



BAM CONSULTANCY SERVICES LIMITED

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ICMC RECERTIFICATION –SUMMARY REPORT

INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

Transportation Summary Recertification Audit Report

STELLAR LOGISTICS LIMITED, GHANA

Date of audit : 1st to 3rd October 2024

For the

International Cyanide Management Institute

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INTRODUCTION

Operational information.

Name of Transport Company	: Stellar Logistics Limited
Name of Transport owner	: Stellar Logistics Limited
Name of facility operator.	: Stellar Logistics Limited
Name of responsible manager	: Godfred Boakye
Address	: Stellar Logistics Limited
	: Airport Base,
	: Takoradi, Western Region
Town	: Takoradi
Country.	: Ghana
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Acronyms and abbreviations:

DSV -	De Sammensluttete Vognmænd
ERP	Emergency Response Plan
ER	Emergency Response FMCG - Fast Moving Consumer Goods
HSE	Health, Safety & Environment
ICMI	International Cyanide Management Institute
IBC	Intermediate Bulk Container
RRA	Route Risk Assessment
SLL	Stellar Logistics Limited
TMP	Transport Management Plan

Location detail and description of operation

Stellar Logistics became a Signatory to the International Cyanide Management Code on 01 November 2012 and obtained Cyanide Code Certification in April 2015. Recertification was completed in 2018.

Stellar Logistics Limited is a division of the Stellar Group of Companies. Stellar Logistics is a wholly owned Ghanaian entity that was established in 2007 to provide freight forwarding and logistics services. The Company's head office is in Accra, with branches in Takoradi, Accra, Tema, Ouagadougou, Burkina Faso and Lagos, Nigeria.

Stellar Logistics has a truck yard and in its office located in Takoradi in the Western Region of Ghana. The Takoradi yard also has a maintenance workshop for repair of vehicles.

Stellar logistics is a leading provider of supply chain solutions in Ghana. The company combines its core products of ocean freight, airfreight and logistics to deliver tailor-made solutions to various industries such as mining, oil & gas, telecom, healthcare, FMCG, and manufacturing. Stellar Logistics is the exclusive agent of DSV Air & Sea for Ghana, and the company offers end to end services to and from more than 90 countries worldwide.

The company has warehouses across Ghana, and have the know how to manage every inch of it. The company offers both bonded and non-Bonded warehouses. With a fleet of over 50 tractors & Trailers, Stellar Logistics has installed tracking systems and cameras on all of them to monitor their fleet and cargo at all times.

The Group of companies provides logistics, hospitality, travel, power, ship broking, and property maintenance and retail services.



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Transportation of cyanide

Stellar logistics is involved in the transportation of sodium cyanide in sparge containers (isotanks) and containerized IBCs to the mining industry in Ghana and Cote D'Ivoire. Stellar Logistics transports sodium cyanide in sparge container to AnglogoldAshanti Obuasi and Iduapriem mine Goldfields Tarkwa, Barbex, Gold Stone Resources, Asante Gold Bibiani mine and Allied Resources Bonikro Mine in Cote D'Ivoire.

Sodium cyanide deliveries to Sparge Facility in Barbex, Tarkwa are done from Takoradi and Tema ports

Currently, the company transports solid sodium cyanide manufactured by Orica Australia Pty Ltd, in 20' general purpose shipping containers from the ports of Tema and Takoradi, Ghana to Orica's cyanide sparging facility in Tarkwa, Ghana. Containerized cyanide loaded in the port of Tema, Ghana are delivered directly to Asanko mine whilst sodium cyanide in isotanks is delivered to end user destinations namely Gold Stone Akrokerri mine, AngloGold Ashanti Obuasi and AGA Iduapriem mines in Ghana and Allied Gold Bonikro in Cote d'Ivoire from Orica's sparge facility in Tarkwa.

The supplier's Supply Chain from its manufacturing facility in Yarwun, Australia to the ports of Tema and Takoradi was re-certified as being in full compliance with the Code on 4 February 2022.

Stellar Logistics was first certified in 2015, and recertification in 2018 and another recertification in 2021. This audit(2024) is Stellar third recertification audit.

Stellar Logistics has a Ghana Environmental Protection Agency (EPA) of permit for transportation of cyanide. Permit No. EPA/WR/LHCT-179/24 issued on March 22, 2024 and expires on March 21, 2025. The designated trucks for the cyanide transportation are listed at the back of the EPA permit issued by the authority.

Audit Scope

The audit covers the transportation of cyanide in shipping containers from the ports of Takoradi and Tema, Ghana and Isotanks from Orica's facility in Tarkwa to mining companies in Ghana. and a mine in Ivory Coast. The ICMI protocols were used as guidelines in conducting this audit.

Audit Schedule

The recertification Audit was conducted from 1st to 3rd October 2024.



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Auditor's Finding.

This operation is

X in full compliance

in substantial compliance

not in compliance

with the International Cyanide Management Code. Stellar Logistics has not experienced any compliance issues during the previous three-year audit cycle.

Auditor Information.

Audit Company: **BAM Consultancy Services Limited**

Lead Auditor & Technical Expert Auditor: **Benjamin Amoo-Mensah**

Lead Auditor E-mail: **csbpghana@ghana.com**

Names and signatures of other Auditors: **None.**

Auditor 1: _____

Name (Print / Type Signature

Auditor 2: _____

Name (Print / Type Signature

Auditor 3: _____

Name (Print / Type Signature

Dates of Audit: This audit was conducted in the period of 1st October to 3rd October 2024.

Auditor Attestation.

I attest that I meet the criteria for knowledge, experience and conflict of interest for a Cyanide Code Certification Audit Lead Auditor, 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 Cyanide Code Auditors.

I attest that this Summary Audit Report accurately describes the findings of the certification audit. I further attest that the certification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Cyanide Transportation Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

Date: 3rd December 2024



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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 transport routes to minimize the potential for accidents and releases.

