

REPORT**ICMI RE-CERTIFICATION SUMMARY REPORT**

CyPlus, GmbH - Supply Chain 5, Turkey

Submitted to:

International Cyanide Management Institute (ICMI)

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Washington, DC 20005

UNITED STATES OF AMERICA

Submitted by:

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1894613.601/A.0

October 2018



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Table of Contents

1.0	SUMMARY AUDIT REPORT FOR CYANIDE TRANSPORTATION OPERATIONS	1
2.0	SUPPLY CHAIN OVERVIEW	1
3.0	SUMMARY AUDIT REPORT	3
4.0	PRINCIPLE 1 – TRANSPORT	4
5.0	PRINCIPLE 2 – INTRIM STORAGE	10
6.0	PRINCIPLE 3 – EMERGENCY RESPONSE	10

1.0 SUMMARY AUDIT REPORT FOR CYANIDE TRANSPORTATION OPERATIONS

Name of Cyanide Production Facility: CyPlus GmbH

Name of Facility Owner: CyPlus GmbH

Name of Facility Operator: CyPlus GmbH

Name of Responsible Manager: André Mieth

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2.0 SUPPLY CHAIN OVERVIEW

CyPlus's production site in Wesseling, Germany is ICMC-certified and has been registered since July 24, 2006 with no suspension since then. From the Wesseling site, the cyanide is shipped to gold-mines all over the world. The CyPlus company acts also as a consignor for cyanide transportations. The scope of the CyPlus consignment is covered in different supply chains.

Supply Chain No. 1 covers the portion from the production site, across the German oversea ports (Hamburg and Bremerhaven) to the respective ports of entry including the Port of Izmir.

This report focuses on Supply Chain No. 5: Port of Izmir to the *Tüprag Metal Mining Industry and Trade* gold mine in, Turkey. This includes the following stages:

- Part 1, Supply Chain No. 5: Port of Izmir (TCDD); Receiving the vessels, port operations
- Part 2, Supply Chain No. 5: Limar Port and Ship Operators; Subcontracted by Port of Izmir to perform port operations using port installations including loading of containers onto transport vehicles.
- Part 3, Supply Chain No. 5: TO-PET; The transportation company collects the containers from the Port of Izmir and transports them in convoy to the Tüprag gold mine. This journey is approximately 201 km by road in an eastern direction from the Port of Izmir.
- Part 4, Supply Chain No. 5: Meke-Hydra (Hydra); Emergency Response Service company, lead the emergency response activities and the convoy from the container collection to delivery to the mine site.

TO-PET are contracted as a cyanide transporter for CyPlus GmbH to transport solid cyanide by road from the Port of Izmir to the Tüprag gold mine. TO-PET's main operations base is situated in close proximity to the Port of Izmir. Cyanide is received at the Port of Izmir by sea in containers, which each hold approximately 20 one-ton boxes of solid cyanide.

The containers are offloaded at the port by Limar. Limar load the cyanide containers onto TO-PET vehicles. For the purposes of Cyanide Code transportation compliance, TO-PET's Code responsibilities commence on collection of the containers from the Port of Izmir. TO-PET's vehicles collect the containers and appropriate documentation. The containers of cyanide, in all cases, are then transported in an escorted convoy to the mine. This journey is around 201 km in distance and entails one overnight stop. Meke-Hydra provide the Emergency Response support during the convoy.

3.0 SUMMARY AUDIT REPORT

Auditors Findings

CyPlus GmbH	<input checked="" type="checkbox"/> in full compliance with	The International Cyanide Management Code
	<input type="checkbox"/> in substantial compliance with	
	<input type="checkbox"/> not in compliance with	

This operation has maintained FULL COMPLIANCE with the International Cyanide Management Code throughout the previous three- year audit cycle.

Audit Company: Golder Associates
Audit Team Leader: Dale Haigh - Lead Auditor
Email: dhaigh@golder.com

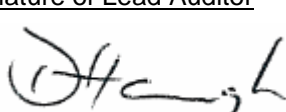
Dates of Audit

The Re-certification Audit was undertaken over 2 days, between 3 July and 4 July 2018.

The audit was undertaken by Dale Haigh of Golder Associates. Dale Haigh is pre-certified as an ICMI Lead Auditor and ICMC Transport Specialist and he acted in this capacity during the audit.

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute for Code Verification Auditors.

