



ICMC Recertification Audit of Golden Coach Limited - Summary Report

July 2018

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Golden Coach Limited

ICMI Recertification Audit -
Summary Report

18 July 2018

Prepared by: Environmental Resources Management
(ERM)

For and on behalf of
Environmental Resources Management

Approved by: Philip Johnson

Signed:



Position: Partner

Date: July 2018

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1.0 SUMMARY AUDIT REPORT FOR CYANIDE TRANSPORTATION OPERATIONS

Name of Cyanide User Facility: Golden Coach Limited
Name of Cyanide User Facility Owner: Golden Coach Limited
Name of Cyanide User Facility Operator: Golden Coach Limited
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Address: Golden Coach Limited
PO Box 38322
Dar es Salaam
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2.0 LOCATION DETAIL AND DESCRIPTION OF OPERATION

Golden Coach Ltd (GCL) became a Signatory to the International Cyanide Management Code on 27th May 2014 as part of the repeated requests by other companies (other than FFT) to transport Cyanide to mines not serviced by Freight Forward Tanzania (FFT).

With their sister company, Golden Fleet Ltd (GFL) they have been in operation for over 30 years and located off Nelson Mandela Road in Dar es Salaam. GCL and GFL are separate companies. However, they operate out of the same location, using the same management team, vehicles and trailers. GFL acts as a subcontractor to GCL with regards to the transport of cyanide with GFL providing some of the trucks and drivers. Throughout the remainder of the report we have denoted them as GCL as this is the primary company and the signatory to the International Cyanide Management Code. GCL's main client is Freight Forwarders Tanzania Ltd.

GCL has a fleet of over 200 trucks and 220 trailers and provides services throughout Tanzania and its neighbouring countries such as Kenya, Uganda, Burundi, Rwanda, DRC and Zambia. The company specialises in bulk, break-bulk and containerised cargo deliveries. Services offered by GCL include:

- General cargo haulage;
- Abnormal/out of gauge cargo haulage;
- Hazardous goods haulage; and
- Consolidated cargo haulage.

The company maintains its vehicles at its own workshop which was visited as part of the audit. It has preventive maintenance systems in place to ensure that vehicles are checked regularly.



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Signature of Lead Auditor

8 July 2018
Date

**SUMMARY AUDIT REPORT
AUDITORS FINDINGS**

in full compliance with
Golden Coach Limited is in substantial compliance with **The International Cyanide Management Code**
:
 not in compliance with

Audit Company: Environmental Resource Management Southern Africa (Pty) Ltd
Audit Team Leader: Ed Perry, Lead Auditor
Email: escafrika@gmail.com

Golden Coach has not experienced any significant cyanide incidents or compliance problems during the previous three year audit cycle.

NAME OF OTHER AUDITORS

Lynton Brown ICMI pre-certified Transportation Technical Specialist

DATES OF AUDIT

The Re-certification Audit was undertaken between 16 April 2018 and 18 April 2018.

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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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.

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

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Transport Practice 1.1; select cyanide transport routes to minimize the potential for accidents and releases.

The transporter implements processes and procedures to select transport routes that minimize the potential for accidents and releases or the potential impacts of accidents and releases.

This is undertaken in accordance with Standard Operating Procedure (SOP) CN-002 New Route Selection 12 January 2018.

The following are considered as part of the route selection procedure:

- Population density. Areas where population density is high are identified within the Cyanide Transport Route Assessment and drivers advised to exercise caution.
- Infrastructure (roadway, rail, port, runway, helipad) and Pitch and Grade. Transport is only via roads but the condition of the road (tarmac or earth) is noted within the Cyanide Transport Route Assessment and details of the gradient are provided along with advice to the convoy on exercising caution/being aware of speed limits/using low gears etc. where required.
- Prevalence and proximity of water bodies and fog. Within the Cyanide Transport Route Assessment water bodies or impact of water are noted and advice provided. For example, advice is provided about exercising caution when turning due to the problems of parts of roads being washed away by rain.

