



**MARÍTIMA DOMINICANA**

**TRANSPORT OPERATION**

**SUMMARY AUDIT REPORT**

**FOR THE**

**INTERNATIONAL CYANIDE  
MANAGEMENT INSTITUTE**

**MARCH 2022**



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## Operation General Information

Transport Operation:	Marítima Dominicana, S.A.S.
Transport Owner	Marítima Dominicana, S.A.S.
Transport Operator:	Marítima Dominicana, S.A.S.
Name of Responsible Manager:	Dommi Méndez – HSE and HAZMAT Manager Email: domendez@mardom.com
Address and Contact Information:	Carretera Sanchez Km 12 ½ Santo Domingo, Dominican Republic Phone: (809) 539-6000 Ext. 7308

## Location and Description of the Operation

Marítima Dominicana, S.A.S. (MarDom), provides solid cyanide transportation to mine sites, among other logistics and port services, in Dominican Republic. The head office is located near the port of Rio Haina in Santo Domingo.

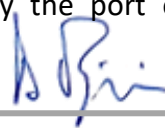
With 50 years of experience in the market, MarDom is a ship agency, port stevedore and logistics company in the Dominican Republic, handling both ocean and air cargo, import and export, as well as providing a wide range of logistics solutions. MarDom, with more than 1,200 employs, attends approximately 2,000 vessels annually.

With presence in all Dominican ports and main airports, MarDom offers and extensive range of logistics services including customs clearance, land transportation and local distribution, as well as the rental of equipment such as dry and refrigerated containers.

MarDom is certified under the ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 management systems. Also is certified in BASC (Business Alliance for Secure Commerce), OEA (Authorized Economic Operator), Effective Environmental Management, and TRACE (Ethical Business Operations in Compliance with Anti-Bribery Regulations) standards in the country for ship operations, customs brokerage and land transportation.

Cyanide is transported to Dominican Republic by ship to Rio Haina Oriental Port and Punta Caucedo Port (as backup port).

Stevedoring operations are performed by the port operator, which releases ISO tanks and



containers at a container terminal operated by MarDom; the port authority uses its own vehicles to deliver the container at the MarDom terminal located within the port enclosure. At this point, the cyanide becomes responsibility of MarDom.

MarDom transports cyanide from the port to the client’s mine site using its own trucks without the intervention of further storage facilities. Currently, MarDom transport cyanide only to Pueblo Viejo mine; however, it has the procedures and systems to add transport routes maintaining compliance with the Code.

This audit comprises the ground transportation operations from the moment the Port Authority releases the cyanide at the container terminal operated by MarDom, to the mine.

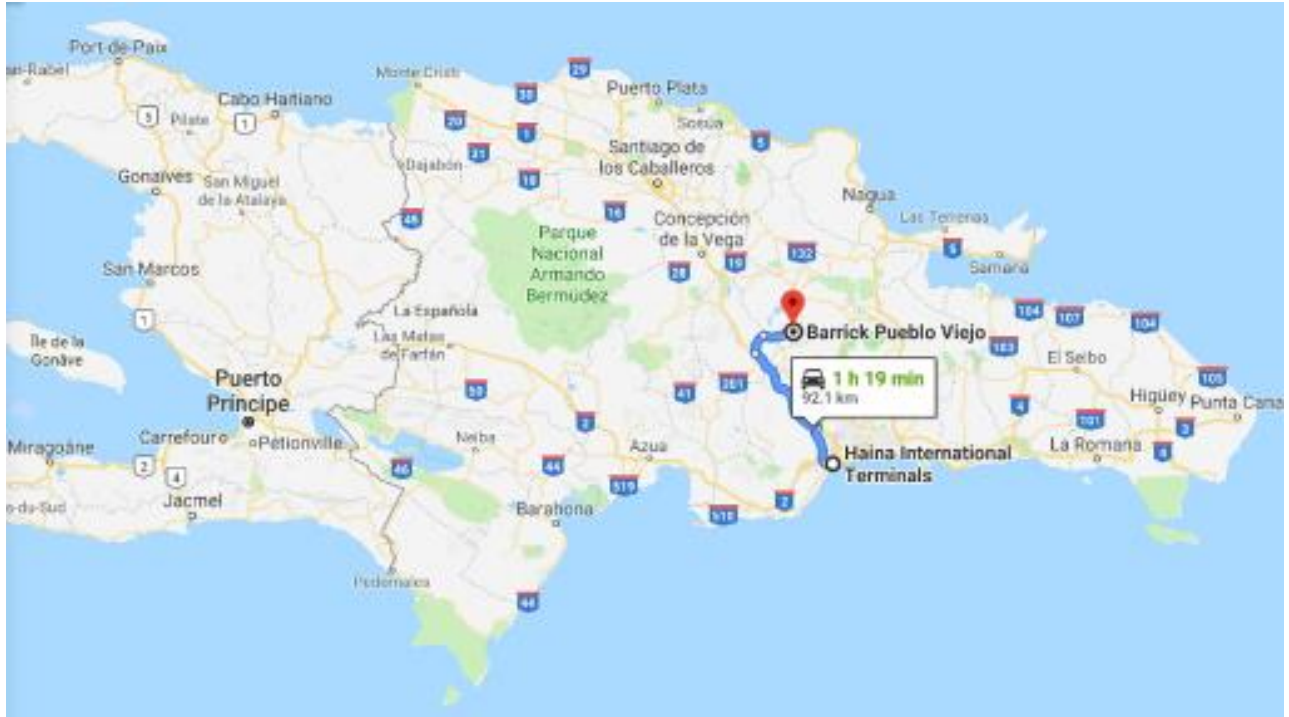
The activities performed by the port authority (ship unloading, interim storage at storage areas operated by the port authority, etc.) are not included within the scope of this audit.

