# HAUKES N.V

# CYANIDE TRANSPORTATION SUMMARY AUDIT REPORT

# FOR THE

# INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

**MAY 2023** 

This report was written by: Bruno Pizzorni – Lead Auditor



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## **Operation General Information**

Transport Operation:	Haukes N.V.
Transport Owner	Haukes N.V.
Transport Operator:	Haukes N.V.
Name of Responsible Manager:	Jeroen Haukes Email: jhaukes@haukesnv.com
Address and Contact Information:	Martin Luther Kingweg 701, Wanica, Suriname Telephone: (+597) 531986

# Location and Description of the Operation

Haukes N.V. (Haukes) is a transport and construction company active on the Surinamese market since 1991. Since then they have been very active in the various disciplines of transport, civil construction, bush clearing, equipment rental and general services. Haukes holds certification in the following International Organization for Standardization (ISO) management systems: ISO 9001:2015 Quality Management, ISO 14001:2015 Environmental Management and ISO 45001:2018 Occupational Health and Safety Management.

Haukes business scope includes road transport, contracting and execution of mining related activities, land development, civil construction, hauling of ore, in-house maintenance and repair of mobile equipment fleet, among others.

The company operates a modern fleet of heavy hauling equipment, which are updated on a regular basis so they meet the customers' requirements and needs. Haukes trains drivers in rigging and signaling, defensive driving, handling of dangerous goods and other specialized training. Drivers are certified in dealing with hazardous materials.

Haukes has a broad range of transport services, including raw materials (e.g. ore, sand, rock), diesel fuel, regular cargo in sea containers and isotanks, oversized cargo and hazardous goods (e.g. lime, cyanide). All trucks are equipped with GPS tracking for position, safety and efficiency control.

Haukes has been transporting sodium cyanide from the Surinamese Port of Paramaribo to the IAMGOLD Rosebel Mine in Central Suriname. In 2016, Haukes N.V. began transportation of sodium cyanide briquettes from the Surinamese Port of Moengo to the Newmont Surgold Mine at Merian.

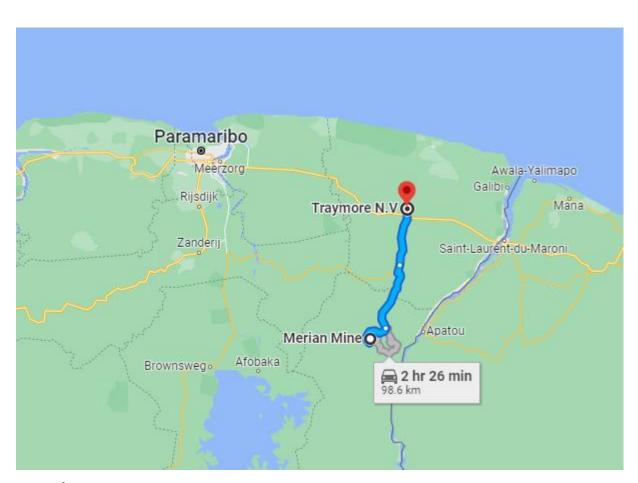
Haukes uses only heavy duty diesel tractors and trailers for cyanide transport. All of its tractors are satellite equipped to provide real time tracking of shipments from pick up at the port to delivery at



the mine. Haukes cyanide transportation activities are based at its Wanica facility, which includes transporting sodium cyanide briquettes in 20 foot sea containers and isotanks from the ports of Moengo and Paramaribo to gold mines in the Eastern and Central areas of the country.

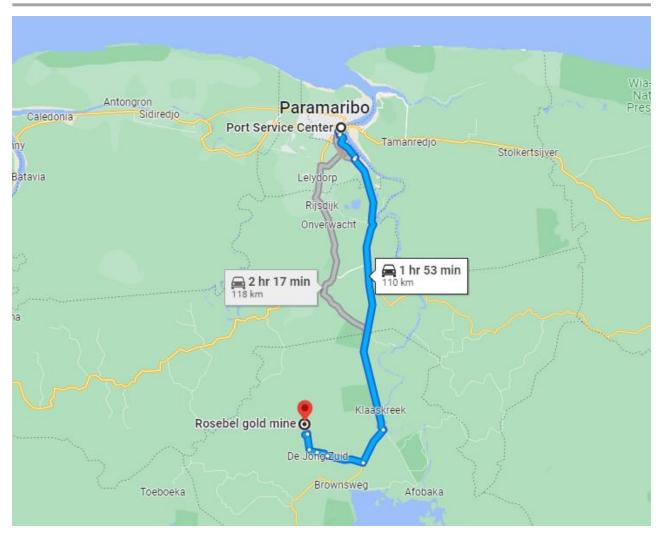
Haukes has selected and evaluated a primary route to each consignee. Details of the evaluation process are provided in this report. Because of the presently served mines' remote locations, with little exception, there is only one route. The route to the Newmont Surgold Merian mine is two-lane dirt, while the road to the lamgold Rosebel Mine is mostly asphalt.

