## ICMI Cyanide Code Summary Audit Report Re-Certification Audit

## Cyanide Transportation Supply Chain #1 from Production Site to Int'l Ports of entry

## **CYPLUS GMBH**

RODENBACHER CHAUSSEE 4 63457 HANAU-WOLFGANG GERMANY

## Submitted to:

International Cyanide Management Institute 1400 I Street, NW, Suite 550 Washington, DC 20005, USA

## **AUTHOR:**

## **LULU INTELLIGENT ORGANIZATION**

CONSULTING • TRAINING • AUDITS • CERTIFICATION • VERIFICATION

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REGISTERED LEAD AUDITOR

ISO 9001, ISO 14001, ISO 50001, ISO/TS 16949, KTA 1401, ICMC

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> Signature Lead Auditor Dr. Steinweg

CyPlus, Transportation Route No. 1

Name of Cyanide Transportation Facility: CyPlus GmbH (Evonik Industries)

Name of Facility Owner: n/a
Name of Facility Operator: n/a

Name of Responsible Manager: Frank Harenburg (Managing Director)

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## Location detail and description of operation:

The German company CyPlus GmbH is part of the Evonik Industries Group. CyPlus produces cyanide as a manufacturer (among others) in the German Wesseling plant. From Wesseling, Germany the cyanide is distributed in different packaging variations using different supply chains. The customers / the gold mines can be found on different sites across the world. Accordingly different supply chains are utilized. In this report, the **supply chain no. 1** is covered, starting from the Wesseling (Germany) NaCN production site to the different ports (ports are excluded) of entry on different continents.

## Supply from the production site to the customers / mines

CyPlus's production site in Wesseling, Germany is ICMC-certified and registered since July 24, 2006 with no suspension since then. From Wesseling site the cyanide is shipped to gold-mines all over the world. The CyPlus company acts also as a consignor for cyanide transportation. The scope of the CyPlus consignment is covering different supply chains. Table 1 shows the different supply chains, as they are currently listed at the http://www.cyanidecode.org – webpage.

Supply Chain No. 1 covers the portion from the very start at the production site, across the German oversea ports (Hamburg and Bremerhaven) to the respective ports of entry (ports are excluded from supply chain no. 1, but included in respective local supply chains).

Based on this situation the transportation process is structured into the following elements:

- A) Generic Part 1: transportation between the CyPlus production site at Wesseling/Germany and the Container Terminal at Cologne-Niehl/Germany by road. Interim storage site at Talke between production site and CTS terminal site may be used.
- B) Generic Part 2: transportation between the Container Terminal at Cologne-Niehl/Germany and the Container Terminals at Bremerhaven/Germany or Hamburg/Germany by rail.
- C) Specific Parts 1-x: shipment between the Container Terminals at Bremerhaven/Germany or Hamburg/Germany and the various ports of entry (ports are excluded) by sea.

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CyPlus, Transportation Route No. 1

Audit Date: Apr 25-26, 2017 Signature Lead Auditor The most important organizations which are involved in this Supply Chain #1 and their roles or functions are as follows:

## 1) CyPlus GmbH, Hanau, Germany

CyPlus GmbH is the signatory company which is in the role of the ICMI Code's Consignor. The organization is not active in transporting cyanide but is contracting the full transport service by Evonik Services GmbH.

## 2) CyPlus GmbH, Wesseling, Germany

The CyPlus site at Wesseling is the production plant of sodium cyanide. They pack the product into wooden IBCs, prepare them for shipping and hand it over to the truck carrier "Frisch", which is the very start of the present supply chain #1. The organization is not active in transporting cyanide, but leaving their warehouse is the starting point of supply chain #1.

## 3) Evonik Industries AG, Wesseling, Germany

The service organisation of Evonik Industries AG at Wesseling site provides CyPlus with logistic and handling services such as control of trucks, preparing the transportation documents, loading or labelling of the containers.

## 4) Evonik Services GmbH, Hanau-Wolfgang

The technical procurement is purchasing transportation and logistic services from dedicated suppliers and is following strictly defined processes to evaluate appropriate suppliers who are able to perform cyanide shipment under controlled conditions.

## 5) Lexzau, Scharbau GmbH & Co. KG (part of the Leschaco organization), Hamburg

Leschaco is the overall coordinator of transport services and has no operating activities. Lexzau, Scharbau GmbH & Co. KG holds a valid SQAS certification by CEFIC (Conseil Européen de l'Industrie Chimique) organization.

## 6) TFG Transfracht Internationale Gesellschaft für kombinierten Güterverkehr mbH & Co. KG, Frankfurt

TFG is engaged as the inland transport (precarriage) between Wesseling production plant and the container terminal at Cologne-Niehl by truck and the following rail transportation to the port terminals at Bremerhaven and Hamburg as well. TFG is selecting the trucking company ("Spedition Frisch"). Each single transport event in this field between Wesseling and the port terminals is running exclusively under the control of TFG.

TFG Transfracht transports containers for ship owners and freight forwarders from German seaports direct to final consignees in Germany, Austria, Switzerland and the Czech Republic and vice versa from first shippers to German seaports. TFG Transfracht connects four countries (Germany, Austria, Switzerland and the Czech Republic) and three seaports (Hamburg, Bremerhaven, Wilhelmshaven) with their rail network. With approx. 12,000 connections per year and more than 20 terminals, the network is the most extensive rail network in European seaport-hinterland transport. TFG Transfracht sets high quality standards when transporting containers. These product and service standards are transposed by utilizing a respective quality management system. As a subsidiary of Deutsche Bahn Mobility Logistics AG, TFG Transfracht has a transport volume of approx. 900,000 TEUs. TFG Transfracht claims to be the market leader for seaport hinterland traffic with the German seaports.

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CyPlus, Transportation Route No. 1

## 7) Frisch Spedition und Transport GmbH & Co. KG, Cologne

Transport company Frisch is operating the truck transport of cyanide containers between the production plant at Wesseling, the interim facility at Talke and the inland container terminal CTS at Cologne-Niehl.

## 8) Alfred Talke GmbH & Co. KG, Hürth

Talke is in the German / European chemical transportation market one of the big players, running different logistic sites, where they do traditional storage and interim storage on the one hand, but also doing handling, filling, refilling activities with chemicals on the other hand.

They are providing a temporarily back-up loading and storage interim facility, if necessary. The facilities had been audited by CyPlus and were object in this supply chain audit as well. The Talke site is very good equipped, especially focussing on prevention of spill, handling of dangerous goods in different packaging modes and emergency preparedness. The required permissions from local German authorities are fully available and fulfilled.