As previously noted, the main transportation route is from Rio Haina Port to the mine site, 91.6 km from the port. As alternative route, in case of contingency in the main route or problems in the port, the cyanide could go from Punta Caucedo Port to mine; this route has an approximate length of 143.2 km.

Solid cyanide briquettes are delivered by the manufacturer mostly in ISO tanks with 20 metric tons of solid cyanide. Also, deliveries cyanide in 20-foot sea containers containing one-ton Intermediate Bulk Containers (BC)s, whether in wooden IBCs or in Ecopaks - the upgraded to the standard IBC.



A handwritten signature in blue ink, appearing to read "B. Pizzorni".



*B. Pizzorni*

## Auditor’s Finding

The ICMI-approved Auditor verified that MarDom’s operation is in FULL COMPLIANCE with ICMI Cyanide Code requirements for Transport operations.

This operation was determined to be in FULL COMPLIANCE with the International Cyanide Management Code.

This operation has not experienced any compliance issues or significant cyanide incidents during the previous three-year audit cycle.

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:	BP Cyanide Auditors S.A.C.
Lead Auditor and Transportation Technical Auditor:	Bruno Pizzorni E-mail: <a href="mailto:bpizzorni@cyanideauditor.com">bpizzorni@cyanideauditor.com</a>
Date(s) of Audit:	March 15 and 16, 2022

Marítima Dominicana  
Name of Operation



Signature of Lead Auditor

March 16, 2022  
Date

## Cyanide Transportation Verification Protocol

### Principle 1 | TRANSPORT

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

#### Standard of Practice 1.1

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

in full compliance with

The operation is  in substantial compliance with Standard of Practice 1.1

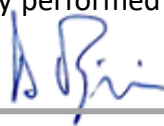
not in compliance with

MarDom's has developed and implemented the procedure DO-SIG-020 Routes Evaluation for Hazardous Material Transport v1, with the objective of having an instruction that determines the necessary parameters for the approval of transport routes for the supplier's products and that defines the permanent update system in order to minimize the risk of accidents due to poor road conditions. The application of the procedure covers national highways through which hazardous materials are transported.

MarDom maintains a documented process for the cyanide transportation routes to the mine site that considers population density, infrastructure, pitch & grade, proximity to water bodies, and the prevalence and likelihood of poor weather and resulting poor driving conditions.

MarDom personnel work together with the mining customer to determine the safest and best route for transport. The procedure calls for driver feedback and routes are re-evaluated when driving conditions change, or when driver feedback suggests that this is necessary. Records were available to demonstrate that all current routes were re-assessed and re-approved during the re-certification period. Among others, the auditor reviewed route assessments performed during the recertification period, from Rio Haina Port (at Santo Domingo city) to the mine site, located 92.1 km from the port.

The procedure for Routes Evaluation for Hazardous Material Transport 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. In some cases, the pitch and grade of the roads are significant and transit through towns is considered to be lower related risk. Mine customer input is considered when routes are determined. Records were available to show that MarDom periodically performed route risk assessment and participated in



meetings with the mine customer during the re-certification period. The results of these meetings are used in the overall cyanide delivery planning processes.

Appropriate risk mitigation measures have been established in this cyanide transport procedure including limiting the transportation activities to day-time only, a minimum 8 hour driver-rest period prior to starting a cyanide transportation operation, mandatory driver rest periods approximately every two hours in pre-selected stop points during cyanide transportation operations, all shipments are performed in convoys (of up to four trucks) with a safety escort vehicle and a convoy leader. The procedure allows the convoy leader to stop the operations when the route conditions are unsafe (e.g. due to weather conditions).

Section 2 of the procedure Routes Evaluation for Hazardous Material Transport states given that the routes can undergo modifications over time, the analysis of the reports that the convoy leader do is the fundamental tool for the route sheet to be updated periodically, at least annually. The convoy leader will be responsible for informing the responsible persons as well as the members of each of the convoys that circulate through it, whenever there are permanent as well as temporary modifications, about their nature and the preventive measures that must be adopted in each case before the start of the trip.

Interviews with drivers and management personnel were used to confirm that feedback about driving conditions is communicated. Special conditions noted by customers are noted and communicated to all drivers assigned to the route.

The risks assessment is documented through matrices, which *are* used to develop emergency scenarios (e.g. truck rollover on dry soil conditions, crash with another vehicle, etc.) in the different route sections. Each scenario has specific preventive measures (e.g. establishing maximum speed controlled by the driver in the head of the convoy in steep slopes).