Haukes Health, Safety and Environmental (HSE) Department and Newmont Surgold Merian Mine staff have provided cyanide handling and emergency preparedness and response training to Haukes drivers on the cyanide routes.



**Route from Moengo Port to Merian Mine** 





Route from Paramaribo Port to Rosebel gold mine





## **Auditor's Finding**

The International Cyanide Management Institute (ICMI) approved Auditor verified that Haukes N.V. transport operation is in substantial compliance with ICMI Cyanide Code requirements for Transport operations.

This operation was found in substantial compliance with the Cyanide Code based on the audit findings discussed in this report under the following Transport Practices: 3.2 and 3.5.

The Corrective Action Plan (CAP) to bring this operation found in substantial compliance into full compliance is enclosed with the Summary Audit Report. The operation must fully implement the plan within one year of the date of this 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 Institute for Cyanide Transportation Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

### Auditor's Information

Audit Company:	Cyanide Auditors S.A.
Lead Auditor and Transportation Technical Auditor:	Bruno Pizzorni E-mail: bpizzorni@cyanideauditor.com
Date(s) of Audit:	January 25 and 26, 2023



# **Cyanide Transportation Verification Protocol**

#### **Principle 1 | TRANSPORT**

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

Transport Practice 1.1

Select cyanide transport routes to minimize the potential for accidents and releases.

	$\checkmark$	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 1.1
		not in compliance with	

Haukes has selected and evaluated a primary route to each consignee. Because of the presently served mines' remote locations, with little exception, there is only one route. The route from Moengo Port to the Newmont Surgold Merian mine is two-lane dirt, while the road from Paramaribo Port to the lamgold Rosebel Mine is mostly asphalt.

The HSECQ (Health, Safety, Environmental, Community and Quality) Department maintains a Risk Register for Transport Cyanide in an Excel worksheet, to manage risks of cyanide transportation along each of its routes. Because of the remote locations of mines presently served by Haukes, there are no alternative routes to be assessed. However, the assessments performed consider risk associated with population density, infrastructure, road construction and condition, pitch and grade, proximity of water bodies and prevalence of fog and other visibility issues.

The Merian route passes through a sparsely populated sector of Moengo then only passes through two other small villages where a very few residences are found on both sides of the road. Convoys transporting sodium cyanide report road conditions to Haukes management. If necessary, Haukes can dispatch road repair equipment to address reported issues on the Merian route or alert the Rosebel Mine for issues along that route. For the Merian route, Haukes' responsibility includes repairs to bridges and culverts. Haukes, as construction company, has corrected pitch and grade on the Merian Route to reduce risk. The Risk Register indicates that Merian route crosses no major bodies of water, only a few small creeks. The Rosebel route is similar, except that it crosses a small river and notes a few roadside ponds.

Haukes NV maintains bridges and culverts along the Merian route, and has built guardrails on these structures, as well as alongside speed bumps to prevent accidents which could result in product spills into water. No areas along the routes are particularly prone to fog, especially due to convoys not leaving ports early in the morning. But anytime fog is encountered, the lead vehicle will warn the rest of the convoy. The convoy will pull off the road and stop if conditions warrant, as



determined by the lead vehicle. A much more significant visibility issue lies with dust from the Merian route's unpaved road during dry weather. Haukes addresses this through extensive radio contact among vehicles in the convoys.

The routes are re-evaluated when driving conditions change, or when driver feedback suggests that this is necessary. Periodically, the Superintended of Transport and Head of HSECQ, along with a driver go for the assessment through the road, taking notes and pictures.

Records were available to demonstrate that both current routes were assessed and approved during this certification period. The auditor reviewed updated Risk Register for Merian and Rosebel gold mines updated to March 2022.

By mean of the Risk Registers, Haukes evaluates the risks to manage cyanide transportation along each of its routes and states the necessary measures to manage these risks. It includes a risk rating matrix. Risks related to pitch and grade of roads, traffic congestion, social disturbs, security issues and proximity to water bodies were considered during the development of the routes. Mine customer input is considered when routes are determined.

Appropriate risk mitigation measures have been established in the Risk Registers including limiting the transportation activities to daytime only, driver-rest period prior to starting a cyanide transportation operation.