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

CyPlus Supply Chain No. 5- Turkey Supply Chain		
<u>Name of Facility</u> CyPlus GmbH	<u>Signature of Lead Auditor</u> 	<u>Date</u> 31 October 2018

4.0 PRINCIPLE 1 – TRANSPORT

Transport cyanide in a manner that minimizes the potential for accidents and releases.

Transport Practice 1.1: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 1.1? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 1.1

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

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

The route between the port and the mine site is the most direct route with main roads in good condition. The selection process is therefore supported by this. Hazards associated with this route are noted in the route risk assessments.

Hydra produce the route risk assessment that is used as the basis for determining the route. It is noted that TO-PET also carry out their own route risk assessments to ensure they are aware of the risks and feed any comments to Hydra where relevant. The following are considered as part of the route selection process/procedure:

Road Structure and Road Condition; Emergency Lane; Trip Planning and Trip Length; Field Structure; Natural Events; Climate Conditions; Visibility; Night-Time Risks and Clarity; Security; Traffic Density - Road Risks – Speeds, Livestock and Agriculture; Population Density; Accident Likelihood (Black Spots and Hot Spots); Environment; Communication; and Immediate Support.

Ongoing monitoring of the routes is performed through daily logs made during each convoy and these are fed into the Hydra route risk assessments. The route risk assessments will be updated annually.

Examples of instructions given within the route assessments include lower speed on certain crossings, no overtaking on bends and maintaining safe driving practices.

For activities at the Port of Izmir conducted by Limar a due diligence exercise has been performed by CyPlus. A review of the due diligence exercise confirms that the Port, equipment, systems and personnel have been reasonably evaluated and that necessary management measures have been implemented.

Drivers, Convoy Supervisors and the ER Team are provided with training by CyPlus and briefed on a regular basis (at the start of every consignment and at the start of each day during the two-day convoy) and warned of changes in route conditions.

CyPlus (via TO-PET and Hydra) contacts Izmir Port, the Mine site, and hospitals along the route and relevant information could be used to influence the selection process.

CyPlus report that there are no special safety or security concerns currently. However, should any such issues arise then they would re-evaluate their plans and modify them accordingly. They have carried out a number of convoys over the past 3 years and no security issues have been experienced. The drivers receive cyanide training.

In addition to convoys, additional security measures are implemented for the material including the use of locked and sealed containers, and the use of locking plates, convoy monitors at the front and rear and advising mines of expected arrival times.

Transport Practice 1.2: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 1.2? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 1.2

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in FULL COMPLIANCE with Transport Practice 1.2; ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

TO-PET only uses trained and competent operators to operate its vehicles. There is a requirement in Turkey for drivers to be licensed for HGV vehicles and for dangerous goods transport (ADR). CyPlus holds a record of all drivers used which includes Government office note, contract with TO-PET, driver identification, driver licence, ADR training certificate, resident's information, medical report, training certificates.

The training programme includes the following modules:

- HSE Induction
- ADR (for relevant TO-PET drivers);
- Emergency Response Plan;
- Cyanide Hazard Awareness.

TO-PET and the ER Team (Hydra) maintain records of the training provided to personnel within a matrix.

TO-PET and Hydra Drivers and convoy leaders were interviewed about their knowledge of the procedures and practices involving operating cyanide handling and transport equipment. Responses received indicated that they were competent to perform their jobs in a manner that minimises the potential for cyanide releases and exposures.

Transport Practice 1.3: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 1.3? Explain the basis for the finding.

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

Summarise the basis for this Finding/Deficiencies Identified:

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

TO-PET only use equipment designed and maintained to operate within the parameters of the cyanide loads it will be handling. Cyanide manufacturers and suppliers limit the mass of cyanide sent to the Mine. This is clearly shown on the chain of custody information provided with each shipment.

The weight of packaging container and trailer in addition to the 20 tonnes of cyanide gives a total weight of 27.7 tonnes.

Equipment used to transport cyanide loads consists of road vehicles (tractor units and trailers) that were purchased to a design specification appropriate for the cyanide transport task. These include main tractors with articulation and trailers which can carry only one container. The capacity of the trailer is 29 tonnes (although it is noted by TO-PET that the legal load limit is 28 tonnes) which is greater than the cyanide, packaging and container weights in total (27.7 tonnes). The tractor units have a capacity of 40 tonnes.

TO-PET have registration certificates for all tractors and trailers.

CyPlus maintains records of vehicle specifications. Maintenance history is shown in vehicle log books kept with each vehicle. Vehicles are maintained by the main dealer MAN and Mercedes suppliers.

In addition, each year vehicles are required to complete a TÜV inspection.