The auditor reviewed the measures taken to address risks identified during the evaluation performed during the routes assessments performed in 2020 and 2021 for the route from Rio Haina Port to Barrick Pueblo Viejo mine. Also reviewed the mitigation measures taken during risks identified.

MarDom, along with Barrick's personnel, seeks input from communities, other stakeholders and applicable governmental agencies as necessary in the selection of routes and development of risk management measures. Records were available to demonstrate that they have met with local stakeholders to seek input from communities, non-governmental organizations, and governmental authorities to seek input into the planning for their trucking transport operation.

MarDom and Barrick organize meetings with different stakeholders. Representatives from different stakeholders (the mine, the port authority, and medical facilities) participate in the meetings. Cyanide generalities were communicated in these meetings. Specific information was also provided regarding emergency response procedures. Attendance lists for these meetings are kept in files.





The auditor reviewed attendance records of the disclosure exercise carried out together with Barrick “Disclosure on the Transport of Sodium Cyanide” carried out on November 23, 2020, with a total of 21 participants among residents of the communities and the participation of the Dominican authority that accompanies the shipments cyanide.

MarDom has developed and implemented the document MA-SIG-008 Sodium Cyanide Transport Manual v2 where establishes that all shipments from the ports to the mine site to be performed in convoys of four truck and with one safety escort vehicle at least (where the convoy leader travels). Additionally, according to the convoy leader reports, a mechanical support vehicle escorts the convoy with basic spare-parts. Furthermore, in compliance with local regulations, the national army personnel escort the convoy.

The Manual establishes cyanide transportation must be performed only in daylight hours and that talks on the handling of sodium cyanide must be given only by the convoy leader before the start of each day of the trip. The talks must be attended by all the drivers, support staff, MarDom supervisors assigned to the trip and that the participants must sign the list of participants in pre-trip talks for hazardous materials.

MarDom do not contract the cyanide transportation. No contractors are used, all trucks are property of MarDom, all drivers are MarDom’s employees.

#### Standard of Practice 1.2

*Ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.*

- The operation is
- in full compliance with
  - in substantial compliance with
  - not in compliance with
- Standard of Practice 1.2

MarDom uses only trained, qualified and licensed operators to transport its products. MarDom has duly trained operators trained and qualified to handle its reach stackers however they were not subject to review since at the date of the audit the company does not handle maritime containers or ISO tanks with sodium cyanide. The company plans to carry it out in the future if required by the client, for which it has a space enabled for this purpose. MarDom ensures that its drivers are compliant with ICMC requirements and are assessed by auditors during certification audits. The company maintains a policy to use only qualified drivers who have received appropriate operational



and safety training. Records were available for all current cyanide drivers to demonstrate that qualification and training requirements were met.

MarDom's Cyanide Transport Manual establishes drivers must have the legally required driving license, to be trained in hazardous materials (HAZMAT) transport, defensive driving, in sodium cyanide handling and in emergency response.

The driver job description document requires for this profile that they have completed secondary education, driver's license category 3 to 4 and at least one year of experience transporting hazardous materials. MarDom also has a simulator that allows them to evaluate the skills of the driver. On the other hand MarDom's management system has an alert that in the event that the driver's license is expired, the system does not allow the assignment of the driver to the hazardous materials transport service.

The company has 20 drivers and five convoy leaders for cyanide transport operations. The auditor reviewed files samples of drivers and convoy leader which included training, driver's license for heavy vehicles (as required by local regulations) and medical exams, all was found in order.

A cyanide transport driver was available for interview at the audit occasion. He showed particularly good knowledge about the product, the risks along the route and emergency response procedures.

Interviews with drivers, dispatch, management, and maintenance personnel were used to confirm that personnel operating cyanide transportation equipment can perform their jobs safely and appropriately. Training related to cyanide and the delivery of cyanide is given by MarDom's Health & Safety (H&S) Manager. Training records covering the re-certification period were available for review.

MarDom maintains training management processes to ensure that all drivers and handling equipment operators in MarDom is up to date. Drivers showed particularly good awareness of unloading procedures and of emergency shut-off procedures that would help mitigate the risk of having a cyanide release during an unplanned event.

The human resources area controls the training received by the personnel involved in the sodium cyanide transport operation. The auditor reviewed the annual training plan, which includes training in sodium cyanide, and interpretation and reading of safety data sheets, among other training.

The Transport Procedure establishes that the convoy leader must confirm that the drivers are included in the list of trained drivers; this is documented in the operation report. The convoy leader has a list of trained drivers and includes in its report the vehicles and drivers that participated in the shipment. According to the training records and the shipment reports, only employees that participated in the training sessions have participated in the convoys. The convoy leader has been trained by MarDom and the cyanide manufacturer.



## Standard of Practice 1.3

*Ensure that transport equipment is suitable for the cyanide shipment.*

- The operation is  in full compliance with
- in substantial compliance with Standard of Practice 1.3
- not in compliance with

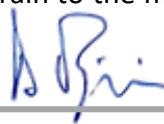
MarDom uses only equipment designed and maintained to operate within the loads it is handling. The transporter does not handle sodium cyanide containers or ISO tanks; cyanide shipments are transported by truck directly from the port to the mining client. The Cyanide Transport Manual states that all drivers and escort leaders must ensure the loads it will be handling.

