

MARITIMA DOMINICANA, S.A.

## *Cyanide Code Principle 2 Transportation Audit*

### *Summary Audit Report*

PROJECT NO. 0316138

APRIL 2016

## TABLE OF CONTENTS

<b>1</b>	<b>GENERAL SUMMARY</b>	<b>1</b>
1.1	INFORMATION ON THE AUDITED OPERATION	1
1.2	OVERALL AUDITOR'S FINDING	2
<b>2</b>	<b>DUPONT REPORT</b>	<b>4</b>
2.1	TRANSPORT: TRANSPORT CYANIDE IN A MANNER THAT MINIMIZES THE POTENTIAL FOR ACCIDENTS AND RELEASES	4
2.1.1	Transport Practice 1.1: Select cyanide transport routes to minimize the potential for accidents and releases.	4
2.1.2	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.	7
2.1.3	Transport Practice 1.3: Ensure that transport equipment is suitable for the cyanide shipment.	8
2.1.4	Transport Practice 1.4: Develop and implement a safety program for transport of cyanide.	8
2.1.5	Transport Practice 1.5: Follow international standards for transportation of cyanide by sea and air.	10
2.1.6	Transport Practice 1.6: Track cyanide shipments to prevent losses during transport.	10
2.2	INTERIM STORAGE: DESIGN, CONSTRUCT AND OPERATE CYANIDE TRANS-SHIPPING DEPOTS AND INTERIM STORAGE SITES TO PREVENT RELEASES AND EXPOSURES.	11
2.2.1	Transport Practice 2.1: Store cyanide in a manner that minimizes the potential for accidental releases.	11
2.3	EMERGENCY RESPONSE: PROTECT COMMUNITIES AND THE ENVIRONMENT THROUGH THE DEVELOPMENT OF EMERGENCY RESPONSE STRATEGIES AND CAPABILITIES	13
2.3.1	Transport Practice 3.1: Prepare detailed emergency response plans for potential cyanide releases.	13
2.3.2	Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response.	14
2.3.3	Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.	15
2.3.4	Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.	16

**2.3.5 Transport Practice 3.5: Periodically evaluate response procedures and capabilities and revise them as needed.**

**16**

# SUMMARY AUDIT REPORT

## 1 GENERAL SUMMARY

### 1.1 INFORMATION ON THE AUDITED OPERATION

Name of Cyanide Transportation Facility: Maritima Dominicana S.A. S.  
Name of Facility Owner: Maritima Dominicana S.A..  
Name of Facility Operator: Maritima Dominicana S.A.  
Name of Responsible Manager: Pilar Dueverge  
Address: Carretera Sánchez Km. 12.5  
State/Province: Santo Domingo Country: Dominican Republic  
Telephone +809 539 6000 Fax: + +809 5397200  
E-Mail: pduverge@mardom.com

Location detail and description of operation:

Maritima Dominicana, S. A. (MarDom) is a transporter of sodium cyanide in solid state in Republica Dominicana.

Cyanide is transported to Republica Dominicana by ship to the Rio Haina Oriental Port and the Punta Caucedo Port (used only as backup port).

Ship unloading operations are performed by the Port operator, which releases the container at a container terminal operated by MarDom; the port authority uses its own vehicles to deliver the container at the MarDom terminal; which is located within the port enclosure. At this point, the cyanide becomes responsibility of MarDom.

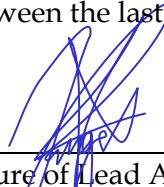
MarDom transports cyanide from the port to the client's site using its own truck and without the intervention of further storage facilities. Currently, MarDom transport cyanide only to the Barrick Pueblo Viejo mine; however, it has the procedures and systems to add transport routes and maintain compliance 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 its delivery to the mine.**

Cyanide is packaged by the manufacturer in one of the following modalities:

- Primary packaging in a poly propylene super-sack filled up to 1 ton. A secondary package is a polyethylene liner that protects cyanide form humidity and water exposure. The super-sack is then placed in a wooden box. Only 20 boxes are placed in standard 20-foot shipping containers (the containers); the exact number of boxes is to prevent lateral movement of the boxes within the container. To further prevent movement a block and brace is applied consisting of placing wood beams between the last box and the container's door. Prior to

Maritima Dominicana, S.A.  
Name of Facility

  
Signature of Lead Auditor

4 November 2015  
Date

## SUMMARY AUDIT REPORT

shipping, the manufacturer (Du Pont USA) seals the container with a tag with serial number at the production facility to prevent material losses. These seals are only removed at the mine.