TO-PET's maintenance procedure is in place and is used to flag up any issues arising from a maintenance perspective. The manager reviews the sheet each week and the responsible person is emailed (15 days in advance).

Prior to the start of each convoy (and at points during the convoy) vehicles and trailers (along with their loads) are checked to ensure they are safe to travel. The Hydra Emergency Response Plan details the checks that should be made to the Emergency Response Vehicles during the convoy.

Transport Practice 1.4: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 1.4? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 1.4

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

The route risk assessments ensure routes are selected to minimise damage to vehicles and transported cyanide. The route for this supply chain is along good quality roads. Vehicles and trailers selected by TO-PET are designed to carry the loads safely. Inspections carried out by TO-PET and Hydra at the start of the convoy and during the convoy also ensure that the integrity of the producer's packaging is maintained. Chain of custody (Delivery Notes) forms completed by the mine also confirm that the material has been received in an effective state and are retained by TO-PET.

Vehicles carrying cyanide are also tracked by TO-PET using a GPS system. Monitoring is maintained with the convoy and in the event of an issue CyPlus, TO-PET and Hydra management are informed.

Vehicles and their loads are inspected at the Port and during the convoy. Vehicles are also fitted with a GPS system which tracks operational hours.

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

The placards used on containers, include:

- UN Numbers; and
- Hazchem classification.

The presence of each sign is checked at the port and during the journey.

The safety program implemented by the transporter includes:

Vehicle inspection forms are completed on a daily basis during the convoy and were observed during the audit.

TO-PET has implemented a preventative maintenance program and uses an electronic system to flag maintenance requirements in advance.

Limitations on operator driver hours are managed by TO-PET. The limitation requirements are indicated in training and at the start of the convoy as well as being stated in the Driver packs.

Solid cyanide is stowed into the sea containers by the supplier. Vehicles and trailer units are designed to hold these containers in a secure manner. At the port of Izmir, freight containers are secured to vehicles using twist locks, which are designed and constructed to international transport standards. These are also checked at the start of the convoy and during each day of the convoy.

The CyPlus Manager and the Hydra Emergency Response and Convoy leader has authority to modify transport operations and consult with TO-PET drivers and management during a convoy. Discussion with CyPlus confirmed that such communication does occur but that any change in route is expected very rare and would likely be due to road and weather conditions. Any such issues would be recorded.

TO-PET has a drug abuse prevention program. The policy is implemented by drivers. The drug policy is discussed during cyanide training. TO-PET also instigates an alcohol testing process which is completed at the start of each trip.

Records are maintained and inspected for all relevant parts of this element as indicated adjacent to each finding. Records are retained by CyPlus or where relevant TO-PET and Hydra.

Transport Practice 1.5: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 1.5? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 1.5

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

Transport Practice 1.4; Is not applicable as the transporter does not ship cyanide by air.

Transport Practice 1.6: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 1.6? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 1.6

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

Vehicles transporting for CyPlus have several means to communicate with CyPlus, with emergency responders and with the relevant mining operation.

Each convoy has a lead and end vehicle which keep the convoy in view during the entire route. In the event of an issue one of the convoy team (Hydra and TO-PET) in these vehicles would initially follow the Hydra emergency response calling procedure and alert the relevant parties (depending on the incident). In addition, each driver within the convoy has a mobile phone. Telephone numbers are provided at the start of the convoy (the transport company, the mining operation, CyPlus, emergency responders, Hydra and other drivers) so drivers can get in touch with relevant persons in the event of an issue although drivers are not allowed to use mobile phones whilst driving.

All vehicles transporting cyanide are also fitted with GPS which are tracked actively.

There are no black spots for the GPS or mobile phone system for the routes that CyPlus is currently involved with.

As part of the pre-start check all communication equipment is checked including mobile phones and the GPS system. All checks are documented as part of the prestart procedures.

CyPlus, Hydra and TO-PET have developed procedures in agreement with CyPlus to track the progress of cyanide shipments including the Emergency Response Plan.

Procedures include:

- Advising the mine when shipments leave the departure point and estimated time and date of arrival of the consignment (note normally takes 2 days from collection at port to arrival at mine);
- Logging of convoy movements using telephone calls from the mobile phones from Hydra to TO-PET.

For each convoy, there is a designated departure time and arrival time (including for breaks and overnight stays) and every journey is logged to monitor progress (departure, interim stops, overnight stops etc). All logs are documented.

Shipments are inspected at the start of the convoy and at periods during the convoy. These include visual integrity checks.

