RESPONSE | 10 | | |



August 2013 Report No. 12514140070.500/B.1



1.0 SUMMARY AUDIT REPORT FOR TRANSPORTATION

Name of Cyanide Transportation Facility: Hebei Chengxin Transport Co Ltd

Name of Facility Owner: Hebei Chengxin Transport Co Ltd

Name of Facility Operator: Hebei Chengxin Transport Co Ltd

Name of Responsible Manager: Yao Zhenting, Hebei Chengxin Transport Co Ltd

Address: Yuanzhao Road

Yuanshi County Shijiazhuang City

State/Province: Hebei Province

China Country:

Telephone: +86 311 84632554 Fax: +86 311 84627329

E-Mail: chengxin@hebeichengxin.com

LOCATION DETAIL AND DESCRIPTION OF OPERATION 2.0

2.1 **Facility Location**

Hebei Chengxin Transport Co Ltd (Chengxin Transport) was established on 3 July 2002. It is located at Yuanzhao Road, to the east of Yuanshi County railway station, 2 kilometers (km) east of Beijing/Guangzhou railway and No.107 Stated Road, 3.6 km west of Beijing/Zhuhai speedway, 30 km south of the province capital Shijiazhuang City. To the north is Yuanzhao Road, to the west is Jingyuan Road (400 metres), and to the east and south is farmland

2.2 **Background**

Chengxin Transport employs 237 employees of which 144 are involved in solid and liquid sodium cyanide transportation. Chengxin Transport owns 113 trucks and tankers of which 72 are used for the transportation of cyanide.

The solid sodium cyanide is packaged by the Hebei Chengxin Co Ltd (the sister production company) into plastic bags, which are then stored in either 50 kg plastic drums or 1,000 kg timber boxes.

Hebei Transport, established in 1990, is based at the same location as Hebei Chengxin Production Co Ltd. It is a joint-stock enterprise with 5,500 employees and is one of the largest production bases of cyanide and its derivatives in China. It manufactures a large number of chemicals using liquid sodium cyanide as a basic feed-stock.

Since 2005, Chengxin Transport has used a parking yard located approximately 0.5 km to the northwest of the main facility at Jingyuan Road Yuanshi County. The parking yard is approximately 10,000 m² and is used solely for the parking of empty trucks and trailers that have returned from transporting cyanide to customers.

Currently Chengxin Transport undertakes transport of both liquid and solid cyanide via 10 road transportation routes, all of which are in China.

Cyanide is loaded onto the trucks and tankers at the Hebei Chengxin production facility and from there is transported directly to the customer.

> heele Signature of Lead Auditor

1 August 2013 Date





Chengxin Transport is approved by Shijiazhuang City Bureau of Transport for road transportation and handling of dangerous goods.

Table 1: Chengxin Transport's Cyanide Transport Destinations

| Destination | Distance | Cyanide Form |
|-----------------------------------|----------|-----------------|
| Tianjin Port | 427 km | Solid |
| Anqing City | 1135 km | Solid |
| Nantong City, Jiangsu Province | 1107 km | Solid |
| Shangyu City, Zhejiang Province | 1270 km | Liquid |
| Shijiazhuang City, Hebei Province | 25 km | Solid |
| Xian Tao City, Hubei Province | 991 km | Solid |
| Dongyang City, Zhejiang Province | 1392 km | Solid |
| Hangzhou City, Zhejiang Province | 1210 km | Liquid |
| Zhangjiakou City, Hebei Province | 545 km | Liquid |
| Baotou City | 1170 km | Liquid |





SUMMARY AUDIT REPORT Auditors Findings

| | ⊠ in full compliance | with | |
|---|--------------------------------|-----------|---|
| Hebei Chengxin Transport Co Ltd is: | in substantial compliance with | | The International Cyanide Management Code |
| | not in compliance w | vith | |
| Audit Company: | Golder Associates | | |
| Audit Team Leader: | Sophie Wheeler, Lead Auditor | | |
| Email: | swheeler@golder.com | | |
| Name of Other Audit | ors | | |
| Name, Position | | Signature | |
| Dale Haigh, ICMI Pre-certified Transport Technical Specialist | | He-,L | |

Dates of Audit

The Certification Transport Audit was undertaken over three days (three person-days) between 1 July 2013 and 3 July 2013.

