INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

Transportation Summary Certification Audit Report

Africa Maritime Agency Guinea

(AMA Guinea)

Guinea

15th – 18th July 2018

Submitted to:

International Cyanide Management Institute

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Name of Operation: Africa Maritime Agency (AMA)

Name of Operation Owner: Africa Maritime Agency (AMA)

Name of Operation Operator: Africa Maritime Agency (AMA)

Name of Responsible Manager: Mr. Xavier Plantier
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Location detail and description of operation:
AMA Guinea is a logistics company serving several mine sites in Guinea (bauxite, iron, manganese, gold, phosphate, uranium). AMA has ISO 9001 certification and is authorized by the Guinea government to transport hazardous materials, including explosives, within the territory of the Republic of Guinea.

The company is contracted as a cyanide transporter for Lero SMD to transport solid cyanide (briquettes) by road from Conakry to Lero mine.

AMA Guinea’s main operations are located at Cité Chemin de Fer - Immeuble Kassa, located approximately 1 km from the port of Conakry, in Guinea.

Cyanide is received at the port of Conakry by sea in containers, each of which holds 20 boxes of one ton of solid cyanide briquettes.

The containers are offloaded at the ports by a stevedoring company.

A due diligence was done by Orica by Ed Clark for the port of Conakry as a part of the ICMI audited supply chain of the cyanide producers and consignors bringing the cyanide into Guinea.
For the purposes of Cyanide Code transportation compliance, AMA Guinea’s Code responsibilities commence on collection of the containers from the port.

The audit covers road transport exclusively from the port of Conakry to Lero mining site (Société Minière de Dinguiraye / SMD Nordgold).

Containers are delivered from the Quays to the port Container Depot where they are loaded directly onto trucks.

AMA Guinea's Cyanide Code responsibilities commence once they take the containers from the port area.

AMA Guinea clears the consignment and AMA Guinea's vehicles collect the containers with the documentation and manage them under a Transport procedure (jointly agreed between the mine, and AMA Guinea).

The containers of cyanide, are then transported in convoy by AMA Guinea and a Guinean customs official to the mine sites.

There is neither storage nor interim storage during the delivery journey.

Each truck has a driver, who is accompanied by a safety officer.

The safety officer manages the communications between the trucks, the escort vehicles and the convoy manager, and monitors the driver.

The convoy includes a convoy manager, assistant convoy manager, a cyanide first aider, a mechanic, and cyanide emergency response equipment for spills and releases and cyanokit or medical equipment to treat cyanide exposures (splashes, skin exposures, inhalations and ingestions).

The convoys include an armed customs escort through Guinea.

According to the regulations of the port of Conakry, hazardous materials are delivered directly under hoist, there is no interim storage allowed.

If the carrier/Transporter fails to present the vehicles to collect the dangerous goods, then the cargo is not discharged and returns to the shipper on the same boat.

There is only one suitable route from Conakry to the site at Lero, a distance of 675 km.
SUMMARY AUDIT REPORT
Africa Maritime Agency
15-18 JULY 2018

Auditor’s Finding

This operation is

X in full compliance
☐ in substantial compliance *(see below)
☐ not in compliance

with the International Cyanide Management Code.

Audit Company: Safety Transport & Logistics Solution   Audit Team Leader: Ghassan Husseini

E-mail: ghass@stlsgh.com

Names and Signature of Transportation Auditor:

Name: Ghassan Husseini    Signature
Date: 3 August 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.

Date of audit: 15th – 18th July 2018

Signed
Lead Auditor: Ghassan Husseini    Date 3rd August 2018
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.

X in full compliance

The operation is □ in substantial compliance — with Transport Practice 1.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
AMA has a road hazard mapping from Conakry to Lero. Road Hazard mapping as well as road risk assessment are completed. also they have a Risk Matrix that shows the level of risk.