Haukes periodically reevaluates the routes used for cyanide transport to confirm that no new risks have developed evaluated, in a process whereby the driver and the escort leader report on route conditions to the Transportation Superintendent and to the Head of HSECQ, who will evaluate the new condition. There are periodic inspection of the routes, and also annually, according to the company's ISO management systems requirements – Haukes is certified in ISO 9001:2015 Quality Management, ISO 14001:2015 Environmental Management and ISO 45001:2018 Occupational Health and Safety Management.

Interviews with drivers and management personnel were used to confirm that feedback about driving conditions is communicated. Risk Register versions performed during this certification period were available for the auditor's review.

The transporter use the Risk Register to document the measures taken to address the risks identified with the selected routes. Then, by mean of Power Point presentations train the drivers, summarizing the necessary control measures that have been developed to address risks along the selected route. Features such as sharp turns, areas of proximity to surface water and areas near population are taken into account. The auditor reviewed the Excel Risk Register worksheets, the drivers training material and assistance records that addresses management of risks along the selected route.

Haukes seeks input in the selection of routes and development of risk management measures meeting the District Commissioners through which transportation routes pass, through the National Institute for Environmental Development (NIMOS) and from the mine sites. Also has opportunities to receive this input during the Hazardous Material Training sessions where involves



the ports stevedoring crews, fire departments, medical clinics and police departments.

Local population I the route to Merian mine has been included in the mock emergency drills and training for emergency response. Records were available to demonstrate that they meet with local stakeholders where they have opportunities to seek feedback on the route risks to plan the cyanide transport operations.

Cyanide transport is in convoys leaded by a pickup truck with a police officer and Haukes Safety Officer, then follows 2 or 3 trucks carrying sodium cyanide in sea container or isotanks. Behind travels another truck carrying a 20 foot sea container with emergency response material and equipment for emergency response to hazardous materials (HAZMAT) and closing the convoy is another pickup truck with the Transport Superintendent with an HSEQ Supervisor with a sign of Danger Cyanide.

Haukes has implemented the Standard Operating Procedure (SOP) PRO-2/SOP23-2022v1 Transportation of Containers with Cyanide for Rosebel Goldmines, to organize and guiding a convoy for cyanide transport, from Paramaribo Port facilities to Rosebel mine site and ensure that the transport is done in a safe and efficient manner, according to the rules specified in this document. In the same way, has the SOP PRO-2/SOP07-2022v2 Transportation of ISO tanks with Cyanide for Newmont

The SOPs stablish cyanide transportation must be performed during daylight hours, to have pre trip meetings to evaluate any risk due to weather or road conditions, among others. The talks must be attended by all the drivers and support staff.

The transporter does not contract other entities to conduct any of the activities in Transport Practice 1.1. Haukes operates with its own trucks and employees to transport cyanide.

#### 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.

	✓	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 1.2
		not in compliance with	

Haukes was able to demonstrate that all personnel operating its cyanide transport vehicles, such as trucks, have been properly trained and had valid license to operate this equipment. The auditor reviewed the transporter's documentation to verify that its drivers are properly trained and licensed to operate its transport vehicles.

All Haukes drivers operating transport vehicles maintain a valid Truck Drivers' License (for trucks greater than 3,500 kg capacity) and have received a certificate for Good Behavior from their local



District Commissioner verifying that they have violated no law. All drivers are subject to Haukes Drug and Alcohol Program and background investigations, including the Good Behavior Statement.

All drivers operating cyanide transport equipment receives initial training, refresher and on-going training to perform their assigned tasks in a safe and environmentally sound manner. Training is provided by external contractor Heavy Construction Academy (HCA) Suriname. Around 60 drivers are trained in HAZMAT, a 48 hour course which includes cyanide specific issues; refresher training is every 2 or 3 years. Drivers also receive defensive driving training among others, as first aids; basic operator safety; machine operator; and cyanide awareness training, this last provided through videos by Merian and Rosemary gold mines.

The auditor reviewed training and test records over the last three years, to verify that all drivers who have transported cyanide have completed the training and passed the test. The auditor reviewed the training material, online access for the trainees and assistance records, kept by Haukes Human Resources Department.

#### Transport Practice 1.3

Ensure that transport equipment is suitable for the cyanide shipment.

	✓	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 1.3
		not in compliance with	

Haukes uses only equipment designed and maintained to operate within the loads it is handling. The transporter was able to demonstrate with records documenting the load-bearing capacities of its transport equipment, its maximum cyanide load weight available and having in place appropriate specifications for equipment and parts that may be replaced during maintenance. The transporter performs bimonthly inspections to its trucks and trailers and periodically maintenance activities specific to ensure that its transport equipment retains a load-bearing capacity adequate for the anticipated load.

