

## SUMMARY AUDIT REPORT


# Allship Logistics Limited. Ghana. Cyanide Warehouse Recertification Audit.

## Summary Audit Report.

Report submitted to:-  
1400 I Street, NW, Suite 550  
Washington. DC 20005  
Unites Sates of America.

Report of:-  
Allship Logistics Limited  
P.O. Box BT 582  
Heavy Industrial area  
Opposite Tema Lube Oil  
Tema.  
Ghana.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

### 1.0 INTRODUCTION

#### 1.1 Operational information.

Name of warehouse facility : Allship Logistics Limited  
Name of facility owner : Allship Logistics Limited  
Name of facility operator. : Allship Logistics Limited  
Name of responsible manager : Robert Kutin  
Address : Allship Logistics Limited  
: Head Office (Tema)  
: Heavy Industrial area  
: Opposite Tema Lube Oil  
: P.O. Box BT 582  
State / Province : Tema  
Country. : Ghana  
Telephone. : 0303-205627  
Fax. : 0303-206482  
E-mail. : [Robkutin@hotmail.com](mailto:Robkutin@hotmail.com)

#### 1.2 Audit scope.

The scope of this audit covers the warehousing of cyanide at Allship's Warehouse located at Dompim situated near Tarkwa in Ghana.

#### 1.3 Description of operations.

Allship is a wholly owned Ghanaian entity that was established during 1990 to provide freight forwarding and logistics services. The Company's Head Office is located in Tema, with branches in Accra, Takoradi, Tarkwa Paga and Burkina Faso.

Since the establishment of the Company it has provided services to companies in the mining heavy industrialized sector, Government organizations as well as private organizations.

Allship Logistics Limited is a Network Partner with Röhlig-Grinrod (Pty) Ltd which is an airfreight, sea freight and project logistics service provider situated in Sub-Saharan Africa, operating internationally and into Africa.

The company is a member of International Federation of Freight Forwarders Association (FIATA) and Ghana Institute of Freight Forwarders (GIFF). Allship has a 4.5 acre truck yard and a 34,000 square meter warehouse facility at its Head Office in Tema. The Takoradi branch office has a 2.88 acre truck yard and a 5,000 square meter warehouse facility.

Allship Logistics has a cyanide storage warehouse at Dompim – Pepesa measuring 65.50 meters by 24.50 meters with ridge height roof of 9.50 meters located in Dompim –Pepesa and it was constructed and completed in 2011. Dompim – Pepesa is about 88 kilometers from Takoradi which is in the Western Region of Ghana and approximately 171 kilometer west of Accra.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

### 1.4 Cyanide Warehousing.

Allship's cyanide warehouse is located at Tarkwa Road, Dompim, a town with approximately 10 000 people and situated approximately 30 kilometers south-west of Tarkwa. Most cyanide is delivered by ship to the port at Takoradi and some cyanide been delivered via the Tema port.

Allship designed and arranged the construction of the Warehouse during 2010. The Ghanaian Environmental Protection Authority granted authorisation on 28<sup>th</sup> December 2011 to commence the construction and operation of the sodium cyanide warehouse. The warehouse is divided into equal storage areas to give two chambered compartments, separated by a brick wall. Both compartments are fitted with vents to allow heat and fumes that may be generated within the warehouse to escape into the atmosphere. One of the compartments is designed for temporarily storage of solid sodium cyanide transported from the port at Takoradi to mine site. The other one for used cyanide packaging material generated at the mine site and returned to the warehouse

The cyanide is packaged in one ton polypropylene lined timber boxes which are destuffed at the warehouse from the shipping freight containers and stored on concrete flooring in the warehouse. This kept there until required by the mine site Perseus Mining. Upon request by the mine, the cyanide boxes are removed from the warehouse. using a forklift and packed into a shipping freight container, then locked and sealed for road transport to the mine site.

The warehouse construction is watertight equipped with air vents at the pitch of the roof and each warehouse section has a manually operated roll-up door..

The warehouse has a stacking capacity for 2000 x 1 ton boxes of cyanide to be stored safely in this facility and is secured with lockable steel doors. The warehouse is situated within a well built boundary wall and has a security service presence manned 24/7.

The warehouse is secured and has a security manned presence on the site 24/7.

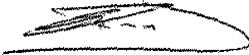
At the time of the audit, boxes of cyanide were present within the warehouse.

### 1.5 Auditor's Findings and Attestation.

	In full compliance with	
Allship's Logistics Warehouse is	In substantial compliance with	The International Cyanide Management Code.
	Not in compliance with	
Audit Company	Tommie Muller South Africa	
Audit Team Leader	Tommie Muller	
E-mail address	<a href="mailto:tommieb.muller@gmail.com">tommieb.muller@gmail.com</a>	

No significant cyanide exposures and releases were noted during the audit period.

#### Name and signature of Auditors

Name	Position	Signature	Date
Tommie Muller	Lead Auditor		21/2/2020

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT


### 1.6 Dates of Audit.

The recertification audit of the Allship Logistics Warehouse was conducted 25<sup>th</sup> to 27<sup>th</sup> November 2019.