- Iso-tank without packaging material.
- Ecopack, which consist on a polyethylene bag within a polypropylene super sack container with a wooden framework. This is filled to up to 1 ton.

The main transportation route is from Rio Haina Port to the mine which has an approximate length of 91.6 km. 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.

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.

### 1.2 OVERALL AUDITOR'S FINDING

This operation is

- in full compliance
- in substantial compliance \*(see below)
- not in compliance

with the International Cyanide Management Code.

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

This operation has not experienced compliance problems, cyanide related incidents, exposures or releases during the previous three-year audit cycle.

Audit Company: ERM Mexico, S. A. de C. V.

Audit Team Leader: Juan Carlos Rangel Lopez E-mail: [juancarlos.rangel@erm.com](mailto:juancarlos.rangel@erm.com)

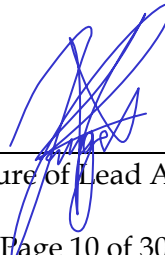
Names and Signatures of Other Auditors: none

Date(s) of Audit: 3 November 2015

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.

Maritima Dominicana, S.A.

Name of Facility

  
Signature of Lead Auditor

4 November 2015

Date

## SUMMARY AUDIT REPORT

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

Maritima Dominicana, S.A.  
Name of Facility

  
Signature of Lead Auditor

4 November 2015  
Date

## SUMMARY AUDIT REPORT

### 2 MARDOM REPORT

This operation is

- in full compliance
- in substantial compliance
- not in compliance

with the International Cyanide Management Code.

#### **2.1 TRANSPORT:**        *TRANSPORT CYANIDE IN A MANNER THAT MINIMIZES THE POTENTIAL FOR ACCIDENTS AND RELEASES*

##### **2.1.1 Transport Practice 1.1:**        **Select cyanide transport routes to minimize the potential for accidents and releases.**

The operation is

- in full compliance with
- in substantial compliance with Transport Practice 1.1
- not in compliance with

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

MarDom has the following procedures:

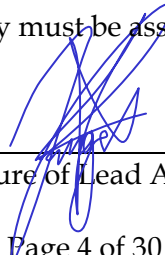
- IT-SSA-006 - "Evaluación de Rutas de Transporte Materiales Peligrosos" (Assessment of Hazardous Materials Transport Routes, or Routes Assessment Procedure).
- PR-SSA-007 - "Transporte Cianuro de Sodio" (Cyanide Transport or the Transport Procedure).
- IT-SSA-007 - "Plan de Emergencia Transporte de Cianuro de Sodio (the Emergency Plan).
- IT-SSA-007B - "Almacenamiento Intermedio de Cianuro de Sodio en Contenedores o Isotaques" (Procedure for Interim Storage of Ocean Containers or Iso-Tanks or the Interim Storage Procedure)
- IT-SSA-007<sup>a</sup> - "Plan de Emergencia Almacenamiento Intermedio de Cianuro de Sodio" (Emergency Plan for Sodium Cyanide Interim Storage)

According to the Route Assessment Procedure, the route is selected based on the origin and destination, the available infrastructure (dimensions and conditions of the road), the length of the road, and crossing of cities.

Once the route has been selected, its safety must be assessed using the following criteria:

Maritima Dominicana, S.A.

Name of Facility

  
Signature of Lead Auditor

4 November 2015

Date



## SUMMARY AUDIT REPORT

- Dangerous turns
- Steep slopes
- Main cities and population density
- Bridges
- Landslides zones
- Intersection with rail roads
- Fog, ice, and snow areas
- Water bodies
- Environmentally sensitive areas
- Areas with high robbery risk
- Areas where driver could rest
- Any other conditions that may represent a risk.

