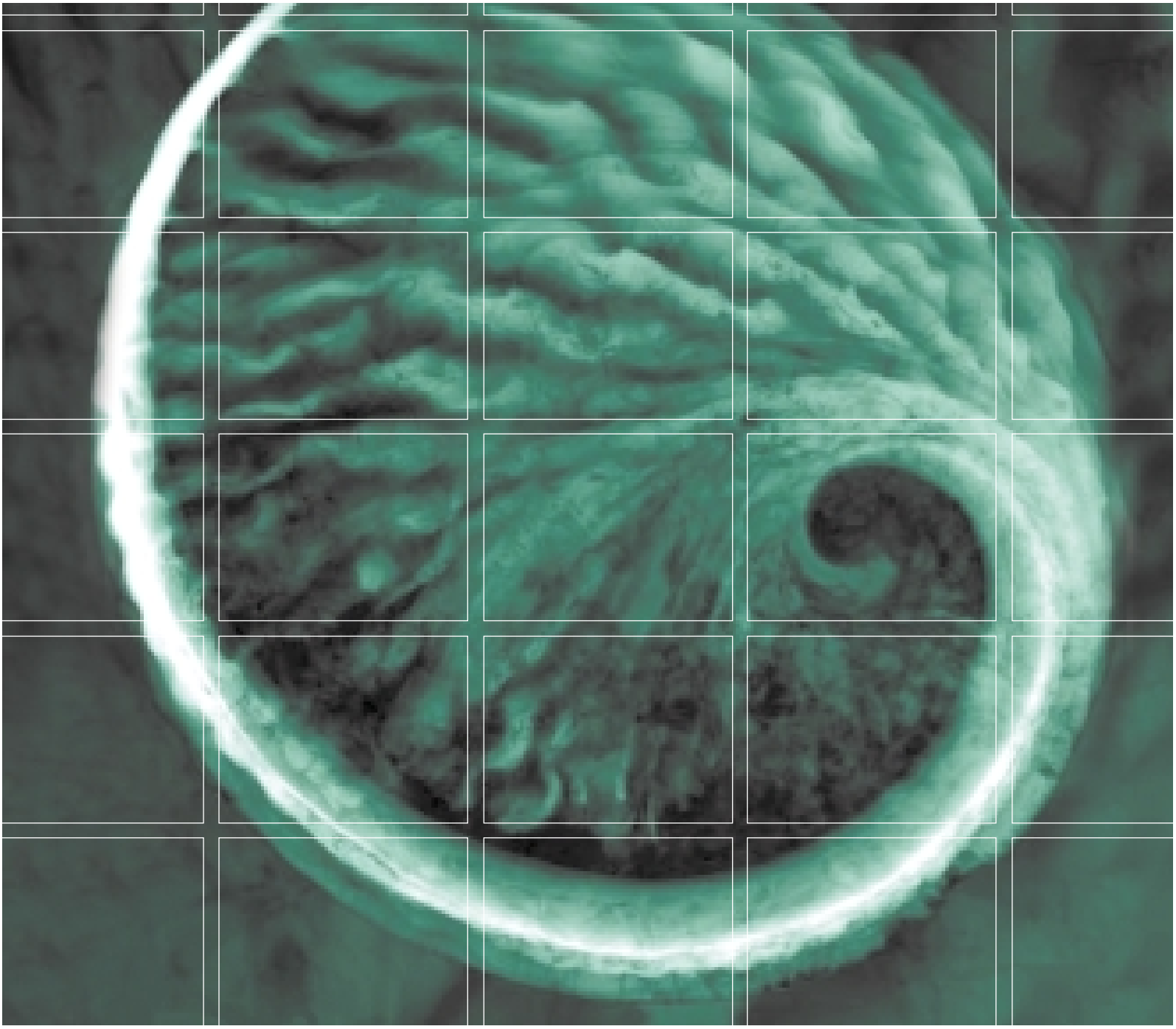


VÍCTOR MASSON TRANSPORTES CRUZ DEL SUR S.A.