Chain of custody (Delivery Notes) forms completed by the mine also confirm that the material has been received in an effective state. Examples were seen during the audit.

All vehicles carry a driver's record which includes a copy of the Safety Data Sheet. Examples were observed during the site visit.

TO-PET provided a number of documents indicating the amount of cyanide involved in shipments during the last three years.

5.0 PRINCIPLE 2 – INTRIM STORAGE

Design, construct and operate cyanide trans-shipping depots and interim storage sites to prevent releases and exposures.

Transport Practice 2.1: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 2.1? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 2.1

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

Transport Practice 2.1 is not applicable as CyPlus does not undertake any interim storage of cyanide.

6.0 PRINCIPLE 3 – EMERGENCY RESPONSE

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

Emergency Response Practice 3.1: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 3.1? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 3.1

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in FULL COMPLIANCE with Transport Practice 3.1; prepare detailed emergency response plans for potential cyanide releases.

CyPlus have a contract with Hydra to develop and implement an Emergency Response Plan. The document also applies to TO-PET (transportation company). This is the document to be used in the event of an emergency involving Cyanide.

The document includes the following sections:

- Purpose and Scope;
- Descriptions;
- Roles, responsibilities and Training;
- Equipment and Maintenance;

- Communication Plan;
- Documents and Sources to be Referred;
- Emergency Response operations and Transport Services;
- Medical and Physical Health Conditions;
- Reporting;
- Vehicles;
- Weather Forecast Reports; and
- Attachments – These include road risk assessments, contact details, SDSs etc.

The plan includes communications for the specific route identified and also considers appropriate release scenarios and their management.

The Emergency Response Plan states sodium cyanide bricks and also attaches the Safety Data Sheet for sodium cyanide bricks. The Cyanide Safety Management Plan considers all aspects of the transport infrastructure relevant to CyPlus's activities which involve transfer of solid sodium cyanide from the port (Izmir) to the mine site.

All transport is by road. The Route Risk Assessment provides information on the condition of the road (surface type, number of carriageways and incline), specific hazards at different points along the route and specific precautions to be undertaken such as use of speed limits.

Emergency numbers are also listed in the Emergency Contact list within the Emergency Plan.

Drivers are also provided with training on the hazards.

The plan states the vehicles used are stated as either MAN or Mercedes trucks with twenty feet long trailers.

The plan also states that solid cyanide is packed by the cyanide manufacture in heavy duty plastic bags inside nylon bulk bags which are packaged into UN approved wooden IBCs or drums, which are in turn placed within metal shipping containers for transportation. The plan further states that containers are loaded from a back door within the container before being loaded onto the vehicle. In the event of an accident/incident drivers are instructed to inspect for signs of cargo damage or leakage as part of their assessment and information to pass on to the emergency services.

The containers are loaded onto the trailer and locks fitted to prevent movement.

The Emergency Response Plan considers a number of emergency situations and categorises the level of response (Level 1 to 3 with Level 3 being the most severe).

The document has the following sections which specifically describe the response actions for support during an incident and general actions to be considered including:

- Protect individuals, alerting others, securing the incident area, defining the incident zone, containing the spill, using suitable packaging, chemical treatment, spill scenarios, contamination of waterways, and;
- Medical and Physical Health conditions and reporting.
- Communication plan in the event of an incident including the telephone numbers for emergency services and local hospitals;

- The need for calling on national and international experts and teams for a significant incident.

Details of specific responsibilities for government officials (including police, firefighters, ambulance service, and the CyPlus Emergency team).

The plans also include various release scenarios and considerations.

Emergency Response Practice 3.2: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 3.2? Explain the basis for the finding.

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

Summarise the basis for this Finding/Deficiencies Identified:

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

CyPlus provide cyanide awareness training to TO-PET drivers and the supervisor and also to the Hydra ER team. Training records were inspected to confirm this. Additional HSE training is provided to all parties including basic job training, PPE, working with chemicals, Field Training, Use of Equipment, Technical safety, Environmental protection. Hydra develop a training calendar each year for the Emergency Response teams and this includes training on the Emergency Response Plan (refresher every year), HAZMAT training, ADR training.

Interviews were conducted with CyPlus, Hydra and TO-PET staff. This demonstrated that personnel operating cyanide transport equipment or involved in the convoys are appropriately trained and had a good understanding of what to do in the event of an emergency.

The Emergency Response Plan identifies the key roles and responsibilities in the event of an emergency for the following positions:

- Drivers;
- Government Officials (Police, firefighters, ambulance service);
- CyPlus Emergency Response Team.