The operation is:

✓ in full compliance with Transport Practice 1.1

o in substantial compliance

o not in compliance

Summarize the basis for this Finding/Deficiencies Identified:

Stellar Logistics Ltd has implemented processes and procedures to select transport routes that minimize the potential impacts of accidents and/or releases. Stellar Logistics has developed a Transport Management Plan for all the routes it uses to deliver both containerized cyanide and cyanide in Isotanks from the ports of to the various mine site destination and Orica's Sparge facility in Tarkwa.

In the selection of the routes from the port to the mine sites, the transporter considered Population density, Waterways located along the route, Weather condition and Fog, Pitch and grade, Road infrastructure(i.e. bridges, toll boots), Prevalence of water bodies and fog, potholes, traffic on the roads and through towns, pedestrians, sandstorms, and environmental conditions. The Transport Management Plan and the Route Risk Assessment procedure stipulate that the in selecting the route population density, water bodies and fog, pitch and grade and infrastructure must be considered.

Before the routes were selected a driver and a QHSE personnel drove on the routes to record all the hazards on the road and the general conditions and record them on a Risk Assessment Form and in Route Survey report. During the route selection the Truck Driver Guide-Ghana issued by the Ghana National Road Transport and Transit Facilitation Committee on behalf of Ghana government serves as a guide for all the route risk assessments in relation to the laws and regulations on road transport. Route Risk assessments are carried out and the necessary measures taken to address the risks. Records of Route Risk Assessment Form sighted by the auditor is evident that in selecting the routes population density, road characteristics and signalling, road infrastructure, Pitch and grade, water fog and water bodies.

SLL has implemented a procedure to evaluate the risks of selected cyanide transport routes and has taken measures to manage these risks. Stellar Logistics Route Risk Assessment Procedure outlines the category of risks identified when conducting a route assessment. Route Risk Assessments have been carried out on all the routes to the various mine sites that the company delivers cyanide to. SLL's procedure includes a requirement to complete a new Route Risk Assessment at least annually or as when necessary. Routes to the various mine site destinations are evaluated annually. The risks on the routes which are evaluated are the route from Orica's sparge facility in Tarkwa to mine sites in Ghana and Cote d'Ivoire and from Tema and Takoradi ports in Ghana to the mines.

A Convoy leaders Route Advice Adjustment Form, End of Journey Report and In Vehicle Monitoring Report(IVMS) is also used to review the risks annually or as and when necessary.



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The various risks have been assessed by a Risk Assessment team consisting of the Assistant QHSE Manager, Fleet Administrator, Senior QHSE Officer and escort driver. The risks are evaluated and assessed on a Risk Assessment Table which has the pictures of the type of risk, location, potential consequences and controls that are to be followed to minimize or eliminate the risks. The controls include some existing controls, such as the use of bypass to avoid construction areas) and driver rules to adhere to in order to reduce the risks (e.g., use of low gears, decrease speed).

Other control measures include;

- Reducing speed and Exercising caution,
- Adhering to speed limits
- Convoy management
- Engaging higher gears on hills
- Daylight driving all the time
- Training for drivers and escort team

Prior to the departure of a convoy, the Convoy Leader discusses in a Tool box meeting with the drivers and escort team the hazards sighted on the road in the previous convoy in order to mitigate any transportation incident. Copies of Tool box meetings showing the discussions about the feedback on the road conditions were sighted and noted by auditor. RRAs procedure were found to be in place, appropriate and approved by the QHSE Manager of the company. Records of RRAs were verified by auditor.

The company has implemented a system to periodically re-evaluate routes and has a process of getting feedback on the road condition. A Convoy Leaders Route Advice Adjustment Form and End of Journey Report is used for recording and reporting feedback on the road condition.

The transporter's Transport Management Plan mentions a process of continuously evaluating the transportation route using feedbacks obtained on the road condition after each trip. Review and monitoring of the risks are carried out to verify the effectiveness of the actions implemented, through documentary review and visual inspection. The Convoy supervisor completes a feedback report form on the road condition after each trip. Precautionary measures have been implemented. The TMP is reviewed annually and as and when necessary and depending on the End of Journey Reports obtained. Measures to reduce risks are covered in the company's Risk Assessments. A revised cyanide transport Route Risk Assessment is performed at least annually with additional supplementary reviews if conditions on the roads to the mine sites change.

SLL have documented the measures taken to address risks identified with the selected routes within the Route Risk Assessments.

The transporter has the a Convoy Leader Adjustment Form, End of Journey Report and Journey Management Plan which risks on the routes are noted. The RRAs has been documented for each of the destinations where deliveries are made to. Copies of completed Route Advice Adjustment Forms and copies of End of Journey reports and RRAs were sighted by auditor and noted. Records of feedback detailing risks on the road and the measures to address them are documented on the risk assessment form.

SLL sought input from various stakeholders and applicable governmental agencies as necessary in the selection of routes and development of cyanide management measures. The transporter has been issued an EPA Permit No. EPA/WR/LHCT-179/24 issued on March 22, 2024 and expires on March 21, 2025 to transport cyanide and other hazardous chemicals in Ghana.



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Input has been sought from the Ghana Police, Ghana Fire Service, Ambulance Service and selected hospitals along the cyanide transportation route to the various mine sites. The ERP, MSDS for cyanide and the TMP were supplied to the relevant government organisation and stakeholders. Acknowledgement letters stamped by the various organisations were sighted by auditor. In Cote d'Ivoire, input was sought from the Allied Bonikro mine and Arme Chimique and the Militaire(military).

Evidence were presented showing that stakeholders have been made formally aware of their roles in an emergency. Community consultation is undertaken by the Ghana EPA in consultation with SLL.

The transporter uses escorts, convoys and additional safety and security measures when doing deliveries to the mine site destinations. Stellar Logistics has a convoy management procedure document which states that convoys and escorts are used during deliveries to the mines. Convoys are used as a means of managing the risks of the road conditions (traffic, congested areas, and poor roads) and responding to emergencies.