Cyanide Code Principle 2 Transportation Audit

Summary Audit Report

PROJECT NO. 0114725

NOVEMBER 2010

Delivering sustainable solutions in a more competitive world

ERM

SUMMARY AUDIT REPORT

Name of Cyanide Transportation Facility: Víctor Masson Transportes Cruz del Sur S.A.
Name of Facility Owner: Víctor Masson Transportes Cruz del Sur S.A.
Name of Facility Operator: Víctor Masson Transportes Cruz del Sur S.A.
Name of Responsible Manager: Carlos Cafora
Address: Au. Riccheri y Boulogne Sur Mer, Nave D3, Tapiales
State/Province: Buenos Aires Country: Argentina
Telephone: 4480-6666 Int. 1320 Fax: 4480-6666 Int. 1320 E-Mail: ccafora@cruzdelsur.com

Location detail and description of operation:

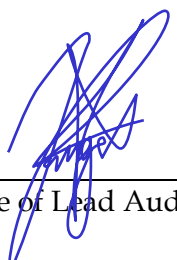
Víctor Masson Transportes Cruz del Sur S.A. (CDS) is a sodium cyanide transporter in Argentina. Currently, CDS transports cyanide to the Gualcamayo and Veladero mines located in western Argentina.

CDS receives the cyanide at the Buenos Aires Port. CDS responsibility starts when the Port Authority releases the container by placing it on a CDS's platform. The cyanide is transported directly to the mine, without the intervention of secondary storage facilities.

This audit comprises the ground transportation operations from the moment the Port Authority releases the cyanide to its delivery at the client's facility. CDS formally completed the implementation of the Cyanide Code in May 2009.

Although Argentina infrastructure would allow for alternative routes, the national regulations indicate that hazardous materials must be transported only through road controlled by the national police, leaving only one possible transport route from Buenos Aires Port to these mines with a total length of 1,404 km to Gualcamayo and to 1,481 km to Veladero.

Currently CDS transports cyanide produced by DuPont and by Orica. Cyanide is packaged by the producers in the following way: primary packaging in a poly propylene super-sack filled up to 1 ton. The super-sack is then placed in a polyethylene bag to protect the material from water and humidity; finally the packaged material is placed in a wooden box. No less than 20 boxes are placed in standard 20-feet 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 shipping, the manufacturers seal the container with a tag with serial number at the production facility to prevent material losses. These seals are only removed at the mine.



V. M. Transportes Cruz del Sur S.A. — Name of Facility
Signature of Lead Auditor
29 - 30 July 2010 — Date

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.

Audit Company: ERM Mexico, S. A. de C. V.
Audit Team Leader: Juan Carlos Rangel Lopez E-mail: juancarlos.rangel@erm.com
Names and Signatures of Other Auditors: none

Date(s) of Audit: 29 and 30 July 2010

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

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

V. M. Transportes Cruz del Sur S.A.		29 - 30 July 2010
Name of Facility	Signature of Lead Auditor	Date

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

TRANSPORT PRACTICE 1.1: SELECT CYANIDE TRANSPORT ROUTES TO MINIMIZE THE POTENTIAL FOR ACCIDENTS AND RELEASES.

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:

CDS has the following procedures:

- IT-TTES05-05 "Instructive to Assess the Risk and Approve Routes" (dated May 2010).
- PG-TTES-05 "General Procedure for Sodium Cyanide Ground Transport" (latest revision July 2010, hereafter the transport procedure).

The instructive to assess risk and approve routes establishes the first step in the route assessment is to describe and the following safety criteria must be identified:

- Dangerous turns
- Steep slopes
- Main cities and population density
- Bridges
- Slides 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.

It establishes that a physical inspection of the route must be performed by the convoy leader. During this inspection the scheduled stops and rest are selected, the communication services available, emergency numbers, gas station, police offices, sensitive areas, and communities are also identified. The areas where accidents are most likely to take place must also be identified.