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 Cyanide Production Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

### 1. OPERATIONS: *Design, construct and operate cyanide production facilities to prevent release of cyanide.*

Production Practice 1.1: *Design and construct cyanide production facilities consistent with sound, accepted engineering practices and quality control/quality assurance procedures.*

**in full compliance with**

The operation is  in substantial compliance with Production Practice 1.1  
 not in compliance with

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

The warehouse is located at Dompim - Pepesa, Western region of Ghana about 70km from the port of Takoradi and 23Km from Tarkwa city centre. The design of the warehouse was done by a qualified Architect (E.M. Akuta) and drawings were approved by the Ghanaian Governmental authorities in Takwa as well as by Takwa Municipality. Tarkwa Nsuaem Municipality Assembly issued a business permit / license dated. 29<sup>th</sup> May 2019. An Environmental Impact Assessment (EIA) was done and a certificate No. EPA/EIA 343 dated 28<sup>th</sup> December 2011 was issued

Structural Integrity Assessment report on existing Warehouse at Tarkwa Industrial Area, Tarkwa Nsuaem Warehouse drawings were done by Mr. E.M. Akuta an architect of profession and dated June 2006.

An Environmental Impact Assessment (EIA) was conducted and a certificate number EPA/EIA/343 dated 28th December, 2011 issued by EPA for the commencement and construction and operation of the sodium cyanide warehouse and incineration plant. The Environmental Protection Agency (EPA) permit EPA/EMP/C11793/15/0489) issued during 2014 was renewed in 2019.

Structural Integrity Assessment report on existing Warehouse was issued by Tarkwa Nsuaem Municipality Assembly issued a business permit / licence dated 29th May 2019.

On October, 17, 2019 a Structural Integrity Assessment was carried out at the warehouse by the qualified architect, Mr. E.M. Akita. A certificate of inspection issued and signed off on 4th November, 2019.

Ghana EPA (Environmental Protection Agency) issued a renewed the Environmental certificate of " Authorization for continuous operation of the warehouse for chemicals storage as per a Schedule to Environmental Certificate" No. WRC 100987.01 dated 15th November, 2019 which expires on 14th November, 2022.

This certificate granting Allship permission to continue operating the existing Chemical Storage Facility located in Dompoin-Pepesa in the Tarkwa-Nsuaem Municipality of the Western Region.

Block plan (Layout) was noted. Ground Floor Plan Sheet No 2 dated June 2006 noted. Size of floor plan of the warehouse indicated a two compartment building with a size of 65.5 m x 24.5 m with ridge height of 9.59m.

The size of the area that will be utilised for the warehousing of cyanide is 26.850 m x 20.0 m. The warehouse is of a pre-engineered structure made out of steel stanchions, beams, braces, purlins and corrugated aluminum roofing and cladding. Reinforced concrete foundation columns, beams and 200 mm reinforced concrete floor. The exterior walls are 6.50 m in height. Exterior walls of the warehouse are built with bricks from mortar and bricks up to about 3.9 meters high from ground level and from there with corrugated sheeting up to the roof. Warehouse construction material is compatible with the chemicals that will be stored in the warehouse.

Environmental Protection Agency (EPA) conducted and Environmental Impact Assessment and issued an environmental certificate No. WRC 100987.01 to Allship Logistics Ltd granting latter permission to continue

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

operating the existing Chemical Storage Facility located in Dompoin-Pepesa in the Tarkwa-Nsuaem Municipality of the Western Region.

Quality control and quality assurance records have been retained. The Tarkwa Municipality approved the building plans and plan of the land. The local Fire Department issued a fire permit number 0006224. Kpone-Katamanso Municipal Assembly Building issued operating permit No. KKEMA / IND / 24/2019 issued and noted.

Expansion gaps in concrete flooring been sealed off with Master Seal PG 470 that will prevent any seepage or cyanide residue getting in contact with the soil below the floor. No cyanide in liquid form will ever be stored in this warehouse.

Two (2) entrance doors installed in warehouse exterior wall which can either be operated manually or electrically. A standby uninterruptible power supply or uninterruptible power source (UPS) battery pack is installed inside the warehouse and is protected against tampering. A power outage could not result in the release of any cyanide. Under normal circumstances the doors is closed by electrical motors. In the event of an electrical power outage, doors do not close automatically.

Standby electrical generators available at the facility and an uninterruptible power supply / source (UPS) battery pack installed in the warehouse. Adequate diesel noted to be in the fuel reservoir at the generators. An electrical power outage could not be the cause or a contributory factor for any cyanide released during an electrical outage.

During rainy days or signs that it is going to rain soon, no off-loading of cyanide packaging from freight containers or loading into the containers. The same applies for the off-loading of used cyanide packaging.

Two standby electrical generators available plus inbuilt battery packs that can last for 12 hours. Under no circumstances will power outages cause any cyanide releases. However, the facility has a standby generator to power the facility (lighting) when the national grid goes off.

*Production Practice 1.2: Develop and implement plans and procedures to operate cyanide production facilities in a manner that prevents accidental releases.*

in full compliance with

The operation is  in substantial compliance with Production Practice 1.2  
 not in compliance with

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

Allship Logistics do have several procedures in place and applicable to the current activities at this facility. Procedures describe the standard practices necessary for its safe and environmentally sound operation.