MarDom uses new vehicles for hazardous materials (HAZMAT) transport service, especially those assigned to sodium cyanide transportation, which are one or two years old. According to MarDom's vehicle replacement policy, the company changes vehicles older than 9 years. MarDom uses Scania and Mac brand trucks, all with a power greater than 450 horsepower which are considered appropriate for the roads for the cyanide transport route. The auditor reviewed the technical specifications of these vehicles.

The chassis (trailers) are manufactured in the United States and have a plate indicating the load capacity of 35 tons (t), which are appropriate to load 20-foot sea containers and ISO tanks, with a gross cargo of approximately 22 t. The auditor reviewed records of chassis technical inspections; if an anomaly is detected, they disable the chassis. Each trailer goes through a verification and acceptance process when it is ready to be put into service. The auditor performed a site inspection and interviews to driver and mechanics confirming that trailers are appropriate for the load and the material being shipped. The auditor reviewed the Equipment Maintenance and Repair Procedure that includes preventive and reactive maintenance. MarDom's electronic system only allows assigning a vehicle that has up-to-date maintenance.

Shipment records were reviewed to confirm that standard weights within the capacity of the tractors, trailers, ISO tanks and containers were being shipped. Weight capacities and the fulfillment of cargo inspection requirements were reviewed during the audit and were found to be compliant. MarDom uses only authorized packaging for its sodium cyanide shipments.

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. Shipping records were available for the recertification period to demonstrate that equipment is not being overloaded.

According to interviews with MarDom personnel, standard weights are loaded, and standard blocking and bracing configurations are used for trailer. Shipping paperwork was reviewed during the audit and showed the number of packages shipped and the weight of the cargo. This information is used to ensure that overloading does not occur. Records were available to demonstrate that equipment is not being overloaded.

The Cyanide Transport Manual establishes the convoy leader is responsible for the inspection of every truck and trailer prior to the shipment. A checklist, which includes questions about the truck and trailer conditions, the driver, the required documents, and truck accessories, is used to document the inspection. A checklist form is filled for each truck in the convoy. According to the reports and checklists, this inspection is performed the same day of the shipment. When small deficiencies are identified these are fixed prior the vehicle leaving MarDom base to the Port facilities or the vehicle is replaced.

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.

#### Standard of Practice 1.4

*Develop and implement a safety program for transport of cyanide.*

The operation is  in full compliance with  
 in substantial compliance with  
 not in compliance with

Standard of Practice 1.4

MarDom has formal procedures and training programs used to ensure that cargo, including cyanide, is transported in a manner that is safe and protective of the transportation packaging (ISO tank and containers). MarDom personnel were interviewed to confirm that written procedures continue to be used and implemented in daily operations. A visual inspection is performed by MarDom's H&S officer at the port when the cargo is released liberation by authorities. Once received the cargo, the employee performs a detailed inspection with a checklist. Containers, and ISO tanks are loaded with standard blocking and bracing configurations.



The auditor reviewed samples of completed checklist for cargo integrity and signaling performed at the port, where any occurrence is observed. The Transport Manual establishes that the load cannot be altered during the transportation process. To ensure this, tags are placed in the ocean container's locks at the manufacturing facility. These tags can only be removed at the mine. The procedure establishes that the drivers cannot open the container. The containers received in the terminal are placed on platform trailers hauled by trucks without opening the container.

A visual inspection is performed by MarDom's H&S personnel both at the port upon cargo liberation by authorities, and also when receiving empty ISO tanks and containers from the mine site. Once received the cargo, the employee performs a detailed inspection with a checklist. Records were available showing completed checklist for cargo integrity and signaling inspections performed at the port and mine site, where any occurrence is observed. All vehicles and trailers were found to be properly placarded during the audit.

Records were available to demonstrate that inspections prior to cyanide shipments is being performed. Trucks, and trailers are inspected prior to shipment. MarDom does inspections of its trailers before each departure with any cyanide shipment and maintenance performs its maintenance when needed and according to a preventive maintenance program. Trailers destined for cyanide transport are identified with a characteristic color and receive special attention before each shipment. The Cyanide Transport Manual establishes to perform vehicle inspections prior to each departure, documented by a checklist which is included in the convoy's leader report after each trip.

Vehicles maintenance is in charge of the Department of Internal Workshops. MarDom is not responsible for maintenance of the isotankers and sea containers transported. Upon receipt of cyanide shipments at the port of arrival on the island, the carrier makes a checklist where, among others, it checks the status of the containers and ISO tanks. In the event of any damage suffered by the container or the ISO tank, MarDom reports to the port and the customer about it. Preventive maintenance for trucks that are under the manufacturer's warranty is performed in the dealer's authorized workshop. Preventive maintenance for all trucks is carried out every 150 hours, according to the Procedure. The truck service hours is recorded from the hour meter during when the vehicle's fuel supplying in MarDom's own service station. The auditor interviewed the head of the internal workshop, confirming the information provided.

Preventive maintenance is projected weekly every Monday, with 50 hours in advance. Maintenance is only performed on weekends for which a work order is generated for each truck and then the history is kept in a file for each truck.