The procedure establishes that a physical inspection of the route must be performed by the convoy leader. During this inspection the scheduled stops and rest points are selected. Communication services available, police offices, sensitive areas, communities, and the locations where an accident is more likely to take place are also identified during the physical inspection. The procedure establishes that the inspection must be documented through a specific format.

The procedure also establishes that the route assessment must be updated based on the convoy leader reports as necessary or at least once per year. The latest review route assessment was conducted on March 2015. Digital copies of route assessments dated February 2014 and April 2013 were also available for review. The route has also been modified to use new infrastructure and avoid urban areas.

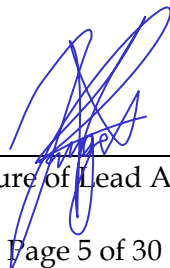
The route assessment procedure includes a section for risk assessment which is performed in a matrix where the route is divided in sections considering crossings of urban areas, intersections with other roads, and other key points. Each section was assessed for each of the route safety criteria mentioned above and, based on these, a risk ranking was used (A for areas where incident risk is high to D where the risk is low). The assessment was documented in a matrix where the different risks present in each section are marked and the risk ranking is determined.

Based on the mentioned matrix general preventive measures have been established in the transport procedure including: limiting the transportation activities to day-time only, a minimum 8 hr. 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 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). The evaluation matrices were used to develop emergency scenarios in the different route sections. Each scenario has specific preventive measures (e.g. establishing maximum speed of 20 km controlled by the truck driver leading the convoy in steep slopes).

Maritima Dominicana, S.A.

Name of Facility

Signature of Lead Auditor



4 November 2015

Date



## SUMMARY AUDIT REPORT

The Transport Procedure establishes that all shipments from the ports to the mine are performed in convoys and with least one safety escort vehicle (where the convoy leader travels). Additionally, according to the convoy leader reports, a mechanical support vehicle escorts the convoy with basic spare-parts and a mechanics technician. Furthermore, in compliance with local regulations, the convoy is escorted by the national army personnel. The transport procedure establishes that the convoy leader must prepare reports for every trip completed which are used to review and update the route assessment.

The convoy leader report includes:

- List of drivers, trucks, and trailers;
- Activities log per day;
- Results of the alcohol test,
- Observations (e.g. maintenance operations) and a recommendation whether or not to review the rout risk assessment due to those observations; and
- Emergency kit inspection checklist.

The convoy leader report is included in an operation file which includes also:

- Copies of communications,
- Vehicles inspection checklist,
- Shipment tracking format, and
- A summary sheet containing basic emergency response activities and sodium cyanide hazardous characteristics which is signed by each driver the first day of the trip.

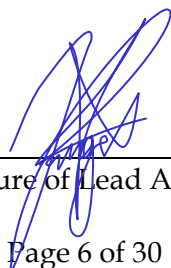
A sample of 35 operation reports (out of 158) was reviewed. The convoy leaders have received HAZMAT training and additionally have received training from the Cyanide Manufacturer (Chemours).

According to the Transport Procedure, MarDom informs the communities and the authorities regarding its cyanide transport operations, through meetings and providing literature (MSDS) and MarDom contact information. According to the procedure, this is performed at least every three years.

In November 2014, MarDom organized meetings with different stakeholders. Approximately 35 representatives from different stakeholders (the mine, the port authority, and medical facilities from Maimol and Cotui) participated in the meetings. Cyanide generalities were communicated in these meetings. Specific information was also provided regarding emergency response procedures. According to MarDom, no feedback has been received to date. Attendance lists for these meetings are kept in files.

Maritima Dominicana, S.A.

Name of Facility



Signature of Lead Auditor

4 November 2015

Date

## SUMMARY AUDIT REPORT

Additionally, in November 2014 and March 2015, MarDom provided copies of the sodium cyanide MSDS to the external emergency responders (3 hospitals) that would provide support in case of emergency.