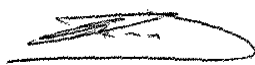
Hotspot areas such as: -

- ❖ The packing area for the cyanide Intermediate Bulk Containers (IBC's)- medium risk
- ❖ The packing area for the cyanide waste packaging material- high risk,
- ❖ Loading and offloading point - medium risk

has been identified where HCN gas monitoring is carried out on a weekly basis by the Safety Officer. Readings within these areas are captured on an appropriate checklist and kept on file. The HCN monitoring procedure specifies that the threshold limit for cyanide should not exceed 4.7 ppm.

Allship conducts monthly facility inspection in the warehouse.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

Tools box meetings are held weekly at the warehouse for all warehouse personnel. Records of details of weekly tools box meetings held on 18/03/19, 24/02/19, 4/02/19 and 4/03/19 verified by the auditor.

All warehouse personnel have been trained in cyanide awareness and emergency response.

The facility has procedures in managing the warehouse to ensure its environmentally sound operation. Allship has the following procedures;

- ❖ Loading and offloading of product,
- ❖ Hydrogen Cyanide Gas Monitoring procedure(SOP4.12.18)
- ❖ Emergency response and Evacuation (doc No. GEP4.11.1)
- ❖ Equipment Maintenance procedures (doc No.TR/SOP/03)
- ❖ Security and access control procedure (doc No.HSE/WI/08)
- ❖ Handling sodium cyanide packaging waste procedure(HSE/WI/06)
- ❖ Work and inclement weather (HSE/WI/10)

Cyanide awareness and emergency response training have been presented to all warehouse personnel. The training was conducted by a qualified external consultant.

The warehouse facility is protected 24/7 with the entire boundary wall been secured with a security wire fence on top of the wall. The warehouse are guarded by two(2) security guards on dayshift and two(2) security guards on night shift plus and one (1) armed Ghanaian policeman. The facility is protected 24/7. The entire boundary wall around the facility is secured with a security wire fence on top of the wall.

Gas monitoring is performed every morning on opening of the warehouse doors (the cyanide storage and used cyanide packaging areas) and when off-loading the boxes containing cyanide from freight containers and when used empty cyanide packaging (boxes) is off-loaded coming from mine site is done. The HCN monitor is calibrated by an external company, Ultimate Resurgence Services. Certificate noted.

The facility has an Emergency Response and Evacuation procedure (doc, GEP4.11.1) that stipulates the following anticipated emergencies and the measures to take during product spill / loss have been experienced such as:

- ❖ Fire
- ❖ Medical emergency
- ❖ Severe weather
- ❖ Bomb threat
- ❖ Chemical spill
- ❖ Earthquakes
- ❖ Civil disorder
- ❖ Armed confrontation
- ❖ Terrorist attack/hostage taking

The facility has a change management process to identify when site operating practices have or will be changed from those on which the initial design and operating practices are predicted. A Change Management procedure (doc No. HSE/SOP/10 dated 01/06/18) available. The "Request for Revision/New documents" completed and submitted by the Safety Officer where after the Managing Director approves application.

Forklift and a reach stacker are the main equipment used in the warehouse facility and serviced every 250 hours of running. Equipment is serviced by external service provider Pasico Ghana. Pre-trip checks are done on a weekly basis before fork lift and reach stacker is taken into use. Standby generator is serviced at 250 hour intervals. Pre-departure checks conducted on delivery loaded vehicles before departure to mine sites.

No design changes have been made to the warehouse since it was designed and taken into use.

This warehouse do not handle any cyanide solution, therefore it does not generate contaminated water

The facility have environmentally sound procedures, Handling Sodium Cyanide Packaging waste No. HSE/WI/06, for the disposal of cyanide or cyanide-contaminated solids. Waste gets kept at warehouse for

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

approx one month before reloaded into containers and taken to waste disposing Company, Verhad Transport

No artificial vents installed in the warehouse. Opening vents fitted to the pitch of the warehouse roof and vents fitted in western wall of warehouse and vents fitted in western wall of warehouse which allows adequate ventilation through the warehouse. Prior to any work to be performed in the warehouse, the doors are opened and left open for a minimum period of 15 minutes to ensure any accumulated HCN gas can be drawn out of the working area. HCN gas concentration reading must be <4.7 ppm before access into warehouse is allowed. The same principle applies when entering the warehouse area where damaged packaging is kept. Employees always work on the "Buddy Buddy" system.

During rainy days or when circumstances have potential to rain, no loading of off-loading of cyanide from freight containers is done. Exterior warehouse walls are built from mortar and bricks.

Adequate firefighting equipment, in the form of dry chemical powder (DCP) type is available in and around warehouse. No CO<sup>2</sup> fire extinguishers been used at this facility.

The facility has procedures in place that stipulates that access to inside of facility is by appointment only. Boundary walls are built up by bricks and mortar with razor wire fitted on top. Access gate manufactured from steel structure and covered with steel flat sheeting. Security gates are manned 24/7 by trained security officers. Cyanide is packed in 1 ton wooden boxes lined with polypropylene and polyvinyl plastic bags which are in accordance with international standards. The warehouse has been built in such a manner that no rainwater can gain ingress into stacking areas.