Specific duties are also stated within the procedure for each emergency scenario considered.

The Emergency Response Plan lists the equipment related to each of the emergency response vehicles that may be used in the convoy. The emergency response equipment listed includes the following:

HCN detectors, ABEK filter respirators and full-face masks, SCBA and oxygen cylinders, chemical protective gloves and suits (Level A, B and C), chemical resistant boots, first aid kit, stretcher, alcohol test kit, polythene covers (various sizes), chemical sorbent pad and boom, lighting, decontamination set, fire extinguishers, table and chairs, PC tablet, sample bottles, generator, air compressor, cyanide antidote brochure, ladder, plastic drums, tools, traffic control equipment.

An Emergency Response Vehicle and associated equipment was inspected and found to contain all the equipment on the check list. Respirator cartridges were in date and HCN monitors were in calibration.

Emergency Response Practice 3.3: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 3.3? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 3.3

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in FULL COMPLIANCE with Transport Practice 3.3; develop procedures for internal and external emergency notification and reporting.

The Emergency Response Plan details the notification and communication plan in the event of an incident and includes a notification flow chart and contact numbers. This contact information is reviewed by Hydra every six months and external responders contacted by phone to confirm details. The information was last confirmed on 2 May 2018 and is to be reviewed again by 2 November 2018.

National and Local Government responders (Governorship, Environmental department, Health Department, Police, Fire, Health Emergency, Highways, Coastguard) have direct codes and so these numbers remain the same and are also stated in the contact list.

Emergency Response Practice 3.4: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 3.4? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 3.4

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

The operation is in FULL COMPLIANCE with Transport Practice 3.4; develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

The Emergency Response Plan identifies actions to be considered depending on the incident, location and weather conditions. Key actions identified include containment of any spill and clean-up of solid spills. No chemical treatment is recommended in the plan. The procedure includes details to follow in the event of a spill. An operational check list is used to guide the clean-up process. The plan also identifies external responders who would provide support in the event of an incident. The Emergency Response Plan states "No chemical treatment on spillage site. Do not use any chemical to destroy the remaining cyanide. Use adsorbing material like sand to clean up the remaining cyanide".

Emergency Response Practice 3.5: Is the operation in full compliance, substantial compliance, or non-compliance with Transport Practice 3.5? Explain the basis for the finding.

☒ in full compliance with

The operation is

☐ in substantial compliance with

Transport Practice 3.5

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

The Cyanide Procedures are currently on Revision 07 dated 20 June 2018. The revision history is detailed within the Emergency Response Plan. Hydra and CyPlus representatives confirmed that the Emergency Plan is reviewed on an annual basis

with additional changes occurring based on changes to the system that may occur from time to time.

In Turkey, Emergency Response teams are required to carry out 2 mock drills each year. The mock drills are also identified in the Annual Training Plan. Several records were observed for mock drills performed by the CyPlus team and this include photographic and video records of the drills.

Signature Page

Golder Associates (UK) Ltd



Dale Haigh
Lead Auditor



Witty Lai
Reviewer

Date: 31 October 2018

DH/WL/ab

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INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

Auditor Credentials Form

Facility Audited: CyPlus, GmbH - Supply Chain 5, Turkey

Date: 31 October 2018

Auditor and Technical Specialist Credentials:

Lead Auditor: Dale Haigh

Auditor Certification Date: From 2010

Certifying Organization: Institute of Environmental Management and Assessment (IEMA)

Telephone Number: +44 (0)1522 540 069

Address: IEMA, City Office Park, Tritton Road, Lincoln, LN6 7AS, UK

Web Site Address: www.iema.net

Minimum experience: 4 Audits in past 7 years as Lead Auditor

Year	Type of Facility - Type of Audit Led	Country
2018	EHS audit of mineral processing facility	UK
2018	EHS review of pharmaceutical manufacturing facility	UK
2018	Environmental audit of 3 vehicle sales, service and parts centres	UK
2018	Environmental audit of former RAF base	Scotland
2017	Recertification transportation audit for Verhad Transportation	Ghana
2016	Transportation audit under ICMI for Catoni, Georgia	Georgia
2016	EHS and process review of pharmaceutical manufacturing facility in UK. Lead Auditor.	UK
2015/2016	EHS compliance and due diligence audit at an engineering manufacturing facility in Ireland. Lead Auditor.	Ireland
2015/2016	EHS compliance and due diligence audit at 6 hazardous waste treatment facilities in Ireland and the UK. Lead Auditor.	Ireland / UK
2015	EHS compliance including explosive atmosphere assessment at 2 Eaton facilities in Cambridge and Titchfield in the UK. Lead Auditor.	UK
2014	EHS compliance audit for pharmaceutical manufacturing facility in Tilburg, Netherlands. Lead Auditor	Netherlands