**2.1.2 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.**

The operation is

- in full compliance with
- in substantial compliance with Transport Practice 1.2
- not in compliance with

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

The Transport Procedure establishes the following requirements for drivers:

- To have the legally required driving license
- To be trained in defensive driving
- To be trained in sodium cyanide handling and emergency response

MarDom has a job description for the convoy leader; which includes its responsibilities and background.

MarDom has a quarterly training program which includes the following topics, among others:

- Cyanide transport
- Defensive driving
- Drugs use prevention

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 also been trained by MarDom and the cyanide manufacturer.

MarDom has assigned 20 drivers and five convoy leaders for cyanide transport operations; a sample of six drivers and three convoy leader files was reviewed. The files include the following

- Copies of the driver license for heavy vehicles (as required by local regulations)
- Copies of medical exams

Training records are kept in electronic and paper format and they were consistent with the above mentioned requirements and the training program.

Maritima Dominicana, S.A.

Name of Facility

Signature of Lead Auditor

4 November 2015

Date

## SUMMARY AUDIT REPORT

### 2.1.3 Transport Practice 1.3: Ensure that transport equipment is suitable for the cyanide shipment.

The operation is

- in full compliance with
- in substantial compliance with Transport Practice 1.3
- not in compliance with

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

MarDom has a list of 13 trucks and twelve trailers that are designated to transport cyanide.

MarDom's trucks were manufactured from 2004 to 2012 and have capacities from 350 to 450 HP. According to the data plates, the trailers have load capacities from 30.5 to 32 tons, which is more than that of a loaded container (24 tons, including the container weight, the cyanide and the packaging material, or 25 tons of the iso-tank with product).

The Transport Procedure establishes that each platform will be loaded with only one container and that each truck can only haul one platform trailer. This is verified by the convoy leader.

The Transport Procedure establishes the convoy leader is responsible for the inspection of every truck and platform 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. This was confirmed through the review of the sample of transport operation reports mentioned above.

### 2.1.4 Transport Practice 1.4: Develop and implement a safety program for transport of cyanide.

The operation is

- in full compliance with
- in substantial compliance with Transport Practice 1.4
- not in compliance with

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

In order to ensure that the cyanide is transported in a manner that maintains the integrity of the producer's packaging, Transport Procedure 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; MarDom has negotiated

Maritima Dominicana, S.A.

Name of Facility

Signature of Lead Auditor

4 November 2015

Date

## SUMMARY AUDIT REPORT

with the custom authorities to have the containers inspected at the mine site. The procedure establishes that the container cannot be opened by the drivers. The containers received in the terminal are placed on platform trailers hauled by trucks without opening the container.

The Transport Procedure establishes that placards with cyanide's UN number and poison signs must be placed in the container; this is verified through the previously mentioned vehicle inspection checklist. The convoy leader has additional placards in case the container is missing one or more. According to the reviewed convoy leader reports, the presence of the placards is verified through the checklist.

The Transport Procedure establishes that:

- Inspections are performed prior the vehicle departs to the terminal (documented by checklist included in convoy leader report).

MarDom has preventive maintenance program for trucks and stackers (used to load the trailer with the container). These programs are cyclic and based on service hours. These programs include standard requirements for combustion engine vehicles and equipment. Additionally, the trailers are inspected on a semiannual basis based on a technical inspection sheet; which is kept as record.

If issues are identified during preventive maintenance or inspections, a work order is issued for its execution by the maintenance department.

A sample of four out of 12 trailers, five out of 20 trucks and two out of six stackers, maintenance records was reviewed; no deviations or omissions were identified.

As established by the Transport Procedure, operators rest at least 8 hrs. prior to trip. The fulfillment of these requirements was confirmed by the interviewed drivers and convoy leader. According to the reviewed reports, each transport operation takes from two to three hours depending on traffic conditions.