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.

Hebei Chengxin Transport Co Ltd

Meele.

1 August 2013

Name of Facility

Signature of Lead Auditor

Date





eele



PRINCIPLE 1 – TRANSPORT

Transport Cyanide in a Manner that Minimizes the Potential for Accidents and Releases

| Transport Practice 1.1: | Select cyanide routes to minimize the potential for accidents and releases. | | | | |
|---|---|--------------------------------------|--|--|--|
| | ☑ in full compliance with | | | | |
| The operation is | in substantial compliance with | Transport Practice 1.1 | | | |
| | not in compliance with | | | | |
| Summarise the basis for the | his Finding/Deficiencies Identified: | | | | |
| | OMPLIANCE with Transport Practice 1.1; requential for accidents and releases. | iring cyanide transport routes to be | | | |
| | tten and implemented a procedure (Cyanide T I its routes. An alternative route has also been | | | | |
| A range of hazards are assethe least risk. | are assessed and these are scored to determine which of the alternative routes presents | | | | |
| • | The routes are reviewed periodically with review dates set as either annually, when new clients arrive or when road conditions change. | | | | |
| Chengxin Transport has doo | Chengxin Transport has documented measures to address the risks identified within selected routes. | | | | |
| details for all of its routes to | Chengxin Transport does not undertake direct consultation with governmental organisations but has supplied letails for all of its routes to them. In addition, prior to each transportation shipment it has to provide details of the load and route to the local government department and obtain a permit before embarking on the burney. | | | | |
| | In the event of an incident, response is coordinated through Chengxin Transport. Assistance is provided (if required) from China's emergency services including the police, fire, transport authority and medical authorities. | | | | |
| Transport Practice 1.2: | Ensure that personnel operating cya equipment can perform their jobs with mithe environment. | | | | |
| | $oxed{oxed}$ in full compliance with | | | | |
| The operation 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 Standard of Practice 1.2 requiring that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

Chengxin Transport uses only qualified, trained and competent drivers to operate its transport vehicles.

Chengxin Transport has developed training plans which show that the training provided includes modules on laws, industrial protocols, safety, prevention of accidents, emergency response and management, emergency response drills, investigation measures, and case studies. Training also includes transportation of cyanide.

Hebei Chengxin Transport Co Ltd Name of Facility

eele Signature of Lead Auditor





Loading and un-loading is completed by the manufacturing company (Hebei Chengxin Co Ltd) and unloading is completed by the client. These activities are witnessed by Chengxin Transport drivers.

Before being employed by Chengxin Transport, each driver must have three years' experience and then undertakes a driving test with the company.

Chengxin Transport does not employ sub-contractors for the transportation of cyanide.

| Transport Practice 1.3: | Ensure that transport equipment is suitable for the cyanide shipment. | | |
|-------------------------|---|------------------------|--|
| | oxtimes in full compliance with | | |
| The operation is | in substantial compliance with | Transport Practice 1.3 | |
| | not in compliance with | | |

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in **FULL COMPLIANCE** with Transport Practice 1.3; requiring that transport equipment is suitable for the cyanide shipment.

Chengxin Transport only uses equipment that is designed and maintained to operate within the cyanide loads it will be handling.

Chengxin Transport holds the details of each vehicle. The values on the maximum loading capacity and towing capacity are initially provided by the manufacturer and are appropriate to handle the cyanide loads managed and comply with the legal capacities of the public roads.

All vehicles are also provided with a certification by a government authority, which annually inspects the vehicle and the certification confirms the towing and loading weights are satisfactory.

Chengxin Transport limits the mass of the loads it transports by issuing a loading permit prior to entering the cyanide loading area (at Hebei Chengxin Co Ltd). The safety supervisor and driver then check that the mass of the load placed on the vehicle does not exceed the permitted capacity.

An annual inspection is required by law from the Vehicle Management Authority for vehicles transporting dangerous chemicals. The certificate confirms the loading capacity. The inspection includes the trailer chassis.