Year	Type of Facility - Type of Audit Led	Country
2014	Lučební závody Draslovka a.s. Kolín, ICMI Manufacturing Re-certification, Transport Specialist Auditor	Czech Republic
2014	Bombardier Transportation EHS compliance audits for 3 sites in Plymouth, Crewe and Mansfield. Lead Auditor.	UK
2010 to 2014	Risk based EHS, process, management of change and Business continuity reviews for over 20 pharmaceutical contract manufacturing facilities at various locations including UK, Finland, France, Germany, Italy, Norway, Spain, Sweden and Switzerland, with reviews of other work in South Africa, South America and China. Led reviews and was sole reviewer on behalf of Pfizer. Helped train small team of reviewers (6) to provide world wide support to Pfizer. Lead Auditor for > 20 sites.	Europe
2013	Hebei Chengxin Transport Co Ltd, Lead Auditor	China
2013	EHS compliance audit at 5 Eaton facilities in Burton on the Wolds, Bristol, Aldridge, Luton, Watford, UK. Lead Auditor. Also provided review role for several other facilities in the UK.	UK
2012	Lead auditor for EHS review of chemical manufacturing facility in the UK and identification of related issues at other facilities worldwide (Arizona Chemicals) in Chester le Street, UK. Lead auditor.	UK
2011	Freight Forwarders Tanzania, ICMI Re-certification Audit, Transport Specialist Auditor	Dar es Salaam, Tanzania
2011	Freight Forwarders Kenya, ICMI Re-certification Audit, Transport Specialist Auditor	Mombasa, Kenya
2011	Orica Chemicals Bag to Bulk transfer facility, Production and Transport Specialist Auditor	Lima, Peru
2010	Project Manager for assessment of contaminant storage and landfill at a chemical manufacturing facility in the UK. Included assessment and review of mercury, lead, arsenic, cadmium and zinc management options for contaminants. Lead auditor.	UK
2010	EHS audit (including chemical process review, emergency response, hazardous material management and assessment of chemical exposure), and limited scope HAZOP for fuel cell manufacture for packaging facility in Ireland. Lead auditor.	Ireland
2010	EHS Compliance review for two automotive manufacturing facilities in UK and subsequent EHS system development at one facility. Lead auditor.	UK

Year	Type of Facility - Type of Audit Led	Country
2010	EHS audit of chemical works in the UK for third party and identification of issues relevant to development of new manufacturing process on Site. Lead auditor.	UK
2010	Waste minimisation review of pharmaceutical manufacturer in UK. Included review of manufacturing and R&D activities, identification of waste stream, review of storage, handling and treatment facilities and development of minimisation and improved treatment recommendations. Lead auditor.	UK


Cyanide-related Operations Experience

Each auditor must have at least 3 years; at least one auditor must have at least 7 years' experience.

Auditor	Yrs.	Relevant Titles	Position	Types of Operations
Dale Haigh	25	Production and Transport Technical Specialist and Lead Auditor		Dale is a senior Environmental, Health and Safety (EHS) consultant, project manager/director and Associate with Golder Associates and has over 25 years' experience applied to a wide range of EHS services. He is certified as a production and transport specialist and lead auditor with the International Cyanide Code and has significant chemical industry experience. Dale has previously completed transportation and production ICMI audits in Europe, South America, Asia and Africa.

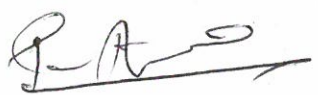
Statement of No Conflict

I certify that I have not audited any component of this facility for which I was responsible for design or development; nor have I within the past year been an employee of the facility, its parent company, or associated affiliates. Excluding audits, I have not derived more than 30% of my income within the past 5 years from the facility, its parent, or associated affiliates. I have not participated in more than two consecutive Cyanide Code audits of this facility. I have participated in at least 3 health, safety, and/or environmental audits in the past 7 years and am familiar with standard audit procedures as well as with the protocols developed by the International Cyanide Management Institute for implementation of the Code.

Signed	Name	Signature	Date
Lead Auditor*	Dale Haigh		31 October 2018

Use additional pages if necessary

*The lead auditor's signature must be certified by notarization or equivalent.


 Paul Thomas
 Solicitor

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