Additionally, the trailers are completely inspected on a semiannual basis based on a technical inspection sheet, in addition to pre-trip inspections. MarDom does maintenance to all trailers in their own workshops. MarDom has a maintenance workshop destined for trailers, which looks quite complete and organized. The auditor interviewed the head of the workshop reviewing and



confirming the above staff competencies machine shop.

Maintenance records for the recertification period were found to be complete. Samples of trailers, trucks and stackers maintenance records were reviewed.

As established by the Cyanide Transport Manual, the working day for drivers during a trip with sodium cyanide may not exceed 12 hours per day, allowing detentions every 2 hours for 10 minutes or more to review the equipment, food and others. Operators must rest at least 8 hours prior to each trip. The knowledge of this requirement was confirmed by interview with two drivers and a convoy leader. According to the reviewed reports, each cyanide transport operation between Santo Domingo and the mine site takes about two to three hours depending on traffic conditions.

MarDom monitors driver hours to ensure compliance. Dispatch and delivery records for the recertification period were reviewed during the audit and were found to be acceptable.

The Cyanide Transport Manual states that ISO tanks and containers must be anchored to the chassis using twist locks or chains. According to interviews with MarDom personnel, in containers and ISO tanks, standard weights are loaded, and standard blocking and bracing configurations are used. Shipping paperwork was reviewed during the audit and showed the amount of cyanide shipped and the weight of the cargo. Transportation partners use this information to ensure that overloading does not occur.

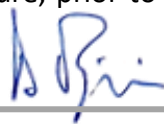
MarDom receive cyanide shipments in ISO tanks and 20-foot containers which are loaded and sealed with a safety seal from the cyanide manufacturer. MarDom does not open the containers to secure the cargo. However, load shifting within the container is not considered possible as all containers are filled with 20 boxes and block and brace is applied to prevent load movement; the containers are fixed to the trailer through twist locks. The iso-tanks are fixed to a frame that is then fixed through twist-locks to the trailer.

The Cyanide Transport Manual states that the convoy displacement will be dependent on the climatic / social / political / environmental conditions. In case the convoy is accompanied by an official of the client, the leader could consult the opinion of this person, but the decision if the trip stops or if it continues, is under his responsibility, communicating it to the supplier.

Weather conditions are constantly monitored, and deliveries are postponed if a route is considered to be unsafe. Drivers are empowered to stop a delivery if the conditions are considered to be unsafe. Interviews were used to also confirm that drivers adhere to designated routes and request authorization prior to deviating from the established routes. 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.

Such a change in delivery plans would be done in close coordination, at least, with the MarDom dispatcher and with the mining customer.

As stated in the Cyanide Transport Procedure, prior to departure, the convoy leader will make a



meeting with all the staff, explaining among others, the policy for alcohol and drug prevention. It also indicates that alcohol testing should be performed to all the members of the convoy, drivers and assistants and that in case of any incident on the trip, the convoy leader will make the assessment of the state of intemperance of those involved, with the breathalyzer.

Records for the recertification period were available to show that all parts of the MarDom safety program are effectively being implemented. Blow tests are documented in the convoy leader report.

According to MarDom representatives, records relating cyanide transport are be retained at least for the recertification period. Records were available to show that all parts of the MarDom safety program are effectively being implemented, records samples were found to be complete for this recertification period, no problems were noted.

### Standard of Practice 1.5

*Follow international standards for transportation of cyanide by sea.*

- The operation is  in full compliance with Standard of Practice 1.5
- in substantial compliance with
- not in compliance with

No shipments are made by sea on this transportation operation. MarDom 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 MarDom from Dominican Republic's ports to the mine site.



## Standard of Practice 1.6

*Track cyanide shipments to prevent losses during transport.*

- The operation is  in full compliance with Standard of Practice 1.6  
 in substantial compliance with  
 not in compliance with

MarDom personnel maintain communications with truck drivers making cyanide deliveries. All drivers have communication equipment consisting of mobile phones, all trucks are equipped with two-way radio communication system. Trucks are in contact at all times with the convoy leader and this with MarDom dispatch and the client at the mine site.

Communication with dispatch during the cyanide transportation is done at pre-selected points of the route. The Cyanide Transport Manual establishes that the convoy leader must report the progress of the convoy at the pre-selected stop points. The progress report is provided by phone to the base. A tabular report is generated with the actual time of arrival to the selected stop points and included in the operation file. Also, all incidents (e.g. mechanical failure) are reported immediately to the base.

In addition, Global Positioning System (GPS) are tracking shipments. Interviews were conducted to confirm that these practices have been in place for the entire recertification period.

All communication equipment is confirmed to be operational at the start of each trip. Procedures, checklists, and interviews were used to confirm this practice.

According to the route assessment, no communications blackout areas were identified in the route. A review of procedures and driver interviews were used to confirm this practice.

MarDom has systems and procedures to track the progress of cyanide shipments. MarDom is the island representative for Scout, a satellite tracking system and has a business unit that provides fleet control systems to third parties. All the trucks are equipped with GPS which is used to track the convoy progress and ensure that no deviations from the route take place. Interviews with the H&S Manager and logistics personnel were held during the audit. The Logistics Coordinator has designated responsibilities for tracking shipments on a daily basis.