The liquid tanker vehicles are inspected annually by the Vehicle Management Authority for vehicles transporting dangerous chemicals. The inspection includes the tachograph, global positioning system, and the condition of the weight and volume capacity of the tank. The Measurement Supervision and Inspection Institute also inspect tankers to confirm the volume that they are able to carry.

A further inspection is performed for tank integrity. This includes thickness of walls, valve inspection, leakage testing and concludes whether or not there are deficiencies or signs of corrosion; it also states the date that the next inspection is required.

Chengxin Transport holds a vehicle licence and a transportation licence for all vehicles which are renewed annually and confirms the loading capacity of the vehicle.

All vehicles are inspected prior to departure. All drivers are also provided with training (including emergency response).







| Transport Practice 1.4: | Develop and implement a safety program for transport of cyanide. | | |
|-------------------------|--|------------------------|--|
| | oxtimes in full compliance with | | |
| The operation 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 that the operation develop and implement a safety program for transport of cyanide.

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

Chengxin Transport implements a safety program for cyanide, which includes a number of elements that are described in detail below.

Vehicle Inspection Prior to Departure

Chengxin Transport carries out specific inspection on vehicles prior to and after loading.

Preventative Maintenance Plan

Chengxin Transport carries out checks prior to cyanide dispatch. A vehicle Level 2 maintenance inspection is carried out every 120 days by a qualified sub-contractor and an annual inspection required by law is performed by the Vehicle Management Authority for vehicles transporting dangerous chemicals.

Limitations on operator or driver hours

The legal limit for continuous driving is four hours. The daily driving limit is eight hours. If the driver has carried out at least 50 hours driving then they must have at least 24 hours rest. If they drive for more than 72 hours per week then they need to take 32 hours rest. In high temperatures in summer the transportation should be carried out before 11.00 or after 14:30. All of these requirements are mirrored in the company's management system.

Chengxin Transport implemented a tachograph scheme for all vehicles in June 2013.

Shifting Loads Prevention

Chengxin Transport has a management system procedure that requires the safety supervisor and drivers to be present during the loading of the cyanide and sealing of vehicles (using wire seals).

Hebei Chengxin Co Ltd (not Chengxin Transport) carries out the loading of vehicles using their equipment. Once the cyanide is loaded the container doors are sealed (for solid cyanide) and the vehicle weighed. For the liquid cyanide the weight and seals are checked during the dispatch check.

Modification of Transportation

There is a procedure within the management system that allows cessation or halting of any convoy due to a range of circumstances.

Drug Prevention

The management system considers drug prevention programmes. The company requires that drivers have no drug or alcohol abuse history.

The company tests drivers for alcohol using breath test before employment and prior to each convoy.

Other elements of the safety program

<u>Hebei Chengxin Transport Co Ltd</u> Name of Facility Signature of Lead Auditor

Golder Associates



There are always two drivers with each vehicle.

A global positioning system is used to constantly track each shipment, speed, location and if the driver follows the planned route. The estimated time of arrival can also be estimated using the global positioning system.

Speed tracking is performed by the global positioning system and the vehicles are limited to a specific speed when carrying cyanide (60 km/h). Any exceedance of this speed is picked up by the global positioning system and the drivers are called by the coordinator and a record kept on the board in the control room.

| Transport Practice 1.5: | Follow international standards for trans air. | portation of cyanide by sea and |
|-----------------------------|--|------------------------------------|
| | $oxed{\boxtimes}$ in full compliance with | |
| The operation is | in substantial compliance with | Transport Practice 1.5 |
| | not in compliance with | |
| Summarise the basis for the | his Finding/Deficiencies Identified: | |
| Chengxin Transport does no | ot involve shipment by sea or air and so Trans | sport Practice 1.5 does not apply. |
| Transport Practice 1.6: | Track cyanide shipments to prevent loss | es during transport. |
| | $oxed{\boxtimes}$ 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:

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

Chengxin Transport has a range of communication systems available that are used to communicate with different parties. The management system defines a number of these communication streams.

All vehicles carry the Emergency Response Plan which includes a list of telephone numbers including the emergency numbers for each province and all hospitals on each transport route.