Boxes with cyanide and used cyanide packaging are stored in locked warehouse areas fitted with steel roll-up access doors which are locked when access is not required.

Company does have a procedure in place for the neutralisation of contaminated water collected in the secondary containment pond. A 10% concentration of ferrous sulphate is used for this purpose before declaring liquid to be safe for disposal. The total cyanide in the liquid is monitored with a result to be below detectable level and the HCN gas above the liquid to be less than 4.7 ppm. Once readings are within the minimum levels disposal is done via an approved land fill site or mines tailings dam.

Production Practice 1.3: Inspect cyanide production facilities to ensure their integrity and prevent accidental releases.

in full compliance with

The operation is  in substantial compliance with Production Practice 1.3

not in compliance with

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

This facility is not a cyanide production facility and do not handle any cyanide solutions or store liquid containing cyanide. Building structural integrity inspections are carried out by a qualified engineer, which include the warehouse concrete floor.

Procedures are in place for Warehouse Safety Officer to perform weekly safety inspections in all areas of the warehouse facility.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date



## SUMMARY AUDIT REPORT

### 2. WORKER SAFETY: *Protect workers' health and safety from exposure to cyanide.*

Production Practice 2.1: *Develop and implement procedures to protect plant personnel from exposure to cyanide.*

in full compliance with

The operation is  in substantial compliance with Production Practice 2.1  
 not in compliance with

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

The facility has developed operational procedures to minimise exposure during normal warehouse operations from the receipt of product, storage thereof and dispatch of cyanide containers. The key activities undertaken at the warehouse are the operation of forklift and the disposal of cyanide packaging material. Allship has developed procedures covering these activities. The Cyanide Warehouse Business Continuity Plan - Emergency Response Plan No GEP 4.11.1 addresses non-routine activities. All employees working at the warehouse are trained in the contents of this procedure.

Emergency telephone numbers of stakeholders available at the Tema offices.

The standby electricity generator serviced at 250 hour intervals. Maintenance and servicing of the forklift and reach stacker are serviced by Pasico Ghana Ltd an external service company. The Emergency Response Plan (ERP) requires that the appropriate Personal Protective Equipment (PPE) as per product Material Safety Data Sheet (MSDS) be worn when servicing the vehicles. The road transportation vehicles are serviced at intervals of 10 000 kilometers. The road transport vehicles get washed off before been sent to be serviced.

Load tests on forklift and reach stacker been carried out and certificates issued. Certification of equipment was done by a reputable external service provider.

To review proposed process, operational changes and modifications that could have a potential impacts on worker health and safety of employees, facility has compiled procedure "Management of Change" ref No, HSE/SOP/10 addressing the handling of new products, changes on work processes or procedures.

Suggestion scheme boxes available throughout the facility into which employees can deposit a health & safety suggestions. Daily health & safety talks held during with employees do get the opportunity to raise health & safety issues and suggestion to improve the health & safety with the warehouse Employees are aware of the suggestion scheme that have been implemented. Response was found to be positive.

HCN Gas monitoring device, model MSA Model ALTAIR PRO with serial number 12700252 in use and have been calibrated by Ultimate Resurgence Services which is an approved institution. Relevant employees been trained in the operating of the HCN monitor. Device properly maintained.

The facility has the provisions to ensure that a system is used where employees can communicate with other personnel for assistance, help or aid where necessary. ER Plan No. GEP 4.11.1 requires that the Buddy Buddy system be followed. Document stipulated that another employee (Buddy) will always be available during loading and off-loading of cyanide by another employee who has been trained in cyanide handling. Visual and / or two-way voice communication required.

Procedures are in place to be followed during destuffing of wooden boxes containing cyanide, when loading boxes cyanide from warehouse into a container or any other area where the HCN levels rises to a level above 4.7 ppm. The portable HCN gas monitor clipped onto employee's overall will sound an audible alarm. Employee has to vacate the area immediately and move to a zone where HCN gas concentration is way less than 4.7 ppm present. (Stay upwind).

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

Where an employee is required stay or work in an area where the HCN level is above 4.7 ppm, he/she must be dressed up in all the required PPE including the self-contained breathing apparatus (SCBA) fitted with a full face respirator.

Some areas within the warehouse and its surroundings have been identified as possible areas where workers can be exposed to cyanide gas or cyanide dust particles at more than 4.7 ppm. 1. The Incinerator Area. 2. The Packing Area for the Cyanide IBCs or boxes, 3. The Packing Area for the Cyanide waste. (The cyanide wastes include the polypropylene and polyethylene plastic bags and the recovered ply woods.) and 4. The loading and offloading area.

Procedures available that requires the Personal Protective Equipment required (PPE) that is to be worn where workers may be exposed in areas where the concentration of hydrogen cyanide gas is more than 4.7 ppm.