Convoy Management Procedure requires the use of one escort vehicle for maximum of six (6) trucks in convoy. Trucks carry one or two containers depending on the configuration, their load capacities and Horsepower(HP). For deliveries to Allied Resources Bonikro mine in Cote d'Ivoire, two military personnel escorts the convoy in addition to the company's escort team. For deliveries from Takoradi port, Ghana to Bonikro mine, a convoy is accompanied by the escort team to the Ghana side of the border between Ghana - Cote d'Ivoire border. From the Cote d'Ivoire side of the border to Allied Bonikro mine site in Cote d'Ivoire, two military personnel from that country accompanies the convoy together with the escort team to the mine site. The roles of the Convoy Leader in managing the convoys are spelt out in the TMP. The convoys travel only in day light hours(6am to 6pm). Night driving is prohibited. The transporter also has installed Global Position System(GPS) and In Vehicle Monitoring System(IVMS) in the trucks to monitor the locations of the convoy.

The escort team consists of;

- 1 Convoy leader
- 1 Escort driver
- 1 Safety officer
- 2 Military (in case of deliveries to Cote d'Ivoire)

SLL does not subcontract any of the activities in Transport Practice 1.1.

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**

o in substantial compliance

o not in compliance

Summarize the basis for this Finding/Deficiencies Identified

Stellar Logistics Ltd only uses trained, qualified, and licensed operators to operate cyanide handling transport vehicles. The transporter has employed qualified drivers with Class F licenses a requirement for driving trucks in Ghana. A driving license is valid for 6 years but renewed every 2 years.



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SLL has a criteria for employing drivers. For a driver to qualify for employment;

- The driver must be at least 25 years of age
- Have accident free record as much as practicable
- Possess license "F"
- Have a minimum of 5 years experience
- Have a high standard of both spoken and written English
- Pass the company's operations test.

There is a QHSE Training Plan gives the details of training for all drivers, escort team and other company staff. The training plan which shows training topics as well as the frequency of the training. Employees undergo defensive driving, First Aid, Fire Fighting, cyanide awareness, convoy management and PPE training to equip their for their various job.

SLL policy requires that personnel operating cyanide handling and transport equipment to perform their jobs with minimum risk to themselves, the communities, and the environment.

Drivers are required to undertake the following general training programs:

- General Induction
- Drivers Induction
- Defensive Driving training
- Cyanide Awareness training
- Route Risk Assessments
- Correct use and storage of PPEs
- Drug & Alcohol Policy
- Driver Fatigue Management
- First Aid training for convoy leaders and Emergency Response personnel
- Cyanide Convoys management training
- Second Level Response to Cyanide Emergency
- First Level Response to Sodium Cyanide Emergency
- HSE roles and responsibilities

The above training programs are listed in the company's Training Matrix which is colour coded with Red indicating training has expired, Green, training is valid and Blue training not required.

The mandatory training programs for drivers and escort team are;

- Defensive driving training ---- Organized every 2 years
- First Aid Training ----- Organized every 3 years
- Cyanide Awareness Training-- Organized yearly
- PPE Training --- Organized every two years
- Fire Fighting training - --- Organized yearly

First Aid training is organized by the St John's Ambulance, Ghana. Cyanide refresher training is conducted by the supplier(Orica). Fire Fighting training is organized by the Ghana Fire Service. Defensive driving training was organized by Road Safety Limited, Ghana. The QHSE Manager is responsible for PPE training. Copies of certificates of training awarded to the participants were sighted by auditor. In each of the training programs written assessments were organized for the participants. Some drivers were tested orally and marks awarded to them. Records of written test and test results were noted. Selected drivers and escort team were interviewed about cyanide and their knowledge of work procedures and



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practices on cyanide were found to be knowledgeable. Sampled copies of three(3) years training attendance registers were sighted and noted.

Stellar Logistics does not subcontract any of the activities in Transport Practice 1.2.

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**

o **in substantial compliance**

o **not in compliance**

Summarize the basis for this Finding/Deficiencies Identified

SLL uses brands of trucks designed and maintained to operate within the loads it will be handling. The vehicles have the required configurations for cyanide transportation. The brand of trucks used are MAN diesel, Howo and DAF trucks. The Horsepower rating for the MAN Diesel trucks, Howo and DAF are 430HP, 420HP and 460 HP respectively with Sivoko trailers.

The trucks have the following configurations as per Clause 4.4(Equipment) of the Transport Management Plan.

- 6x4 double axles
- 6x2/2 single axles
- 4x2 single axles

The following trailers are used;

- Two axle trailers
- Triple axle trailers
- Quadruple axle trailers

Each 6x4 quadruple trailer is loaded with 2x20ft containers of cyanide. The same trailer configuration is used to carry one isotank (sparged container). SLL has a Fleet Maintenance Plan that it follows in maintaining its vehicles. The Fleet Maintenance Plan includes both Preventive and Corrective Maintenance

The Preventive Maintenance entails;

- Vehicle inspection,
- Changing of oil and greasing,
- Tyre maintenance,
- Trailer maintenance,
- Routine Servicing



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Trucks are serviced at every 10,000Km interval as per the manufacturers specifications. The procedure describes a process of detecting faults on a truck, raising of work orders for the workshop and executions of the job on the truck, testing of the vehicle and signing off the a Job Request form by the mechanic who worked on it and the Maintenance Manager.

The operation has a tyre maintenance procedure (Tyre Management) and tyres are changed when the tread depth reaches 2mm. The tyres are replaced with new ones when a particular tyre reaches or is nearing a tread depth of 2mm and no retreaded tyres are permitted to be used. Samples Maintenance records for some selected vehicles were scrutinized and noted by the auditors.

Stellar Logistics has 54 trucks out which fifty three(53) trucks have been approved by Ghana Environmental Protection Agency and are dedicated for cyanide transportation. The Fleet manager is in charge of scheduling the trucks for a particular shipment taking into consideration the number of containers. The Fleet manger receives the service requirement from the clearing department and schedules trucks ahead of time for deliveries to the mines. The trucks have the required capacities and configurations for cyanide transportation. The 6x4 truck configurations with quadruple trailers load 2x20ft containers of approximate weight of 50 tons whilst 6x4 and 6x2/2 configuration of truck load one freight container weighing approximately 25ton.