Chengxin Transport uses a global positioning system and telephone communication between the vehicles and the transport company. The global positioning system is used to track the vehicles constantly during transport.

Each vehicle has two global positioning systems which are tracked by the global positioning team based at the Site in Shijaizhuang. A signal from the global positioning system on each vehicle is received every 30 seconds by the Teletek system. This shows progress along the entire transport route. Progress is monitored by the global positioning team.

Communication equipment (global positioning system, mobile phone) is tested periodically (daily) to ensure it functions properly. This includes before dispatch and each day.

Cell phones are checked to ensure they are working prior to dispatch. These checks are recorded on the Inspection Records of Communication Equipment before Dispatch. These records include the global positioning system check and the mobile phone check and are signed by the coordinator.

Chengxin Transport has assessed blackout areas along its routes. The only black out areas identified in any of the routes currently undertaken are within short (1 km length) tunnels.

Signature of Lead Auditor

1 August 2013 Date



Report No. 12514140070.500/B.1



The transporter implements inventory controls and/or chain of custody documentation to prevent loss of cyanide during shipment. Chengxin Transport also maintains a register of all the delivery dockets and the received weight of solid and liquid cyanide. A review of these indicates that the weights were correct.

Each vehicle carries a Delivery Confirmation Docket which includes the date of delivery, the registration number of the vehicle, name of the cargo, weight of the cargo, the seal and packaging integrity, signed by the receiver (on arrival), sales department (on dispatch) and coordinator (on dispatch).

Shipping papers and Materials Safety Data Sheets accompany each cyanide convoy.

Schooler.
Signature of Lead Auditor

Golder Associates



PRINCIPLE 2 - INTERIM STORAGE

Design, Construct and Operate Cyanide Trans-shipping Depots and Interim Storage Sites to Prevent Releases and Exposures.

| Interim Storage Practice 2.1: | Store cyanide in a manner that releases. | minimizes the potential for accidental |
|----------------------------------|---|--|
| | oxtimes in full compliance with | |
| The operation is | in substantial compliance with | Interim Storage Practice 2.1 |
| | not in compliance with | |
| Summarise the hasis | for this Finding/Deficiencies Identified: | |

Within the scope of this audit, there are no trans-shipping depots or interim storage sites, as defined in the ICMI definitions and Transportation Protocol. Cyanide is loaded directly from Hebei Chengxin's production company on to the trucks and tankers and delivered straight to the customer. At no stage is cyanide removed from the trucks prior to delivery to the customer.





1 August 2013

Report No. 12514140070.500/B.1



PRINCIPLE 3 – EMERGENCY RESPONSE **Ensure that Process Controls are Protective of the Environment.**

| Emergency Response Practice 3.1: | Prepare detailed eme releases. | rgency response | e plans fo | r potential | cyanide |
|----------------------------------|--------------------------------|----------------------|------------|--------------|---------|
| | ⊠ in full compliance wit | th | | | |
| The operation is | in substantial complian | nce with Emer | gency Resp | onse Practio | ce 3.1 |
| | not in compliance with | | | | |

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in FULL COMPLIANCE with Transport Practice 3.1; prepare detailed Emergency Response Plans for potential cyanide releases.

Chengxin Transport has an Emergency Response Plan. The plan includes the following sections:

- Scope and Basic Principles;
- Hazard Analysis;
- Organisational Framework and Responsibilities;
- Accident Prevention;
- Reporting Process;
- **Emergency Treatment**;
- **Emergency Rescue Requirements;**
- Post-Accident Measures;
- **Emergency Facilities and Equipment;**
- Assessment of Rescue Ability;
- Revision of Emergency Plan;
- Training and Drill; and
- Management of Emergency Plan.

The Emergency Response Plan is specific to each selected transportation routes. The Emergency Response Plan considers emergency scenarios for both the transport of liquid and solid cyanide. It considers emergency scenarios for incidents whilst on the road and when parked overnight. It considers breakdown and accidents/incidents on highways, national roads, and in tunnels. It includes emergency scenarios where cyanide (liquid and/or solid) has escaped or remains in the tanker or truck.