Haukes transports cyanide in Iveco 420 HP (horsepower) trucks, with hauling capacity on 60 tons trailers based cargo capacity. In addition to the operator's pre trips inspections and the preventive maintenance program, Haukes Maintenance Department performs bimonthly inspections using a complete vehicle checklist form. Trucks are repaired in Haukes own shops. Trailer's platforms maintenance and repairs is performed by Traverco company, a third party shop.

In addition to ensuring that the manufacturer's rating of the loading capacity of transport equipment is adequate, the transporter also verifies that the load bearing capacity of its equipment is adequate by inspecting and testing its equipment to identify signs of stress or overloading. This is done as part of the transporter's routine inspection and preventive maintenance inspection



program.

Equipment was found to be in particularly good condition and was deemed suitable for delivering solid cyanide. The tractors and trailers are enhanced with upgraded equipment and heavy-duty frames to ensure safe travel over rough terrain to the mine sites. Tires are replaced on a frequent basis and regular maintenance activities and inspections are conducted.

The auditor reviewed the trucks and trailers inspection records which includes checking for platforms twist locks, top deck, king pin, chassis structure, axis and wheels, among others. Reviewed work orders and invoices for the work done as grease points, loose things, lights, brakes and suspension. The interviewed with maintenance personnel and equipment operators confirming compliance with this provision.

The cyanide shipper performs all cyanide loading according to its own procedures. Product weights are specified on shipping papers. Haukes N.V. supervisors check the weights and verify conformance with Suriname government axle-weight requirements. Procedures specify total weight of tractor, trailer and load at 50 tons (two isotanks on one trailer). The limit is set to comply with the 8 ton/axle government imposed weight limit.

The Cyanide Transport Manual establishes that each trailer will be loaded with only one ISO tank or a 20-foot container and that each truck can only haul one platform trailer. The convoy leader verifies this.

#### **Transport Practice 1.4**

Develop and implement a safety program for transport of cyanide.

	$\checkmark$	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 1.4
		not in compliance with	

Haukes has cyanide transport and inspection procedures to ensure that the integrity of cyanide packaging is maintained during shipment. Loading and unloading of the cargo is not the transporter's responsibility.

The auditor reviewed the Standard Operating Procedures (SOP) PRO-2/SOP23-2022v1 Transportation of Containers with Cyanide for Rosebel Goldmines, and SOP PRO-2/SOP07-2022v2 Transportation of ISO tanks with Cyanide for Newmont, both dated October 2022. These procedures call for inspections to ensure packaging integrity during transport of cyanide, including blocking and bracing techniques, and pre trip shipments inspections. Drivers inspect the exteriors of isotanks and sea containers for any sign of damage or leaking product before leaving the ports.

The auditor reviewed the inspection records verifying these are performed, with each record signed



off by a Transportation Foreman. Transportation procedures then minimize the potential for damage to packaging due to load shifting. Ports operators perform all cargo loads; mine personnel unload the shipment.

Placards are installed by the shipper's personnel and a visual inspection is performed by Haukes drivers. Sea containers and isotanks are marked on all four sides with proper placards and other signage identifying the U.S. Department of Transportation (DOT) Hazard Class 6. The number UN 1689 is displayed in lieu of the words "Toxic" or "poison", and Marine Pollutant markings are also applied by the shipper. Newmont personnel at the Port of Moengo and lamgold personnel at the Port of Paramaribo store extra placards in case the originals have become dislodged or unreadable.

The transporter has implemented a safety program, maintenance activities and procedures for cyanide transportation. These reasonably addresses each identified issue as necessary to ensure the safe transport of cyanide and considers the specific circumstances presented by the transport route.

Records were available to demonstrate that inspections prior to cyanide shipments is being performed. Trucks, and trailers are inspected prior to shipment. Haukes drivers complete a pre-trip inspection before leaving the ports. The checklist ensures drivers inspect each load for any evidence of powder, unsealed valves, hatches and locks, according to its procedures. A convoy mechanic also checks the serviceability and integrity of transport trucks and trailers, including the twist locks securing containers to trailers, according to the checklist. Route specific checklists ensure these items are inspected at every checkpoint along each route. Records were sampled during this visit verifying inspections taking place consistently over the three year period.

The preventive maintenance (PM) program includes monthly inspections and PM for 30,000 km, 60,000 km, 90,000 km and 120,000 km, as well as appropriate specifications for replacement equipment and parts. Trailers are inspected twice per month, or when they have just completed a cyanide transport series. Trailers follow a heavy equipment PM schedule calculated based on kilometers travelled. A device on each trailer measures kilometers travelled. Inspection schedule compliance is maintained through frequent communication between Maintenance and Operations. The Auditor verified that tractors and trailers had been maintained according to schedule over the past three year period. Maintenance records for the recertification period were found to be complete. Samples of trucks and trailers maintenance records were reviewed.

