

# SUMMARY AUDIT REPORT

## **Bolloré Transport & Logistics, Ghana. Cyanide Warehouse Pre-Operational Audit.**

### **Summary Audit Report.**

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

Report of:-  
Bolloré Transport & Logistics  
P.O. Box 51,  
Commercial Warehouse Area,  
Tema. Ghana.

Bolloré Ghana Cyanide Warehouse  
Name of Facility

  
Signature of Lead Auditor

20<sup>th</sup> September 2019  
Date

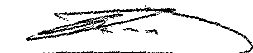
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## 1. INTRODUCTION.

### 1.1 Operational Information.

Name of Transportation Facility: Ghana.	Bolloré Transport & Logistics, Warehouse, Tema,
Name of Facility Owner:	Bolloré Transport & Logistics, Tema, Ghana.
Name of Facility Operator:	Bolloré Transport & Logistics, Tema, Ghana. .
Name of Responsible Manager:	Mr. Patrick Banoeyelle Bolloré Transport & Logistics, Tema, Ghana.
Address:	Plot No. IND/A/51/6 & 13 Kpone Industrial Area. Tema. Ghana.
State/Province: Country:	Kapone Katamanso District. Ghana.
Telephone:	+233 303 218 500. Mobile: +264 0244 478791
Fax:	None
E-Mail:	<a href="mailto:Patrick.Banoeyelle@bollere.com">Patrick.Banoeyelle@bollere.com</a>
<b>Bolloré Depot.</b> Physical address	Commercial Warehouse Area.  Tema Ghana
Telephone number	+233 303 218 500
Fax	None
E-mail address	<a href="mailto:Patrick.Banoeyelle@bollere.com">Patrick.Banoeyelle@bollere.com</a>
Head Office.	Commercial Warehouse Area. Tema Ghana
Telephone number	+233 303 218 500
Fax	None
E-mail address	<a href="mailto:Patrick.Banoeyelle@bollere.com">Patrick.Banoeyelle@bollere.com</a>
Website	<a href="http://www.Bollere/transport/logistics.com">www. Bollere/transport/logistics.com</a>

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## 1.2 Description of Operation – Bolloré Transport & Logistics, Ghana.

### 1.2.1 Company Profile.

The Bolloré group was founded in 1822. From the beginning in this paper, the group has diversified its product ranges and services. It is now involved in plastics films for capacitors and packaging, electric batteries, thin papers, transportation in Africa (freight forwarding and stevedoring, railways) and international logistics, fuel distribution and dedicated terminals and systems.

The Africa transportation arm of the Group is managed by Bolloré Africa Logistics which has been established for more than 50 years. The Company is involved in port activity, terrestrial transport and logistics solutions. Bolloré Transport and Logistics is one of the largest transport and logistics operators in Africa.

Bolloré Transport and Logistics, Ghana conduct freight forwarding and transportation activities within West Africa.

During an official ceremony organized by Bolloré Transport & Logistics and its main project partners, the President of the Republic of Ghana inaugurated the construction works of what will be one of the largest deep-water ports in West Africa. An important milestone has been reached.

This major project worth US\$ 1.5 billion is being carried out by Meridian Port Services (MPS), the joint venture bringing together Bolloré Transport & Logistics, APM Terminals, and the Government of Ghana through the Ghana Ports and Harbours Authority (GPHA), and financed with the support of the IFC-World Bank Group acting as the lead arranger.

Bolloré Transport & Logistics is a major international transport and logistics operator with approx 36,700 employees spread across 107 countries express their expertise through four businesses. Bolloré Logistics, Bolloré Ports, Bolloré Railways and Bolloré Energy are working in synergy to deliver their international customers a turnkey service offer. In Africa, Bolloré Transport & Logistics has the largest integrated logistics network and is the leading port infrastructures operator.'

The provision of road transport and logistics solutions between Ghana and other neighbouring West African countries to and from Ghana is greatly facilitated by services provided by the private sector. This is especially the case with specialised transport services associated with mining operations in many of these countries.

### 1.2.2 Sodium Cyanide Transportation.

Cyanide in briquette form, is packaged in intermediate bulk containers (wooden IBC's) which are in turn packed into a 6 meter freight container and transported by sea from the Consignor to the Port of Tema in Ghana. A maximum of 20 wooden fabricated IBC's are packed into a freight container with a maximum gross mass of the product of 20 tonnes.

Shipping between the Consignor and the Port of Tema is conducted by independent shipping companies co-ordinated by the Consignor.

Prior to the arrival at the Port of Tema, Bolloré ensures that the shipping documentation is in order and the goods are pre-cleared to allow prompt handling of the product through the Port of Tema. Upon arrival at the Port of Tema, the off-loading of all the containers is performed by the port authorities.

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Bolloré collects the containers within 24 hours of arrival and transports the loaded containers to an area at the Bolloré's Transport Depot based in Tema. There the containers remain loaded onto the trailers, in preparation for departure to either Karma gold mine or Hounde Gold mine both situated within the borders of Burkina Faso.

All the dedicated truck tractors and trailers are owned by Bolloré. The truck tractor drivers are full time Bolloré employees with average of 5 years experience in driving of heavy vehicles.

Bolloré Transport & Logistics is comprehensively equipped with a wide range of well-maintained transportation equipment and vehicles. To ensure a high quality, efficient and prompt service, the vehicles are serviced in accordance of the manufacturer's specifications. Average size of the fleet is 44 truck tractors and trailers. Every three (3) years vehicles replaced. Total fleet for the transportation of the cyanide approx 26 (Truck tractor & trailer combination)

De-stuffed Sodium Cyanide freight containers are returned to the Port of Tema where it is off-loaded and forwarded to the Cyanide manufacturer. No nominally empty freight containers are or will be stacked at the transporter's depot. Containers are taken directly to shipping liners.

### 1.2.3 Transit storage.

Bolloré Transport does not operate cyanide-shipping depots or interim storage facilities although they do have a newly built warehouse facility. Freight containers containing cyanide are collected from the Port of Tema and transported directly to various mine sites based in Burkina Faso.