Appropriate action is taken to ensure that cyanide shipments keep moving, stay on pre-designated routes, and that their location can always be confirmed. The daily tracking reports were reviewed during the audit and confirmation was made that cyanide shipments are being tracked continuously from the point at which they are put into service and enter the fleet. Information was available for





review to demonstrate that MarDom tracks all ISO tanks, and containers using GPS tracking systems.

Shipping paperwork was found to be conformant to ICMC requirements, including chain of custody requirements. A waybill accompanies the transportation which includes chain of custody data such as container numbers, waybill numbers, shipping documentation, SDS, packing list, bill of lading, customs declarations, producer invoice, among others.

The convoy leader ensures that the drivers carry with them the cargo documents. Additionally, both ISO tanks and containers are locked and tagged at then manufacturer’s facilities and these tags are only removed at the mine site upon delivery of the product.

The shipping records indicate the number of packages and amount of material. Upon arrival to the mine site, the client review the seals and weight the cargo to confirm quantities. Information was found to be compliant in general for MarDom shipments. 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.

### Standard of Practice 2.1

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

- The operation is
- in full compliance with
  - in substantial compliance with Standard of Practice 2.1
  - not in compliance with

Interim storage activities in this transportation operation, as defined by ICMI, do not take place at MarDom trucks terminal. As stated by the MarDom H&S Manager, cyanide shipments are sent directly from the port to the mine site. However, MarDom maintains an area for internal or temporary storage located in the same headquarters.

On occasion of the audit, the cyanide storage area was visited and found empty. This area is located at the rear of the terminal. It consists of a brick background wall and a perimeter fence high enough to prevent the entry of any unauthorized person to the area. This storage fenced-in portion of the truck yard is separated physically from other parking areas and has all ICMC required signage. The storage area is locked when trailers are present and access to the area is limited to MarDom’s



drivers and the facility manager / dispatcher.

Warning signs were observed in the location that comply with ICMC requirements. Warning signs stated that cyanide is present, smoking, open flames, eating and drinking are not allowed, and what personal protective equipment (PPE) is required in the area. PPE requirements were deemed to be appropriate.

The storage area was found to be appropriately fenced, locked, with security measures in place to prevent unauthorized access to cyanide. Access to the area is restricted and has 24/7 safety guards and CCTV surveillance. Security was found to be acceptable.

No other materials are stored in this segregated area. Any cyanide shipment is kept within the containers and its packaging material away from any other chemical within the terminal in a separated area from incompatible materials. The storage of other materials in the area is prohibited.

The area has a concrete floor to minimize the potential for contact of solid cyanide with water. There are no waterways near the cyanide area. Although the area has no roof, containers are not opened. Cyanide is kept in the ISO tanks and maritime containers. Containers are equipped with heavy-duty rubber door seals that keep water and wind out. When maritime containers are received at the port, MarDom personnel inspects them for any signs of container damage like holes, dents and doors seals. There were available filled inspection checklist for the recertification period, confirming this practice is performed consistently.

Sodium cyanide packages within the maritime containers are comprised of a bag-in-box construction that offers additional protection against water intrusion. ISO tanks are sealed and are constructed to be watertight. This is considered sufficient protection from contact with water.

The storage yard is an open area with adequate ventilation to prevent build-up of hydrogen cyanide gas, no additional ventilation is required. No ISO tanks or containers are opened or stored indoors where cyanide gas could build up. Transportation containers are not opened.

The storage area has concrete floor as secondary containment system in place, capable of controlling the extent of any released solid cyanide. MarDom manages only solid sodium cyanide. Any cyanide released to the concrete floor would not mix with low pH water or other incompatible material. There are no waterways near the cyanide area, the concrete floor is not connected to any drainage.

The Cyanide Transport Manual requires to have a spill emergency kit and to inspect it for completeness prior to loading and unloading operations. Spills emergency kit consists, among others of a cyanide gas detector, medicinal oxygen, Cyanokit (hydroxocobalamin for injection), Tyvek suits, leather gloves, PVC booths, safety goggles, danger tape rolls, duct tapes, disposable respirators, shoves, safety cones, sweeps, polyethylene bags, empty containers, calcium carbonate and sodium hypochlorite. The availability of these was confirmed during the audit.



### Principle 3 | EMERGENCY RESPONSE

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

#### Standard of Practice 3.1

Prepare detailed emergency response plans for potential cyanide releases.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.1

not in compliance with

MarDom has developed and implemented the Sodium Cyanide Transport Emergency Response Plan revision 002 (ERP) that is appropriate for its transport operation. The ERP includes details regarding the response procedures to be used in each mode of transportation, and type of incident. This Plan has been agreed with the mine, which provides emergency response team and is responsible for the communication with the media. This is a detailed document that includes, among other information, the emergency response team organization chart, emergency phone directory, communication channels guidelines, emergency scenarios, and instructions to attend specific and general emergency scenarios.