AMA has a permit from government dictates the roads to be used. Due to the nature of the cargo, 2 permits are given one by the Ministry for the transport of cyanide and another permit by ministry of security.
Also attach to the permit issued by the ministry there is a ledger detailing the conditions in the given permit that AMA need to adhere to.
The permit specifically states all approved routes to transport cyanide in Guinea to serve Lero mine, the contractual mine and Siguri mine for future business.
the Risk Assessment from Conakry to Lero mine SMD Guinea highlighting black spots, warnings of hazards.
also Guinea customs dictate the route, since it is escorted by armed customs official because the cargo is under exemption and customs need to ensure that the cargo reaches the specific mine using the specific road.
The escorting customs officer is obliged to declare and go through specific formalities when he reaches each customs barrier and the escorting document is stamped at each customs barrier to ensure the cargo is not diverted.
AMA has Procedure to determined the risk level per route procedures describes the process of the route selection and approval and rejection
AMA has Procedures Operators golden rules which includes detailed route and rest stops and further identifies road hazards such as slippery roads, bridges, population densities, customs barriers, road construction, cyclists, traffic congestion, standard caution, heavy rain, cattle crossing, children, bridges etc.
Routes selected and approved by the Ministry of Security and Civil Protection & the Ministry of Transport, are included in permit
Population concentrations and built-up areas, are identified, as are concentrations of children, pedestrian activity, cyclists.
Furthermore, the lead auditor verified the road and the assessment, seen procedure for road risk assessment.
Risk assessment covers evaluation of the condition of the roads in terms of quality, drive-ability and safety. Also states the condition of road (tarred or rough road), and the distance of the rough road and the recommended speed to be used. This is also reviewed every time there is a risk assessment and updated on each convoy. Containers are transported as is from port to destination with customs, police and military escort. Feedback on route received from drivers and convoy managers via procedures. Route risk assessments currently reviewed yearly all feedback is documented by Convoy Managers.

Full routes re-evaluated every five years no alternative route available. The feedback document has 14 categories and 55 questions that take into consideration everything from road conditions, to population, to time of transit, where delay came from and possible solution to expedite the delivery. The data from this sheet is transferred into an excel sheet and analysis is done to review and revise the level of risk on the road and if the risk or the number of hazards is increasing or reducing. Convoy managers takes this into account in their journey planning. Convoy Managers have copies of the full route risk assessments and operation assessment procedure. Some of the Convoy Manager’s core duties on the convoy are to direct OR inform the safety officers on board of the trucks of all incoming hazards to be communicated to the drivers, including when to overtake, any oncoming vehicles or if there is a barrier ahead. A flyer, describes the cyanide handling and the dangers and the Emergency Response and is given to the community.

All cyanide deliveries are conducted using a convoy system with CUSTOMS escort for the Guinea component of the trip and including support vehicles containing spill kits, medical staff, mechanic and safety officers. (Complete emergency response team).

AMA does a briefing to stakeholders, neighbors, Customs, ONG/NGOs, Fire Service, Chamber of Mines, Mines representatives, hospitals and port authorities on the Emergency Response Plan. Further the Ministry of Security granted permission for the transport of dangerous goods. No sub-contracting is undertaken, due to the nature of the cargo and the lack of safety standard by service providers. AMA Guinea retain the full responsibility of the operation and the only function that is subcontracted is the stevedoring and this is covered by the due diligence done by ED CLARCK FOR ORICA.

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.

X in full compliance with

The operation is □ in substantial compliance with Transport Practice 1.2

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

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AMA GUINEA has a training matrix which includes all the requirements of training for the transporting of cyanide. Basic training is done fire, transportation of hazardous materials training, cyanide transport training and first aid training, road test regulation, parking test, defensive driving, driving permit, Dangerous Goods Training, Cyanide awareness, cyanide intoxication, Cyanide drill, Accident on road training In case of accident roll over, Road survey training.

All truck drivers have a permit C that allows the driver to drive trucks above the weight of 19 tons. A certificate of competency is issued per driver as fit for work.

AMA have a trainer-assessor responsible for the training plan, training, assessments, etc. and have a driver Mentor to train, test and mentor truck drivers.

The containers which contain the cyanide boxes are sealed and loaded on other truck at the port by the stevedores. They remain on the truck until unloaded at the mine by the mine staff.

The convoy carries all the necessary cyanide emergency equipment (cyanide releases and medical) with them and they are under armed customs escort.

Critical task and critical position that gives each person his responsibility.

No sub-contracting is undertaken due to the nature of the cargo and the lack of safety standard by service providers.