## 9) DB Schenker Rail Deutschland AG, Mainz, Germany

DB Schenker is the rail carrier from the inland container terminal CTS at Cologne-Niehl to the ocean terminals at Bremerhaven and Hamburg. DB Schenker is the legal successor (part of Deutsche Bahn AG) of the former one and only German railway monopolist. They operate approx. 2.000 locomotives and approx. 90.000 owned railcars (approx. 16% utilized for dangerous goods). DB Schenker is SQAS certified, e.g. they have catastrophy prevention plans and ERP in place and active. Due to safety and security reasons DB Schenker Rail Deutschland AG does not accept to perform due diligence audits on-site, but they supplied the last SQAS certification protocol (June 2015) to the CyPlus's due diligence auditors. The protocol and thus the SQAS certification cover the relevant aspects of ICMC transportation verification protocol.

## 10) CTS Container-Terminal GmbH, Cologne

CTS is operating the inland container terminal at Cologne-Niehl.

All above mentioned companies No. 1-10 are generically involved in the supply chain #1 of cyanide to the international ports. After arrival in the port terminals at Bremerhaven or Hamburg the specific parts of the transportation chain are following. With this report, the destinations at Mazatlan and Guaymas (Mexico), Izmir and Pendik (Turkey) and Kemi (Finland) are covered under this audit.

The organizations which are involved in the specific steps are:

## 11) Eurogate Container Terminal Hamburg GmbH

## 12) Eurogate Container Terminal Bremerhaven GmbH

Both Eurogate terminals are utilized by MSC to ship cyanide containers to several destinations. They are organized as highly safe areas which are completely under control by the port police. The incoming containers are promptly transferred to the dedicated ocean vessels being booked.

CyPlus, Transportation Route No. 1

Signature Lead Auditor Dr./Steinweg

## 13) MSC Mediterranean Shipping Company S.A. Geneva

MSC is operating the ocean shipment to various ports. The MSC organization has implemented an international structured management system to regulate and to control the shipments of dangerous goods with high expertise, responsibility and experience.

## 14) HHLA Container Terminal Burchardtkai GmbH

HHLA terminal is utilized by Hapag Lloyd to ship cyanide containers to various destinations. It is organized as a highly safe area which is completely under control by the port police. The incoming containers are promptly transferred to the dedicated ocean vessels being booked.

## 15) Hapag Lloyd AG

Hapag Lloyd is operating the ocean shipment to the port of different destinations. The Hapag Lloyd organization has implemented an international structured management system to regulate and to control the shipments of dangerous goods with high expertise, responsibility and experience.

## 16) Hamburg Süd GmbH

Hamburg Süd (HS) is a German (HQ in Hamburg, Germany) shipping company performing –among other services- ocean crossing vessel shipping services. Basic key figures are (2012): Container vessels: 107 (own: 43, chartered, leased etc.: 64), Slot capacity: 395,000 TEU, Container pool: 430,000 Units, Employees: approx. 4,500 (approx. 700 at sea), Carryings: approx. 3,125,000 TEU, Turnover approx. 6.6 bnUSD. By running an integrated safety, environmental and quality management system, the Hamburg Süd Group is documenting the fact that the company attaches great importance to the quality and environmental compatibility of its services, as well as to the safety of human life, ship and cargo. As early as 1996, the shipping group was one of the first leading international container shipping lines to be certified worldwide in line with the ISO 9001 quality standard. In the same year and on a voluntary basis, the International Safety Management (ISM) Code was introduced, before the existing quality and safety management system was augmented by the ISO 14001 environmental management system in 2000.

Hamburg Sud was added to CyPlus's Supply Chain No. 1 starting in 2013. Hamburg Sud transportation services is not dedicated to a specific transportation way from Germany to the int'l ports of entry but can be used as ocean transportation service supplier for all destinations.

In 2016 a merger was announced between Hamburg Süd an Danish Maersk company where Hamburg Süd will be integrated into Maersk organization. Currently no activities are relevant in cyanide transportation, coming out of this respective merger.

All relevant players and involved organizations had been inspected during the audit (by ICMC auditor of by CyPlus's due diligence auditors – where feasible according to ICMC-regulation). Those assessments were covering visits at the locations (production site, interim storage area, inland terminal, port terminals and administration offices of the ocean carriers as well), interviews with the involved partners and employees, inspections of IT systems and checks of documents.

Signature Lead Auditor

CyPlus, Transportation Route No. 1

## **Auditor's Finding**

This operation is	
<ul><li>☑ in full compliance</li><li>☐ in substantial complian</li><li>☐ not in compliance</li></ul>	nce *(see below)
with the International Cyanide N	lanagement Code.
	ull compliance with the International Cyanide he previous three-year audit cycle.
* For cyanide transportation operations seeki substantial compliance into full compliance m mplemented within one year of the date of th	ing Code certification, the Corrective Action Plan to bring an operation in nust be enclosed with this Summary Audit Report. The plan must be full his audit.
Audit Company	LULU Intelligent Organization  Dr. Benno Steinweg  Benno.Steinweg@gmail.com  n/a  Apr 27 - 28, 2017

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 Production Operations and using standard and accepted practices for health, safety and environmental audits.

CyPlus, Transportation Route No. 1

Signature Lead Auditor Dr. Steinweg

## A) ROAD TRANSPORTATION:

## PRINCIPLE 1 - TRANSPORT:

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

Transport Practic	e 1.1:	Select cyanide transport releases.	routes to minimize the potential for accidents and
This operation is	ins	full compliance with substantial compliance with tin compliance with	Transport Practice 1.1

Summarize the basis for this Finding:

CyPlus is not active in transport operating activities on site. This activity is subcontracted to different partners in the supply chain. The CyPlus organization (by means of the technical procurement of Evonik Services GmbH) is purchasing transportation and logistic services from dedicated suppliers. Especially the department "Category Transportation Safety" is following strict defined processes to evaluate appropriate suppliers who are able to perform cyanide shipment under controlled conditions. In this certain case of Supply Chain #1 the carriers such as MSC, Hamburg Süd and Hapag Lloyd are contracted by CyPlus as main suppliers. These ocean carriers are contracting TFG as a subcontractor to transform the shipment to the German ports (Bremerhaven, Hamburg) as a carrier's haulage in compliance with the code. Finally, in each and every case Cyplus verifies the subcontractor's system installation and performance to fulfill all the requirements, coming from ICMI requirements and CyPlus's system requirements. This is routinely done by audits and due diligence inspections, focusing the respective partner's quality and safety system.