The facility assesses the health of employees to determine their fitness to perform their specified tasks. Allship has a drug & alcohol policy, which includes workplace testing for drugs and alcohol during employment and following any worker being involved in an accident. Allship requires all employees to undergo pre-employment health checks. Employees below the age of 50 years are subjected to at least one medical screening per year. Employees being over the age of 50 years are subjected to a minimum of two medical screenings / examinations in a year.

The facility has a Personal Protective Equipment Management policy. Policy number HSE/P/05. Allship does hazard risk assessment evaluation of all Personal Protective Equipment and these are documented. PPE's are issued in accordance with the risk assessment. Symbolic safety signage that conforms to the Ghana requirements and international standards are displayed where appropriate PPE must be warned.

Upon the evaluation, the required Personal Protective Equipment (PPE) is issued to the employee. One set of PPE's are given to each employee per year. Visitors are given the required PPE's when entering the warehouse premises. PPE's of employees are inspected everyday and recorded.

Recipients of Personnel Protective Equipment signs off after receiving any new PPE's. Records of completed PPE Risk Evaluation forms are appropriately kept on file. Dirty PPE's are not to be taken out of the site but decontaminated (washed) within the warehouse premises.

Applicable warning signs (symbolic safety signage) such as toxic 6 and marine pollutant labels, no eating, no drinking, no smoking and no open flames are displayed at strategic locations at the entrance and within the compound of the warehouse. The warnings signs are to prohibit eating, drinking and open flames in areas considered as hot zones in the warehouse.

Production Practice 2.2: *Develop and implement plans and procedures for rapid and effective response to cyanide exposure.*

in full compliance with

The operation is  in substantial compliance with Production Practice 2.2  
 not in compliance with

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

Allship Warehouse Management developed specific written emergency response plans or procedures for employees to respond to cyanide exposures, decontamination and evacuation from the affected area. Emergency Response Plan and Evacuation Procedures (ERP) are available at this facility. Plans and procedures scrutinise and found to be applicable and appropriate to this operation.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

Management has entered into an agreement with the Tarkwa Government Hospital and Effia Nkwanta Government hospital to handle cyanide exposed persons. In response to this agreement, both these medical institutions indicated in writing that they have adequate and appropriate first aid equipment, qualified staff and expertise that could respond to cyanide exposed incidents.

Allship has notified the two hospitals of their roles in emergency situation. The plan covers;

- Treatment of exposure of a person to cyanide
- Treatment for Conscious and Unconscious Victims
- Contacts with skin
- Contact with the eyes
- Medical treatment for sodium cyanide exposure.

The recommended cyanide antidotes used is Hydroxycobalamine. This is administered by the doctor at the designated hospitals. The facility has emergency response equipment which includes all the required PPE's, oxygen resuscitator, mask, and first aid items. Communication to these medical facilities and other outside responders such as the police, Ghana Fire Service and Ghana Ambulance are done via the use of cell phones. An updated emergency communication procedures and medical support telephone contact numbers available.

A Safety shower combined with an eye wash is located adjacent to the warehouse. This is tested weekly and inspection records kept appropriately. The safety shower and eye wash stations are well sign posted. Potable water is available throughout the facility as well as a reservoir tank to store water to ensure the availability of water throughout the facility.

Dry powder chemical fire extinguishers are located in the warehouse and the warehouse office block. The fire extinguishers are inspected monthly by the Safety Officer.

The DCP fire extinguishers are serviced every six months by external qualified company called Advance Safety Engineering. Allship documents the inspections and keep them appropriately.

A fully equipped first aid box is available at the warehouse and the contents are inspected on a monthly basis by the Safety Officer. This is done to assure that the equipment is available when needed. The first Aid box is replenished if there is a shortfall in its contents after each inspection. The warehouse staff has all been trained in basic first aid by Ghana Red Cross to administer first aid treatment and certificates of training issued to them..

HCN gas monitor used in the warehouse is calibrated annually by a competent third party company. A sticker stuck onto each gas monitoring device displaying the date when last the device had been calibrated. .

MSDS from the supplier (Orica) is conspicuously displayed in various areas of the warehouse building and warehouse office block. The MSDS is in English which all the employees are conversant with as it is the official language of the Ghana. A copy of the MSDS is also included in the facility's Emergency Response and Evacuation Plan.

The Emergency Response Plan (ERP) addresses decontamination processes as well as first aid measures for exposure to cyanide and employees. Suspected cyanide exposed person having their skin contaminated with cyanide dust, have to wash their hands and thereafter have to shower off the dust before exiting the warehouse facility.

The facility has developed procedures to transport cyanide affected person to Tarkwa Government Hospital or Effia Nkwanta Government Hospital after administering first aid to the person and decontaminating the person. The facility does not own an ambulance. Should it be required that a cyanide exposed employee will be transported the hospital the company has a permanent standby vehicle available at all times during the operation of the warehouse.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

The Safety Officer does an initial assessment of the cyanide exposed person who will then report the incident to the receiving medical facility. Information such as the condition of the patient, the treatment given to the patient as well as the estimated time of arrival at the medical facility will be provided to the hospital.

The facility alerts the two hospitals i.e. Tarkwa Government Hospital and Effia Nkwanta Government Hospital of the potential patient/s to be treated for cyanide exposure. The hospitals have indicated that the medical facility have adequate first aid equipment, qualified staff and expertise to respond to cyanide exposure incidents.