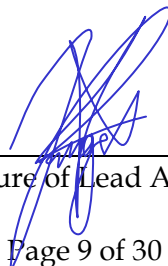
Load shifting within the container is not considered possible as all containers are filled with 20 boxes and block and brace is applied to prevent load movement; the containers are fixed to the trailer through twist locks. The iso-tanks are fixed to a frame that is then fixed through twist-locks to the trailer.

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.

Prior to departure of every shipment, the drivers are tested for alcohol levels (blow tests documented in the convoy leader report; the tester was available for inspection during the audit and it was observed to be in operating conditions).

Maritima Dominicana, S.A.

Name of Facility



Signature of Lead Auditor

4 November 2015

Date

## SUMMARY AUDIT REPORT

According to the interviewed MarDom representatives, records relating cyanide transport are retained at least for the three year period between one certification audit and another.

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

The operation is

#### **THIS PRACTICE DOES NOT APPLY TO THE OPERATION**

- in full compliance with
- in substantial compliance with Transport Practice 1.5
- not in compliance with

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

As described in Section 1, the scope of this audit was only for the ground transportation operations performed by MarDom from Dominican Republic's Ports to the client site; therefore, this practice does not apply.

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

The operation is

- in full compliance with
- in substantial compliance with Transport Practice 1.6
- not in compliance with

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

The Transport Procedure 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. Additionally, 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.

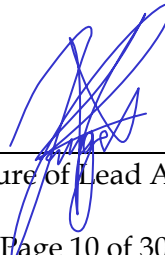
MarDom has provided the drivers with mobile phones; additionally, every truck has a radio. These are tested prior to the transport operation and the test is recorded in the vehicle inspection checklist.

According to the route assessment, there are no blackout areas in the route. This was confirmed during interviews with the drivers.

The following documents are used to track the amount of cyanide transported:

Maritima Dominicana, S.A.

Name of Facility

  
Signature of Lead Auditor

4 November 2015

Date

## SUMMARY AUDIT REPORT

- Bill of lading issued by the ocean cargo company, this includes the number of containers and their identification number, the number of super-sacs contained (referred in the format as intermediate bulk containers IBC), and net weight.
- MarDom's Invoice the ocean container number and the amount of cyanide per container.

Additionally, as previously mentioned, the containers are locked are tagged at then manufacturer's facilities and these tags are only removed at the mine.

The bill of lading, the invoice, and the MSDS are carried by each driver. The first one is provided by the ocean cargo at the moment of releasing the containers, the MSDS is provided by the convoy leader, along with first aid indications, prior to departure.

### **2.2 INTERIM STORAGE: DESIGN, CONSTRUCT AND OPERATE CYANIDE TRANSSHIPPING DEPOTS AND INTERIM STORAGE SITES TO PREVENT RELEASES AND EXPOSURES.**

#### **2.2.1 Transport 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 Transport Practice 2.1
- not in compliance with

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

As previously noted, the port authority releases cyanide containers at the container terminal operated by MarDom. MarDom maintains the cyanide within the ocean containers while the designated trucks are available to transport the containers to the mine (within 48 hrs of the container reception). However, 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.

The cyanide containers interim storage area was visited during the audit. This is located the rear the terminal. It consists of a brick walls and three chain fence walls, with concrete floor and no roof. Signs regarding the presence of cyanide; the prohibition of drinking, smoking, and eating in the area; and the PPE required were noted in the chain fence walls.

The interim storage is located within MarDom terminal which is complete fenced, has safety guards in the accesses and CCTV surveillance. Cyanide is stored in an open area, no ventilation is required.

Maritima Dominicana, S.A.

Name of Facility

Signature of Lead Auditor

4 November 2015

Date

## SUMMARY AUDIT REPORT

Cyanide is kept within the containers and its packaging material away from any other chemical within the terminal in a separated area; this is considered sufficient protection from incompatible materials. Additionally, the Interim Storage Procedure establishes that no other chemicals can be stored in the cyanide storage area.

Cyanide is kept within the containers and its packaging material, which includes a polyethylene bag to protect the cyanide from water and humidity.