Only a single route is available for the delivery of cyanide from the Port of Dar es Salaam to individual mine customers due to the location of delivery points and the location and condition of the routes available.

Shipping containers of cyanide are first taken to the ICD (Inland Container Depot) by PMM on behalf of the government from where they are collected by GCL. The containers are then taken to the yard at Mbagala where the trucks spend the night to start the convoy the following morning or are offloaded into the interim storage facility for transportation at a later date. The yard is operated by Freight Forwarders Tanzania and its operation e.g. loading and unloading lorries is included in their recertification audit reports. Alternative routes between the ICD and the interim storage facility were assessed and the safest one selected.



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The transporter has implemented a procedure to evaluate the risks of selected cyanide transport routes and has taken measures to manage these risks.

GCL has produced a route risk assessment for the transportation of solid cyanide from the ICD in Dar es Salaam to the following gold mines: North Mara Mine; Buzwagi Mine; Bulyanhulu Mine; and Geita Gold Mine. Since the last recertification audit in 2014 the Golden Pride Mine and the Tulawaka mine have closed and transportation to Shanta Mine, Twangiza Mine and Namoya Mine have ceased.

The convoy leaders follow the directions in the cyanide transport route assessments, and drivers as part of the convoy follow this lead. Within the Cyanide Transport Route Assessments there are descriptions of existing controls, (e.g., speed bumps, ensuring no trains before crossing rail lines) and driver actions to improve controls and thereby reduce the risks (e.g., use low gears, decrease speed).

GCL implements a procedure to regularly re-evaluate the risks of selected cyanide transport routes and takes measures necessary to manage these risks. Route changes are mostly not practical given the limited number of routes available between Dar es Salaam and the mine sites. However, changes to conditions along the route may result in instructions to modify operations.

The Route Risk Assessments are formally reviewed on an annual basis when a cyanide awareness campaign is undertaken. Any changes to the route are included in the updated route risk assessments.

In addition, any localised or temporary changes to the route are noted in the Trip Report created after the completion of a trip. The Trip Reports are used to brief drivers at the start of every trip and warned of changes in route conditions e.g. construction work, etc.). Convoy leaders also feed information back through telephone text messages. Full details of telephone texts are recorded for each trip and where appropriate included in the Trip Reports.

GCL have consulted various stakeholders and relevant governmental agencies as necessary in the selection of routes and development of cyanide management measures.

GCLA is the Tanzanian Government regulator for dangerous goods management and GCL has discussed the route selection and cyanide management practice, including providing emergency response procedures to this regulatory authority. Before each trip GCL contact GCLA to inform them about the convoy. GCLA issue a permit to GCL to carry out the trip. GCLA then contact all the relevant local police to inform them that the convoy will pass through their areas. When the convoy stops at, or close to, a population centre, the GCL Convoy Leader contacts the local police to inform them that they are in their area.

Each year the GCL QHSET Manager, GCL Convoy Leader and GCLA Senior Chemicals Inspector conduct a road trip and make contact with local community police and hospitals. Information obtained during these trips is used to update the Route Risk Assessments.

GCL personnel indicated that security is not usually a significant issue. They have carried out a number of convoys since the last recertification and no significant security issues have been experienced. They also notify the police in each region prior to starting each convoy and call the Regional Police Commissioner of each region as they enter it. However, cyanide is always transported in convoys.

Convoys are used as a means of managing the risks of the road conditions (traffic and people, poor roads, floods) and responding to emergencies. Each convoy is led by a support vehicle and fitted with signs and



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flags. In addition to convoys, additional security measures are implemented including the use of locked and sealed containers, the use of angle plates, and GPS tracking.

GCL has advised medical facilities and communities of their roles during an emergency response. Both Police and Government Hospitals have been provided with GCL's Emergency Procedures and GCL has also discussed their activities during annual road trips with the relevant hospitals and police.