Mock drills are held annually for all workers and emergency responders. Mock drills are evaluated and repeated when necessary to perfect or improve upon the response actions.

Allship has a procedure for investigating and evaluating cyanide incidents. The process involves incident reporting, investigation and instituting of corrective measures to prevent recurrence of the incident. Evaluation of any incident ascertains whether the procedures are adequate to protect employees from cyanide exposures. The procedures are revised as and when necessary after the evaluation. An incident register is completed when an incident is recorded.

Since the last cyanide audit, no cyanide related incidents has been recorded at the warehouse facility.

### **3. MONITORING:        *Ensure that process controls are protective of the environment.***

Production Practice 3.1:        *Conduct environmental monitoring to confirm that planned or unplanned releases of cyanide do not result in adverse impacts.*

**in full compliance with**

The operation is                       in substantial compliance with                      Production Practice 3.1  
 not in compliance with

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

Question 1(a) & (b) is not applicable to this facility as no process activities undertaken at this facility.

There are no direct and indirect discharges of cyanide contaminated solution into surface waters. The facility does not generate any cyanide contaminated water and therefore do not monitor cyanide been discharges to surface water and to surface and ground water down gradient.

### **4. TRAINING:        *Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.***

Production Practice 4.1:        *Train employees to operate the plant in a manner that minimizes the potential for cyanide exposures and releases.*

**in full compliance with**

The operation is                       in substantial compliance with                      Production Practice 4.1  
 not in compliance with

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

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

The facility conducts annual refresher training for all its workers. The mandatory training programs for all workers are cyanide awareness training, Basic First Aid, Basic Fire Fighting, Proper Use of Personal Protective Equipment, emergency response and mock drills. The training programs are organized and presented by professional external consultants.

To assess the competency of each employee after training has been presented, it is required from participants to write a short assessment on each course. Alternatively, workers are subjected to verbal questioning in a particular area that was discussed. The training models are all captured in the company's training matrix and the records are updated after each training program. A planned task observation is also used to ascertain employee's competency.

Behavioural Based Safety Checklist is used to record observations of safety practices as employees perform their tasks.

Training in Personal Protective Equipment is also covered in the cyanide emergency response training and mock drills. The required type of PPE's that is to be worn by employees is prescribed in the product MSDS. These include correct use of respirator with canister, PVC gloves, disposal tyvek overalls, safety boots and helmets. PPE training is covered in tools box meetings. Employees are trained when new type of PPE is issued to workers.

Employees are trained, assessed and declared competent prior to commencing work at the warehouse. Workers are trained in each of their specific task that they perform to prevent risks of exposure to cyanide releases and injuries. The tasks include loading and offloading of sodium cyanide IBC's, safe operation of forklift and reach stacker. The procedure addresses the safe practices in loading and offloading IBC's from containers to prevent unwanted exposure risk to any worker due to cyanide gas been released. Prior to loading or offloading cyanide full IBC's and cyanide empty boxes, each worker is expected to wear their required PPE's. At the warehouse facility no production activities is present. Procedures refer to the precautions to worker health and safety and in a manner that prevents unplanned cyanide released.

Production Practice 4.2:      *Train employees to respond to cyanide exposures and releases.*

**in full compliance with**

The operation is       in substantial compliance with      Production Practice 4.2

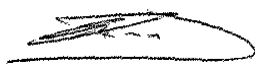
not in compliance with

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

The facility do present training to their employees and emergency response personnel to manage cyanide in a safe and environmentally protective manner and to ensure that they understand the hazards of cyanide.

Training The facility train its workers to respond to cyanide exposures and releases. Training in Emergency response and mock drills are held annually for all employees. New employees undergo induction and cyanide awareness and ER training prior to them starting work. The facility has a training matrix that stipulates the training requirements, employee's names and position, date of training and next training date. The ERP addresses spill response actions for both small and large solid spills. Also, cyanide spill response actions are also covered in the mock drills which are organized annually. The mock drills are conducted to equip all workers on how to respond to cyanide exposures and releases. Refresher ER training and mock drills conducted annually ensures that employees have the required knowledge for effective response to cyanide exposed persons and spill actions. Training attendance records have the names and signatures of the

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

workers, date training was held, name and signature of the trainer.

After each mock drill training, corrective action plans are issued and inefficiencies addressed by repeating the drill.

The Spill Response Actions in the Emergency Response Plan are found to be relevant. Interviews conducted on warehouse employees was evident that the warehouse staff are trained in cyanide emergency response actions and are competent to handle cyanide exposures and releases. Mock drill reports are on each mock drill is written and this has deficiencies observed and the corrective action plans to ensure that employees are competent to handle cyanide emergencies.

Training records for training programs held in 2016 to 2019 are appropriately placed on record. Training records are kept for a minimum period of 5 years.