MarDom stores only solid sodium cyanide; the Interim Storage Procedure requires to have the following emergency kit and to inspect it for completeness prior to loading and unloading operations.

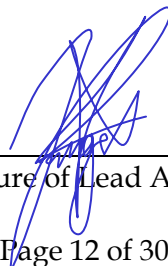
- 14 overall tyvek suits
- 8 pairs of leather gloves
- 8 pairs of PVC booths
- 8 safety goggles
- 2 danger tape rolls
- 2 ducting tapes
- Cyanide gas detector
- 40 disposable respirators 8210
- Water analysis kit
- 12 amyl nitrite shots
- 4 Shoves
- 4 safety cones
- 4 sweeps
- 40 polyethylene bags
- 80 kg of calcium carbonate
- 2 empty containers

The availability of these materials was confirmed during the audit.

Additionally, cyanide is kept within the containers and its packaging material which would prevent large spills.

Maritima Dominicana, S.A.

Name of Facility



Signature of Lead Auditor

4 November 2015

Date



## SUMMARY AUDIT REPORT

### 2.3 **EMERGENCY RESPONSE: PROTECT COMMUNITIES AND THE ENVIRONMENT THROUGH THE DEVELOPMENT OF EMERGENCY RESPONSE STRATEGIES AND CAPABILITIES**

#### 2.3.1 **Transport Practice 3.1: Prepare detailed emergency response plans for potential cyanide releases.**

The operation is

- in full compliance with
- in substantial compliance with Transport Practice 3.1
- not in compliance with

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

MarDom has implemented an Emergency Response Plan for Transport (latest revision November 2015). 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 (34 pages plus appendices) 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.

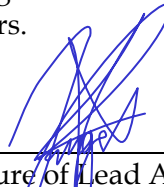
Additionally, MarDom has an Emergency Response Plan for the Interim Storage (32 pages), which has similar structure and content.

The Emergency Response Plan for transport includes the route assessment matrices mentioned in practice 1.1 which were used to develop emergency scenarios (Plan Sections 2 D and 2. E, Appendices 2 through 4), the respective preventive and mitigation measures (also included in Appendices 2 through 4), and emergency response actions (Section 5). The Emergency Response Plan for the interim storage considers the possible scenarios that may take place in during the storage and loading operation.

The Plans have a detailed (two pages) explanation of the sodium cyanide characteristics and toxicity based on the MSDS (also attached to the Plans). The emergency scenarios, the general emergency response instruction, and the scenario-specific instructions consider the solid state of the cyanide.

Section 2 C of the Plans 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: crash with another vehicle, vehicle rollover in steep slope or curve, rollover with spill, rollover with hurt persons, and rollover with the product reaching a water body, among other. The scenarios for the storage facility include spill, container hit by vehicles or containers.

Maritima Dominicana, S.A.  
Name of Facility

  
Signature of Lead Auditor

4 November 2015  
Date

## SUMMARY AUDIT REPORT

As previously noted the transport Plan includes the emergency scenarios developed from the route assessment (in the case of the transport plan); both include prevention and mitigation instructions, as well as specific response instructions. All the scenarios are in relation with accidents of trucks hauling a platform trailer carrying a 20-ft container or iso-tank, which are the only transportation modality used by MarDom.

The Plans' Section 4 establishes the responsibilities for the members of the response team; Section 5 establishes the role of external emergency response teams based on the emergency response requirements for each scenario.

### **2.3.2 Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response.**

- in full compliance with
- in substantial compliance with Transport Practice 3.1
- not in compliance with

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

The Plans' Section 4 establishes the responsibilities for the members of the initial response team. They 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.

MarDom has trained its personnel in the emergency response procedures.

As mentioned in practice 1.2 the drivers and the convoy leader, as well as administrative personnel have received training from MarDom in the emergency response procedures. Additionally, the Plan has been agreed with the Mine. Additionally, the cyanide manufacturer has provided redundant training to MarDom personnel.