The QHSET Manager advised that there is no effective state emergency response facility in Tanzania, consequently GCL manages its own emergency response in preference to subscribing to any private emergency response service.

The transport company has a procedure to ensure that its sub-contractors are in compliance with elements 1, thru 7 of this Transport Practice 1.1.

The only subcontractor that GCL uses for the transportation of cyanide is Golden Fleet Limited (GFL). GFL has separate drivers and trucks from GCL however apart from this GFL uses the same offices, yard, management personnel, support personnel, maintenance personnel, tracking systems, procedures and process. GFL acts as a department of GCL such that in any one convoy there will be a mix of trucks and drivers i.e. both GCL and GFL drivers and vehicles. The Convoy Leader is always a GCL employee.

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.

The operation is in full compliance with **Transport Practice 1.2**
 in substantial compliance with
 not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with 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.

The transport company only uses trained, qualified and licensed operators to operate its transport vehicles.

There is no requirement in Tanzania for drivers to be licensed for dangerous goods transport. GCL confirms that individuals are competent to drive HGVs before they are employed by undertaking a practical test. In addition GCL provides additional training, as detailed below, to ensure its drivers (and those of GFL) are competent.

A range of training courses are provided by GCL on a 6 monthly basis including the following:

- Induction;



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- Driver induction;
- Cyanide awareness;
- Cyanide convoys;
- Cyanide first response.

GCL maintains a record of training provided to its drivers and other personnel in the form of a matrix, which is continually updated. Drivers are also provided with cards showing the date of their licence the training they have received and when the next training update is required. Prior to starting the convoy, these cards are checked by convoy leaders to ensure that the training is in date.

All personnel operating cyanide handling and transport equipment have been trained to perform their jobs in a manner that minimizes the potential for cyanide releases and exposures.

Drivers (GCL and GFL) and the Convoy Leader (from GCL) were interviewed about their knowledge of the procedures and practices involving operating cyanide handling and transport equipment. Responses received indicated that they were competent to perform their jobs in a manner that minimises the potential for cyanide releases and exposures.

The transport company has a procedure to ensure that its sub-contractors are compliant with elements 1, 2 and 3 of this Transport Practice 1.2.

The only subcontractor that GCL uses for the transportation of cyanide is Golden Fleet Limited (GFL). GFL has separate drivers and trucks from GCL however apart from this GFL uses the same offices, yard, management personnel, support personnel, maintenance personnel, tracking systems, procedures and process. GFL acts as a department of GCL such that in any one convoy there will be a mix of trucks and drivers i.e. both GCL and GFL drivers and vehicles. The Convoy Leader is always a GCL employee.

Transport Practice 1.3: Ensure that transport equipment is suitable for the cyanide shipment.

The operation is in full compliance with **Transport Practice 1.3**
 in substantial compliance with
 not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Transport Practice 1.3; ensure that transport equipment is suitable for the cyanide shipment.

GCL only uses equipment designed and maintained to operate within the parameters of the cyanide loads it will be handling. Cyanide manufacturers and suppliers limit the mass of cyanide containers sent to Tanzania to 27 tonnes. This is clearly shown on the chain of custody information provided within each shipment.



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Equipment used to transport cyanide loads, consists of road vehicles (tractor units and trailers) that were purchased to a design specification appropriate for the cyanide transport task. These include main tractors with articulation and trailers which are 12 m in length. Step-deck trailers are now being used for the transportation of cyanide containers to reduce the likelihood of rollovers.

GCL maintains records of vehicle specifications and maintenance history. The company has a detailed program of preventative maintenance and enough capacity to ensure that they always have enough vehicles on the road for the task.

During each convoy, the convoy leaders check that the trailers are only carrying cyanide and no additional loads. This is checked at the start of the convoy and at various times during each day. The loads are also checked at government weighbridges during the transportation and confirmed to be within the legal weight limits.