**5. EMERGENCY RESPONSE:                    *Protect communities and the environment through the development of emergency response strategies and capabilities.***

Production Practice 5.1:                    *Prepare detailed emergency response plans for potential cyanide releases.*

**in full compliance with**

The operation is                     in substantial compliance with                    Production Practice 5.1

not in compliance with

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

Allship has developed a Warehouse Emergency Response and Evacuation Plan that addresses potential cyanide releases and the various response actions. At the time of the audit cyanide was stored inside the section of the warehouse. Redundant cyanide packaging was kept inside the second warehouse storage area.

Two warehouse staff members namely Mohammed Naziru and Francis Otoo well acquainted with the contents of ER Plan.

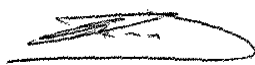
The ER Plan addresses the most likely emergency situations that could occur, being a fire, spillage of solid cyanide, gas release, severe weather and natural disasters, earthquakes, civil disorder and explosion. The warehouse facility has a designated assembly points. No potentially affected communities in and around the immediate vicinity of the facility as the warehouse is about 10km from the closest settlement. The warehouse facility has a standby electric generator which is used to generate power in case the national electricity grid goes off.

The Company do have an ER Plan compiled that details the emergency first aid measures that are to be followed in the event of emergency situations and in particular cyanide exposure cases. Specific first aid procedures and the administering of the cyanide antidote been detailed. Hydroxycobalamine being the preferred antidote for cyanide poisoning.

The facility does not carry out any dissolution activities and does not have any tanks, valves, pipes, pumps and waste treatment facilities. The facilities has procedures in handling cyanide exposed persons and spills of cyanide.

As per the ERP, oxygen is administered to a cyanide exposed person and then transported whilst on oxygen to the hospital. An ambulance is called upon or in the no availability thereof or urgency of the case, the

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

company's escort vehicle will then be used to transport victim to the hospital. Allship Logistics entered into an agreement with Tarkwa Government Hospital and Effia Nkwanta Government hospital to stock and administer the recommended cyanide antidote. According to the ER Plan the preferred cyanide antidote for Allship is Hydroxycobalamine. This antidote is available at these hospitals. Administrating of the antidotes to cyanide effected employees is solely carried out by a medical doctor or a trained paramedic at the designated hospitals.

*Production Practice 5.2: Involve site personnel and stakeholders in the planning process.*

in full compliance with

The operation is  in substantial compliance with Production Practice 5.2  
 not in compliance with

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

The facility has involved its workforce and stakeholders in the emergency response planning process. Direct engagement of communities by Allship did not occur as the Ghanaian Environmental Protection Agency (EPA) is tasked with the consultation of the community on the issue of cyanide warehousing. Local response agencies such as Ghana Environmental Protection Agency, Ghana Police, Ghana Fire Service, Ghana Ambulance Service and medical facilities are involved in the emergency planning process.

The nature and scale of identified scenarios are unlikely to result in impacts beyond the facility boundary. However, Allship Logistics have entered into consultation with the Assembly member (elected representative) of Dompim-Pepesa.

The following external responders have been notified about their roles and responsibilities during emergency situation and the responders have acknowledged the roles they need to play in an emergency situation involving cyanide. Allship wrote letters to the external responders notifying them of the company's cyanide activities and roles required of them during cyanide incidents. The stakeholders intend replied accepting to assist during cyanide incidents at the warehouse. The external responders are;

- ❖ Ghana EPA
- ❖ Ghana Police Service
- ❖ Ghana Fire Service
- ❖ Mine site
- ❖ Medical Providers namely Tarkwa Government hospital and Effia Nkwanta Government hospital.

The ERP addresses the process of communication between themselves and the stakeholders.

Allship organizes annual Emergency Response training and mock drills together with the external responders namely Ghana Police, Ghana Fire Service and Ghana Ambulance Service.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

Production Practice 5.3: Designate appropriate personnel and commit necessary equipment and resources for emergency response.

in full compliance with

The operation is  in substantial compliance with Production Practice 5.3  
 not in compliance with

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

The E.R. Plan specifies that the Warehouse Safety Officer is the appointed primary emergency response coordinator. Appointee is responsible for initiation of alerts and to commit whatever resources are necessary to manage the required functions.

The ERP identifies the emergency response teams.

Training in the contents of the ERP is undertaken. The training comprises annual cyanide emergency response scenario training. Responders are further involved in cyanide awareness training as per training matrix. Training matrix been updated to cover training presented. Effectiveness of training presented been evaluated during emergency drills (mock drills).

The ERP details Sodium Cyanide Emergency Call contact information for Company emergency responders and external emergency responders displayed all through the warehouse facility and offices. The ERP details the duties and responsibilities of warehouse supervisor, Response Team members, Senior Management and other emergency personnel identified e.g. Safety Officer, and Forklift Operator..

List of emergency equipment specified in ERP and product MSDS of which latter is available and kept in the Warehouse office. Safety equipment (Shovels and brooms, Full face respirator with canisters, PVC Gloves, Caution tape, Cones, Medical oxygen and mask, Spray gun and HCN gas monitor) is kept at the facility. Safety showers and eye wash facilities checked monthly to ensure it is in a good condition and operating effectively. Emergency response equipment stored in a dry and clean storage area and as per manufacturer's recommendation. Emergency Equipment Procedure requires that emergency response equipment be inspected weekly to assure that it is available and operative when needed.