A clear system is in place to periodically evaluate and reevaluate routes including a feedback process for route conditions. The distance between CyPlus's Wesseling production plant and the CTS terminal at Cologne-Niehl is approx. 20 miles. The trucks are equipped with GPS system and digital control system. The routes are selected under the focus to avoid population density; they consider infrastructure, pitch and grade and the prevalence and proximity of water bodies and fog as well. In case of construction and road maintenance activities alternative routes will be considered to manage the corresponding risks. If they is any indication of special concerns in advance of an individual transportation the transport will not be started until tha safe situation to start the transportation will be maintained again. Thus no escorts or any other / further actions are necessary, because the transport will only start, when a clear and safe transportation situation is given. As part of TFGs quality management system an extensive respective documentation has been established. In addition, appropriate procedures, working instructions or significant manuals are in place. The local routes between the production site and the terminal are approved for hazardous materials transportation. The drivers are mandatory trained for the transport of packaged dangerous goods, long-time experienced and they know the specific road conditions as well. Each transportation is supervised by satellite tracking system. TFG as responsible SC partner for the inland transport (precarriage) between Wesseling production plant and the container terminal at Cologne-Niehl by truck and the following rail transportation to the port terminals at Bremerhaven and Hamburg as well is cooperating with the ICE (International Chemistry Environment) in Europe, which is supported by the CEFIC organization (European Chemical Industry Council). ICE is a network of national schemes, set up by the European Chemical Industry to provide information, advice and resources to the emergency authorities in case of land based chemical transport accidents. The German (national) ICE Scheme is called TUIS. 40 companies are participating. They are listed in a manual and may be contacted directly by the Competent Emergency Authorities (Police, Fire Brigade etc.) in case of transport accidents. TUIS is an association of 130 chemical plant firebrigades and specialists, 365 days/yr. continuous preparedness. This TUIS (Transport-Unfall-Informations- und Hilfeleistungs System) offers help and support for local fire brigades and police when events with chemicals occur during handling, transportation and storage. ICE (International Chemical Environment) is the co-operative program of chemical companies to achieve the goal of negative incident prevention. ICE aims to set up, in each European country, a framework for providing this competent assistance in an effective way, e.g. by making use of the emergency response schemes from individual chemical companies, by building upon existing local, regional and product related (e.g. cyanide) emergency response schemes. Also by co-operating with national Authorities through the National Chemical Federation and by

CyPlus, Transportation Route No. 1 Audit Date: Apr 25-26, 2017

Signature Lead Auditor

communicating and exchanging information with other National ICE Schemes. And finally by promoting mutual assistance within the Chemical Industry.

Transport Practice	e 1.2: Ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.
	⊠ in full compliance with
This operation is	in substantial compliance with Transport Practice 1.2

## Summarize the basis for this Finding:

not in compliance with

Each and every active transportation company within the supply chain only employs operators who have a commercial driver license to operate it's transport vehicles according to German regulations. The personnel is qualified and trained in an appropriate manner to fulfil the internal Frisch, CTS, TFG and CyPlus safety requirements. To transport cyanide the drivers need to have a valid mandatory training certificate for the transport of packaged dangerous goods according to ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route = European agreement upon road transportation of dangerous goods). All drivers performing the corresponding Cyanide transportations between CyPlus manufacturing facility and the terminal are listed at TFG and Frisch company. Their status of qualification and training scope is documented. For training reasons, charts or explanations of the Material Safety Data Sheets have been used. These statements are valid for all contractors which are involved (if so) in the transportation process.

Operating personnel does not have to do handling activities with cyanide, but only transport activities and handling activities with originally closed containers. The trainings do focus on scenarios and potential incidents and accidents. Exercises are performed routinely, e.g. simulation of spills and the respective reaction on that. Basic trainings are required according to training matrix (knowledge about procedures, forms, processes etc.). These basics are replenished by further trainings with respect to spill handling, emergency reaction etc. The documentation shows the training history and the respective effectiveness checks of the trainings. This is completed by specific re-qualification documentation for truck drivers, that is mandatory. Records of special trainings were available, too.

If emergency action needs to be taken by drivers when leaks, spills or fire occur during transport, the instruction given in the "Transport Emergency Card" (ADR "Instructions in writing") must be followed immediately. In this special case, the external responders such as the plant's fire brigade at Wesseling, the medical organization of Evonik at Wesseling site, local fire-brigades (municipal fire-brigade of Wesseling) or the local hospitals are well informed about the handling and transportation of cyanide and the potential risks of cyanide. TFG is coordinating and contracting the trucking company. In this specific case, the road transportation from Wesseling to Cologne-Niehl is operated by Frisch company. TFG maintains a profile of requirements for subcontractors. This profile needs to be signed by TFG and subcontractor's company and is part of the contract.

In addition, the consignor CyPlus has implemented a Standard Operating Procedure (SOP) "Supervision – Internal Audits" to ensure that the procedures of the established system to manage cyanide shipments (as mentioned above) are reviewed at regular intervals.

Signature Lead Auditor

Ensure that transport equipment is suitable for the cyanide

## shipment in full compliance with This operation is in substantial compliance with Transport Practice 1.3 not in compliance with

Summarize the basis for this Finding:

**Transport Practice 1.3:** 

For packaging and transportation of cyanide standardized equipment is in use. All the freight containers are specified especially for the use to transport packaged or non-packaged dangerous goods, such as sodium cyanide.

Containers, chassis and trucks as well have to fulfil the requirements of the European legislation for handling and transporting dangerous goods, here: cyanide solids and cyanide liquides as residuals in returning SLS containers. The containers – once loaded by CyPlus in Wesseling – will not be opened and thus the load amount will not be changed. The use of heavy load trucks in each and every transportation safeguards, that no overload will occur. To control the subcontractors like Frisch company CyPlus performs checks and audits in a regular manner.

## Transport Practice 1.4: Develop and implement a safety program for transport of cyanide. | In full compliance with | In substantial compliance | In substantial complian

Summarize the basis for this Finding:

Each and every container is sealed by CyPlus in Germany and not opened before reaching the mine, thus internal damage cannot be identified en route. Container Interchange Reports are maintained and jointly signed by the shippers representatives and the cyanide transporter's representatives to agree on any damage that may be sighted on the container at the port. The Vehicle Trip Checklist is completed at the mine, on delivery of the container and a section reports on container seals, labelling and general container condition. This checklist is counter signed by the mine representative. German / European transport regulations with respect to marking and placarding are consistently followed. A pre-trip checklist is completed for the truck and trailer before the vehicle is loaded with the cyanide container. The Fleet Preventative Maintenance (PM) policy states that preventative maintenance is performed for each vehicle. PM tasks are clearly identified and followed. These tasks are –among others- identified in the scheduled maintenance system of truck OEM's manual.