Procedures are in place to verify the adequacy of the equipment for the load it must bear, through the regular inspection and maintenance of the equipment.

There are procedures in place to prevent overloading of the transport vehicle being used for transporting the cyanide.

GCL have the following procedure, SOP-010 GC DG Loading & Trucking R-04. This procedure does not need to include the requirement to prevent the overloading of trucks as each truck only carries one shipping container of cyanide approximately 25.5 tonnes in total weight. This complies with the legal requirements for the weight of HGVs in Tanzania and the carrying capacity of the trailers. The trailer specifications for the Simba Trailers used shows they can carry 36 tonnes.

The transport company has a procedure in place to ensure its sub-contractors are in compliance with elements 1, 2 and 3 of this Transport Practice 1.3.

The only subcontractor that GCL uses for the transportation of cyanide is Golden Fleet Limited (GFL). GFL has separate drivers and trucks from GCL however apart from this GFL uses the same offices, yard, management personnel, support personnel, maintenance personnel, tracking systems, procedures and process. GFL acts as a department of GCL such that in any one convoy there will be a mix of trucks and drivers i.e. both GCL and GFL drivers and vehicles. The Convoy Leader is always a GCL employee.

Transport Practice 1.4: Develop and implement a safety program for the transport of cyanide.

The operation is in full compliance with **Transport Practice 1.4**
 in substantial compliance with
 not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Transport Practice 1.4; develop and implement a safety program for transport of cyanide.



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Procedures are in place to ensure that the integrity of the producer's packaging is maintained.

Only one container is allowed per trailer, which is stated in the training presentations observed by the auditors. GCL ensures seals are checked on all containers before being collected at the ICD and this has been recorded using a Dangerous Goods Container Checklist.

As part of the checks the seals are re-checked on route three times a day by the drivers and the Convoy Leader and this is also recorded on the Checklist.

All containers transported are held in place on the vehicles using twistlocks and angle plates.

At the mine, the consignee signs chain of custody document to acknowledge receipt of the container in a good condition. They check the condition of the load during the unpacking process and reports on the standard of the shipping container. The Delivery Manifest is signed to confirm the seals were in place on delivery and the delivery was acceptable.

As all cyanide is delivered by sea to the Port of Dar es Salaam, containers arrive with placards already in place as attached by the supplier, in accordance with the International Maritime Dangerous Goods (IMDG) Code. These placards remain on the containers until the containers are unpacked at the mine sites. These provisions and the attachment of the IMO marine pollutant label ensure that all consignments comply with international standards.

The placards used on containers, include:

- UN Numbers; and
- Dangerous Goods Class labels, both of which are prescribed in the United Nations Model Regulations and the IMDG Code.

These signs have to be displayed on all four sides of the container. The sign's presence is inspected at the point of collection and during the journey.

The Dangerous Goods Transport Regulations in Tanzania only require that dangerous goods and their hazards be clearly identified to others. The vehicles therefore also carry a "local" sign on the front of the vehicle which reads: "Danger Poison" in English and Swahili. All vehicles in the convoy are fitted with this sign at the front of the vehicle before they set off. Red flags are also fitted to the lead vehicle and the vehicles carrying containers.

The safety program implemented by GCL includes the following:

- a) Vehicle inspections prior to every departure/shipment;
- b) A preventative maintenance program;
- c) Limitations on operator/driver hours;
- d) A procedure to prevent loads from shifting;
- e) A procedure to modify or suspend transportation if conditions require it;
- f) A drug abuse prevention program; and
- g) Retention of records documenting that the above activities have been conducted.



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The transport company has procedures in place to ensure that its sub-contractors are in compliance with elements 1, 2 and 3 of this Transport Practice 1.4.