At the time of the warehouse audit, no freight containers stacked with boxes of cyanide are stored at the transporter's warehouse facility. The same time no container stacked with redundant packaging material was noted on the premises.

Storage in transit does occur at the Port of Tema for four to five days, under the control of the Port Authorities, while formalities such as customs clearance and carrier releases are performed. Once formalities are complete, the cyanide containers are collected from the Port of Tema by Bolloré and taken to Bolloré's Transport Depot at Tema where they are stored on the truck overnight in preparation for convoy departure at 05:00 the following morning.

### 1.2.3 Cyanide Warehousing.

Bolloré cyanide storage facility is located in the industrial area of Tema, a town approximately 30 kilometers from Accra. Most of the cyanide is delivered by sea freight to the Port of Tema.

Bolloré designed the construction of the warehouse during 2018. The Ghanaian Environmental Protection Authority granted authorisation to commence the construction at Plot No. IND/A/51/6 & 13, Kpone Industrial Area, Ghana. Certificate No. TMC1 002344.01 dated 5/7/2018 was issued. Soon hereafter construction started.

The warehouse comprises of a single floor building with no interior walls without any windows fitted in warehouse walls. This facility is operated by Bolloré warehouse employees.

Currently Bolloré Transport do not utilised this storage facilities for cyanide. Freight containers containing cyanide are collected from the Port of Tema and transported directly to various mine sites.

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At the In the event of inclement weather such as sandstorms, rainy weather, or just appearance that rain is predicated, etc the off-loading of used packaging received in freight containers and incinerating of the packaging will be postponed until such time as the rainy weather has cleared.

Under clear weather conditions the two roll-up doors are kept open to ensure proper ventilation through the building. Both the roll-up doors of the warehouse building are also closed during bad weather conditions such as sandstorms, rainy weather, or even if it appears that rain is to come down or when rain is predicated.



This warehouse is currently used for the storage of redundant cyanide packaging (timber boxes, damaged pallets and used plastic wrapping). The aforementioned is stored on the concrete floor until such time as it has to be incinerated. During day time the two access doors are kept open with supervision from the member working in the warehouse. At night time the doors are lowered and locked.

The warehouse is secured and is manned by security guards 24/7 365 days per year. The perimeter wall around the warehouse is approximately 3 meters high with razor wire all around the top of the wall. Only one sliding entrance gate fitted with a pedestrian gate fitted in the sliding gate.

At the time of the audit no cyanide was present in the warehouse or on the area between the warehouse walls and the perimeter wall. The housekeeping within the perimeter walls was found to be of a high standard.

## 1.4 Auditor's Findings.

This operation is  in full compliance  
 in substantial compliance  
 not in compliance

with the International Cyanide Management Code.

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- ❖ For cyanide transportation operations seeking Code certification, the Corrective Action Plan to bring an operation in substantial compliance into full compliance must be enclosed with this Summary Audit Report. The plan must be fully implemented within one year of the date of this audit.

Audit Company: T.B. Müller South Africa  
Audit Team Leader: T.B. Müller  
E-mail: tommieb.muller@gmail.com  
Names and Signatures of Other Auditors: None  
Date(s) of Audit: Audit was conducted from 4<sup>th</sup> to 5<sup>th</sup> July 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 Pre-Operational 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.

Name	Position	Signature	Date
T.B. Müller	Lead auditor.		20 <sup>th</sup> September 2019

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**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.*

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

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

The design of the warehouse was done and approved by Governmental authorities i.e. Tema Development Corporation, and Kpone Katamaso Municipal Assembly Kpone.

Structural Integrity Assessment report on existing Warehouse at Kpone Industrial Area, Tema issued by Eudia-Plus Engineering Services Ltd dated June 2018. Document submitted by Ing. Euclid K. Nikoi. Civil Engineer. Preliminary Environmental Assessment been conducted during June 2017 in order to apply for a building permit. EIA was submitted. EPA (Environmental Protection Agency) who issued two permits. One for the construction of the building and other one to the land owner.

The required plans for the erecting of the warehouse were submitted, approved by the relevant authorities and available on file.

Statement by Mr. Euclid K. Nikoi the Civil Engineer - The design and construction of the building in accordance with sound engineering principles and practice for the use of a warehouse.

Permit No. TMCI002344.01 dated 5/7/2018 issued by the EPA (Environmental protection Agency) to Bolloré noted and found to be applicable. Similar certificate issued to Landlord.

Fire permit No. 0006224 dated 8/9/2018

Kpone-Katamanso Municipal Assembly Building permit No. KKMA / IND / 24/2019, dated 19th March 2019 which is valid until 19th March 2024.

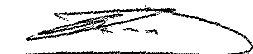
Certificate of registration in terms of Factories, Offices & Shops Act, Act 328 of 1970 was issued on 26th March 2019 to Bolloré Transport Logistics Ghana.

The approved building plans and Structural Integrity Assessment report are available and were noted.

Warehouse facility was inspected by Civil Engineer Mr. E. Nikoi Mr. Euclid K. Nikoi's statement noted and found to be appropriate.

The material used for construction of cyanide warehouse facility is compatible with the reagents. The material used for the erecting of the warehouse comprises the following: -

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Concrete floor;

- ❖ Brick walls of the building up to the height of about 3.9 meter;
- ❖ To roof height corrugated iron sheeting used lapping over the exterior side of the brick walls;
- ❖ Steel roof rafters covered with corrugated iron sheeting;
- ❖ Two steel roll-up doors.

Construction material compatible with the chemicals that will be stored in the warehouse. At the time of the audit only empty cyanide boxes and plastic packaging been stored in the warehouse. No packed boxes stored.

Evidence observed during visit. No automatic shutdown of doors installed. In the event of a electrical power outage doors need to be closed manually. Under normal circumstances the doors is closed by electrical motors or can even be close manually.

The warehouse does not have automatic shut power down system linked to the doors. These systems are not a requirement for the facility as a power failure could noy result in a cyanide release. Two standby electrical generators available plus inbuilt battery packs that can last for 12 hours.

Evidence observed during audit period. No cyanide in liquid form will ever be stored in this warehouse.