The freight containers which are used for the transportation of solid cyanide in wooden boxes are usually in property of the ocean carrier. The wooden boxes which are used to pack the solid cyanide (together with PE inlining bags) are specified. Technical data and dimensions are well defined. They are classified and licensed for hazardous goods transportation according to UN registration. The as well utilized ISO SLS containers are in property and under maintenance of CyPlus. The drivers are to follow the established delivery procedures

Lead Auditor

CyPlus, Transportation Route No. 1

described in the requirements for transportation of dangerous goods to ensure the integrity of producer's packaging. The freight containers are sealed after loading; the seals are registered on the transportation documents. Due to this fact the drivers will neither come into contact with the wooden boxes / ISO containter's inner space nor with the product inside. Vehicle inspections prior to each departure are performed according to the Evonik and TFG procedures for dangerous goods transportation. The trucks are checked first when entering the Wesseling site and again before and after the loading process. The preventive maintenance program is well established and documented. The technical equipment (trucks etc.) undergoes different types of inspection (annual inspection) according to German law. The consumption of drugs or alcohol is strictly forbidden in accordance to the law and to the contracts with TFG. Records retention is ensured by software tools, electronic files or by paperwork in defined binders. These statements are valid for all contractors which are involved in the transportation process.

The Vehicle Operators Handbook specifies the maximum hours of duty for the drivers. The Vehicle Operators Manual includes a section on drug and alcohol policy. The policy includes specific statements on drug and alcohol usage, testing, alcohol and drug dependence, use of drugs and alcohol on the company premises or whilst driving and the consequences of positive test results. The policy also covers random testing and searches. The involved companies recognize alcohol and drug dependence as a treatable condition and will provide appropriate support and assistance within the bounds of the policy.

Standard operating procedures (SOP) are available, covering the topics modifying the transport, caused by unexpected incidents, preventing load from shifting during all handling activities etc. Records of evidences demonstrating the operation of the safety program are archived according to respective SOP, that are part of the company's quality system.

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

This operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Transport Practice 1.5	
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Summarize the basis for this Finding:

This section is not applicable with respect to air transport mode, as no air transport is used.

The shipments of cyanide by sea are transported in compliance with the IMDG Code. According to the due diligence investigations, the contracted ocean carriers could demonstrate that the current valid amendment of the IMDG Code is available (printed and online) and in use and that all employees concerned are made aware by delta trainings about new and/or changed legal requirements in comparison to the previous edition. Further the ocean carrier could prove, that all vessels are certified according to the ISM- and the ISPS Code.

Current due diligence investigations were performed by CyPlus and Evonik Services on-site at the ocean carrier's administration sites. Compliance with ICMC requirements could be demonstrated in each an every case.

Lead Auditor Steinweg

- Mediterranean Shipping Company (MSC) Germany GmbH, Bremen, Germany
- Hamburg Süd KG, Hamburg, Germany
- Hapag Lloyd AG, Hamburg, Germany

CyPlus, Transportation Route No. 1

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

	in full compliance with	
This operation is	☐ in substantial compliance with	Transport Practice 1.6
	☐ not in compliance with	

Summarize the basis for this Finding:

Truck transport from producer's site to CTS terminal in cologne (by "Spedition Herbert Frisch"):

communication with "Spedition Herbert Frisch" vehicles in the cyanide transport is undertaken using mobile phones. All drivers have cell phones and the relevant phone numbers are all available in different documents. In cases of an incident drivers use their cell phones. CyPlus's Road Assessment SOP requires to find out potentially blackout area with respect to functionality of communication equipment. There are different tools in place to control the inventory and the amount of cyanide during transportation. After finishing the loading process, the containers are to be sealed; the seal no. is documented on the transportation documents. The bill of lading indicates the amount of cyanide in transit with respect to the controlled weight of each box which are checked at the production facility. Material Safety Data Sheets are available and in place. These statements are valid for all contractors which are involved in the transportation process.

"Spedition Herbert Frisch" receives, transports and delivers sealed containers, originally packed by CyPlus in Germany. A waybill accompanies the transport which includes chain of custody data such as container numbers, waybill numbers, shipping documentation, MSDS, packing list, bill of lading, customs declarations, and producer invoice. Drivers have shipping documentation including the Bill of Lading with them at all times during a shipment. Information regarding the type of material transported, the type of container, the number of packages, and the weight of the shipment is consistently entered onto the Bill of Lading by the shipper. Drivers also have the sodium cyanide MSDS and Emergency Response Guides with them during deliveries.

Rail transport from CTS terminal in cologne to the German seaports (by TFG Transfracht):

The containers are rail-transported with no stoppage to the German seaports. Each and every container can be traced and tracked by using an electronic system, that's made available by internet ("status report").

In each and every route step "Communication possible yes / no" has to be verified. Result: full availability of cell phone communication, as it is quite normal in central Germany. No blackout areas have been identified. Thus no additional activities are necessary, e.g. satellite phone or calling before entering blackout areas.

CyPlus, Transportation Route No. 1

Signature Lead Auditor Dr. Steinweg

## PRINCIPLE 2 – INTERIM STORAGE

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

<u>Transport Practice 2.1:</u> Store cyanide in a manner that minimizes the potential for accidental releases.		
This operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Transport Practice 2.1

Summarize the basis for this Finding:

In terms of Cyanide Code definitions, CyPlus' subcontracted supply chain partners do partially operate interim storage facilities. Those interim storage facilities are used by and under control of:

- 8) Alfred Talke GmbH & Co. KG, Hürth
- 11) Eurogate Container Terminal Hamburg GmbH
- 12) Eurogate Container Terminal Bremerhaven GmbH
- 14) HHLA Container Terminal Burchardtkai GmbH

## Interim storage Operations at 8) Alfred Talke GmbH & Co. KG, Hürth

Talke is providing a temporary back-up loading and storage interim facility for Cyplus's cyanide containres, if necessary. The facilities had been audited by CyPlus and were object in this ICMC supply chain audit as well. The sodium cyanide dedicated on site storage area is designed according to German legal requirements for dangerous goods storage, e.g. sufficient containments in case of spill. In no case cyanide is handled as an open product but only in primary and secondary packaged for, as it was prepared in CyPlus's production site.