The ERP states what actions are to be taken in the event of a cyanide incident during transit and temporal storage. The document was found to be appropriate for this solid sodium cyanide transportation operation. Emergency scenarios have been identified as result of the route assessment matrix and emergency response actions have been addressed.

The Plan considers 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). Solid sodium cyanide is shipped using this transportation operation. 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 Plan 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 Plan considers truck transport. The emergency response actions in the ERP is appropriate for this type of product and method of transportation. The plan provides information regarding the



packaging and transportation characteristics of the product, the container, and the transportation unit. All emergency scenarios developed are related to ground transportation: incidents without injuries, mechanical problems, collision, rollover with and without spill, fire during transportation, fall of the load and collision with hurt persons. The scenarios for the storage area include fire and spills.

The ERP considers all aspects of the transport infrastructure as condition of the road. The emergency response actions in the ERP are appropriate for the roads and transport infrastructure of the island. The Plan includes the emergency scenarios developed from the route assessment. It also identifies the areas where the different scenarios are more likely to take place

The Plan considers the design of the transport vehicle with trucks and trailers, including a detailed description of the vehicle. The emergency response actions in the ERP are appropriate for this type of transport vehicle.

During the audit documents review, MarDom was required to include in the ERP, the following:

- to identify a cyanide intoxication also as an emergency scenario;
- in the emergency response, prioritize securing the area by measuring HCN levels before approaching the victim;
- indicate what actions to take when the first HCN sensor alarm is triggered at 4.7 ppm and when it is at 10 ppm.; and
- to review the emergency response procedure in case of sodium cyanide spills to water, because as established, it could expose its personnel to HCN intoxications. Also to include alerting immediately the authorities so that they inform the downstream populations and refrain from consuming the water.

Soon after the audit MarDom sent a new version of the ERP where all these issues were addressed. The ERP includes descriptions of response actions, as appropriate for the anticipated emergency situations. The emergency response information clearly outline the roles and responsibilities of internal and external responders.

The actions that MarDom will take in an emergency (primarily secure the scene, notify stakeholders and contact authorities) are listed in the ERP. The documentation was found to be acceptable for this type of operation.

In the event of an emergency, in addition to the Pueblo Viejo emergency response team, external emergency responders, such as fire departments, ambulance, police, would provide on-site response. The ERP states that in case of fire in the intermediate storage area or in the truck during transport, MarDom will call the firefighters and the police in the area, if extinction is not possible with their own equipment. The police will be responsible for cordoning off the area to avoid the proximity of the public, the convoy leader will advise the firefighters to combat the fire caring that



if there is a danger of spillage, water is not allowed for any reason to fight the fire.

In case of a road accident with spill where the concentration of HCN is not detectable, the convoy leader will ask the police to help keeping transit fluid on the road and not allowing vehicles to stop. If there are injured, the convoy leader will request an ambulance so that they can be attended immediately and sent to the nearest hospital.

### Standard of Practice 3.2

*Designate appropriate response personnel and commit necessary resources for emergency response.*

✓ in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.2

not in compliance with

During interviews to MarDom's personnel involved in the cyanide transport operation the auditor did notice that there was a lack of clarity regarding the first aids required to cyanide expositions and emergency response procedures, so the auditor observed this issue requiring refresher training. Soon after the audit, on March 24, 2022, MarDom sent evidence as pictures, movies and assistance records of the training provided by the HSE and HAZMAT Manager to 22 operators on first aids on cyanide exposition and emergency response procedures. No additional information was required to conclude MarDom has provided initial and refresher emergency response training to all his personnel involved in the transportation operation as drivers, convoy leaders, managers, convoy mechanics, maintenance shop logistics and dispatch personnel, among others. They receive an appropriate level of training to fulfill their role in emergency response. Formal emergency response training is refreshed annually. Additionally, the cyanide manufacturer has provided redundant training to MarDom personnel. Training records were available for the recertification period and were complete.

The roles and responsibilities of relevant internal and external personnel are clearly described in the ERP. The plan also include responsibilities for the on-site commander, the communications leader (responsible for contact with the authorities and the media), field containment and recovery supervisor (from the manufacturer), emergency brigade leader, and the mine emergency brigade leader.

During the audit MarDom was requested to Include in the list of materials and emergency equipment checklist, the 5% sodium hypochlorite solution as during the site inspection it was part



of the materials available for emergency response. They had also granulated chlorine stored, so were asked to document the proportions to be mixed to obtain a 5% solution with granulated chlorine.

After the audit MarDom sent the new version of the ERP where the checklist for emergency response equipment and material included the solution of sodium hypochlorite at 5% concentration and discarded the use of granulated chlorine. No additional information was required.

The Plan defines what equipment must be available in convoy's support pickup vehicles and provides a list of the required emergency response equipment and materials. Among others figure in the list: overall Tyvek suits, leather gloves, PVC booths, cyanide gas detector, disposable respirators, Cyanokit, medicinal oxygen, polyethylene bags, calcium carbonate and sodium hypochlorite at 5% solution (commercial bleach). HCN monitors have been calibrated during the recertification period according to the manufacturer's recommendations. The Cyanokit is stored following the manufacturer's recommendations. MarDom escort personnel are qualified to administer the antidote if needed.