Warehouse floor constructed of concrete flooring with expansion joints filled with Master Seal PG 470 TDS sealant to prevent any cyanide to enter into underground area.

Empty cyanide boxes and other used cyanide rapping material are off-loaded out of freight containers using forklifts. Off-loading area in front of warehouse covered with concrete.

No off-loading of used cyanide packaging if it is raining or signs that it is going to rain soon.

No transshipment of cyanide done at this warehouse. No storage vessels in use at this facility.

No process activities are undertaken at this facility nor do they have storage tanks or containers for liquid cyanide.

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

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

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

Bolloré do have the procedures that describe the standard practices necessary for its safe and environmentally sound operation.

Although no cyanide is stored in the warehouse, quarterly water samples from the effluent sump taken and sent to be analysed. Analysis was done by SGS, Ghana Standard Authority or Environmental Protection Agency.

External Security service provider renders a security service to Bolloré.

Perimeter walls are checked daily by Security Officer on duty. (2 Security guards per shift on duty 24/7 365 days per year.)

Operating procedures scrutinised and content noted. Copies of "working documents" found on file and up to date.

Analysis of water samples are done by SGS, Ghana Standard Authority or Environmental Protection Agency. Test results noted.

Relevant documentation w.r.t. the execution of procedures scrutinised and found to be up to date.

Required PPE to be used –

- ❖ Hard hat
- ❖ Safety boots;
- ❖ Disposable overall;
- ❖ Chemical splash goggles;
- ❖ Rubber gum boots;
- ❖ Dust mask;
- ❖ Calibrated HCN gas monitor;
- ❖ Neoprene hand protection;

Monthly safety inspections were carried out at the warehouse and corrective actions taken on deficiencies recorded.

Access control to the warehouse premises been applied on all people and vehicles entering and exit the premises to prevent unauthorised movement and losses. 24/7 security guards on duty.

Record of movement in and out of the facility is kept.

The nearest police station and hospital from the warehouse is approx 1 kilometer away.

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Business Contingency Plan in place. Document addresses extreme weather conditions, localised spillage, Fire, Earthquake, Burglary, Accident - forklift punching into full cyanide box, IT system failures and vehicle roll over.

The plan addressing the unforeseen circumstances and found to be up to date and applicable.

To date none of the unforeseen has been experienced.

Facility has a MOC system (Doc BLX-AFR-QUA-PRO-0008 rev 3 dated 5/4/2016) introduced should there be changes in the operating practices from those on which the initial design and operating practices. MOC system (Doc BLX-AFR-QUA-PRO-0008 rev 3 dated 5/4/2016) noted.

Bolloré have implemented preventative maintenance programs and documented activities for equipment and devices necessary for warehouse operations.

Forklift is serviced every 250 hours and daily pre-use inspections carried out. Documentary evidence of this noted.

Annual load test forklift was performed on 1st November 2018 and done by Bureau VERITAS. Certificate noted.

Generators been serviced at 250 hour service intervals.

Activities include planned inspections of equipment, incinerator, buildings and surrounding areas.

This facility does not have any chemical processes that require monitoring.

However HCN gas monitors gets calibrated to ensure proper functioning and readings are accurate.

The prevent unauthorized/unregulated discharge to the environment of any cyanide solution or cyanide-contaminated water is not applicable to this operation as no liquid cyanide is been stored or handled in this warehouse therefore it does not generate contaminated water. Only used cyanide packaging stored in the warehouse.

Neutralisation procedure for disposal of cyanide or cyanide-contaminated solids of ashes generated at the incinerator is addresses in a well documented procedure. The same procedure addresses the disposal of the ashes.

Ashes been removed by an approved waste disposal company. Ashes disposed of at an approved waste disposal site. An AIA carried out analytical tests on the ash and the results were found to be well within the acceptable standard.

Procedure No. BLX-GHA-HSE-PRO-0015 rev 0 refers to the Neutralisation of ashes generated at the incinerator noted. Procedure addressing the Disposal of neutralised / cyanide free ashes. Waste disposal certificates of ashes removed from the facility were noted.

Roof section covered with a metal cladding onto which 15 air extraction systems (whirlybirds) are fitted and two roll-up type doors each of a width of approx 6.3 meters.

During interviews with the warehouse employees it was confirmed that container and warehouse doors are closed during rainfalls.

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The warehouse is adequately ventilated to prevent the build-up of HCN gas, with measures to avoid the potential of entering into the warehouse, and in a well secured area where public access is prohibited.

The roof of the building is equipped with extraction vents (whirlybirds) to ventilate the building and extract possible HCN gas.

The roll-up doors also provides air flow (ventilation) to the building.

At the time of the auditor visiting the warehouse, the personal HCN gas monitor recorded 0.8 to 1.4 ppm. Readings found to be well below the limit of 4.7 ppm.

After hours the facility is lock-up. The keys to the warehouse are kept with the warehouse supervisor

During rainfall tasks been ceased at the warehouse. Freight container doors and warehouse doors are closed to protect the damaged packaging from getting in contact with moisture.

The warehouse facility is within a surrounded 2.4 meter high brick wall fitted with 0.5 meter razor wire all round the pitch of the wall. Access routes are limited to only one gate fitted with a pedestrian gate.

Security services rendered by a private Company named Magnum Force Security Services. Supervisors of the service provider pay night time visits to the facility.

There is no necessity for procedures to ensure that the cyanide is packaged as required by the political jurisdictions through which the load will pass as no cyanide is packed or intended to be done at this warehouse.

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

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

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

This facility as it is not a cyanide production facility. The facility does not handle any cyanide solutions or store liquid containing cyanide therefore no secondary containment required. Building structural integrity inspections are carried out by a qualified engineer, which include the warehouse concrete floor.

As a legal requirement that an annual inspection be carried out by the Ghana Environmental Protection Agency (EPA) in accordance to the Ghana Environmental Permit guidelines where after a warehouse operating permit issued by EPA.

A full integrity assessment carried out by Mr. Euclid K. Nikoi the Civil Engineer employed by Eudia-Plus Engineering Services Ltd and submit an inspection report.