Based on the route inspection, a risk assessment is performed. The assessment is documented in a matrix where the transportation route is divided in sections considering crossings of urban areas, intersections with other roads, and other key points (e.g. mine check point). Each section is assessed for each of the route safety criteria mentioned and, based on these, a risk ranking is used (A for areas where incident risk is high to D where the risk is low). Based on the matrices

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 10 minutes brakes approximately every two hours in pre-selected stop points during cyanide transportation operations, all shipments performed in convoys with at least one safety escort vehicle and a convoy leader. The transport procedures allow the convoy leader to stop the operations (in a pre-selected point) when the route conditions are unsafe (e.g. due to weather conditions). Copies of the matrices are included as annex in the Emergency Response System for Ground Transport.

According to Mr. Carlos Cafora, CDS's Process Manager, the initial route assessment (under the Cyanide Code process controlled by CDS) was performed by the convoy leader. The route assessment to Gualcamayo was performed jointly with the mine cyanide supplier (DuPont) in May 2010. The route assessment to Veladero mine was performed by CDS independently. The route assessment procedure also establishes that the route assessments must be updated as necessary and at least once per year. According to the track changes of the transportation procedures, the route assessments were prepared on May 2010 and no update has been required.

Additionally, CDS has implemented the transport procedure which includes preventive measures including performing all shipments in convoys with at least one safety escort vehicle, having a convoy leader, mandatory 10 min. breaks every two hours, charging fuel only at the transport company base, the prohibition of transporting other goods along with cyanide, and safety briefings prior to each departure.

CDS has prepared and implemented a format for the control and follow-up of the convoys. The format records the compliance with the activities required by the procedure (e.g. use of vehicles inspection checklist, alcohol test, pre-travel training and driver assessment, calls, etc.). It also records when other conditions increase the risk and the measures taken to manage those risk (e.g. light rain faced on the 2 March 2010 and the speed was reduced to prevent accidents). The report is part the operation file, which includes the convoy leader report, the emergency kit checklist, the convoy tracking, copy of the manifest, record of the pre-travel cyanide training, and the vehicle inspection checklist and the records required by the manufacturer. The convoy leader report includes information on the weather, road, and traffic condition for each day; it also records delays and the reasons these took place (e.g. vehicle failure, inspections at the port exit).

In July and September 2009, CDS co-organized with DuPont (one of the cyanide manufacturers) forums with relevant institutions including:

- The police, firefighter, hospitals, and Energy and Mines Ministry of the San Juan Province
- Buenos Aires Port Authority
- Deseado Port Authority and Deseado City firefighters
- The police, firefighter, hospitals, and Energy and Mines Ministry of the Buenos Aires Province

Mining companies have been also invited to these forums.

A total of 40 persons participated in the mentioned forums. Attendance lists for these meetings are kept in files. During these forums, DuPont provided information regarding cyanide handling and emergency.

CDS distributed on August 2010 copies of the sodium cyanide material safety datasheet to hospitals that are located along the route. Additionally, CDS co-organized with DuPont forums focused on the external responders (e.g. policy, firefighters) in July and September 2009. According to CDS representatives, these activities will be repeated on an annual basis.

CDS does not subcontract the cyanide transportation.

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 procedures establish the following requirements for drivers:

- To be healthy
- To have the legally required driving license
- To be trained by CDS in sodium cyanide handling and emergency response.

To obtain the driving license for hazardous materials in Argentina, the driver must attend a training course about hazardous materials transport (which includes defensive driving) and a general goods transport (which also includes defensive driving). The training is provided by a government agency. Additionally, CDS provides a four hour training prior to each operation about cyanide and emergency response; a test is applied to the drivers to reinforce the training. The tests are kept as records and are included in the operation file.

The procedure also establishes that the driver must have at least one rest day per week, must have rested at least 8 hours prior starting the trip, that a 10 minutes break must be taken approximately every two hours, and that the maximum work journey for the driver is 12 hours.

The transportation procedure also establishes that the convoy leader must have transport background, to be knowledgeable on basic mechanics, and leadership qualities. The current convoy leader has five years of experience escorting hazardous materials convoys.

The transport procedure establishes that the convoy leader must review that the driver license is current and that therefore he has received the legally required training on defensive driving and provides a four-hour training to all the drivers prior to every operation.

CDS does not subcontract the cyanide transport.