Alfred Talke's Logistic Service is used as a buffer system between the producer's site in Wesseling and the CTS Terminal in Cologne / Niehl. But in the most cases the cyanide is transported directly from Wesseling to the Terminal. Talke has the permissions of the local authorities to store dangerous goods such as solid cyanide. It is certified according to packaging and warehouse regulations by SQAS (Safety and Quality Assessment System under control of CEFIC). The required warning signs were in place. Visitors and auditors as well need to wear personal protection equipment. This storage interim facility within the fenced area of the Talke facilities is locked and supervised by cameras. A gatekeeper is present on 24/7. Contact of the packed cyanide with water or other chemical materials is impossible. Talke has implemented an appropriate system to manage cases of emergency in close cooperation and with support of the CyPlus organization, as well as ISO 9001 and ISO 14001 conformity. In cases of cyanide spill a corresponding information chain (internal and external communication to CyPlus) is organized and trained. Talke employees are well informed about the risks in handling of cyanide; they are practicing emergency simulations with cyanide periodically. Spill equipment is available.

## Interim storage Operations at 11) Eurogate Container Terminal Hamburg GmbH

Eurogate Container Terminal Hamburg GmbH is providing extensive dedicated area for storing dangerous goods containers. During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 13, 2017), the auditors found, that ICMC transportation protocol definition of "trans-shipping depots and interim storage sites" is relevant at this site and thus audited Transport Practice 2.1 intensively and in full. The result of this inspection is available in the due diligence report. The auditors stated "...The auditors have received a very positive picture of the terminal and got the impression that it is able and in full compliance to tranship cyanides from rail on board the ocean ...". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

Signature Lead Auditor Dr. Steinweg

CyPlus, Transportation Route No. 1

## Interim storage Operations at 12) Eurogate Container Terminal Bremerhaven GmbH

Eurogate Container Terminal Bremerhaven GmbH is providing extensive dedicated area for storing dangerous goods containers. During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 14, 2017), the auditors found, that ICMC transportation protocol definition of "trans-shipping depots and interim storage sites" is relevant at this site and thus audited Transport Practice 2.1 intensively and in full. The result of this inspection is available in the due diligence report. The auditors stated "... offers easy connectivity to all modes of transport, especially a reliable access to the European hinterland by rail (siding). The auditors have received a very positive picture of the terminal and got the impression that it is able and in full compliance to tranship cyanides from rail on board the ocean vessels...". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

## Interim storage Operations at 14) HHLA Container Terminal Burchardtkai GmbH

HHLA Container Terminal Burchardtkai GmbH is providing extensive dedicated area for storing dangerous goods containers. During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 13, 2017), the auditors found, that ICMC transportation protocol definition of "trans-shipping depots and interim storage sites" is relevant at this site and thus audited Transport Practice 2.1 intensively and in full. The result of this inspection is available in the due diligence report. The auditors stated "... based on the terminal inspection, documents review, and interviews held during this due diligence investigation, it is considered that the terminal has sufficient resources, equipment, management systems, and personnel to safely transship cyanide briquettes in dry van box- and SLS-containers and to prevent and respond to incidents involving cyanide container transhipment's. The CTB offers easy connectivity to all modes of transport, especially a reliable access to the European hinterland by rail (siding). The auditors have received a very positive picture of the terminal and got the impression that it is able and in full compliance to tranship cyanides from rail on board the ocean....". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

CyPlus, Transportation Route No. 1

Signature Lead Auditor Dr. Steinweg

## PRINCIPLE 3 - EMERGENCY RESPONSE

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

Summarize the basis for this Finding:

In general the supply chain partners are obliged to follow ADR regulation.

Reflecting the total supply chain from Wesseling plant to the German ports of departure there are several emergency response plans in place for potential cyanide releases. These instructions declare that the drivers have immediately to contact local authorities and advising the nature of the emergency and the material involved. The most important supporting organizations are CEFIC (European Chemical Industry Council) and the German Chemical Industry Association (VCI). The VCI has initiated all over Germany a system called TUIS (Transportation-Emergency-Information-and-Response-System; see also answer on TP 1.1 questions). This emergency response system is available 24 hours on 365 days per year. Police, authorities, physical doctors or municipal fire-brigades are on duty as well. The drivers have information sheets and safety instructions onboard (with telephone numbers, name of contact persons etc.). All these documents support the driver to react in an appropriate manner in case of emergency. Due to the fact that the road distances between production plant. terminal and (in some cases) the external warehouse are very short the emergency response plan needs no specific regulations for different transportation routes. The design of the equipment is considered in the ERPs. The TUIS organization is well informed about this. The Talke interim storage facility has its own emergency response planning. Response actions are defined considering the different anticipated emergency situations. The roles of outside responders, medical facilities or communities are covered with respect to the TUIS organization, being the national scheme of the European ICE system in Germany. The emergency hotline is published in different instructions and procedures. TUIS is essential for the success of the emergency response activities. TUIS has multilingual communication capabilities, is operational 24 hours at seven days per week and could record all communication related to an emergency event. The Evonik Industries professional fire brigade is member of the TUIS organization and therefore will be contacted directly in case of any emergencies involving cyanides in Germany.

## ERP activities at 8) Alfred Talke GmbH & Co. KG. Hürth

Talke realizes the implementation of CyPlus' Emergency Response Plan by having maintained an own, site-specific BAGAP (betrieblicher Alarm- und Gefahrenabwehrplan; site-specific Alert and threat prevention plan). This plan covers all the relevant requirements from ICMC transportation protocol TP 3.1 – 3.5. This plan is not only created because of CyPlus's ICMC requirements but it is the result of permission requirements, laid down in German "Hazardous Incident Ordinance" act (12. BImSchV) as well as certification requirements coming from ISO 14001, ISO 22000, Responsible Care and CEFIC's SQAS Certification scheme.

## ERP activities at 10) CTS Container-Terminal GmbH. Cologne

CTS realizes the implementation of CyPlus' Emergency Response Plan by having maintained an own, site-specific AGA-Org. Plan (Alarm- und Gefahrenabwehr-Organisation; site-specific alert and threat prevention organization). This plan covers all the relevant requirements from ICMC transportation protocol TP 3.1 – 3.5. "Spedition Frisch" is fully included in CTS's AGA-Org. Plan, thus "Sped. Frisch" does not maintain it's own ERP. Nevertheless "Spedition Frisch" runs an own ISO 9001:2015 certified system.