Dry chemical powder (DCP) fire extinguishers are located in warehouse area and additional fire extinguishers are located at office complex, security offices, emergency electricity generator and around the facility. Fire extinguishers are checked and inspected by and external service provider.

The ERP details the duties, roles and responsibilities of the warehouse staff, outside responders, medical facilities and EPA for the community.

Letters were addressed to each external emergency responders such as the police, ambulances, Fire service, EPA and medical facilities. Annual mock drills are held in conjunction of the external emergency responders. These entities are aware of their roles and responsibilities in case of an emergency.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date



## SUMMARY AUDIT REPORT

Production Practice 5.4: *Develop procedures for internal and external emergency notification and reporting.*

**in full compliance with**

The operation is  in substantial compliance with Production Practice 5.4  
 not in compliance with

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

The Company's Safety Officer is responsible for initiating and contacting both internal and external responders. In case of a cyanide emergency situation, each emergency response team member and the external responders have been assigned with roles and responsibilities. Procedures are in place in which the Company's Safety Officer is tasked to notify the members of the Company's Managing team e.g. the Managing Director, Transport Manager, Logistics Manager, Warehouse supervisor and any other heads of departments if required. The external responders are the Ghana Police, the local Fire Service, the local Ambulance Service, the Environmental Protection Agencies (the local community authorities) and the Water Resources Commission.

The Ghana EPA in conjunction with Allship Management is responsible for notifying the communities.

A designated employee is responsible for ensuring that the emergency contact numbers are kept current and revised annually..

The facility has contact information for notifying potentially affected communities of the incident and/or response measures and for communication with the media.

The Emergency Response plan outlines the procedures for notifying management, consignor, consignee, outside responders, medical facilities and Environmental Protection Agency. Current emergency telephone contact numbers for the management of Allship, mine site, external responders e.g. Ambulance Service, Police and Ghana Fire Service are listed in the Emergency Response Plan and up to date and appropriate. Telephone numbers are listed and included in the Emergency response plan.

The facility has an Emergency Response team consisting of the Safety Officer, Forklift operator, reach stacker operator and escort driver. This team have been trained in emergency response and also participated in organised annual mock drills.

The Emergency Response Procedure addressing "Internal & external communication" do not specifically refer to the contact with the media.

Production Practice 5.5: *Incorporate into response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.*

**in full compliance with**

The operation is  in substantial compliance with Production Practice 5.5  
 not in compliance with

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

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

The facility has in place remediation measures, such as recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media.

The plan addresses the following: -

- Recovery of sodium cyanide solid material
- Neutralization and/or disposal of excavated soil
- Neutralization and/or disposal or recovered solution
- Neutralization of soil and/or water in situation
- Recovery and treatment of surface/ground water

Contaminated soils are neutralized using Ferrous sulphate under strict conditions and neutralized material sent to the mine site for disposal at their tailing dam site. Clause 4.3.4 of ERP refers and noted. In case of an incident resulting in a spill of sodium cyanide solid in the warehouse, the Safety Officer and the warehouse ER team will take the initial clean-up response and should it be required, call upon the outside responders to assist. There is no surface water on the site or within proximity of the site.

The ER Plan stipulates that under no circumstances sodium hypochlorite, ferrous sulphate and hydrogen peroxide be used as neutralizing agent for cyanide that has been released into surface water.

During design and construction of the warehouse, provision was made for the availability of potable water throughout the facility. As an alternate drinking water supply, a water reservoir filled with water present within the boundary walls of the premises to ensure the constant availability of water, should the main water supply, for some reason, be shut down.

Production Practice 5.6: *Periodically evaluate response procedures and capabilities and revise them as needed.*

in full compliance with

The operation is  in substantial compliance with Production Practice 5.6

not in compliance with

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

The Safety Officer and his team is responsible for reviewing and updating the plan annually to ensure that the business and technology changes are aligned with the plan.

The Company procedures require that the TM Plan and ER Plan be revised and evaluated at least on an annual basis or when significant or critical changes have been observed or reported.

Company procedures require that mock drills be held at least on an annual basis. Emergency mock drills are used for the evaluating of the competency of the employees as well as the effectiveness of the requirements as stipulated in the ER plan. Based on the non-conformances and observation done during the annual mock drills, the ERP is reviewed according. A current review of the plan has been done.

The Safety Officer and the entire safety team are responsible for the reviewing and evaluation of the Emergency Response Plan.

In the event of a cyanide incident, an investigation is conducted and an investigation report issued. Based on the lessons learnt out of the incident as well as short falls noted, the ER Plan is reviewed according. .

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor


21<sup>st</sup> February 2020  
Date

## SUMMARY AUDIT REPORT

The facility's procedures require that refresher training in cyanide awareness and mock drills are held on an annual basis. The annual training and mock drill have been followed consistently and records filed. Mock drill reports are issued for every mock drill that is conducted. External emergency responders such as Ghana Fire Service, Ghana Police and Ghana Ambulance Service participate in the annual mock drills.

End of report.

Allship Logistics Warehouse  
Name of facility

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date