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:

The transport procedure establishes the characteristics required for vehicles to be used for cyanide transportation including:

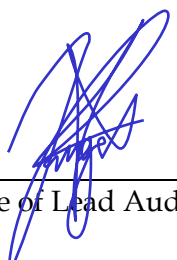
- The be included in a preventive maintenance program
- Permits required by the local authorities
- To use only vehicles owned by CDS.

The convoy supervisor reviews the truck and platform documents, the platform load capacity is included in the circulation permit. The load capacity of the platforms used by CDS is 28 tons and larger; the gross weigh of an ocean container fully loaded with cyanide is approximately 24 tons.

The transportation procedures establish that the convoy leader must inspect every truck and platform prior to the shipment. A checklist, which includes questions about the truck 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 reviewed checklists (corresponding to 32 operations performed from January 2009 to the July 2010), this inspection is performed the day before the shipment.

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 consistent with the information included in the inspection checklist and was confirmed during the interview with the convoy leaders and drivers.

CDS does not subcontract the cyanide transport.



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:

The 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. The containers received in the port are placed on platform trailers hauled by trucks without the need of changing the packaging. According to the interviewed convoy leader, the load is not removed from 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 vehicle inspection checklist. The convoy leader has additional placards incase the container is missing one or more. According to the reviewed operation files, the presence of the placards was verified through the checklist.

The transport procedure establishes that:

- Inspections are performed prior the vehicle departs to the port facility for loading (documented through the vehicle inspection checklist)
- the truck and the platform must have a preventive maintenance program, which is controlled by a software system
- Operators rest at least 8 hrs prior to trip, should not drive for over 12 consecutive hours, and take a 10 min break approximately every two hours at pre-selected stops points where the risk has been assessed and ranked as low; the convoy leader ensures that these are the only programmed stops. The fulfillment of these requirements was confirmed through the operation logs, the operation files, and interviews with the drivers and the convoy leaders.
- 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 and this decision is informed to the mine and the cyanide provider; this is recorded in the convoy control and follow format included in the operation file.
- Prior to departure of every shipment the drivers are tested for alcohol levels (blow tests documented in the convoy leader report).
- 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.
- Container rollovers in different conditions (during the rainy season, crossing a river, in a curve, or crash) are considered and preventive measures are included in the Emergency Response Plan (e.g. speed limits).

V. M. Transportes Cruz del Sur S.A.		29 - 30 July 2010
Name of Facility	Signature of Lead Auditor	Date

CDS has implemented the following preventive maintenance routines for trucks which are based on the manufacturer recommendations:

Every 30,000 km: oil change, oil filter replacement, fuel filter and pre-filter replacement, inspection of the air filter, belts inspections, break shoes inspection, general lubrication, air ducts, suspension system inspection, lights, tire lug nuts, and inspection of the steering system.

Every 100,000 km: valves, engine belt replacement, air filter change, gear box oil change, steering fluid filter replacement, humidity filter replacement (compressed air system), suspension system inspection, and breaks system.

Additionally, the platforms must be inspected every 6 months as follows: lights and electric system, breaks system, air system, tires, lubrication, suspension, physical integrity of the chassis and pneumatic axis.

The electronic records are kept in a computer system; records for six units were reviewed. According to the reviewed files, preventive maintenance is provided according to the schedule a checklist is kept as record as well as the list of spare parts and materials provided by the maintenance storage. Additionally, when a truck or platform requires corrective maintenance, CDS takes the unit to workshops authorized by the manufacturer.

CDS does not subcontract the cyanide transport.

TRANSPORT PRACTICE 1.5: FOLLOW INTERNATIONAL STANDARDS FOR TRANSPORTATION OF CYANIDE BY SEA AND AIR.

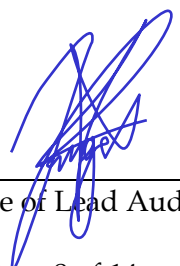
The operation is

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 CDS from Buenos Aires port to mines in Argentina; therefore, this practice does not apply.