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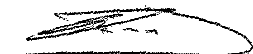
  
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Monthly inspections of all the warehouse facilities, equipment, rain water drains and extractor fans on the roof are carried out by their Safety Supervisor. Supervisor's monthly inspections are found to be adequate. Fire extinguishers and safety showers / eyewash facilities are checked monthly by Warehouse Supervisor. Fire extinguishers are serviced externally every 6 months by an accredited external service provider. Inspection reports noted during audit process.

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### 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.*

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

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

This question is not applicable to this operation as no raw material is received which is used for the manufacturing of cyanide. The key activities at the warehouse are the receiving and disposal of cyanide used packaging

Bolloré do have a developed procedure compiled and available addressing non-routine and emergency operations. A Business Continuity Plan - Cyanide Warehouse No. BLX-GHA-HSE-PRO-0008 rev 2 compiled and available addressing non-routine and emergency operations.

Service schedule for forklift available. Services done by qualified artisans. "Safe loading testing" done by an accredited service provider who issued a certificate of compliance. During walk-about at the facility it was noticed that the Certificate was still valid and no overdue servicing noted on forklift's service record.

It was noticed that the condition of the forklift seat wasn't up to standard. On scrutinising the daily checklist, it was noted that the condition of the seat was noted as "in order".

Bolloré have implemented a procedure to review proposed process and operational changes and modifications for their potential impacts on worker health and safety, and incorporate the necessary worker protection measures available. Procedure describes the process & methodology that must be followed in the event of a change in a procedure of process. Clauses noted. HOD responsible for the implementation of the MOC process.

During the process of developing and evaluating health and safety procedures, Management members, Warehouse Supervisor and HSE Manager seek input of their sub-ordinates in developing and evaluating health and safety procedures. Copies of daily safety talks noted. A Suggestion Scheme has also been implemented. During walk-about some employees were interviewed in this regard and their response was positive.

Gas monitoring procedure compiled and approved. Six calibrated HCN Gas monitoring devices in use. Employees trained in the use of the monitors as well as their reaction should the alarm is been activated Calibration done by Ultimate Resurgence Services who is an approved institution.

HCN gas monitoring is done before ash is disposed, when opening received containers to off-load packaging for disposal, Incineration area, around the warehouse and inside the warehouse. Records of gas monitoring conducted noted. Controls found to be adequate.

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Gas monitoring procedure compiled and approved. Six calibrated HCN Gas monitoring devices in use. HCN gas monitoring equipment is maintained tested and calibrated as directed by the manufacturer. Calibration records are retained and on file. Calibration is done annually..

This question is not applicable to this operation as no cyanide is stored in the warehouse. During visit to the warehouse, no evidence could be found that cyanide is stored in the warehouse.

Areas which are designated as high risk have been duly identified and requisite protective measures in the form of wearing the appropriate / required PPE to be taken by each employee prior to and when working in these areas. Records of HCN gas levels scrutinized, do not exceed 4.7ppm. Areas where employees may be exposed to HCN gas and or dust e.g. area inside the warehouse and off-loading area. The highest reading of HCN gas been recorded, was 2 ppm. Procedure "Goods Inbound - Cyanide Warehouse" No. BLX-GHA-HSE-PRO-0011 rev 2 refers. "Ensure that a Standby person is assigned to remain outside of the warehouse and be in constant contact (visual and / or two-way voice communication) with the team inside the warehouse. (buddy-buddy). Employees were interviewed with regards to the "buddy-buddy" system and all of them were acquainted with this system and that it is practiced.

Directive been issued in which it is stated that all employees must be subjected to a medical screening before employment. Employees employed and younger than 50 years of age sent for medical examination once per year. Employees older than 50 years are subjected twice per year to a medical examination. Bolloré assesses the health of their employees to determine their fitness to perform their specific tasks.

Interview with Me. A. Gyama (HP Manager) confirmed that employees are subjected to pre-employment medical test and thereafter undergo annual medicals. Pre-screening as per Certification report. Pre-employment medicals, and exit medicals are performed. Sighted list indicating medicals completed for 2019. Medical certificates kept on each employee's personal file.

The facility does have a clothing change policy and procedure for employees, contractors and visitors to areas with the potential for cyanide contamination of clothing. Four sets of PPE's are giving to each employee per year. Procedure "Clothing change - Cyanide Warehouse and incineration. BLX-GHA-HSE-PRO-0016-rev 0 refers. Clause 5.6 states that an employee leaving his / her working area at the end of the day had to wear private clothes. No Company clothing to be taken off site. Washing will be done on the expense of the Company. Site has a laundry facility where "dirty" PPE of employees been put in baskets for laundry are washed.

Compulsory, general information, fire fighting and warning signs noted been displayed. Warning signs drawing employee's attention that cyanide is present and that, if necessary, suitable personal protective equipment to be worn are displayed at conspicuous places. Evidence observed. Applicable symbolic safety signage displayed at main entrance to the facility, at the entrance to warehouse as well as on various places inside the facility.

Evidence observed. Applicable symbolic safety signage displayed at main entrance to the facility, at the entrance to warehouse as well as on various places inside the facility. No smoking/eating/drinking and no open flames symbolic safety signs displayed in areas where there is the potential for cyanide contamination can take occur. The entire facility is declared a "no smoking" area.

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

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

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

Bolloré Warehouse Management developed specific written emergency response plans or procedures for employees to respond to cyanide exposures. Emergency Response Plan and Evacuation Procedures are available at this facility. Plans and procedures scrutinise and found to be applicable and appropriate.

Cyanide treatment protocol is found to be available at Narh Beta hospital and the GPHA Clinic. Emergency contact numbers for Narh-Beta Hospital in TEMA and to GPHA Clinic in TEMA sighted.

Ambulance telephone numbers also captured. Antidote will be administered ONLY by a qualified doctor or qualified paramedic.

Two manually operated low pressure safety showers fitted with eye wash facilities located on the outside of the warehouse building close to the warehouse entrances. Both positions are indicated and clearly visible.