Limitations on drivers' hours is controlled by mean of the Attendance Management Program, where a software registers the days worked in a row. According to state in the Fatigue Management Plan, where applicable a work schedule for driver will be implemented of 4 days' work and 2 days' rest, not exceeding 12 hours a day, in order to keep the work hours as low as possible.

To prevent cyanide loads from shifting, the shipper loads the sea containers with Intermediate Bulk Containers (IBC) and blocks and & braces each load to prevent shifting during ocean transit. The shipper also loads briquettes in bulk into isotanks. On loading the shipment at the ports, Haukes secures it to heavy duty flatbed trailers using twist locks. The cyanide transport SOP's states that isotanks and containers must be anchored to the chassis using twist locks. According to



interviews with Haukes personnel, standard weights are loaded, and standard blocking and bracing configurations is used. Shipping paperwork was reviewed during the audit and showed the amount of cyanide shipped and the weight of the cargo.

The transport procedures state that cyanide transportation can be modified or suspended if conditions such as severe weather or civil unrest are encountered, by joint decision of the Convoy Leader and Convoy Foreman. Onboard communication systems in all tractors provide a mechanism for alerting drivers and communication regarding alteration of pre-planned activities.

Weather conditions are constantly monitored, and deliveries are postponed if a route is considered to be unsafe. Prior to departure, the Convoy Leader assesses the weather conditions and gets information about political issues on the road; if he deems it necessary, he can postpone the trip.

Alcohol & Drug test, states random tests, after an accident or if suspicious about it. On hiring a new employee must pass the drug test. we saw examples from July (drugs & alcohol most of the times), November and December 2022

Haukes maintains a Drug and Alcohol Prohibition Policy and Program. The program includes drug screening pre-employment, random, after an accident or if reasonable suspicious about it. The Auditor reviewed a copy of this policy and saw examples from drugs and alcohol tests performed during this certification period.

The transporter retains all documents to support that the above activities are being done, as inspection and preventive maintenance records, including histories on each piece of equipment; records relating to the Alcohol & Controlled Substance Testing Program, and consent forms, are maintained in personnel files at the Haukes headquarters; drivers' hours of service records and pretrip checklists. All records reviewed by the auditor were found to be complete.

#### Transport Practice 1.5

Follow international standards for transportation of cyanide by sea.

	$\checkmark$	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 1.5
		not in compliance with	

No shipments are made by sea on this transportation operation. Haukes receives the cyanide shipments upon release of the cargo by the port authorities. The scope of this audit is for the ground transportation operations performed by Haukes N.V. from Surinam ports to the mines site.



#### Transport Practice 1.6

Track cyanide shipments to prevent losses during transport.

	✓	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 1.6
		not in compliance with	

The auditor verified that Haukes vehicles have two-way radios and GPS (Global Positional System) devices installed in the trucks, to the driver and convoy personnel carry cellphones as communications equipment, and the Convoy Leader has a satellite telephone. Drivers have the company's emergency numbers on their cell phones. The Convoy Leader carries a complete contact list is in the Emergency Response Plan, with pre-determined contact information of the appropriate individuals, organizations, and entities along the route, as necessary to mobilize the appropriate response capabilities. The auditor confirmed also that the cyanide transport procedures are being implemented reviewing the pre-trip checklist records requiring to check communications equipment for each shipment.

All communication equipment available is tested periodically. The transport procedures address the requirement for such testing to ensure that it is done. Transport procedures require convoy vehicle drivers to test their radios before leaving the ports and keep them in nearly constant use during the trip to the mines. If any equipment malfunctions, Operations notifies Information Technology, who immediately arranges for a repair. The contract with the radio supplier specifies repair or replacement within 24 hours. Each convoy carries a spare radio, which can be used in the interim. Procedures require that the Convoy Leader tests the satellite telephone at each scheduled check point. Records of completed checklists were available demonstrating that the procedures are implemented and include a fully charged and tested mobile phone on the pre-trip checklist.

Blackout areas for radio communications have been identified for each route. Haukes has a contingency plan if radio communication is necessary in the blackout area. The Convoy Leader possesses a satellite phone which can be used to communicate convoy position and emergency situations to the Moengo Base Camp, which in turn communicates with the mine and the Haukes headquarters.

The transporter has GPS devices installed in all its trucks transporting cyanide, to track its progress, as required in the transport procedures. Evidence of compliance was by interviews with Haukes Fleet Controller who showed the auditor how they track cyanide convoys through the software provided by Neyval Innovations N.V contractor. Although in occasion of the audit visit to the site there was no cyanide convoy en route, the auditor was able to monitor other shipments as well as review the data saved regarding the latest cyanide shipments made to the mines, checking that can track speed, where they are at the moment and duration of the stops, among others.