V. M. Transportes Cruz del Sur S.A. — Name of Facility

Signature of Lead Auditor

29 - 30 July 2010 — Date

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 convoy leader is provided with a cellular phone and a satellite phone. The convoy leader has also a radio and he is responsible of communications with CDS in case of an emergency. Communication equipment is tested prior to the departure of the convoy and recorded in the vehicle inspection checklist.

The transport procedure establishes that the convoy leader must report the progress of the convoy at pre-selected points. The progress report is provided by phone to the base which informs the interested parties of the convoy progress by email. A tabular report is generated with the estimated and actual time of arrival to the selected stop points. Also, all incidents (e.g. mechanical failure) are reported immediately to CDS base and to the interested parties. Additionally, all the vehicles are equipped with a GPS which is tracked through an Internet site which provides on real time the convoy position. CDS base continuously monitors the location of the convoy.

The transport document (similar to a bill of lading) issued by the cyanide provider is carried by each driver and a copy is carried by the convoy leader. The transport document includes the number of container and net weight. The mine receipt stamps the transport document which is used for invoicing. Additionally, the containers are locked and tagged at the manufacturer's facilities and these tags are only removed at the mine.

The transport document, the MSDS, and emergency response information are carried by each driver. The drivers have an on-board file that includes copies of its training, licenses, and the cyanide MSDS. The convoy leader confirms that these documents are available prior to the travel.

CDS does not subcontract the cyanide transport.

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

TRANSPORT PRACTICE 2.1: STORE CYANIDE IN A MANNER THAT MINIMIZES THE POTENTIAL FOR ACCIDENTAL RELEASES.

The operation is: **THIS PRACTICE DOES NOT APPLY TO THE OPERATION**

- √ 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 described in Section 1, the scope of this audit was only for the ground transportation operations performed by CDS from Buenos Aires port to mines in Argentina. The transport is performed without the intervention of interim storage sites; therefore, this practice does not apply.

3. EMERGENCY RESPONSE: Protect communities and the environment through the development of emergency response strategies and capabilities

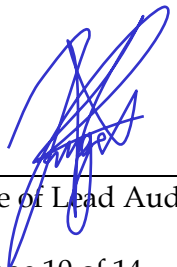
TRANSPORT PRACTICE 3.1: PREPARE DETAILED EMERGENCY RESPONSE PLANS FOR POTENTIAL CYANIDE RELEASES.

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:

CDS has implemented the procedure PG-SYMA-06 "Emergency Response System for Ground Transport" (latest update July 2010). This system is also integrated by the Roles description for the Traffic Control Department (Annex 1), the Roles for the convoy crew (Annex 2), the notification chain (Annex 3), the risk assessments for the routes, the phone directory for the assistance team, the phone directory for the emergency response team, the phone directory for the external emergency response services and the manufacturers.



V. M. Transportes Cruz del Sur S.A. — Name of Facility

Signature of Lead Auditor

29 - 30 July 2010 — Date

The Emergency Response System includes two derived procedures (PG-SYMA-06-01 for Gualcamayo and PG-SYMA-06-02 for Veradero) that include the phone contact and names for the mines, and describes the most likely emergency scenarios in each route based on the route assessments. The specific actions to be taken by the convoy leader and each of the convoy members in case of emergency for five general scenarios (based on the relevant variables of injured persons, spilled cyanide, spilled and wetted cyanide, and presence of wind) an included in Annex 2.

The emergency scenarios, the general emergency response instruction, and the scenario-specific instructions consider the solid state of the cyanide. All emergency scenarios developed are related to ground transportation of cyanide, including scenarios spilled cyanide in dry conditions and scenarios for spilled cyanide that gets in contact with water.

As previously noted the derived procedures include the emergency scenarios developed from the route assessment, they also include prevention and mitigation instructions, as well as specific response instructions.

The Emergency System Section 5.11 establishes the roles for public emergency responders including the police departments, which would have to control and deviate traffic; firefighters would help to rescue hurt people; and ambulance services, which would attend and transport, if necessary, hurt people to the hospitals. However, it recognizes that the firefighters, which by law are responsible of attending the emergency, may request to control the emergency, in which case, the emergency coordinator would pass the control of the emergency to them but will remain on site to provide advice and support, if necessary.