AMA Guinea retain the full responsibility of the operation and the only function that is subcontracted is the stevedoring and this is covered by the due diligence done by ED CLARCK OF ORIC.

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

X in full compliance with

The operation is □ in substantial compliance with Transport Practice 1.3

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

AMA Guinea has 6 cyanide specific trailers, which meet specifications.

There is a planned maintenance program in place for the tractors, trailers and the lifting equipment is inspected biannually and maintained biannually by BIVAC International.

Brake testing and other inspections are undertaken by a third party specialist or by the vehicle manufacturer agent, and BIVAC, at their premises.

The weight of cyanide briquettes in a 20 foot container is 20 tons.

Only one container is carried on each trailer adhering to UMOA agreement.

The weight of the container is 2.3 tons and the weight of the trailer is 6 tons.

The weight of the tractor is 8.3 tons.

Thus the total weight of the trailer and load is 38 tons, including fuel.

The truck trailer is a 6 axle vehicle (3 axles on the tractor and 3 on the trailer), thus the weight on each axle is 6.3 tons per axle.

The Guinean legal maximum axle weight is 11.5 tons, meaning that the loading of axles is well within the legal maximum.

There is a planned maintenance program in place for the tractors.

Brake testing and other inspections are undertaken by a third party specialist or by the vehicle manufacturer agent.

Maintenance carried on site is monthly maintenance.
The on-board computer on the truck dictates the maintenance frequencies and type of service required. No sub-contracting is undertaken due to the nature of the cargo and the lack of safety standard by service providers.

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

**X in full compliance with**

- in substantial compliance
- not in compliance with

**Summarize the basis for this Finding/Deficiencies Identified:**

The operation is in substantial compliance with *Transport Practice 1.4*

The transport is done with the packaging consisting of plastic lined wooden boxes packed into 20 foot containers and sealed. The integrity of the boxes and containers can only be compromised if they are damaged during handling or if moisture/water/liquids enter the containers or the boxes in case of an accident on road. The container is sealed by the producer and only opened at the mine. The cargo is escorted by armed customs official to mine site because the cargo is exempt from duty so no one is allowed to open the container.

Furthermore, a Container Interchange Report is completed and jointly signed by the shippers representatives and the cyanide transporter's representatives to agree on any damage that may be sighted on the container. Also there is a checklist for the container integrity procedure signed by the driver and the convoy manager and the mine on delivery at the port.

The Vehicle Trip Checklist is completed and signed at the mine confirming the condition, on delivery of the container and a section reports on container seals, labelling and general container condition. This checklist is counter signed by the mine representative at mine site. Vehicle checklist, confirms no irregularities on container and vehicle checklist inspections are carried out when the convoy stops during the day and overnight.

Guinea transport regulations require marking and placarding according to the Hazardous Materials. The Plan refers specifically to placarding as per the IMDG Code requirements. Also the container check list identifies the placarding to be on all sides of the container during transport full to mine site and to be removed on the journey back.

AMA Guinea has a complete maintenance program incorporated in procedures & inspection sheets based on mileage or monthly which ever comes first.

AMA has pre-trip checklist is completed for the truck before the vehicle leaves the premises.

AMA Transport that involves the driver, HSSE and transport department has checklists, in addition to the Veritas Inspection.

AMA working hours is 13 hours maximum of duty during any 24 hour period (13 hours); maximum driving hours on duty in any 24 hour period 9 HOURS maximum period of continuous driving (2.5 hours); minimum daily breaks from driving during period of 12 hours on duty is 90 minutes (split into 30 TO 45 minute breaks).

Maximum weekly on duty hours (72 hours), maximum weekly driving hours (48), working week to be a maximum of 6 consecutive days to be followed by a minimum weekly rest of at least 36 hours.

OBC as well monitors driver operating hours.