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CyPlus, Transportation Route No. 1

## ERP activities at 11) Eurogate Container Terminal Hamburg GmbH

Eurogate Container Terminal Hamburg GmbH realizes the implementation of CyPlus' Emergency Response Plan by having maintained an own, site-specific AGAP (Alarm- und Gefahrenabwehrplan; site-specific alert and threat prevention plan). This plan covers all the relevant requirements from ICMC transportation protocol TP 3.1 – 3.5. This plan is not only created because of CyPlus's ICMC requirements but it is the result of permission requirements, laid down in German "Hazardous Incident Ordinance" act (12. BlmSchV) as well as certification requirements coming from ISPS and AEO Certification scheme. During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 13, 2017), the auditors found, that ICMC transportation protocol definition of "trans-shipping depots and interim storage sites" is relevant at this site and thus audited Transport Practice 2.1 intensively and in full. The result of this inspection is available in the due diligence report. The auditors stated "...The auditors have received a very positive picture of the terminal and got the impression that it is able and in full compliance to tranship cyanides from rail on board the ocean ...". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

## ERP activities at 12) Eurogate Container Terminal Bremerhaven GmbH

Eurogate Container Terminal Bremerhaven GmbH realizes the implementation of CyPlus' Emergency Response Plan by having maintained an own, site-specific AGAP (Alarm- und Gefahrenabwehrplan; site-specific Alert and threat prevention plan). This plan covers all the relevant requirements from ICMC transportation protocol TP 3.1 – 3.5. This plan is not only created because of CyPlus's ICMC requirements but it is the result of permission requirements, laid down in German "Hazardous Incident Ordinance" act (12. BImSchV) as well as certification requirements coming from ISPS and AEO Certification scheme. During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 14, 2017), the auditors found, that ICMC transportation protocol definition of "trans-shipping depots and interim storage sites" is relevant at this site and thus audited Transport Practice 2.1 intensively and in full. The result of this inspection is available in the due diligence report. The auditors stated "...offers easy connectivity to all modes of transport, especially a reliable access to the European hinterland by rail (siding). The auditors have received a very positive picture of the terminal and got the impression that it is able and in full compliance to tranship cyanides from rail on board the ocean vessels...". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

## ERP activities at 14) HHLA Container Terminal Burchardtkai GmbH

HHLA Container Terminal Burchardtkai GmbH realizes the implementation of CyPlus' Emergency Response Plan by having maintained an own, site-specific AGAP (Alarm- und Gefahrenabwehrplan; site-specific Alert and threat prevention plan). This plan covers all the relevant requirements from ICMC transportation protocol TP 3.1 – 3.5. This plan is not only created because of CyPlus's ICMC requirements but it is the result of permission requirements, laid down in German "Hazardous Incident Ordinance" act (12. BImSchV) as well as certification requirements coming from ISPS and AEO Certification scheme. During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 13, 2017), the auditors found, that ICMC transportation protocol definition of "trans-shipping depots and interim storage sites" is relevant at this site and thus audited Transport Practice 2.1 intensively and in full. The result of this inspection is available in the due diligence report. The auditors stated "... based on the terminal inspection, documents review, and interviews held during this due diligence investigation, it is considered that the terminal has sufficient resources, equipment, management systems, and personnel to safely transship cyanide briquettes in dry van box- and SLS-containers and to prevent and respond to incidents involving cyanide container transhipment's. The CTB offers easy connectivity to all modes of transport, especially a reliable access to the European hinterland by rail (siding). The auditors have received a very positive picture of the terminal and got the impression that it is able and in full compliance to tranship cyanides from rail on board the ocean....". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

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CyPlus, Transportation Route No. 1

## ERP activities at 13) MSC Mediterranean Shipping Company, Site Bremen

During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 14, 2017), the auditors audited (among others) Transport Practice 3.1 intensively and in full. It was found, that if any emergency situation on board of an ocean vessel comes up, the response is dependent on the position of the ship: when berthing they are mandated by the respective port authorities, when afloat they are mandated by the master of the vessel. To manage those cases of emergency at sea, the MSC Company has worked out a 24 hours/7 days Contingency Manual (current January 2014) on Emergency Preparedness and Response. This document is an integral part of the Safety Management System (SMS) of the ocean carrier. The result of this inspection is available in the due diligence report. The auditors stated "... Based on the terminal inspection, documents review, and interviews held during this due diligence investigation, it is considered that the terminal has sufficient resources, equipment, management systems, and personnel to safely transship cyanide briquettes in dry van box- and SLS-containers and to prevent and respond to incidents involving cyanide container transshipments. The MSC Gate offers easy connectivity to all modes of transport, especially a reliable access to the European hinterland by rail (siding). The auditors have received a very positive picture of the terminal and got the impression that it is able and in full compliance to tranship cyanides from rail on board the ocean vessels ...". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

## ERP activities at 15) Hapag Lloyd AG, Site Hamburg

During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 15, 2017), the auditors audited (among others) Transport Practice 3.1 intensively and in full. It was found, that if any emergency situation on board of an ocean vessel comes up, the response is dependent on the position of the ship: when berthing they are mandated by the respective port authorities, when afloat they are mandated by the master of the vessel. To manage those cases of emergency at sea, the Hapag Lloyd Company has worked out a 24 hours/7 days Contingency Manual (Current Jan. 2013) on Emergency Preparedness and Response. This document is an integral part of the Safety Management System (SMS) of the ocean carrier. The result of this inspection is available in the due diligence report. The auditors stated "...Hapag-Lloyd is obviously an excellent ocean carrier meeting all legal and even stricter additional requirements for the shipment of cyanide containers. Based on the documents reviewed and interviews performed during this due diligence inspection, it was found that Hapag-Lloyd has sufficient resources, equipment, IT systems, management systems, and well skilled and trained staff to safely handle dangerous cargo and to prevent and response to incident involving them ...". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

## ERP activities at 16) Hamburg Süd GmbH, Site Hamburg

During the respective due diligence audit on site, performed by experts from CyPlus and Evonik Services (March 13, 2017), the auditors audited (among others) Transport Practice 3.1 intensively and in full. It was found, that if any emergency situation on board of an ocean vessel comes up, the response is dependent on the position of the ship: when berthing they are mandated by the respective port authorities, when afloat they are mandated by the master of the vessel. To manage those cases of emergency at sea, the Hamburg Süd Company has worked out a 24 hours/7 days Contingency Manual (Current Jan. 2013) on Emergency Preparedness and Response. This document is an integral part of the Safety Management System (SMS) of the ocean carrier. The result of this inspection is available in the due diligence report. The auditors stated "...Hamburg Süd is obviously an excellent ocean carrier meeting all legal and even stricter additional requirements for the shipment of cyanide containers. Based on the documents reviewed and interviews performed during this due diligence inspection, it was found that Hamburg Süd has sufficient resources, equipment, IT systems, management systems, and well skilled and trained staff to safely handle dangerous cargo and to prevent and response to incident involving them....". The attachments of the due diligence report support this statement. The due diligence report is available for ICMC auditor's evaluation.