There are procedures in place to prevent overloading of the transport vehicle being used for transporting the cyanide. SLL have a Loading and Unloading procedure(OPS-WI-002). Each 6x4 quadruple trailer is loaded with 2x20ft containers of cyanide. The same trailer configuration is used to carry one isotank(sparged container). The weight of one empty isotank is 3.65tons and product weight in each isotank is 20.43tons. The total weight of each isotank containing cyanide is 24.08tons. Each 6x4 quadruple axle trailer configuration carries one isotank. The maximum load the 6x4 quadruple trailer can take is 76mt as per the manufacturers specification. The 6x2 with triple axle trailers are loaded with 1x20ft. This truck configuration has a capacity to carrying a maximum weight of 54mt. The maximum load per axle for the 6x4 with quadruple trailer is 7.1mt/axle, axle load for the 6x2 with tri-axle trailers is 10.1/axle which is lower that the Ghana Highway Authority and Economic Community of West Africa States(ECOWAS) axle load of regulation of 10.5mt/axle.

Trucks carrying containerized cyanide are not weighed at the mine sites as the weights are written on the Bill of Lading documents. Only trucks carrying isotanks loaded from Orica's sparged facility in Tarkwa are weighed at the weighing bridges at the respective mine destinations. Sampled records of weighing bridge tickets were noted by auditor.

SLL does not subcontract any of the above activities in Transport Practice 1.3

Transport Practice 1.4:

Develop and implement a safety program for transport of cyanide.

The operation is:

☒ in full compliance with Transport Practice 1.4

☐ in substantial compliance

☐ not in compliance

Summarize the basis for this Finding/Deficiencies Identified:

The transporter has instituted a process to ensure that cyanide is transported in a manner that maintains the integrity of the producers packaging. The supplier's(Orica) cyanide briquettes are stored within a woven polypropylene and



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polyethylene liner bags within a wooden intermediate bulk containers with an integral pallet base and secured lid. Each bag contains 1.135mt of cyanide. Contained within a shipping container are

20 x 1.135t net composite bulk containers. The packaging conforms to the IMDG code. The IBCs are packed in 20ft standard shipping containers and are tagged with security seal for the duration of their transport to the various mine site destinations. Orica's sparged containers (Isotanks) are up to a weight of 20.43mt of solid cyanide. Waybills, Bill of Ladings and interchange documents issued by the shipping lines indicate the container numbers, general conditions of the containers and container seal numbers. Copies of container interchanges issued by the shipping line have the container numbers, waybill numbers and general comments on the conditions of the containers. Records of waybills have been stamped and duly received by the respective mine site. The containers are inspected by the convoy leader to ensure that the containers are secured on the trailers anytime the convoy stops for a brief rest or refreshment break till they reach the mine site. However, the transporter is not responsible for loading containerized cyanide at the port and isotanks at Orica's sparge facility. Loading and unloading activities are the responsibility of Orica and the respective mine sites. At the port, the cyanide containers are loaded onto the trucks by the port authority.

The Isotanks are sealed with a seal at Orica's sparging facility in Tarkwa. The seal numbers are written on the waybills. The seals on the containers and Isotanks are broken at the mine sites when the IBCs and isotanks are about to be offloaded. SLL has a Convoy Log sheet that details the container numbers, seal numbers and Bill of Lading numbers. Waybills are signed by the mine site personnel and stamped indicating the containers are intact. The location of the convoys are communicated to the mine and the supplier at 1hr interval. Updates are sent by the QHSE Officer via Whatsapp and via emails. GPS system tracks the convoy till the convoy reaches the respective mines.

Sampled records of waybills, interchange document and Bill Lading were scrutinized and noted by auditor.

The manufacturer has put signage(s) on the containers to identify the shipment as cyanide as required by international standards as well as the IMDG code and are conspicuously displayed on all four sides of a container. The placards are Hazard Class 6 (Toxic 6 label), Skull & Cross bones, UN number 1689, and Marine Pollutant labels. The transporter has similar placards on its vehicles which does deliveries to the mines. Placards are verified during pre-departure inspection and a Trailer Trip Checklist completed. The required signage(s) identifying the shipment as cyanide were verified and noted by auditor.

SLL has implemented a safety program and policies for its transportation business and it includes the following.

- Vehicle Inspections and Emergency response equipment inspections
- Preventive and Corrective Maintenance program document #MTC-SOP-002
- Alcohol, Drug and Smoking policy document # QHSE-SOP-015
- Fatigue management policy document #QHSE SOP-001
- QHSE Policy (document #HSE-POL-002)
- Employees Engagement (process of participation and consultation of employees in decision making)

Tools box meetings are held before the departure of a convoy and each participant signs an attendance register.

The transporter carries out various inspections before the convoy sets off for a trip. The inspection includes;

- Tractor head and Trailer inspection
- Pre-departure inspection on vehicle
- Sodium cyanide full Sparge Discharge inspection
- Container Control Log Sheet inspection



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- Convoy Emergency Equipment Inspection

Random sampled copies of the various checklists showing inspections carried out were noted.

The operation has a Fleet Maintenance Plan(document # MTC-SOP-002 Rev. 014 dated 19th April 2024) that guides the maintenance of its vehicles.

The Preventive Maintenance entails;

- Vehicle inspection
- Changing of oil, greasing
- Tyre maintenance
- Trailer maintenance
- Routine Servicing

Trucks are serviced at every 10,000Km as per the manufacturers specifications of the trucks.

- When inspections are carried out on the vehicles and defects are identified the defect is corrected by raising a workshop work order. The work order is raised by the QHSE officer. The work order is sent to the workshop to the respective department within the workshop(i.e. electrical, mechanical, tyre etc.).
- The maintenance manager or its delegate assigns responsibility to a workshop personnel(mechanic) to rectify the defect
- A job request Form is completed by the mechanic who carries out the job
- The vehicle is then tested to ascertain whether the work has been successfully completed
- The defect rectified is signed off on the work order form by the mechanic and countersigned by the Maintenance Manager.