The only subcontractor that GCL uses for the transportation of cyanide is Golden Fleet Limited (GFL). GFL has separate drivers and trucks from GCL however apart from this GFL uses the same offices, yard, management personnel, support personnel, maintenance personnel, tracking systems, procedures and process. GFL acts as a department of GCL such that in any one convoy there will be a mix of trucks and drivers i.e. both GCL and GFL drivers and vehicles. The Convoy Leader is always a GCL employee.

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

The operation is in full compliance with **Transport Practice 1.5**
 in substantial compliance with
 not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The transporter does not ship cyanide by sea or air.

Transport Practice 1.6 Track cyanide shipments to prevent losses during transportation.

The operation is in full compliance with **Transport Practice 1.6**
 in substantial compliance with
 not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in full compliance with Transport Practice 1.6; track cyanide shipments to prevent losses during transport.

Vehicles transporting in the cyanide convoys have several means to communicate with GCL, with emergency responders and with the relevant mining operation.

All vehicles transporting cyanide are fitted with GPS and are tracked constantly by the relevant transport company. Alarms are fitted to the tracking system which are monitored constantly during the movement of cyanide convoys. Periodically the file downloads to allow the storage of data. The alarms register when; the drivers speed goes above a maximum level, there is a stop for a duration longer than expected, or one of the vehicles moves outside the travel corridor.

Each driver within the convoy has a mobile phone and numbers are provided at the start of the convoy so drivers can get in touch with the Convoy Leader or vice versa.



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Convoy leaders carry mobile phones to contact GCL, relevant transporters, local police, hospitals and the mine sites. The emergency telephone numbers are contained in GC Cyanide Procedures Rev 05, 01 January 2018. This is carried by the Convoy Leader. If there is an incident the driver contacts the Convoy Leader and it is the Convoy Leader's responsibility to contact the relevant organisation in addition to GCL.

The communication equipment is regularly tested to ensure that it functions correctly. GCL's Haulage Truck Checklist includes confirming the GPS is working and that cell phones are present.

Trucks are logged on to the GPS in the relevant transport yard before departure. During the convoy process, GPS constantly tracks the convoy vehicle movements. Should a vehicle not respond for any reason this would be flagged immediately. The auditors observed the GPS tracking facility and were able to see the cyanide convoy that was currently on the road. The data on the GPS tracking system is refreshed every 2 minutes.

There are no blackout areas along the routes due to the near universal coverage of the cell phone network in Tanzania. Therefore, no special procedures have been implemented.

There are systems and procedures in place to enable the progress of cyanide shipments. Prior to the cyanide convoy departing the timing of the convoy between the pick-up point and the mine is estimated. The mine is then informed as to the estimated time of arrival.

The progress of the cyanide convoy is then continuously monitored using a GPS tracking system that allows the position and speed of the convoy to be viewed within the GCL offices in real time (data is refreshed every 2 mins). In addition, the Convoy Leader sends SMS messages to the relevant people in GCL when the cyanide convoy starts and stops along the route. The information transmitted is logged into a report that records the time of the message and serves as a supplementary record of the trip in addition to the GPS record.

The transporter uses inventory controls and chain of custody documentation to prevent the loss of cyanide during shipment. Chain of custody records are obtained by GCL from the supplier of cyanide. This chain of custody information details the amount of cyanide in transit with one sheet for each container. Shipping documents are included as part of every consignment. The delivery manifests are signed off by the mine representative following the unloading of the containers at the mine to confirm the containers were delivery with the seals intact and the stated quantity of cyanide has been delivered.

The full suppliers Material Safety Data Sheet (MSDS) for solid sodium cyanide is kept by the Convoy Leader and each Driver, which describes the necessary handling precautions. A summary data sheet that describes the necessary handling precautions is also included within the driver's delivery folder and is in Swahili.

The transport company has a procedure to ensure that its sub-contractors are in compliance with elements 1 thru 6 of this Transport Practice 1.6.