Haukes picks up sea containers and isotanks fully loaded and sealed, at the port locations and delivers them to the mines directly. Seal numbers are recorded on shipping papers and drivers verify that the seals are intact and match those listed on the shipping papers, at the load pick-up point. The shipping document or manifest serves as a chain of custody document.

The shipping records indicate the number of packages and amount of material in transit. The Convoy Leader carries this documentation to the mine and upon arriving, the client review the seals and shipping papers to confirm quantities. The cyanide manufacturer dispatches all shipments with Safety Data Sheet (SDS) that are appropriate for the type of sodium cyanide being shipped (solid).

#### **Principle 2 | INTERIM STORAGE**

Design, construct and operate cyanide interim storage sites to prevent releases and exposures.

Transport Practice 2.1

Store cyanide in a manner that minimizes the potential for accidental releases.

	<b>√</b>	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 2.1
		not in compliance with	

Interim storage activities in this transportation operation, as defined by ICMI, do not take place at Haukes transport operation. Haukes does not store any sodium cyanide along the route between the ports and the mines.



#### **Principle 3 | EMERGENCY RESPONSE**

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

#### Transport Practice 3.1

Prepare detailed emergency response plans for potential cyanide releases.

	✓	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 3.1
		not in compliance with	

Haukes ha as the written plan ERP\_06 Emergency Response Plan (ERP) Cyanide Transport from Moengo to Newmont Mine and the Standard Operating Procedures (SOP) PRO-2/SOP07-2022 Transportation of Iso Tanks with Sodium Cyanide for Newmont Gold Corporation , SOP Procedure for the Transportation of Containers with Cyanide IAMGOLD and the SOP PRO-2/SOP23-2022 Transportation of Containers with Cyanide for Rosebel Goldmines, Site for responding to emergencies that may occur during its cyanide transport activities, directing Haukes' Emergency Response Team in using its capabilities, training, equipment, and resources to manage a release of sodium cyanide briquettes onto land and into wet fields. The ERP and SOPs include contact information to notify local authorities, outside emergency response providers, and company operations and safety management.

The ERP and SOPs state what actions are to be taken in the event of a cyanide incident during transit. The documents were found to be appropriate for the sodium cyanide transport operations. Emergency scenarios have been identified as result of the route assessment matrix and emergency response actions have been addressed.

The ERP and SOPs consider the physical and chemical form of the cyanide, with detailed explanation of the sodium cyanide characteristics and toxicity based on the safety data sheet (SDS). Emergency response procedures address actions to be taken in response to this type of sodium cyanide spills. The SDS for solid sodium cyanide is attached to the ERP and SOPs to ensure that chemical-specific information is readily available at all times.

The emergency scenarios, the general emergency response instruction, and the scenario-specific instructions consider the solid state of the cyanide.

The ERP and SOPs consider truck transport. The emergency response actions in the ERP and SOPs are appropriate for this type of product and method of transportation. The documents provide information regarding the packaging and transportation characteristics of the product, the container, iso tank and the transportation unit. All emergency scenarios developed are related to ground transportation: incidents without injuries, mechanicals problems, collision, rollover with



and without spill, fire during transportation, fall of the load and collision with hurt persons.

The ERP and SOPs consider all aspects of the transport infrastructure as condition of the road. The emergency response actions in these documents are appropriate for the roads and transport infrastructure of Suriname. They include the emergency scenarios developed from the routes assessment and also identify the areas where the different scenarios are more likely to take place.

The documents consider the design of the transport vehicle with trucks and trailers, including a detailed description of the vehicle. The emergency response actions in the ERP and SOPs (emergency response procedures) are appropriate for this type of transport vehicle.

During the audit documents review, Haukes was required to include in the ERP descriptions of emergency response actions, as appropriate for the anticipated emergency situations of cyanide spills over dry soil, wet soil, water and to identify a cyanide intoxication also as an emergency scenario.

After the audit, Haukes reviewed the ERP detailing response procedures for sodium cyanide spills to water, including to immediately report authorities to alert downstream populations to avoid using the water. Also detailed procedures to response for situations of cyanide spills over dry soil, wet soil, and cyanide intoxication emergency scenarios. The emergency response information clearly outline the roles and responsibilities of internal responders. The documentation was found to be acceptable for this type of operation.

The auditor found the roles of external responders included in the ERP as the mine, medical services, police and fight fighters were not clearly identified in the emergency response procedures.