Copies of work orders were verified. The operation has a tyre maintenance procedure where (Tyre Management) tyres are changed when the tread depth reaches 2mm. As per the transporter's Tyre Maintenance procedure # OPS-SOP-014 tyres are replaced with new ones when a particular tyre reaches or is nearing a tread depth of 2mm.

As per the transporter's Fatigue Management Plan driver drives a maximum of 70 hours / week. The policy states that drivers drive 2hrs and take 15minutes break. The company's vehicles are fitted with Nsoroma GPS devices. Driving hours of vehicles are monitored via a GPS system by a Tracking officer.

Drivers are permitted to drive only during day time, from 06:00 to 18:00 and maximum speed limit for all vehicles is 50km/hr. No night driving is allowed. Completed copies of journey plans examined indicates driving hours are strictly adhered to.

The transporter's TMP (OPS-SOP-001 Rev 16) specifies that twist locks and container belts(as addition) are used to stabilize the containers and isotanks on to the trailers to prevent them from shifting. During pre-departure inspection, twistlocks are inspected to ascertain whether they are in good condition. The Convoy Leader conducts the inspection to verify whether the twistlocks are firmly in place on the containers. During the journey whenever the convoy stops, the twist locks are inspected. The pre-departure checklist and the Tractor and trailer pre-trip inspection checklists all have the checking of twist locks indicated on them. The form is completed after the inspection by Convoy leader. The checking of twist locks are included in the list of inspections that are to be checked during preventive maintenance.

The transporter has an Inclement Weather Procedure which states that the Convoy leader will suspend delivery operations during civil unrest, bad weather condition, bridge collapse and any adverse conditions that will affect the convoy movement. The trucks will be parked at an appropriate and safe location in case of civil unrest or adverse weather



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conditions. The Convoy leader will notify the QHSE Manager who will intend inform the Assistant General Manager of such events. The Assistant General Manager will get the mining company and the supplier (Orica) informed. The decision to continue the journey is made by Convoy Leader in conjunction with the mine client and his office after the civil unrest or bad weather condition is over.

The transporter has a Drug, Alcohol and Smoking policy (#HSE-POL-002). The procedure details Random testing of alcohol, educating the employees about the dangers of drug, alcohol and smoking and the punishment thereof if an employee contravene the policy. Random alcohol tests are carried out on selected drivers and escort team. A breathalyzer (iBlow 10 tester model number TBMCJ0172) is used for conducting the testing. The breathalyzer was calibrated on 30th January 2024 by Ultimate Resurgence Services located in Takoradi, Ghana. The next calibration date is 30th January 2025. A calibration certificate number AA24005 was sighted. The QHSE Manager is responsible for carrying out the random alcohol tests. Consumption of alcohol and abuse of drugs whilst on duty is strictly prohibited and is punishable. Anyone found culpable is blacklisted and not allowed to drive.

Copies of completed drug and alcohol test records were noted by auditor.

Stellar Logistics has a Document Control Register (QHSE-W1-007(002)) which specifies that all documents and records are retained for 5 years before being disposed. Contents of Document Control register was noted. Records of the above activities namely procedures, policies, checklists and test results) has been duly retained and were verified by auditor.

The transporter does not subcontract above activity in Transport Practice 1.4.

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

The operation is:

☒ **in full compliance with Transport Practice 1.5**

☐ **in substantial compliance**

☐ **not in compliance**

Summarize the basis for this Finding/Deficiencies Identified:

The transporter does not ship cyanide by sea. Transport Practice 1.5 is not applicable. Orica's supply chain from port of Brisbane, Australia to Ghana ports is certified by ICMI.

Transport Practice 1.6:

Track cyanide shipments to prevent losses during transport.

The operation is:

☒ **in full compliance with Transport Practice 1.6**

☐ **in substantial compliance**

☐ **not in compliance**

Summarize the basis for this Finding/Deficiencies Identified:



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The drivers are allocated with mobile phones for communication when the convoy stops or by use by the drivers assistants when the driver is driving. The company provides support for drivers in the form of communication allowance for phone airtime. The Convoy leader is issued with two company cell phones with different Sim cards from different mobile phone service providers and power charging system. The convoy leader uses the cell phones to communicate with the head office, the mining company, the cyanide producer (Orica) and emergency responders. Also, communication is via Whatsapp messages and emails. All relevant stakeholders are on Whatsapp platform. Copies of emails sent by the QHSE Supervisor to Asante Gold Bibiani mine copy to Orica's representative in Ghana were sighted. Whatsapp messages on the location of the convoy were also sighted.

Mobile phones is part of the items which are inspected by the convoy leader during the pre-departure inspections. Trucks drivers journey checklist has the inspection of the mobile phones prior to departure of a convoy. Emergency communication contact list is incorporated into the company's Emergency Response Plan. A list of names of relevant people, contact phone numbers and email addresses of Orica, Goldfields Tarkwa, AngloGold Ashanti Obuasi and Iduapriem mines and Allied Resource Bonikro mines, selected medical facilities, Ghana Ambulance Service, Ghana police stations along the transportation route, Ghana Fire Service and Ghana Environmental Protection Agency are contained in the ERP.

SLL has a system in place to ensure that all communication equipment are regularly tested and functions correctly. Cell phones are inspected before the departure of the convoy to ensure that they are fully charged and functions perfectly. The GPS device is also tested by the Tracking and Surveillance Officer prior to departure of a convoy to ensure that they are functioning properly.

As per the transporter's communication procedure # QHSE-SOP-024 the mobile phones are checked and pre-departure checklist completed by the Convoy leader. An emergency equipment checklist is completed after inspecting the communication equipment. It is the responsibility of the Convoy leader to ensure that the communication equipment's are working effectively. Sampled copies of completed emergency equipment checklist were verified.

There are few blackout areas identified on the road in Ghana in certain areas on the roads from the ports to the mines as per the RRAs conducted. In Cote d'Ivoire the convoy uses in-country service provider (i.e. MTN service provider). No blackout area have been identified from Cote d'Ivoire side of the border to Allied Resources Bonikro mine site. In Ghana, Vodafone and MTN service networks are used for communication during deliveries of cyanide. Vodafone service network is available in the identified blackout areas where there is no MTN service network. No blackout areas affect both cellular service networks within Ghana. In case of loss of MTN phone reception, the convoy relies on Vodafone service network. RRA contents were scrutinized and noted by auditor.