The only subcontractor that GCL uses for the transportation of cyanide is Golden Fleet Limited (GFL). GFL has separate drivers and trucks from GCL however apart from this GFL uses the same offices, yard, management personnel, support personnel, maintenance personnel, tracking systems, procedures and process. GFL acts as a department of GCL such that in any one convoy there will be a mix of trucks and drivers i.e. both GCL and GFL drivers and vehicles. The Convoy Leader is always a GCL employee.



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PRINCIPLE 2 - INTERIM STORAGE

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

Transport Practice 2.1: Store cyanide in a manner that minimizes the potential for accidental releases.

The operation is **in full compliance with** **Transport Practice 2.1**
 in substantial compliance with
 not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

No interim storage is undertaken by Golden Coach Limited.



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PRINCIPLE 3 – EMERGENCY RESPONSE

Ensure that Process Controls are Protective of the Environment

Transport Practice 3.1: Prepare detailed emergency response plans for potential cyanide releases.

The operation is in full compliance with **Transport Practice 3.1**
 in substantial compliance with
 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.

The transporter has an Emergency Response Plan.

The Emergency Response Plan is an integral part of the GC Cyanide Procedure, Rev 05, 01 January 2018. The document covers both GCL and GFL. This is the document to be used in the event of an emergency involving Sodium Cyanide.

The Cyanide Procedures document has been adapted by GCL from Orica International PTE LTD's (Orica) Emergency Response Guide. The Orica Emergency Response Guide was developed by Orica Mining Chemicals to provide guidance in the development of specific site and transport route emergency response plans for the management of incidents involving spillage of Orica sodium cyanide product. The document has been modified by GCL to suit the conditions of East and Central Africa.

It is stated on the front page of the Cyanide Procedures that a copy must be carried by all escorts of the cyanide convoys. The Cyanide Procedures includes an Emergency Flow Chart that guides the management of an incident.

The Plan is appropriate for the selected transportation route(s) or interim storage facility. The Plan includes descriptions of response actions as appropriate for anticipated emergency situations.

The GC Cyanide Procedure, Rev 05, 01 January 2018 include the following:

- Basic Incident Flow Chart for Cyanide Convoys
- Basic Emergency Response Procedures
- Handling Response Guides

In addition, there are route risk assessments for specific routes, which detail the risks associated with specific routes.

The Plan considers the physical and chemical form of the cyanide.



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The Scope section of the Cyanide Procedures states

“Approximately 1.1 tonnes of solid Cyanide, in the form of briquettes, is packaged inside heavy-duty plastic bags inside nylon bulk bags. These bags are then placed inside plastic lined IBC standard wooden boxes. Depending upon the client requirements there are between 17 & 20 boxes loaded into a steel Rear-door Sea Containers for shipment.”

The Basic Emergency Response Procedures and Handling Response Guides describe scenarios for the solid briquette form of cyanide and within the shipping containers.

The Plan considers the method of transport. The Scope section of the Cyanide Procedures states: “Road transport is now the only means of transporting dangerous goods including sodium cyanide in Tanzania”

The Plan considers all relevant aspects of the transport infrastructure. All transport is by road. The road type varies from tarmac to dirt road. The Route Risk Assessments provide information on the condition of the road (surface type, number of carriageways and incline), specific hazards at different points along the route and specific precautions to be undertaken such as use of high gears and speed limits. The Route Risk Assessments detail local hospitals and police departments. Emergency numbers along with contact names for hospitals and police departments are listed in the Emergency Contact list within the Cyanide Procedures.

The Plan considers the design of the vehicles being used and the storage facility. The solid cyanide is packed by the cyanide manufacture in heavy duty plastic bags inside nylon bulk bags which are packaged into UN approved plastic lined wooden IBCs, which are in turn placed within metal shipping containers for transportation. The Cyanide Procedures include incidents where an incident occurs to the convoy, but all of the solid cyanide is still contained within the metal shipping container and those incidents where it is spilt from the shipping container.