The Ghana Fire Prevention Regulations 2003 L.I. 1724 requires that the local Chief Fire Officer to visit the facility to examine and test the firefighting equipment. Proof of visit noted. Annual checking, testing and servicing was reviewed and changed to six months.

Fire extinguishers, eye wash facilities and emergency safety showers are inspected monthly by the Warehouse Supervisor and findings recorded on appropriate registers. Fire extinguishers are serviced by an approved service provider Fransako Nation Wide Ltd.

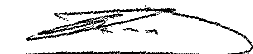
Dry Chemical Power fire extinguishers located at strategic locations evident throughout the facility. The positions of the safety showers/ eyewash facilities and that of the fire extinguishers are indicating by displaying appropriate symbolic safety signage. These signs are clearly visible from a distance.

The facility does have clean water, medical oxygen, resuscitator, antidote and a means of communication or emergency notification readily available for use in the warehouse facility. One (1) polystyrene box containing cyanide antidote kept in a cooler box with ice, inside the warehouse control room. No fridge is available. The antidote may only be administered by qualified paramedics or qualified medical doctor. Emergency equipment sighted in the Control room. Potable water is all round this facility available

Four alarms points noted. One on inside of the warehouse, two at the front of the warehouse entrances and one situated on the western side of the warehouse between the warehouse and the office block. Warehouse control room and warehouse approx six meters apart. All the alarm points are clearly and appropriately identified.

Mobile phones are available to enable communication with emergency personnel. List of emergency telephone numbers clearly pinned to the wall of the office set-up

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No water available inside the warehouse. Municipal water supply available to the emergency showers, office complex and ablution facilities.

Warehouse Supervisor inspects the first aid equipment on a weekly basis to assure that it is appropriately stocked and available when needed. Findings recorded in appropriate register. Supervisor replenishes first aid equipment that has been used. During the audit walkabout one fully equipped first aid box was noted. Box properly and appropriately stocked. Position clearly identified with the names and contact detail of the first aiders displayed next to the box..

The 5 employees working at this facility have attended a standard first aid course presented by St John's Ambulance. Certificates found to be valid for 3 years.

The official language of the Company is English. MSDS, procedure, instructions, communiqué are written in English. Sodium Cyanide Material Safety Data Sheets, first aid procedures or other informational materials on cyanide safety is written in English and available to all the warehouse employees. MSDS found not to be older than 3 years.

It was noted that all the employees working at this facility are English conversant.

No storage tanks, process tanks, containers and piping containing cyanide, available at this facility. No cyanide stored in the warehouse.

The facility has a decontamination policy or procedure for employees, contractors and visitors leaving areas with the potential for skin exposure to cyanide. Clothing change procedure No. BLX-GHA-HSE-PRO-001 rev 1 applicable to this facility. Clause 5.4.8.3 of Emergency Response Plan, Document N°: BLX-GHA-HSE-PRO-0008 Rev 02, refers to "Contact with skin".

Under the current operation with no cyanide stocked in the warehouse, personnel working at the warehouse do not have potential skin exposure to cyanide dust.

The decontamination process comprises of the removal of contaminated clothing, footwear and wrist watch from person. Wash skin thoroughly with water or under emergency shower for at least 15 minutes. Care must be taken to prevent contaminated wash water entering the employee's eyes and or mouth. Decontaminated person is then be transferred to the medical facility where further treatment can be administered if necessary.

The facility developed procedures to transport exposed workers to locally available qualified off site medical facilities. Telephone communication means are available at the warehouse which can be used to call the medical facility requesting an ambulance to proceed to the warehouse to collect the employee. Should an ambulance not be readily available the Company's light delivery vehicle will be used to transport affected employee to the medical facility. Warehouse Supervisor to ensure that the vehicle that is been used at the warehouse has enough fuel is available in vehicle's tank should the vehicle be required. This action is found to be included in the facility's Emergency Response Plan and Evacuation Plan. Clause noted.

Bolloré alerted local hospitals, clinics, etc of the potential need to treat patients for cyanide exposure. A letter with ref No. BTLGH - 2018 -374 dated 29th April 2019 sent to Medical Director Letter with ref No. BTLGH - 2018 -374 dated 29th April 2019 addressed to Medical Director Narh-Bita Hospital Ltd in Tema. MSDS of Sodium Cyanide accompanied the letter. Communiqué received at hospital on 30th April 2019. Reply letter noted.

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The Narh-Bita Hospital was found to be close to the warehouse.

The Management of this operation is confident that the medical facility has adequate qualified trained nursing staff, equipment and doctors at the hospital in TEMA to respond to cyanide exposures

Mock emergency drills were conducted to test response procedures for various exposure scenarios and lessons learned from the drills incorporated into their response planning. Annual mock drill was held on 9<sup>th</sup> May 2019.to ascertain the preparedness and actions of the warehouse personnel and security members.

Bolloré employees, Fire Department, Ambulance services and Ghana Police Services participated in the drill. Feedback session was held. Feedback report and recommendations are incorporated into response planning. Amendments to plan were noted. Annual mock drill was held on 9<sup>th</sup> May 2019.to ascertain the preparedness and actions of the warehouse personnel and security members.

Procedure in place for the investigation of cyanide and other work related incidents to be investigated. "Incidents / accidents Management No.BLX-AFR-HSE-PRO-0003-rev 6" dated 5/1/2019 available and in use as a guideline. Each written task procedure stipulated the required Personal Protective Equipment that is to be used to perform the task safely and to protect employees from cyanide exposure.

Noted procedures are in place and being implemented to investigate and evaluate cyanide exposure and other work related incidents to determine the immediate cause, the root cause and the recommended preventative measure to be implemented to assure recurrence of a similar incident.

Some task procedures scrutinised and auditor noted the stipulation of the required PPE to be worn when performing these tasks. Issue based risk assessments also refer to the issuing of PPE.

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### 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.*

The operation is  **in full compliance with**  
 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 noted during the visit to the facility. No cyanide been stacked in this warehouse. All that was noted was used packaging material that was to be incinerated.