GPS system monitors the locations of the convoy. GPS tracing system is used to track and monitor the location and progress of the cyanide shipment. The system is manned by a dedicated Tracking Surveillance Officer. In-Vehicle Monitoring System (IVMS) has been installed in the vehicles which monitors the actions of the drivers whilst driving as well as the road. The company has a Standard Operating Procedure for tracking the company's fleet. The procedure covers a process for tracking the vehicles through the GPS tracking and monitoring the live feed and reviewing of downloaded videos from the IVMS.

The Surveillance Officer checks the following;

- Checks the status of the vehicles in the convoy
- Monitors alerts from the tracking platform
- Monitors traffic to ensure the trucks are on the right route
- Monitors speed limits
- Check rest stops
- Checks driving hours



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- Idling time of the vehicles
- Reporting of any issues or anomalies

Bill of lading are sent to the transporter in advance prior to arrival of a vessel. Pre-alerts are sent by the shipping line when the shipments arrive in the port of Tema or Tarkoradi. Stellar Logistics positions trucks at the port after completion of customs documentation.

Before the commencement of the journey an email and Whatsapp messages are sent to Orica and the mine site destination. The email contains number of containers, the Expected Time of Arrival to the mine site(ETA), the registration numbers of the trucks and escort vehicles. The convoy leader also give regular updates on the location of the convoy via Whatsapp messages, phone calls to all those concerned including the mine, Orica and his head office.

Stellar Logistics has implemented inventory controls and chain custody documentation. Chain custody documentation namely Bill of Ladings, Packing list, Waybills and Pre-departure checklists. Shipping documents from Orica(supplier) are sent to SLL weeks before the arrival of a shipment. These documents are shown to the shipping line as proof of ownership before the containers are released from the port. A Container Log Sheet form is completed with the Waybill numbers, Container Seal number and name of driver of the truck.

Waybill reflects the sea container numbers and seal numbers. The pre-departure checklist lists have all the required documents for a trip written on it that needs to be checked. All the documents are handed over to the mine representative when a convoy arrives at the mine.

The copies of documents which are sent with a convoy to the mines sites are;

- Bill of Ladings
- Waybills
- Pre-Departure Checklist
- Convoy Emergency Equipment Response checklist
- Tractor Head Semi-Trailer Pre Trip Inspection

Selected records of Bill of Ladings numbers which specifies the quantity of cyanide per shipment, date shipped, container numbers and gross weights of the containers. Orica's SDS is part of the required documents for a trip and it is specified on the transporter's pre-departure checklist. The SDS was verified and contents noted by the auditor.

SLL does not subcontract any of activities specified in Transport Practice 1.6

2.0: 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 2.0

o in substantial compliance

o not in compliance



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Summarize the basis for this Finding/Deficiencies Identified:

Stellar Logistic does not have a cyanide trans-shipment depot or interim storage for cyanide. Shipments of cyanide are delivered directly from the ports to the mine and the supplier's sparge facility. Within the scope of this audit, there are no transshipment depots or interim storage sites as defined in the audit protocol.

Transport Principle 3 – Emergency response

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

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

The operation is:

✓ in full compliance with Transport Practice 3.1

o in substantial compliance

o not in compliance

Summarize the basis for this Finding/Deficiencies Identified:

SLL has developed and implemented an Emergency Response Plan (# QHSE-SOP-008 Revision 20 dated 22nd March 2024) for the transportation of sodium cyanide

The plan outlines the following.

- Design of the transport vehicle
- Mode of transport
- Physical and Chemical Properties of Sodium cyanide
- ER Training
- External responders
- Procedure for incident management and evacuation
- Notification to external responders
- Roles and Responsibilities of emergency responders and other stakeholders
- Incident types
- Incident Scenarios
- First Aid and treatment
- Neutralization and decontamination processes
- Clean up and containment
- PPE requirements

The Plan was found to be up-to-date and appropriate for cyanide transport operation.

Stellar Logistics have conducted RRA's for all the routes from the ports to the mines and the supplier's Sparge facility in Tarkwa. The RRA took into consideration the general road conditions(risks, infrastructure, blackout areas). The ERP is designed for specific emergency circumstances that could arise during transportation of cyanide.

In clause 1.8 (Mode of transport) of the ERP road transportation is mentioned as the only means of transporting cyanide in Ghana and other ECOWAS countries. RRAs and Route Surveys have been conducted on the road from Takoradi port, Ghana



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to Tarkwa where Orica's sparged plant is located and to the various mines. The ER Plan details the descriptions for the responses to various anticipated emergency situations in the transportation of cyanide by road. The plan describes a sequence of events during a road transport incident. The TMP, RRA and ERP all considered the road condition including potholes rivers, slopes, curves, bridges, fog, population density, tarred and dusty road and road surface along the selected route. The plan was reviewed and was found to be appropriate for the cyanide transportation.

The physical and chemical properties of sodium cyanide is comprehensively addressed in the ERP. The SDS in the ERP also describes the physical and chemical properties of sodium cyanide. The ERP describes sodium cyanide solid produced by the supplier (Orica) as white solid briquettes. Upon exposure to the atmosphere it absorbs moisture (hygroscopic) and may release poisonous hydrogen cyanide gas. The cyanide is stable at room temperature when kept dry. The briquettes are stored within a woven polypropylene and polyethylene liner bags within a wooden intermediate bulk containers with an integral pallet base and secured lid. On contact with water, acid and other incompatible chemicals it reacts with it to produce poisonous hydrogen cyanide gas. Each bag contains 1.135mt of cyanide. Contained in a shipping containers are 20 x 1.135t net composite bulk containers. The packaging conforms to the IMDG code. The IBCs are packed in 20ft standard shipping containers and are tagged with security seal and placards for the duration of their transportation to the mine sites.