After the audit Haukes reviewed its emergency response procedures clarifying the responsibilities of the mine, the outside emergency response organizations including local police and fire departments, as well as emergency medical services, such as ground and air ambulances. The documents also stipulate that police officers in the convoy will provide traffic control and restrict access to the area. Emergency medical personnel would provide triage and transport for injured individuals. The emergency response and clean-up services defer to Haukes Environmental, Health & Safety Team for instructions.

#### Transport Practice 3.2

Designa	te appropriat	te response	personnel (	and commit	necessary	resources j	for emergi	ency r	response.
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		in full compliance with	
The operation is	✓	in substantial compliance with	Transport Practice 3.2
		not in compliance with	

The transporter provides initial and periodic refresher training to its personnel with designated responsibilities for responding to emergencies during transport of cyanide. The training address all



anticipated response activities including calling for assistance, use of personal protective equipment and first aid for cyanide exposure. The element of this training is documented in training materials; records including the individuals trained and the nature and dates of training are retained. The auditor reviewed this documentation and interviewed designated response personnel to evaluate compliance with this provision.

During interviews to Haukes personnel involved in the cyanide transport operation, the auditor notice lack of clarity regarding first aids required against cyanide exposures, so the auditor observed this issue requiring Haukes to provide refresher training in cyanide first aids to appropriate personnel. To bring this operation found in substantial compliance into full compliance a Corrective Action Plan (CAP) is enclosed with the Summary Audit Report, where it is stated tis training will be provided in June 2023.

The specific duties and responsibilities of the convoy personnel and emergency response personnel were clearly identified in the procedures, the auditor reviewed the transporter's Plan and procedures to verify that this information was is included, but those of the truck operators were not clearly identified. Haukes was required to clarify this issue.

After the audit, Haukes sent a reviewed version of the ERP, describing the truck drivers' duties and responsibilities as participating in the remediation procedures, following instructions of the emergency response team. No additional information was required to find this Protocol Question in full compliance with the Cyanide Code requirements .

The transporter has a list of the emergency response equipment that must accompany the cyanide load along the transport route. The list is part of the Emergency Response Plan and also is maintained separately as a checklist for inventorying the equipment. The auditor reviewed the transporter's documentation to verify compliance with this provision. The list include equipment accompanying each convoy as well as that in an emergency response trailer stationed at "Highway" or at the Moengo Base Camp to respond to larger spills. The auditor noted that the list of equipment and materials did not include specific equipment to provide first aid in case of cyanide poisoning, such as oxygen bottles, AMBU (airway mask bag unit), antidotes, and water to decontaminate a victim of skin contact with cyanide. The auditor also asked to reconcile the list of response equipment in the ERP with the one used in the Inspection Checklist. After the audit Haukes make the corrections to match both lists.

The auditor reviewed the emergency equipment checklists, finding that the transporter did not have oxygen and an artificial respiration (AMBU), with a pocket mask equipped with a one-way valve. Also, that needed water to decontaminate any potential skin contact with cyanide. To bring this operation found in substantial compliance into full compliance the Corrective Action Plan requires Haukes to have this equipment during the transport operation.

The emergency response equipment identified in the transporter's Plan is being inspected and tested regularly so that it will be available in good working order when needed for use. The auditor required Haukes to stablish the frequency to inspect the emergency response equipment, in a manner which ensures that the inspections and tests will be performed as scheduled and should



retain records for the auditor's review. After the audit Haukes put in writing the practice that it had been carrying out that the frequency of inspection of the equipment should be before each shipment. Emergency equipment is checked as part of the pre-trip inspection process. This practice was confirmed through interview with the workers. The auditor reviewed these records and verified that the equipment was in good working order. No additional information was required to find this Protocol Question in compliance with the Code.

#### **Transport Practice 3.3**

Develop procedures for internal and external emergency notification and reporting.

	$\checkmark$	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 3.3
		not in compliance with	

Haukes has procedures and current contact information for necessary internal notification and external notifications in the event of a cyanide emergency during transport. The auditor reviewed the transporter notification procedure and contact information to verify compliance with this provision. Section 7 of the ERP has a complete emergency contact information detailing name & role, phone and email of Haukes contacts, external responders as police, fire brigade, ambulance and mining client contacts.

Haukes was asked to clarify in the ERP which number and to whom will be the first call for emergency communications. After the audit, the transporter clarified in the ERP first call will be with Haukes base to the Transport Foreman or transport Supervisor at the Transport Office via radio or telephone, to radio 5 channel or phone numbers 110 or 113. The operation's emergency response plan includes procedures and contact information for notifying regulatory agencies, medical facilities and potentially affected communities, as necessary. No additional information was required to find this Protocol Question in full compliance with the Code requirements.