In the situation the driver is unfit during convoy, another driver would be sent to take over.
The box sizes are such that the boxes fit tightly in the container and do not move. The container matches the trailer size, side rails and additional iron chains have been wrapped around the container, locked onto the trailers to provide additional support to prevent movement in transit. The additional lugs or side rail have been welded onto the trailers to provide additional support to prevent movement in transit. All the trailers are equipped with Twists locks to for security and are checked regularly. Cyanide Handling and Convoy Movement covers bad weather and coups. Other security related issues are covered in detail in the Operational Risk Assessments AMA transport department in collaboration with the HSSE department to examine any abnormal operations and to take corrective or preventive action. Alcohol and drugs is also a part of the risk assessment of the pre-trip inspection clearly stating alcohol and drugs are prohibited ( includes a section on Drug and alcohol policy). The driver also signs that he accepts the results in case there is a test for alcohol or a drug test. AMA retains all records for positive tests are put in the employees personal file. The driver hours records are included in Journey Plan documentation. All records are retained for 6 years No sub-contracting is undertaken due to the nature of the cargo and the lack of safety standard by service providers. AMA Guinea retain the full responsibility of the operation and the only function that is subcontracted is the stevedoring and this is covered by the due diligence done by ED CLARCK OF ORICA.

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

X in full compliance with

The operation is □ in substantial compliance to Transport Practice 1.5

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
AMA Guinea is not involved in managing sea or air shipments of cyanide, only land transport.

Transport Practice 1.6: Track cyanide shipments to prevent losses during transport.

X in full compliance with

The operation is □ in substantial compliance with Transport Practice 1.6

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
AMA Guinea Communication process with vehicles in the cyanide convoy is undertaken using mobile phones, short-wave radio, and satellite phones.
The drivers do not use the communications equipment.

The accompanying safety officer in each truck communicates with the convoy leader and support vehicles.

Convoy managers have satellite phones and mobile phones and all the appropriate telephone numbers to communicate with AMA GUINEA head office also appropriate emergency responders and emergency services on the convoy route,

AMA GUINEA head office manages all associated communications with the mine and the cyanide producer.

available an emergency contact list with the vehicles and the convoy managers

Mobile and satellite phones are used by convoy manager to communicate to head office in Conakry.

all Communication is done between the convoy leader and safety as the driver is not allowed to communicate with mobile phone while driving.

The safety officer also has mobile phone so that can call the head office for free.

Convoy managers have all the appropriate telephone numbers to communicate with AMA Guinea head office and appropriate emergency responders and emergency services on the convoy route and the mine.

all equipment are tested prior to departure of convoy - nevertheless the equipment are in continuous use with a contract with the radio communication company for servicing of the equipment

There is no blackout area for the short wave radio (short wave radio is a radio communication equipment meant for long distance communication that has no black out area

since it doesn’t uses GPRS or phone system. it is therefore used as the main means of communication)

Nevertheless, all convoys use of short wave radio communication also in case of GPRS black out areas satellite phone can be used.

AMA Guinea is permitted by Guinea government to use a Short Wave Radio, this equipment cover the needed communication all over Guinea these equipment is installed in the Escort convoy vehicles and in AMA Guinea Head office so in case of black out the radio is used for communication.

The radio operators have 12 hour rosters when there is a convoy on road.

GPS monitors all convoys.

Also there are GPS & on board computers (OBC) on the trucks that can monitor the trucks.

There is a dedicated person that monitors. the trucks’ OBC.

The on board computer can do a play back after the trip in case there is no GPS coverage.

Convoys are phoned periodically from AMA GUINEA head office.

Convoys report in from various rest stops.

A waybill accompanies the convoy which includes chain of custody data such as container numbers, waybill
numbers, shipping documentation, Packing list, Bill of lading, customs declarations, and producer invoice. Checks are carried out at customs posts and borders and at the mine site. Convoy stops have checklists which include the inspection of container seals. Daily tracking and daily communication with customer to keep them updated is done by AMA head office only. Report is sent daily for customers to inform them about the position of the Trucks with color coding including the trailer number, waiting to load, in maintenance and breakdown, Type of goods, truck number, waybill number, departure location. -

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.

X in full compliance with

The operation is □ in substantial compliance to Transport Practice 2.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
There are no situations where interim storage occurs since the cargo is under the customs custody and customs doesn’t allow the exempt cargo to park or be sent anywhere apart from the approved route. There is a procedure that prohibits eating or drinking near the cyanide and the Emergency response plan manages different scenarios on how to manage spill and contain releases.

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.