The method of transport is by the use of trucks of required configurations and Horsepower ratings. Emergency response procedures are based on the road transportation of solid cyanide in IBCs within a shipping container and isotanks. The brands of trucks used are MAN, HOWO and DAF of Horse power (HP) ratings, 430, 420 and 460 respectively. The trailers used are two axles, three axles and quadruple axles.

The ERP captures infrastructure on the road such as bridges, slopes, schools, railway lines, pothole on road. These infrastructure is also mention in the RRAs and the route survey reports during selection of the routes to the various mine site destination.

The ERP describes the design and configuration of the transport vehicle. The trailers used are two axles, three axles and quadruple axles. The design of the trucks are 6x4 double axles, 6x2/2 single axles and 4x2 single axles. The design of the trucks and all the appropriate requirements were noted in the ERP by auditor.

The ERP includes descriptions of response actions for anticipated emergency situation.

The anticipated emergency situations detailed in the ERP are as follows;

- Scenario A: Rollover of cyanide shipping container or isotainer on a dry ground without spill.
- Scenario B: Rollover of container or isotainer with spill on dry ground.
- Scenario C: Rollover of cyanide container into waterway.
- Scenario D: Cyanide truck carrying cyanide on fire

The ERP addresses issues of cyanide poisoning and First Aid. It highlights the mechanism of cyanide poisoning and how to administer oxygen to a person exposed to cyanide, stabilize his/her condition before handing him over to a medical facility.

Response actions for anticipated for the various scenarios been described in the ERP and were noted.

The plan takes into consideration the roles and responsibilities of internal and outside responders. i.e. escort leader, escort team, the police, Ambulance services, hospitals, EPA and the mines.

The ERP mentions that in the event of an incident, the Convoy leader will notify the various external responders for them to come and assist, supervise the cleaning of the spill and neutralization when necessary. The escort team will assist the



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convoy leader in executing the aforementioned responsibilities. The escort team will be responsible for coordinating the recovery of spilled product, recovery of container, neutralization and decontamination.

The overall responsibility for an incident lies on the Convoy leader. The Escort team will cordon off the area and move people upwind. Cleaning, shovelling and sweeping of the solid sodium cyanide briquettes into a sealable container is the responsibility of the escort team. The Convoy leader is responsible for administration of 100% oxygen to a cyanide poisoned person, stabilize his condition and hand the victim over to the Ambulance upon arrival. The role of the Fire Service is to assist in case of fire and rescue of injured person. Ambulance Service will attend to injured persons or possible poisoned person and transports them to the hospital. The hospitals will undertake treatment of a poisoned or injured person and the administration of 100% oxygen to a victim in conjunction with cyanide antidote. The police will do traffic control and also prevent intruders to the incident area.

The procedure mentions that the Ghana EPA's responsibility is to give expert advice on remediation measures, dissemination of information to the local community in conjunction with the escort team and ensure the clean-up of spill. The community is not designated a role as part of the planned response to an emergency. The mine will be responsible for receiving the recovered container and contaminated soils and properly neutralize. The mine will be fully involved in the recovery in case the incident occurs close to the mine site. The manufacturer(supplier) will be responsible for offering technical advice and briefing to the mines.

Auditor scrutinized the roles and responsibilities and found them to be appropriate.

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

The operation is:

☒ **in full compliance with Transport Practice 3.2**

☐ **in substantial compliance**

☐ **not in compliance**

Summarize the basis for this Finding/Deficiencies Identified:

SLL provides emergency response training to appropriate employees as specified in the Training Requirements document. Cyanide Awareness and ER Training is held annually. The emergency team and the drivers receive an appropriate level of training to fulfil their role in emergency response. Handling cyanide poisoned person and spill contingency plans were some of the topics discussed in the ER training. ER training is organized by Orica for all the company drivers and escort team. Mock drills are held on quarterly basis. Mock drills have been addressed in the ERP. The training is mandatory for all drivers, escort team and other auxiliary staff of the company. Drivers are assessed verbally by questioning and answering. Others are tested using written assessments.

The training records were reviewed and discussions with transporter's drivers and the escort team member confirmed that they have completed cyanide awareness and ER training. Records of ER training attendance registers were verified and noted.

The Emergency Response Plan identifies the specific emergency response duties and responsibilities of personnel in case of an incident. Descriptions of the specific emergency response duties and responsibilities have been clearly documented. As noted previously, the roles and responsibilities and duties for SLL personnel are detailed in the ERP.



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Stellar Logistics has a list of cyanide emergency response equipment. The escort equipment are used to accompany cyanide convoys to various mine sites and are kept in the escort vehicle.

The list includes;

- OxyViva 3 resuscitator with oxygen cylinder
- Stretcher
- HCN Gas detector
- Dispose tyvek overalls
- PVC Guantlet gloves
- Safety rubber boots/Gum boots
- Caution tape
- Mattock
- First Aid Kit
- Pair of waterproof boots
- Shovel
- Long hard broom
- Long soft broom
- Poly sheet
- Carpet
- Empty bulk polythene bags
- 1 bag of Ferrous sulphate
- Empty Sand bags
- Buckets with lid
- Emergency over drum
- Safety glasses
- Red and Green flags
- Full face respirator with filters(ABEKP3)

The OxyViva was calibrated on 9th September 2024 and a certificate of calibration (# ASH-24005) issued. HCN gas detectors were calibrated on 5th January 2024 and each detector issued a certificate. All the devices were calibrated by Ultimate Resurgency Services, Ghana Ltd.

Auditor physically inspected the escort equipment and compared it with the transporter's equipment list of items listed on the Convoy Emergency Equipment checklist and found the complete and available.

The transporter does not keep cyanide antidote but have OxyViva to administer 100% oxygen to stabilize a poisoned person till he is handed over to the medical facility. The company has an arrangement with selected medical facilities and the mine clinics. The facilities have written letters of acceptance to treat any possible cyanide poisoned person. The mine clinics have Hydroxycobalamine(cyanokit) for treatment.

Oxygen gas cylinder is periodically inspected by the QHSE Manager to ensure it is always full and ready to be used. The QHSE Manager is responsible for the safe keeping and inspections of all the ER equipment.