The Emergency Response Plan has different accident scenarios for solid and liquid cyanide emergency response. The plan includes the Materials Safety Data Sheet for sodium cyanide, which details all the chemical properties for both solid and liquid forms. The plan details emergency response equipment for both the solid and liquid emergency response equipment.



1 August 2013 Date





The Emergency Response Plan is based on road transport of solid and liquid sodium cyanide. The Emergency Response Plan states that transport is undertaken in trucks or tankers designed for either liquid or solid transport. It deals with specific emergency response actions for either incidents involving either liquid or solid sodium cyanide.

The Emergency Response Plan considers all aspects of the transport infrastructure. The risk assessments detail the condition of the roads. The Emergency Response Plan details different incident scenarios including incidents on parking areas, the highway, the national road, and locations close to rivers or waterbodies.

The Emergency Response Plan considers the design of the transport vehicle. The level of detail for Emergency Response for liquid and solid cyanide was of a high level and appropriate.

The Emergency Response Plan includes descriptions of response actions for breakdown and accidents/incidents on highways, national roads, and in tunnels. It includes emergency scenarios where cyanide (liquid and/or solid) has escaped or remains in the tanker or truck.

The Emergency Response Plan clearly identifies the roles of outside responders, medical facilities or communities in emergency response procedures. In the event of an incident the driver's first duty is to call the emergency services. The role of the emergency services is detailed in the Emergency Response Plan.

| Emergency Response Practice 3.2: | Designate appropriate response resources for emergency response. | • | and | commit | necessary |
|-------------------------------------|--|-----------|------|-----------|-----------|
| | $oxed{\boxtimes}$ in full compliance with | | | | |
| The operation is | in substantial compliance with | Emergency | Resp | onse Prac | ctice 3.2 |
| | not in compliance with | | | | |

Summarise the basis for this Finding/Deficiencies Identified:

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

Chengxin Transport provides emergency response training to appropriate people. All drivers attend training specifically for emergency response once a year. The course is run twice to ensure all drivers attend. Emergency response team members are employed and trained by Hebei Chengxin Co Ltd they receive training on the Emergency Response Plan four times a year.

Specific emergency response duties and responsibilities are detailed in the Emergency Response Plan. They include duties for the two drivers, the Managing Director, the Chengxin Transport control centre, emergency response team leader and emergency response personnel. The responsibilities of each member is discussed and strengthened during the drill that occurs once a year.

Chengxin Transport has a list of emergency response equipment that is available during transport or along the transport route. Each truck and tanker contains emergency response equipment, first aid equipment and personal protective equipment. In addition two Emergency Response vehicles are available at Chengxin Transport's headquarters. The equipment on a tanker and a truck (containing liquid and solid cyanide respectively) was inspected and found complete and in good working order.

Transport vehicle operators receive initial and periodic refresher training in emergency response procedures including implementation of the Emergency Response Plan.

There are procedures to inspect emergency response equipment and ensure its availability when required. This is detailed in the 'Emergency Rescue Equipment Maintenance Management Procedure'. A signed checklist was reviewed for each time a truck has been sent out. All equipment is listed and the checklist is

Supplement Signature of Lead Auditor

1 August 2013 Date



Report No. 12514140070.500/B.1



signed by the driver and the safety supervisor. There are also checklists for the emergency response vehicles stationed at the Chengxin Transport facility.

Chengxin Transport does not sub-contract any of the cyanide handling or transport.

| Emergency Response Practice 3.3: | Develop procedures for internal a reporting. | and external emergency notification and |
|----------------------------------|--|---|
| | $oxed{\boxtimes}$ in full compliance with | |
| The operation is | in substantial compliance with | Emergency Response Practice 3.3 |
| | not in compliance with | |
| Cummariae the basis for | thic Einding/Deficionaica Identified. | |

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in **FULL COMPLIANCE** with Transport Practice 3.3; develop procedures for internal and external emergency notification and reporting.

The Emergency Response Plan details procedures and current contact information for notifying the shipper, the receiver/consignee, regulatory authorities, outside response providers, medical facilities and potentially affected communities of an emergency.