X in full compliance with

The operation is □ in substantial compliance with Transport Practice 3.1

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
AMA has Emergency response plan that gets updated yearly or when the ER plan is activated or in case of a Drill feedback that needs to amend or in case the re is change in regulation or risks.
the Plan covers different scenarios and different routes in Guinea.
As all cyanide deliveries are made in convoy, the accompanying Emergency Response Team will implement the Emergency Response Plan unless more support is needed then they will for head office or external responders.
AMA transport only solid cyanide.
Route risk assessments are fully reviewed every year and redone five years.
The plan considers all aspects of road transport only since sea, air and railway are not part of the scope.
AMA do not use tanks.
The Plan includes a series of likely scenarios (Truck breakdown; truck accident-no spill; truck accident-spill; truck driver injury; security risk-armed robbery; and truck accident, Communications failure and product diversion). Responses in the Plan are based upon the identified scenarios.
The majority of scenarios will be responded to by the convoy’s own dedicated emergency response team.
Any outside additional assistance would be requested or coordinated through the ministry of security, Guinea EPA, with whom AMA GUINEA has regular and on-going contact and communication.
The possibility of using outside medical responders has been considered and a communication workshop with representatives of these bodies.
AMA in collaboration with ministry of security did sensibilize all outside responders, medical facilities for their role in case of emergency.

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

X in full compliance with

The operation is □ in substantial compliance with Transport Practice 3.2
□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
AMA Guinea identified Critical task and critical position manual of authority indicates the training and competency needs of all jobs and includes emergency response.
The ER plan training is embedded in the training matrix.
Convoy team members are trained in emergency response.
only trained personal are allowed on the convoy.
Manual of Authority for Emergency Response which includes duties and responsibilities.
All members of the convoy team (escort vehicle and drivers and safety officers) are trained in the Emergency Response Plan and receive regular refresher training, including mock drills.
Pre-trip briefing includes refresher of emergency procedures.
The contact list contain the ER members names, positions and phone numbers.
AMA retain Stocks of SODIUM HYDROXIDE at AMA site.
No equipment is stored en route - all necessary equipment is carried with the convoys.
convoy checklist indicating emergency equipment carried -
The Convoy escort vehicles carry all needed and necessary emergency response equipment that may be required for cyanide emergencies during the convoy routing.
Convoy equipment is checked and tested before the convoy moves. AMA Guinea yard equipment is tested and checked monthly. The HCN detector is also tested and is sent to the manufacturer when due for calibration every 12 months. The CAYNOKIT was purchased and valid for 12 months. No sub-contracting undertaken due to the nature of the cargo and the lack of safety standard by service providers. AMA Guinea retain the full responsibility of the road transport

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

X in full compliance with

The operation is □ in substantial compliance with Transport Practice 3.3

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
AMA Guinea has developed plan for internal and external responders include roles and responsibility. Contact information is included in the vehicle TREM card ER plan and cyanide transport plan. The convoy manager will communicate with the base controller who will regulate communications to interested and affected parties and other bodies that need to be communicated with. The communication is contained the ER planning, Contact List and Organogram. AMA has systems in place to ensure that internal and external emergency notification and reporting procedures are kept current through their yearly update, when all procedures are reviewed. The convoy manager will communicate with the base who will regulate communications to interested and affected parties and any other institution.

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

X in full compliance with

The operation is □ in substantial compliance with Transport Practice 3.4

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
The plan address the actions to be taken to control a spill of cyanide that would pose a risk to people and the environment. Recovery, treatment of Spills, Neutralization or removal of soils, Treatment and or disposal of soils; reclamation of Sodium Cyanide, Transport of contaminated materials, Neutralization; and Water Resource Treatment have all been addressed in the ER plan. The Plan also prohibits the use of treatment chemicals in water bodies.

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

X in full compliance with
The operation is ☐ in substantial compliance with Transport Practice 3.5

☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
The plan includes:- Containment; Recovery and treatment of Spills; Recovery of Solids; Neutralization or removal of soils; Treatment and or disposal of soils; reclamation of Sodium Cyanide; Transport of contaminated materials; Neutralization ; and Water Resource Treatment.
the plan is reviewed on the following condition
1-accident
2-after drill
3-chnging road condition
4-yealry
5-legal compliance
Drill evaluation filled in onto drill evaluation and learning point are noted and some are added tot he ER plan.
AMA complete 2 drills minimum per year
target cyanide 2 fire 2.