Each convoy is made up of 4 trucks with their trailers, plus two pickup trucks (escort vehicles). One pickup truck pulls a cart with all the necessary materials and equipment to attend an emergency on the route, as emergency equipment, extra personal protective equipment, spill containment and recovery material. Equipment is checked as part of the pre-trip inspection process.

The Cyanide Transport Manual establishes that the emergency equipment must be carried by the convoy leader in the safety escort vehicle. A checklist is used to verify that it is available, and it is documented in the convoy report. The manual establishes that the emergency kit must be inspected prior to every loading operation; this is recorded in a separate checklist.

The availability of this equipment was confirmed during the audit; all the equipment was available; also, the equipment requiring batteries (e.g. gas detector) was operational.

Emergency equipment is checked as part of the pre-trip inspection process. This practice was confirmed through interview and observation.

The Cyanide Transport Manual establishes that the emergency response equipment must be carried by the convoy leader in the safety escort vehicle. A checklist is used to verify that it is available prior the convoy's departure and it is documented in the convoy leader report. The carrier has implemented this provision by doing inspections and tests as planned and maintains the records. The auditor reviewed these records and verified on site that the equipment is in good working order for the transport of cyanide.



## Standard of Practice 3.3

*Develop procedures for internal and external emergency notification and reporting.*

- The operation is  in full compliance with Standard of Practice 3.3
- in substantial compliance with
- not in compliance with

MarDom procedures and emergency contact information is contained in the ERP, Section 4.3 Notifications and Communications System, where is the list Emergency Contacts for Cyanide Transportation, dated from March 9, 2022, updated annually. It lists current emergency numbers for local hospitals, ambulance, fire, and environmental responders, included up-to-date contact information from the cyanide consignor, regulatory agencies, and potentially affected communities. The plan includes a communications flow diagram.

The ERP states 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.

On the other hand, Marlon's Quality and Processes Department sets up alarms on a Share Point platform to indicate the document must be reviewed annually. This alarm reaches a series of people to follow up with the person in charge of the area so that they update the document as required. The auditor reviewed the procedure and verified its application by reviewing the documentation and interviews.

During the audit it was found that the carrier did not have a procedure in place 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. Soon after the audit, MarDom included in the ERP, the requirement to report any significant accident with cyanide to the ICMI. No additional information was required to find this Protocol Question in Full Compliance with the ICMC



## Standard of Practice 3.4

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

- The operation is
- in full compliance with
  - in substantial compliance with Standard of Practice 3.4
  - not in compliance with

MarDom personnel is responsible for containing cyanide spills and performing cleanup and remediation. Specific details regarding the remediation, neutralization, decontamination, and disposal of clean-up debris are contained within the ERP. Descriptions of necessary action steps depending on the incident scenario are clearly outlined in the document. The ERP includes text that addresses the remediation and neutralization of cyanide solutions.

The ERP establishes the procedure to clean a spill and the decontamination of the area: isolate de area, sweep the cyanide (it is handled only in dry state), collect the debris in plastic bags or drums, treat the area with calcium carbonate and then with a 5% sodium hypochlorite solution, wait at least 15 min, rinse the area with water, wait for the area to dry and then remove the barricades.

Final disposition of cyanide contaminated materials will be in charge either to Capsa or Aidsa, both are companies dedicated to adequate final disposal of hazardous waste, among others.

MarDom personnel showed good level of awareness that the use of treatment chemicals is prohibited if cyanide spills into surface waters. The ERP specifically prohibit 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.





## Standard of Practice 3.5

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

- The operation is
- in full compliance with
  - in substantial compliance with Standard of Practice 3.5
  - not in compliance with

MarDom includes provisions in the emergency response plan to ensure that it is 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. Also, the Quality and Processes Department sets up alarms on a Share Point platform to indicate the document must be reviewed annually.

The auditor reviewed these provisions contained in the emergency response plans, assessing the process and its implementation by reviewing the documentation of the various versions of the Plan 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.

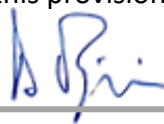
The Plan states to perform annually a mock emergency drill, being a tabletop drill or a practical simulation on field, with the purpose of evaluating the effectiveness of the Plan and correcting the anomalies found.

En April 2019 MarDom performed a cyanide emergency mock drill with simulating a cyanide spill during transport, with 7 participants.

In February 2020 they performed another cyanide mock drill with 14 participants, which included participation of the cyanide consignor AGR. It was simulated a cyanide spill of 100 kg with a worker exposed to HCN gas.

In December 2021 simulated another cyanide spill with 8 participants.

The drills have been evaluated to determine if the response procedures are adequate, the response team is appropriate, and the staff is professionally trained. The emergency response drills simulated cyanide exposure as well as releases. The written documentation of these assessments is used as a basis for any changes in procedures, equipment or training that may be required. The auditor reviewed the drills reports performed during the recertification period and interviewed the relevant staff confirming compliance with this provision.



As a recommendation for improvement, the auditor asked MarDom next mock drill to include a case of cyanide intoxication.

During the audit it was not found the carrier has a procedure or statement in place to evaluate the Plan's performance after its implementation. Soon after the audit, MarDom included in the ERP statement establishing 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.