The facility does not plan to store liquid cyanide. Only dry solid sodium cyanide briquettes packaged in one ton wooden IBC's and properly sealed, will be stored on the concrete floor of the warehouse lined with High Density Polypropylene sheet to prevent seepage to groundwater. Management does not plan to store in future any liquid cyanide at this facility.

During the walk-about on the premises, no evidence of any bore hole noted on the premises.

The warehouse facility does not have a direct discharge to surface water. Should happen that any water flows from the warehouse, the facility do have a primary collection pit into which it can flow and be contained. The outlet at the pit was found to have been closed and locked.

The warehouse floor is of concrete and covered with High Density Polypropylene sheet to prevent seepage to groundwater. The expansion joints in the floor is filled with a product "Master Seal PG 470 TDS". Master Seal PG 470 is a high performance, elastomeric joint sealant grade, polysulphide based sealant possessing outstanding resistance to deterioration due to attack by chemicals present.

It was established that no river or dam is situated close to the warehouse facility.

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## **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.*

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

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

EMERGENCY RESPONSE PLAN - CYANIDE WAREHOUSE No. Document N°: BLX-GHA-HSE-PRO-0008 Rev 02 refers to the various types of training that is to be presented to employees.

The facility do present training to their employees to ensure that they understand the hazards of cyanide. Follow-up training also presented every 6 months. Subjects that are to be presented to employees are captured in training matrix. Training matrix noted and found to be completed and up to date. Attendance registers available. Checked attendance registers.

Applicable training is presented to all warehouse employees, emergency responders, fork lift drivers and security staff. Copy of an attendance register dated 1st August 2019 received indicating when eight employees attended the presentation on the contents of the Emergency Evacuation Plan. Training was presented by the Warehouse Supervisor.

Clause 5.8 of the ER Plan refer to the type of PPE that is to be worn. Clause 5.7 of the ER Plan No. BLX-GHA-HSE-PRO-0008 Rev. 02 refers to "Training Requirements" for employees. The facility train workers in the use of personal protective equipment and when and where this equipment is required.

Personal Protective Equipment training is presented in a module that is part of the annual induction training. PPE training was found to have been presented by the PPE supplier. Issued such as how to wear PPE correctly, when to wear PPE and the purpose of wearing the required and applicable PPE. Training modules noted and found to be appropriate and adequate.

Training presented been captured on training matrix and attendance register. Documentation noted.

Bolloré train their warehouse employees to perform their normal Warehouse related tasks with minimum risk to worker health and safety.

Training such as cyanide awareness, first aid fire fighting, basic medical first aid, evacuation procedures and related warehouse work procedures. Two warehouse employees, Mr. Shadrack Nyame (clerk) and George Kusi Manu (forklift operator) were interviewed. Both these employees left the impression that they were trained effectively as they could explain and answered the questions posed to them satisfactorily.

Safe working procedures training manual, emergency evacuation procedures, warehouse work procedures and ER Plan observed and found to be appropriate.

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The training elements required for each task identified in training materials

The training elements were found to be relevant to the current tasks performed by the warehouse staff / employees. A training matrix is kept in place which list the various types of training that is to be presented as well as all the employee names Training presented is indicated on this matrix.

Training is provided by appropriately qualified personnel.

Basic first aid was presented by external service providers e.g. St Johns. Fire fighting training was presented by the local Fire Department. The cyanide awareness training was presented by an external consultant. All in-house training was presented by HSE Manager and Warehouse Supervisor who can be regarded as qualified individuals.

Employees are trained, assessed and declared competent prior of commencing work on in the warehouse. Training Standard requires that all new employees are to be subjected to an induction programme which includes awareness and training adapted to their position. Once employees are through their induction, safe work procedures, warehouse operations and general safety training, will they be allowed to commence work in the warehouse. Proof of training presented noted during audit process.

The Warehouse Supervisor evaluates the effectiveness of cyanide training by subjecting the trainees to a written assessment on the contents of the subject presented followed by practical training in the plant. Planned job observations are executed, mock drill are held.

Observations are done on safe working practices by Warehouse Supervisor. During mock drills the effectiveness of the training is also evaluated.

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

The operation is  **in full compliance with**  
 in substantial compliance with Production Practice 4.2  
 not in compliance with  
 not subject to

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

The facility do present training to their emergency response personnel to manage cyanide in a safe and environmentally protective manner and to ensure that they understand the hazards of cyanide. Follow-up training presented every 6 months. Subjects that are presented to employees are captured in training matrix. EMERGENCY RESPONSE PLAN - CYANIDE WAREHOUSE No. Document N°: BLX-GHA-HSE-PRO-0008 Rev 02 refers to the various types of training that is required to be presented to employees.

The procedures to be followed if a cyanide release is discovered noted. Training matrix noted and found to be completed and up to date. Attendance registers found to be available and checked.

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Applicable training is presented to all warehouse employees, emergency responders, fork lift drivers and security staff.

Training was presented by the Warehouse Supervisor. Copy of an attendance register dated 1st August 2019 received indicating that eight employees attended the presentation on the contents of the Emergency Evacuation Plan.

ER Plan No. BLX-GHA-HSE-PRO-0008 Rev. 02 clause 5.7 of refers to "Training Requirements" for employees. Bolloré trained warehouse workers in the use of personal protective equipment and when and where this equipment is required.

Clause 5.8 of the ER Plan No. BLX-GHA-HSE-PRO-0008 Rev. 02 refer to the types of PPE that is to be worn e.g.

- ❖ Hard hat
- ❖ Safety boots;
- ❖ Disposable overall;
- ❖ Chemical splash goggles;
- ❖ Rubber gum boots;
- ❖ Dust mask;
- ❖ Calibrated HCN gas monitor;
- ❖ Neoprene hand protection;

Personal Protective Equipment training is presented in a module that is part of the annual induction training. PPE training was found to have been presented by the PPE supplier. Issues such as how to wear PPE correctly, when to wear PPE and the purpose of wearing the required and applicable PPE. Training modules noted and found to be appropriate and adequate. Clause 5.8 of the ER Plan requires that PPEs must be checked at least weekly to ensure their suitability. PPE was found to be checked weekly. Checklists noted.