CyPlus, Transportation Route No. 1

Signature Lead Auditor

# Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response ☑ in full compliance with This operation is ☐ in substantial compliance with Transport Practice 3.2 ☐ not in compliance with

Summarize the basis for this Finding:

The transporter provides emergency response training for the appropriate personnel. The training matrix requires different kinds of trainings. Driver's training on how to act and react as well as information on the product Cyanide etc. is performed. Those trainings are held by different qualified / experienced parties. The scheduling is following the training concept, defined in the ADR regulation.

The truck drivers receive initial and periodic refresher training in emergency response procedures. CTS and CyPlus have set up a system of initial and refresher trainings for the "Spedition Frisch" drivers, taking into account the individual person's training and experience history.

The transporter provides emergency response training on different levels. Knowledge and capability of the management is assured by training courses and practical exercises. In fact, all drivers handling dangerous goods have to pass the mandatory training for the transport of packaged dangerous goods according to the ADR regulation and have to maintain the certificate, which has to be renewed each and every five years. This training covers emergency response activities. The descriptions of the specific emergency response duties are stated in the "Instruction in Writing" (transport emergency cards) in section 5.4.3 of the ADR regulations. All cyanide transportation trucks are equipped with a spill kit to respond to emergencies. All trucks are equipped with fire extinguisher, ladder and spill response material. Completeness is controlled in accordance to the daily driver vehicle inspection report or when entering the Wesseling site to assure its availability. These statements are valid for all contractors which are involved in the whole transportation process.

## Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting ☑ in full compliance with This operation is ☐ in substantial compliance with Transport Practice 3.3 ☐ not in compliance with

Summarize the basis for this Finding:

The CyPlus emergency notification system includes a communication process description that safeguards the full information of all interested and acting parties in case of emergency. This includes —among other aspects- listings of the members of the internal response team members (including the manufacturer CyPlus as well as the included supply chain partners), and those of external emergency responders (police, fire brigades, hospitals, authorities, TUIS emergency organization). The emergency notification and reporting procedures are also included within the Evonik's internal emergency notification structure. The respective documentation is under control of CyPlus' HSE system. Under this regulation the control of the above mentioned documentation is executed and thus it is safeguarded that each involved party always holds the current / actual version of the documentation. This is checked during internal audits.

The internal procedures of TFG, CTS Terminal, Talke and CyPlus define the emergency response activities. These procedures refer among others to TUIS and CEFIC. Internal and external emergency notification as well as reporting procedures are included in the TUIS process. Internal emergency response plans are kept current by periodical checks.

CyPlus, Transportation Route No. 1

Signature Lead Auditor Dr. Steinweg

## Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals in full compliance with This operation is in substantial compliance with Transport Practice 3.4 not in compliance with Summarize the basis for this Finding: Descriptions of the specific emergency response duties and responsibilities of personnel are defined in detail. The master definition on how to react is given in CyPlus' ERP. The measurements and actions during a spill event are defined and adviced in detail. The methods to be used to decontaminate the environment/spillage are described, e.g. prevention of spill entry into waterways, sewers, basements, or confined areas. It is also established that chemicals should not be added to water bodies to control the pH or to neutralize cyanide. Additionally, it includes instructions for assessing the impact on surface water bodies and to prevent the population to be poisoned by contaminated water. These instructions are part of the emergency response instructions to cyanide spills with contact to water and water bodies. The procedure prohibits the use of sodium hypochlorite and hydrogen peroxide to treat cyanide that has been released into surface water. All remediation activities are done by external contractors but initiated and controlled by the local authorities. The remediation procedures for cyanide release are communicated to the external contractors that undertake the remediation activity. TUIS, Evonik and the contracted companies make sure that the right and correct steps and activities are done and that the authorities are involved. This includes that the response companies do not use any sodium hypochlorite, ferrous sulphate and hydrogen peroxide. Finally it's not intended to do any remediation activities by transporters or their truck drivers. In developed countries, e.g. Western Europe, it is usual that the national professional emergency response parties (police, TUIS-organized professional fire brigades, THW "Technisches Hilfswerk" (technical assistance organisation), Emergency doctor in ambulance cars, Federal Office of Civil Protection and Disaster Assistance etc.) are taking over the responsibility as soon as possible. The driver's task (if not injured in the incident) is to be available for information (e.g. handing over MSDS or other transportrelated information). The transporter's task is the same. Remediation activities or clean-up of releases will be the professional emergency response party's task (often / mostly professional fire brigade). Transport Practice 3.5: Periodically evaluate response procedures and capabilities and revise them as needed in full compliance with This operation is in substantial compliance with **Transport Practice 3.5** not in compliance with

Summarize the basis for this Finding:

The necessary provisions for periodically reviewing and evaluating CyPlus' ERP are available. In conjunction with a potential adjustment or change all other corresponding response procedures and requirements must be adjusted. In case of any event, the entry / change in the folder of documents would –if necessary- drive a change in the ER-plans of the different parties within the supply chain.

Provisions for periodically conducting mock emergency drills are made. The respective drills are defined in CyPlus' ERP. The training concept intends to involve all relevant parties, as far as it is possible. It's intended and scheduled to have mock drills minimum once per year.

Signature Lead Auditor
Dr Steinweg

CyPlus, Transportation Route No. 1

The revision system of the CyPlus' ERP is defined. Revisions or recommendations are to be implemented as appropriate. It is also planned to have a routine management review respectively a performance evaluation of the plan itself.

As described in summary of Transport Practice 3.1 it was found, that each partner along the supply chain has maintained his own ERP, either established because of legal / authority requirements and/or established because of CyPlus's ICMC requirements. Due diligence audits or the ICMC audit found frequencies of review / updating of 12 – 24 months – or driven by event.

Finally: the emergency response plans and the corresponding procedures are reviewed and evaluated periodically. Mock emergency drills are conducted all over the involved companies. Outdoor field tests are performed to train emergency response in specific cases (e.g. damage assessment etc.). Even the TUIS processes are trained and drilled periodically.