The transporter has the necessary emergency equipment and Personal Protective Equipment which are available and forms part of the escort equipment. PPEs are part of the ER equipment checklist. Personal Protective Equipment, namely, disposable tyvek overalls, rubber boots, PVC gloves, full face respirator with canisters and helmets are available. The transporter has PPE issuing checklist on which the type of PPEs issued to personnel are recorded. PPE training are organized once in a year. Auditor carried out thorough inspection of all the PPEs and found them available.



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SLL has procedures to inspect emergency response equipment and assure its availability when required. Prior to delivery, the emergency equipment are inspected by the Convoy leader and completes a Convoy Emergency Response Equipment Checklist to ensure availability, good working order and functionality. Any obsolete equipment are identified, are quickly replaced with new ones. SLL has five(5) sets of escort equipment for cyanide escorts. Emergency equipment are kept in a designated store under lock and key. QHSE Manager's is responsible for safe keep of the escort equipment. Records of completed Equipment checklists were sighted and noted.

SLL does not sub-contract any of the activities in clause 3.2.

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

o in substantial compliance

o not in compliance

Summarize the basis for this Finding/Deficiencies Identified:

The ERP outlines notification procedure, including telephone numbers and email addresses of internal and external responders. The ERP has current contact information for notifying the shipper, the receiver, regulatory agencies and potentially affected communities of an emergency. The ERP contains a list of current emergency numbers for police, local hospitals, ambulance service, Fire Service, mining clients and EPA. The ERP stipulates the call-out procedure to be followed in the case of an emergency. The stakeholders are notified using cell phone, emails or letters.

The transporter has procedures for validating internal and external emergency responders contacts. Clause 3 of the emergency response procedure states that the contact details are updated during the review of the route. Every six(6) months the contacts are checked to ascertain whether they are current(whether personnel have changed, email addresses or phone number have been changed). The procedure specifies the steps followed in ensuring that the contacts are kept current. The QHSE Manager is responsible for keeping the internal notification and external reporting procedures current.

Sampled phone numbers of both internal and external entities were called by the auditor and were found to be active.

The ERP in Clause 2.10.2 gives details of a process for notifying ICMI in an event of a significant cyanide incident. The procedure states that notification to ICMI will be made within 24hrs after a significant incident as per below.

- Human exposure that requires action by an emergency response team, such as decontamination or treatment.
- An unauthorized discharge that enters natural surface waters, on or off site.
- An on-site release requiring the intervention of an emergency response team.
- A transport incident requiring an emergency response in the event of a release of cyanide.
- A multiple wildlife death event where cyanide is known or credibly suspected to be the cause of death.
- An unauthorized release that occurs off-site or migrates off-site.
- Theft of cyanide.

The notification will include the date, time and nature of the incident and the name and contact information a company representative to be contacted to respond to request for addition information. The responsible company representative



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will brief ICMI about the incident and the remediation processes put in place to save human life, environment and plant and property.

The transporter has not recorded any cyanide transportation incident since that past 10 years of operation.

The procedure for notification to ICMI in the event of a significant incident was read and noted by the auditor.

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 Transport Practice 3.4**

☐ **in substantial compliance**

☐ **not in compliance**

Summarize the basis for this Finding/Deficiencies Identified:

The transporter has developed procedures for remediation (clause "d" of the ERP), 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.

Stellar Logistics ERP (QHSE-SOP-008 Part C, 3.1) addresses the following remediation process;

- Recovery of sodium cyanide solid material
- Neutralization and/or disposal of dry sodium cyanide spill and neutralization of excavated soil.
- Neutralization and/or disposal of recovered solution
- Recovery and decontamination of contaminated ground
- Neutralisation and or disposal of liquid

The procedure specifies that in case a spill on dry ground the briquettes of cyanide will be shovelled into a sealable container. The residue will be neutralized with Ferrous sulphate monohydrate. Any contaminated soil removed during clean-up will be handed over to the mine Emergency Response Team to dispose it off appropriately. The ERP describes the appropriate use of the neutralizing chemicals. In case of a spill into a river the procedure says EPA in conjunction with the company will inform the villages and town downstream to avoid using the water and alternative water supply given to them. No neutralizing chemical will be introduced into the water body. Sample of the river will be taken by the EPA and Water Resources Commission and tested regularly till it is declared safe.

The ERP prohibits the use of neutralizing chemicals such as ferrous sulphate, hydrogen peroxide and sodium hypochlorite to treat cyanide that has been released into surface waters. This statement was noted by auditor.



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

The operation is:

☒ in full compliance with Transport Practice 3.5

☐ in substantial compliance

☐ not in compliance

Summarize the basis for this Finding/Deficiencies Identified:

The procedure makes provision for reviewing and evaluating the ERP annually to ensure its effectiveness and smooth implementation. The QHSE Manager and his deputy are nominated persons for reviewing and evaluating the plan's adequacy based on the following;

- After an Incident and the resulting investigation and evaluation deems it necessary
- Lesson learnt after an incident
- Contact numbers and email addresses change

The procedure reiterate that the revision and update is also based on findings from yearly mock drills conducted by the QHSE team. The recent review and evaluation of the plan was in 7th September 2024. The ERP has been reviewed twenty times since the past years. The old records were sighted by auditor.

The transporter periodically organize simulation exercises to equip the drivers and emergency team to respond to cyanide incidents appropriately. As per the training requirements(Clause 3.6 of the ERP), mock drills are organized quarterly. The training matrix captures the dates mock drills were held, next mock drill dates and the names of all the participants. Sampled records of attendance registers for mock drills and mock drill reports were scrutinized by the auditor. A review of mock drill reports and interviews confirmed that mock drills have been duly conducted in accordance with the transporter's training commitments.

After each mock drill, debriefings and discussions are held with all the participants and ideas shared and noted. Any useful ideas are incorporated in the plan. As per the ERP evaluation of the plans performance is done annually. on the implementation of the plan. The plan is updated by the QHSE Manager.

The plan's performs is evaluated and reviewed;

- during Annual review
- lessons garnered from mock drills
- hazard identification and risk profiling

END OF REPORT