Training presented been captured on training matrix and attendance register. Documentary proof noted.

Six trained responders used to rescue the effected employee. Training was presented on 1st February 2019. Business Continuity Plan - Cyanide Warehouse" No, GLX-GHA-HSE-PRO-0008 rev 2, clause 5.4.8.1 (first aid treatment for exposure to Sodium Cyanide), 5.4.8.2 (Treatment for conscious / unconscious victims) and 5.4.9 (medical treatment) addresses the response to workers been exposed to cyanide. Exposure types are Inhalation, skin absorption, ingestion and absorption through the eyes

Mock drill was held on 9th May 2019 at the Warehouse to ascertain the preparedness, the effectiveness of the training and the response by the Warehouse employees, forklift driver and Security Officers to an emergency situation of cyanide gas exposure. Scenario was "suspect that employee have been exposed to HCN vapours". Requirements as per ER Plan were followed.

Emergency drills were found to have been held to evaluate the presented training to employees and to determine if personnel have followed procedures and have the knowledge and skills required for effective response. Deficiencies are identified and noted. Training procedures are revised to cover the identified deficiencies. Changes in procedures communicated via training and retraining to employees.

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**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:*

The facility has developed a Business Continuity Plan- Cyanide Warehouse No. BLX-GHA-HSE-PRO-0008 rev 2 addressing potential releases of cyanide that may occur on site. At the time of the audit no cyanide was stored inside this warehouse. Only redundant cyanide packaging been kept inside the storage area. At the time of the audit plan been scrutinised and found to be appropriate to the operation.

The facility has developed an Emergency Response Plan with reference Business Continuity Plan- Cyanide Warehouse". BLX-GHA-HSE-PRO-0008 rev 2 of which the contents addresses potential releases of cyanide and various other scenarios. Plan found to be appropriate to this operation.

Two standby generators available at the facility which is fitted with an inverter device should the electricity supply from the grid shuts down, the generators starts with the result that no electricity interruption can be experienced. Facility checked weekly to ensure functionality. Record of such checks noted. Record of regular maintenance services been done was found on file. Diesel tank at generators found to be filled with fuel.

The facility has developed a Business Continuity / Emergency Response Plan – Cyanide Warehouse No. BLX-GHA-HSE-PRO- 008 rev 2 and Warehouse Emergency Evacuation Procedure compiled and available at the facility. Training record No. BLX-GHA-QUA-F-21 rev 2 reveals that training in the evacuation of the warehouse was presented. Training presented to warehouse employees as well as the Security officer on duty. Training record No BLX-GHA-QUA-F-21 dated 1<sup>st</sup> August 2019 noted.

An evacuation emergency assembly point available and its position is clearly indicated by means of an applicable symbolic safety sign.

The community is a distance from the facility. Any HCN gas that may be released at this facility will be dispersed before it reaches the dwellings. The surrounding community that possibly may be affected in case of an emergency is captured in the Evacuation procedure.

Revised ER Plan and Evacuation plan stipulates the roles and responsibilities of each employee that are to be taken in the case of an emergency situation or evacuation. Clauses noted and found to be relevant.

Business Contingency Plan/Emergency Response Plan clauses 5.4.8 & 5.4.9 refers to the steps that are to be taken in the case of the use of cyanide antidote. Only a medical doctor or qualified paramedic is the only people who are allowed to administer the intravenous cyanide antidote, Hydroxycobalamine.

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No liquid cyanide or dissolution of dry cyanide activities been undertaken at this facility. For this reason the control of releases at their source to ponds, tanks or waste treatment facilities is not applicable to this facility.

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

The operation is  **in full compliance with**  
 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 Bolloré did not occur as the Ghanaian Environmental Protection Agency (EPA) was tasked with the consultation of the community on the issue of cyanide warehousing. Local response agencies such as outside responders and medical facilities have been involved in the emergency planning and response process.

Bolloré has advised external responders and medical facilities of their roles during an emergency response. Letters were sent to a number of emergency services and medical providers prior to the audit advising them of Bolloré Ghana's cyanide practices. The role of the medical and fire agencies are within the scope of their normal duties. The operation engages in regular consultation and communication with stakeholders to assure that the ER Plan addresses current conditions and risks.

The community Assembly (Kpone Metropolitan Assembly) who are in charge of the communities around the facility visited the facility during which they were made aware of the nature of their risks associated with accidental cyanide releases.

Bolloré has advised external responders and medical facilities of their roles during an emergency response. Letters were sent to a number of emergency services and medical providers.

- ❖ The Ghanaian Environmental Protection Agency (EPA) who represents the communities.
- ❖ Ghana Police Service
- ❖ Ghana Fire Service
- ❖ Medical Providers (Narh Bitra Hospital)
- ❖ Local Assembly (Kpone Metropolitan Assembly permit).

The EPA has to be consulted on an annual basis as part of the license issued for the warehouse operations. Permit number TMC 1002344.01 dated 5/7/2018 issued by the Deputy Executive Director / Technical.

The Company engages in consultation with members of the external response agencies on an annual basis or when deemed necessary, reiterating their roles and responsibilities.

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The warehouse is far away from the community and erected in a designated industrial area.

List of telephone numbers of all the internal & external emergency responders on ER Plan as well as displayed around warehouse premises.

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

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

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

Warehouse Supervisor is the appointed primary emergency response coordinator in the plan. Appointee is authorised to commit whatever resources are necessary to manage the required functions. In the absence of the Warehouse Supervisor, the Safety Supervisor acts in the Supervisor's position. Safety Supervisor been appointed as the acting emergency response coordinator in the absence of the Warehouse Supervisor. Safety Supervisor attended the cyanide awareness presentation.

Clauses 5.3.1 and 5.3.2 of Company's Business continuity / Emergency Response Plan for the Cyanide Warehouse, Document N°: BLX-GHA-HSE-PRO-0008 Rev 02 refers applicable.

The facility's emergency response team consists of the following: -

- ❖ Warehouse Supervisor;
- ❖ Warehouse Safety supervisor;
- ❖ First aiders;
- ❖ Fire fighters;
- ❖ Trained forklift operator;
- ❖ Security personnel; and
- ❖ External emergency responders.