CyPlus, Transportation Route No. 1

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## **B)** RAIL TRANSPORTATION:

After delivering the container by truck to the Cologne-Niehl terminal and checking the corresponding documents the container is lifted from the chassis onto the railroad car. Even though there's a dedicated area for dangerous goods, it is not allowed to keep cyanide containers overnight. To handle leakages or spills in a safe manner a specific containment to rescue damaged containers is provided. The CTS's ERP including CyPlus's ERP requirements emergency response plan is available to the terminal operators.

The railway shipment to Bremerhaven or Hamburg terminal is provided by TFG Transfracht. The route of the train is following an elaborated schedule with dedicated passages and defined times. It is possible to monitor the exact route of the train when passing specific checkpoints. In cases of emergency the train conductor has to inform the next control room in charge; they will release the emergency response plan. In cooperation with police, fire-brigade and TUIS organization the emergency response plan should run according to schedule.

The information and response scheme in case of rail accidents with dangerous goods is determined per flowchart and is running through TUIS before informing the Evonik headquarter. All involved parties are trained well in a regular manner. The final destination of the rail transport (without any stopover) are the container terminals at Bremerhaven or Hamburg, respectively. The different terminal operating companies are dedicated terminals for the utilized shipping lines (MSC, Hapag Lloyd, Hamburg Süd). All the container terminals at the ports of Bremerhaven and Hamburg are operating a full implemented management system.

The container terminals at Bremerhaven and Hamburg are operating in compliance with the ISPS-Code security regulations (International Ships and Port Security Code). Among others, the following security measures and proceedings are obligatory:

- Access control of terminal personnel (ID card, turnstiles)
- Control of the access points that are secured with fences, cameras, motion sensors
- Permanent monitoring of the terminal
- Monitoring staff has to check persons and inspect luggage and vehicles
- Staff members always wear personal protection equipment (safety helmet, safety jacket and safety shoes)
- All movements to and on the terminal without announcement are generally forbidden
- No access to the terminal, including the buildings
- Checking ship's personnel for identity and corresponding vessel.

During a due diligence audit on a main TFG Transfracht site (Mainz, Germany), performed by experts from CyPlus and Evonik Services (March 21, 2017), the auditors audited the relevant Transport Practices of the ICMC Code. The results were laid down in the due diligence report "Bericht zum ICMC due diligence Überwachungsaudit", dated April 10, 2017. The auditors stated full compliance with respective requirements. In general a deep satisfaction with respect to the long lasting cooperation was expressed.

Signature Lead Auditor Dr. Steinweg

CyPlus, Transportation Route No. 1

## C) SEA TRANSPORTATION

## ADDITIONAL COMMENTS ON SEA TRANSPORTATION

I. Port of entry "Mazatlan/Mexico" and "Guaymas/Mexico"

The sea passage from Hamburg to Mazatlan/Mexico and Guaymas/Mexico is operated by the ocean carrier Hapag Lloyd. For this reason Hapag Lloyd has to fulfil different requirements which are based on international or maritime regulations to determine aspects such as the technical equipment of ships, the pollution of the sea or the packaging and stowing of dangerous goods. For example:

- ISPS Code (International Ships and Port Security Code)
- SOLAS (International Convention for the Safety of Life at Sea)
- MARPOL (Intaernational Convention for the Prevention of Pollution from Ships)
- IMDG Code (International Maritime Dangerous Goods Code)
- ISM Code (International Safety Management Code)

Hapag Lloyd operates a container booking and tracking system (FIS, Freight Information System). This is also the management tool for handling the dangerous goods cargo to control the stowage position of the hazardous goods containers. FIS is running worldwide at all Hapag Lloyd offices and agencies as a unique system to control the processes; deviations are impossible, user authorization is defined. Nevertheless, and in accordance to the remarks of the Hapag Lloyd management, the port of Mazatlan is supposed to be in very good condition and well equipped to handle the containers with sodium cyanide. The further transportation of this freight is not part of this audit.

## II. Port of entry "Pendik/Turkey" and "Izmir/Turkey"

The sea passage from Bremerhaven or Hamburg to Izmir/Turkey and Pendik/Turkey is operated by the ocean carrier MSC. For this reason MSC has to fulfil different requirements which are based on international or maritime regulations to determine aspects such as the technical equipment of ships, the pollution of the sea or the packaging and stowing of dangerous goods. For example:

- ISPS Code (International Ships and Port Security Code)
- SOLAS (International Convention for the Safety of Life at Sea)
- MARPOL (International Convention for the Prevention of Pollution from Ships)
- IMDG Code (International Maritime Dangerous Goods Code)
- ISM Code (International Safety Management Code).

The management of all these requirements are based on data control and operational control. In certain cases MSC is obtaining specific documents of compliance, e.g. to state that MSC has implemented a safety management system that complies with the requirements of the ISM code, issued under the provisions of the SOLAS convention. The port of Izmir is in very good condition and well equipped to handle the containers with sodium cyanide. This was found during an ICMC due diligence audit in 2012 (and followed up), performed by the same auditor who has also signed the present report. The further transportation of this freight is not part of this audit.

Signature Lead Auditor Dr. Steinweg

CyPlus, Transportation Route No. 1

## III. Port of entry "Kemi / Finland"

The sea passage from Hamburg to Kemi / Finland is operated by the ocean carrier Hapag Lloyd. For this reason Hapag Lloyd has to fulfil different requirements which are based on international or maritime regulations to determine aspects such as the technical equipment of ships, the pollution of the sea or the packaging and stowing of dangerous goods. For example:

- ISPS Code (International Ships and Port Security Code)
- SOLAS (International Convention for the Safety of Life at Sea)
- MARPOL (Intaernational Convention for the Prevention of Pollution from Ships)
- IMDG Code (International Maritime Dangerous Goods Code)
- ISM Code (International Safety Management Code)

Hapag Lloyd operates a container booking and tracking system (FIS, Freight Information System). This is also the management tool for handling the dangerous goods cargo to control the stowage position of the hazardous goods containers. FIS is running worldwide at all Hapag Lloyd offices and agencies as a unique system to control the processes; deviations are impossible, user authorization is defined. Nevertheless, and in accordance to the remarks of the Hapag Lloyd management, the port of Kemi is supposed to be in very good condition and well equipped to handle the containers with sodium cyanide. Kemi port will undergo an ICMC audit in week 22, 2017, done by the same auditor who has also signed the present report. The further transportation of this freight is not part of this audit.

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