In the event of an incident the Emergency Response Plan details that if required the driver must call the emergency services, a list of emergency contact numbers for all provinces is detailed in the plan which is held in all trucks and tankers. The driver will also call the Chengxin Control Room. Contact information for all hospitals along the ten routes is included in Annex 5 of the Emergency Response plans. Annex 6 lists the emergency contact number for each province which gives access to local police, ambulance and fire brigade.

Systems are in place to ensure that internal and external emergency notification and reporting procedures are kept current.

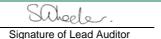
Section 13 of the Emergency Response Plan details that the company must make an annual assessment of the Plan and update it if necessary, including internal and external contact numbers and emergency response numbers. The current Emergency Response Plan is dated July 10, 2013. Ten of the numbers listed were checked with information on the internet and were found to be correct.

| Develop procedures for remediate additional hazards of cyanide treatn | tion of releases that recognize the nent chemicals. |
|---|---|
| | |
| ☐ in substantial compliance with ☐ not in compliance with | Emergency Response Practice 3.4 |
| | additional hazards of cyanide treatn in full compliance with in substantial compliance with |

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in **FULL COMPLIANCE** with Transport Practice 3.4; develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

There are procedures for remediation, such as recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill clean-up debris.









Section 7.2.7 of the Emergency Response Plan details what actions are to be taken by the driver and/or the emergency response personnel in the event of an incident where cyanide has been spilled. Different scenarios and actions to be taken are detailed for solid spills and liquid spills and whether on a road or parking area. The plan details that solid cyanide is to be collected into plastic containers and placed back into the truck or emergency response vehicle and returned to the Chengxin production facility for appropriate disposal. In the event of a liquid spills the emergency response vehicle would be sent to the scene along with an empty vehicle that would be used to transfer and hold any residual cyanide this would then be transported back to the production facility for appropriate disposal.

The Emergency Response Plan prohibits the use of chemicals such as sodium hypochlorite, ferrous sulphate, and hydrogen peroxide to treat cyanide that has been released into surface water or soils that have the potential to reach surface water. Training was undertaken in July 2013 to ensure that this was communicated to all drivers.

| nd revise |
|--------------------------------|
| |
| mergency Response Practice 3.5 |
| |
| |

Summarise the basis for this Finding/Deficiencies Identified:

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

There is a procedure to evaluate the Emergency Response Plan's performance after its implementation and revise it as necessary.

There are provisions for periodically reviewing and evaluating the ERP's adequacy and they are being implemented. Section 13 of the Emergency Response Plan details that the company must make an annual assessment of the Emergency Response Plan and update it if necessary. The current date of the Emergency Response Plan is July 10, 2013. A review took place following the mock drill in June 2013 but no updates were found to be required.

Mock drills involving cyanide transportation are undertaken annually. Reports from the last two mock drill reports were reviewed. The mock drill in June 2013 involved a spill of solid sodium cyanide from a truck (AKC226) in the parking yard. The mock drill in May 2012 involved two tankers (AK44915 and AK5707) that had crashed resulting in a spill of liquid sodium cyanide at the entrance to the parking yard.

Section 11 of the Emergency Response Plan 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 Emergency Response Plan is undertaken and updated as required.

No incidents involving cyanide trucks or tankers have occurred and therefore this has not been tested.







Report Signature Page

GOLDER ASSOCIATES (UK) LTD

Sophie Wheeler

ICMI Lead Auditor/Project Manager

David Hybert Reviewer

Date: 1 August July 2013

Author:Sophie Wheeler/Dale Haigh/DH/pr

Company Registered in England No.1125149
At Attenborough House, Browns Lane Business Park, Stanton-on-the-Wolds, Nottinghamshire NG12 5BL

VAT No. 209 0084 92

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation.



August 2013 Report No. 12514140070.500/B.1 At Golder Associates we strive to be the most respected global group of companies specialising in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organisational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

Africa + 27 11 254 4800
Asia + 852 2562 3658
Australasia + 61 3 8862 3500
Europe + 356 21 42 30 20
North America + 1 800 275 3281
South America + 55 21 3095 9500

solutions@golder.com www.golder.com

Golder Associates (UK) Ltd Cavendish House Bourne End Business Park Cores End Road Bourne End Buckinghamshire SL8 5AS UK

T: [+44] (0) 1628 851851