The Cyanide Warehouse Business Continuity / Emergency Response Plan stipulates the required training for own and external emergency responders. The training comprises of cyanide awareness training sessions, cyanide first aid sessions, contents of the ER Plan for the warehouse, evacuation procedure training, emergency response on various incident scenarios and emergency drills. Proof of the various required types of training noted. Training matrix found to be up to date.

Clauses 5.3.1 (the BTL Ghana Crisis Management Team) & 5.3.2 (Emergency Services) of the Emergency Response Plan for the Cyanide Warehouse, Document N°: BLX-GHA-HSE-PRO-0008 Rev 02 captures the "Call-out procedure". List of 24/7 emergency telephone numbers of the BTL Ghana Crisis Management Team, the Company and external emergency responders detailed in the ER Plan. Contact information available at the Bolloré Warehouse Complex as well as at their Transport offices.

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The responsibilities and duties of warehouse supervisor, Response Team, Senior Management and other personnel identified in Emergency Response Plan - Cyanide Warehouse No. N°: BLX-GHA-HSE-PRO-0008 Rev 02 clause 5.1.

PPE and other emergency equipment as required per product MSDS available and are kept in the Warehouse control office. Equipment checked for availability and tested on a weekly basis. Checklists noted and found to be up to date. Calibration certificates for HCN gas detectors checked and found to be up to date.

Emergency equipment as required in ER Plan clause 5.8 such as: -

- ❖ Medical oxygen with mask;
- ❖ First aid kit;
- ❖ Full face respirators and ABEKP3 canisters;
- ❖ Calibrated HCN detectors;
- ❖ Long PVC gloves;
- ❖ Disposable overalls;
- ❖ Rubber gum boots.

All employees involved in the cyanide activity have found to be trained on the use of all required personal protective equipment and the gas detector.

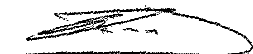
The emergency safety showers and eye wash facilities were checked and during walkabout found to be operative. Positions conspicuously indicated by displaying the appropriate symbolic safety signage. Brand new 9 Kg DCP Fire extinguishers noted throughout the facility and found to be fully charged. No CO<sup>2</sup> fire extinguishers noted at the facility.

On page 25 of the ER Plan Document N°: BLX-GHA-HSE-PRO-0008 Rev 02. Table 5.6.2: "Roles and responsibilities of outside responders" describes the roles and responsibilities of the external emergency responders e.g. Ambulance services, Fire Services, Police, the Ghanaian Environmental Protection Agency (EPA) and client.

Acknowledgement letters received from each outside responder, in whom each responder's roles and responsibilities were spelt out, noted.

An emergency drill held on 9th May 2019. Ambulance crew, Fire Department, Consultant of BAM Consultant, own warehouse employees participated in drill.

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

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

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

Clause 5.10 titled "Specific crisis response procedures" of the Business Continuity / Emergency Response Plan – Cyanide Warehouse refers to the procedure for the notification of Company Management, Regulatory Agencies, External Response Providers and Medical Facilities.

On page 7 of 45 in Table 1 on page 7 of 45 of document "Business Continuity / Emergency Response Plan – Cyanide Warehouse" details the emergency telephone numbers of the BTL Ghana Ltd. Crisis Management Team and on pages 8 & 9 Table 2 that of the Designated Emergency Services. List of telephone numbers noted.

Outside contact with communities is handled by the Environmental Protection Agency (EPA). The HSE Manager is responsible to update the contact numbers of all the emergency responders. This responsibility was found captured in the appointment of the HSE manager.

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

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

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

Appropriate remediation measures, e.g. recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill clean-up debris, is captured in clause 5.4(e)(iii) on page 14 of the Emergency Response Plan No BLX- GHA-HSE-PRO-0008 rev 02 titled "Decontamination of environment and equipment". The supply of adequate drinking water in dispensers to employees is also covered in the same clause.

Clause 5.4e(iii) sub-clause (i) of the Emergency Response Plan prohibits the use of sodium hypochlorite, ferrous sulphate or hydrogen peroxide to treat cyanide that has been released into surface water.

The ER Plan details the detection of cyanide traces process when digging out contaminated soil by using ferrous sulphate.

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The ER Plan do not make provision for any environmental monitoring or sample taking of water been released from the facility. The collection pit behind the warehouse is built-up from bricks and mortar plastered. Pit is lined with a High Density Polypropylene sheet to prevent seepage to groundwater. Rain water collected in the pit gets sampled before released into the surrounding area.

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

The operation is  **in full compliance with**  
 in substantial compliance with Production Practice 5.6  
 not in compliance with

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

The Crisis Management Team Leader is responsible for reviewing and updating the plan annually to ensure that the business and technology changes are aligned with the plan.

ER Plan clause 5.1.5 (Testing/Exercising) stipulate that the plan will be tested and reviewed annually to validate plans, rehearse staff; and test systems which are relied upon to deliver resilience. The frequency of exercises will depend on the rate of change to the risk profile and outcomes of previous exercises.

The main types of Business Continuity Plan exercise will include testing, discussion based exercise, table-top exercise and live exercises. The last emergency drill was held on 9<sup>th</sup> May 2019. Mock emergency drills are conducted periodically as part of the Business Continuity Plan evaluation process.

A review meeting is held after an exercise to validate the effectiveness of the procedure, the reaction of the employees and the quality of training presented.

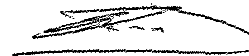
The ER Plan do not make provision for an evaluation on emergency drills to be held. A meeting was called during which the observations that were noted during a drill held on 9<sup>th</sup> May 2019. Minutes of such meeting was taken which include recommendations to prevent the recurrence of similar actions. Minutes noted.

Emergency drills have resulted in review of procedures. Revisions required as a result of replacement of EAP emergencies.

End of report.

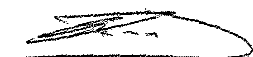
Audit conducted by T.B. Müller South Africa.

Report compiled by T.B. Müller.



Signature

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