The Plan identifies the roles of outside responders, medical facilities and communities in emergency response procedures, which include the following:

- Emergency services along the route (police and medical providers);
- Transporter representative;
- National Environmental Management Commission (NEMC);
- Government Chemist Laboratory Agency (GCLA);
- Clients (mining companies);
- Tanzania International Container Terminal Systems (TICTS);
- Tanzanian Port Authority (where appropriate); and
- Supplier e.g. Orica.

The Cyanide Procedures document the role of the Clients (mine sites) where emergency response and medical facilities are available.



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Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response.

The operation is in full compliance with
 in substantial compliance with **Transport Practice 3.2**
 not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

The transporter provides emergency response training for appropriate personnel. In addition, transport operators receive initial and periodic refresher training in emergency response procedures including implementation of the Cyanide Procedures.

The following people receive emergency response training and periodic refresher training:

- Contact One (this is the person who acts as the main coordinator in the event of an emergency with their responsibilities detailed in the Cyanide Procedures);
- Convoy Leader;
- ER Driver (driving the emergency response vehicle);
- CN Driver (driving the lead pickup truck);
- Tyre Manager;
- HSE Coordinator;
- Operations Supervisor; and
- Yard Emergency Responders x2.

Descriptions are provided of specific emergency response duties and responsibilities of personnel.

The Cyanide Procedures document identifies the key roles and responsibilities in the event of an emergency. The requirements are clear and unambiguous and are also covered in the training programmes. During interviews with emergency response drivers, convoy truck drivers and truck drivers they were asked about their roles and the answers were as per the basis of the procedures.

There is a list of all emergency response equipment that should be available during transport and along the transportation route. All emergency response equipment is taken in the Emergency Response vehicles as no other equipment is available en-route.

GCL currently maintains one Emergency Response Vehicle containing emergency response equipment and Personal Protective Equipment (PPE). On every convoy an emergency response vehicle is taken along with a convoy leader vehicle in which the convoy leader and driver travel. The emergency response vehicle has a



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two hundred litre diesel tank for running the emergency generator. GCL has an Emergency Vehicle Response Checklist which lists all PPE and Emergency Response equipment. This is checked on a monthly basis. In addition to the emergency response vehicles all drivers are issued with a 'Get Out Alive' kit bag when the convoy assembles.

The transporter has the necessary emergency response and health and safety equipment, including personal protective equipment available during transport.

Weekly Safety Meetings are held by GCL for drivers. Each week a different topic is covered. Relevant safety briefing notes are discussed with the drivers at these meetings and some are translated into Swahili and posted on a notice board.

Procedures have been implemented for the inspection of emergency response equipment and to assure its availability when required. The emergency response equipment is inspected on a monthly basis, and the Emergency Response Equipment Checklist is used to ensure that the equipment is present in the vehicle. In the Cyanide Procedures the transportation procedures state that the convoy leader will 'ensure that the emergency response kit is checked and any missing or outdated equipment replaced.

The transport company has clearly delineated the roles and responsibilities of its sub-contractor during an emergency response situation.

The only subcontractor that GCL uses for the transportation of cyanide is Golden Fleet Limited (GFL). GFL has separate drivers and trucks from GCL however apart from this GFL uses the same offices, yard, management personnel, support personnel, maintenance personnel, tracking systems, procedures and process. GFL acts as a department of GCL such that in any one convoy there will be a mix of trucks and drivers i.e. both GCL and GFL drivers and vehicles. The Convoy Leader is always a GCL employee.

Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.

The operation is in full compliance with **Transport Practice 3.3**
 in substantial compliance with
 not in compliance with

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.

There are procedures and current contact information for notifying the shipper, receiver/consignee, regulatory agencies, outside response providers, medical facilities and potentially affected communities in the event of an emergency.