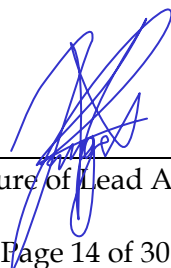
Section 4.3 has a list of the required emergency response equipment. The list is the same in both plans and includes:

- 14 overall tyvek suits
- 8 pairs of leather gloves
- 8 pairs of PVC booths
- 4 safety glasses
- 4 safety goggles
- 4 pairs of impermeable gloves
- 2 danger tape rolls
- 2 hand lanterns
- 2 ducting tapes

Maritima Dominicana, S.A.

Name of Facility

Signature of Lead Auditor



4 November 2015

Date

## SUMMARY AUDIT REPORT

- Cyanide gas detector
- Water analysis kit
- 40 disposable respirators 8210
- 12 amyl nitrile shots
- 4 Shoves
- 4 safety cones
- 4 sweeps
- 1 emergency light
- 50 polyethylene bags
- 80 kg of calcium carbonate
- 45 kg of sodium hypochlorite
- 4 empty buckets
- Plastic tarp
- Pulling cable
- Oxygen tank
- Wind sock

The Transport Procedure 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 Interim Storage Procedure 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.

As previously noted, MarDom has a training program which includes emergency response refreshment. Training records were available for review, these are kept as assistance list, and in some cases diplomas are issued and kept in the personnel files. Additionally, the Plans' section 6 establishes that training is required prior to MarDom personnel gets involve in cyanide operations and that refreshment is required at least on an annual basis.

### **2.3.3 Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.**

The operation is

- in full compliance with
- in substantial compliance with Transport Practice 3.3
- not in compliance with

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

The Plans' Section 3.A includes a communications flow diagram which can be summarized as follows: the convoy leader must first inform the central of communications of the environmental and safety area, they inform the Projects Manager, who informs other members of the

Maritima Dominicana, S.A.

Name of Facility

Signature of Lead Auditor

4 November 2015

Date

## SUMMARY AUDIT REPORT

emergency response committee. The on-site commander is in charge of requesting help from outside responders.

The emergency notification and reporting procedures are included within the plans. The Plans' Section 7 establishes that they must be reviewed whenever modifications are required or, at least, once a year.

### **2.3.4 Transport 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 Transport Practice 3.4
- not in compliance with

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

Section 5 of the Emergency Response Plan establishes the procedure to clean a spill and the decontamination of the area which consist of:

- isolate the 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, and
- wait for the area to dry and then remove the barricades.

Section 5 also establishes that chemicals should not be added in water bodies, and the use of sodium hypochlorite, oxygen peroxide and iron sulfate is limited only to puddles, and artificial water reservoirs. Additionally, it includes instructions for assessing the impact on surface water bodies and to prevent the population to be poisoned by contaminated water. These instructions are part of the emergency response instructions to cyanide spills with contact to water and water bodies.

### **2.3.5 Transport 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 Transport Practice 3.5
- not in compliance with

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

Maritima Dominicana, S.A.

Name of Facility

  
Signature of Lead Auditor

4 November 2015

Date

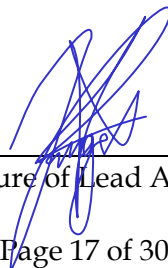
## SUMMARY AUDIT REPORT

The Plans' Section 6 establishes that they must be reviewed whenever modifications are required or, at least, once a year. The Transport Procedure establishes that the convoy leader report must be used to update the assessment of the route. Both plans were last updated in November 2015.

The Plans' Section 6 establishes that at an emergency drill must be performed every year. Desktop and field drills were performed in 2013, 2014 and 2015, in coordination with the mine and the cyanide manufacturer, reports were prepared and no improvement opportunities were identified. The Plans' Section 7 establishes that they must be reviewed whenever modifications are required or, at least, once a year including the name and numbers of the emergency contacts and phone numbers of external responders. According to MarDom representatives, no accidents have taken place.

Maritima Dominicana, S.A.

Name of Facility



Signature of Lead Auditor

4 November 2015

Date