Haukes was required to stablish and to implement that internal and external emergency notification and reporting procedures are kept current and that must be updated when there are changes in the background and form, in terms of procedures, persons, telephone numbers, routes, equipment, methods, or any other consideration that allows more efficiency and effectiveness.

After the audit, the transporter sent the new version of the ERP and the SOP Transportation of Iso Tanks with Sodium Cyanide for Newmont Gold Corporation, stating that all documents related to the transportation of cyanide (procedures, forms and emergency response plan) need to be yearly evaluated and reviewed. Updates need to be documented in the form "Management of Change" and communicated within the whole Transport team. The ERP states Managers and Supervisors have an obligation to ensure that all such plans and procedures are implemented as required and regularly reviewed. No additional information was required to find this Protocol Question in full



compliance with the Code.

During the audit it was found the transporter did not have stablished to notify the International Cyanide Management Institute in the event of a spill or cyanide poisoning or exposure. A cyanide emergency that constitutes a significant cyanide incident, as defined in the Code Definitions and Acronyms document, requires notification to ICMI in accordance with Section VI.A. of the Code Signature and Certification Process and as agreed by the signatory company in the Application Form to become a Signatory to ICMI. After the audit, Haukes included in its ERP, the requirement to report any significant accident with cyanide to the ICMI. The operation has not experienced any cyanide incidents during the full three-year audit cycle, so no such incidents were reported to ICMI. No additional information was required to find this Protocol Question in Full Compliance with the International Cyanide Management Code (ICMC).

#### Transport Practice 3.4

Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

	✓	in full compliance with	
The operation is		in substantial compliance with	Transport Practice 3.4
		not in compliance with	

The transporter will conduct its own remediation actions, therefore has procedures for remediation detailing how activities such as recovery and neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill cleanup debris will be conducted. Haukes ERP and transport procedures address with sufficient detail how this tasks will be performed. If necessary the mine sites would assist Haukes with equipment to perform these activities.

Descriptions of necessary action steps depending on the incident scenario, are clearly outlined in the documents. The ERP includes text that addresses the remediation and neutralization of cyanide solutions. Solid cyanide briquettes would be picked up mechanically and collected in a suitable container (seal in clean, dry, properly labelled drums), also collect the affected soil, any remaining soil will be decontaminated with sodium hypochlorite at 5% concentration (Clorox commercial product), the container will be labeled with "Cyanide briquettes (in solid form) spill" which will not be temporary stored, but immediately transported to mine site by Haukes Hazmat team to a designated area at the mine site for final disposal.

Update has been done in the ERP on page 9 and 10, prohibiting the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide for treating a cyanide spill into surface water. The ERP specifically bans the use of treatment chemicals for spills into surface water.



#### **Transport Practice 3.5**

Periodically evaluate response procedures and capabilities and revise them as needed.

		in full compliance with	
The operation is	✓	in substantial compliance with	Transport Practice 3.5
		not in compliance with	

It is stated in Section 4.5 of the Haukes ERP to review it and the transport procedures every year. These documents will be reviewed, evaluated, and updated as needed to account for changes in potential spill scenarios and necessary response actions that may vary over time such as transport routes, the form of cyanide transported and the types of transport equipment used.

The auditor reviewed these provisions assessing the process and its implementation by reviewing the documentation of the various versions of the Plan and SOPs and through interviews with staff. The plan reviewed was maintained as latest versions and under formal document control. Records were available to show that this is done.

The ERP states to perform annually mock emergency drills, with the purpose of evaluating the effectiveness of the Plan and correcting the anomalies found. The truck transporter has stablished to conduct on an annual basis mock emergency drills that simulate transport-related cyanide exposures and releases so they are better prepared in the event that actual exposures and releases occur. The drills have been evaluated to determine if response procedures are adequate, response equipment is appropriate, and personnel are properly trained. Written documentation of these evaluations has been retained for the past years and used as a basis for whatever changes to procedures, equipment or training are necessary.

The auditor reviewed this documentation and interview applicable personnel to determine compliance with this provision, finding no cyanide related mock emergency drill was performed during year 2022. Haukes was required to perform an emergency mock drill that simulate transport-related cyanide exposures and releases. The transporter will perform this drill finalizing its first aid training session in June. To bring this operation found in substantial compliance into full compliance a Corrective Action Plan (CAP) is enclosed with the Summary Audit Report, where this action is required and will be provided in June 2023.

During the audit it was not found the transporter has a procedure or statement in place to evaluate the Plan's performance after its implementation. After the audit, Haukes included into its ERP a statement stablishing the Plan will be evaluated on its performance after its implementation and revise it as needed. Such reviews have not been conducted during this recertification period as no emergency occurred needing to activate the emergency response plan.