GC Cyanide Procedure, Rev 05, 01 January 2018 includes an Emergency Response Procedure Flow Chart and documents the responsibilities various roles including the Convoy Leader whose responsibility it is to contact the relevant parties in the event of an emergency.



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Emergency contact numbers are included in the Cyanide Procedures for the following; GCL, Freight Forwarders Tanzania, Mainline Carriers, Freight Forwarders Kenya, Transeast, Orica, Samsung C&T Corporation, various mines, GCLA, NEMC, TICTS, Police, and Hospitals

The suppliers e.g. Orica provide an Emergency Response facility whereby they operate a 24 hour, 7 day a week emergency telephone line to provide assistance and advice.

The community do not have a designated role in the event of an emergency other than being represented by the police. The hospitals and police for all areas that the cyanide convoy will pass through are contacted prior to a convoy starting and again when the convoy enters their area.

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

A test of the numbers of the internal and external responders is undertaken annually as part of the Cyanide Awareness Campaign. The Cyanide Awareness Campaign includes visits to the police and hospitals along the route to ensure the contact information is correct.

The GCLA is contacted at least on a monthly basis and contact numbers are updated as required. Mines are contacted at least on a monthly basis. Suppliers emergency phone numbers are checked annually.

Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

The operation is in full compliance with in substantial compliance with not in compliance with **Transport Practice 3.4**

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.

RG 7 Decontamination of a Spill of Solid Cyanide into Soil, under Section 9 Handling Response Guides of GC Cyanide Procedure, Rev 05, 01 January 2018, details the decontamination of a spill of solid cyanide into soil and also includes details if water is impacted.

It includes a procedure for disposal of cyanide contaminated soil and wash water. It states that contaminated soil and spilt material will be disposed of at a mine site heap leach facility/tailings. There are also procedures for dealing with a dry spill and for dealing with a wet spill.



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The Secondary Response section of the Cyanide Procedures states that GCL in conjunction with regulatory authorities will undertake a monitoring program at an accident/incident site where cyanide is released into surface water.

The procedures prohibit the use of chemicals such as sodium hypochlorite, ferrous sulphate and hydrogen peroxide to treat cyanide that has been released into surface water. RG 6 Dry Sodium Cyanide Spill to a Waterway under Section 9 Handling Response Guides of GC Cyanide Procedure, Rev 05, 01 January 2018, states that GCL "subscribe to the recommendations of the International Cyanide Management Code in that no chemicals are to be added to a flowing waterway in the event of a cyanide spill as these may only exacerbate the situation with their own toxicity characteristics."

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

The operation is in full compliance with
 in substantial compliance with **Transport Practice 3.5**
 not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

There are provisions for periodically reviewing and evaluating the Plan's adequacy they have been and will continue to be implemented.

The Document History section of the GC Cyanide Procedure, Rev 05, 01 January 2018 details the date of publication, new revision number and a description of the revision.

The Review and Audit Process Section of the Cyanide Procedures states that the responsible people are required to coordinate a review at least annually, and after any of the following resulting from or affected by the transportation of cyanide; incidents, emergencies, emergency exercises, and transportation audits and assessments.

Amendments made to the document are to be noted within the "Document History" section and implemented immediately. The revised document is to be circulated to parties identified on the distribution list.

The Cyanide Procedures is currently on revision 05.

There are provisions for periodically conducting mock emergency drills and they have been and will continue to be implemented.

The Cyanide Procedures state that:



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“Emergency response simulation drills are done at least at least every six months but in stages whereby one or two specific aspects of the plan are evaluated e.g. Communications systems, Yard Response, Driver Response, etc.

Full scale incident scenario including interaction with external agencies such as GCLA, Mining Companies, Police, Fire Service and a Hospital or Clinic will be done once every three years and can be beneficial in evaluating the overall plan.”

The six monthly emergency response simulation drills are informal with no documentation. It was confirmed through interview that these are carried out. A full scale incident scenario was undertaken on 8 August 2017 jointly between FFT and GCL.



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