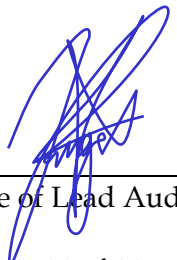
TRANSPORT PRACTICE 3.2: DESIGNATE APPROPRIATE RESPONSE PERSONNEL AND COMMIT NECESSARY RESOURCES FOR EMERGENCY RESPONSE.

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

Summarize the basis for this Finding/Deficiencies Identified:

As mentioned in practice 1.2 the drivers and the convoy leader have been trained in the emergency response procedures. The emergency coordinator and the emergency response team have also received training in the emergency response procedures. Additionally, the plan has been agreed with the cyanide manufacturer and the mines.

The Emergency System Section 4 establishes the responsibilities for the members of the response team (convoy leader, operations base, traffic controller, and other internal roles during the emergency). The convoy leader is responsible for the control of the emergency while the Emergency Coordinator arrives to the scene.



V. M. Transportes Cruz del Sur S.A.		29 - 30 July 2010
Name of Facility	Signature of Lead Auditor	Date

Annex II has a list of the required emergency response equipment. The list 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 flash lights
- 1 ducting tapes
- Cyanide gas detector
- Water analysis kit
- 40 disposable respirators 8210
- 12 amyl nitrite shots
- 4 Shoves
- 4 safety cones
- 4 sweeps
- 1 emergency light
- 50 polyethylene bags
- 80 kg of calcium carbonate
- 45 kg of sodium hypochlorite
- 2 empty containers

The transport procedures establish that the emergency equipment must be carried by the convoy leader in the safety escort vehicle or in a truck. A checklist is used to verify that it is available and it is part in the operation files.

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

As previously mentioned, prior to each operation the drivers receive a four hour training regarding cyanide handling and emergency response.

CDS does not subcontract the cyanide transport.

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 Emergency System Annex III includes a communications flow diagram which can be summarized as follows: the convoy leader must first inform CDS's Traffic Control who then informs the Emergency Coordinator, who notifies the client, CDS management team, to CDS's Emergency Response Team (ERT), the ERT is the one that notifies the external responders if necessary. The derived procedures (one per mine) include the list of contact names and numbers for emergency information with each mine, the format - R-PG-SYMA-06-05 includes the emergency numbers with external responders and the cyanide producers. A sample of the numbers was dialed and confirmed to be accurate.

The emergency notification and reporting procedures are included within the Emergency Response System. The System Section 9 establishes that it must be reviewed whenever modifications are required or, at least, once a year.

TRANSPORT PRACTICE 3.4: DEVELOP PROCEDURES FOR REMEDIATION OF RELEASES THAT RECOGNIZE THE ADDITIONAL HAZARDS OF CYANIDE TREATMENT CHEMICALS.

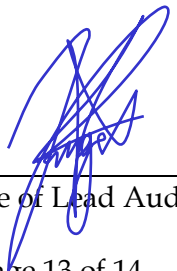
The operation is

- √ in full compliance with
- □ in substantial compliance with Transport Practice 3.4
- □ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The general scenario for cyanide spill in dry conditions included in Annex II of the Emergency Response System 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 sodium hypochlorite solution,
- wait for the area to dry and then remove the barricades.



The general scenario for cyanide spill in wet conditions included in Annex II of the Emergency Response System establishes that chemicals should not be added to water bodies.

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:

The Emergency Response System Section 9 establishes that it must be reviewed whenever modifications are required or, at least, once a year. The transport procedures establish that the convoy leader report must be used to update the assessment of the route. The Emergency Response System was last updated in July 2010.

The Emergency Response System Section 5.5.9 establishes that at least one emergency drills must be performed every year.

The latest drill was performed on 21 May 2010. The scenario consisted in a spill of 500 kg of cyanide from a wood box due to a crash with another truck. The scenario considered that the container doors open due to the crash and one person was hurt. This drill was performed on the route and with the participation of the manufacturer and one of the mines.

Emergency Response System Section 9 establishes that it 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 CDS representatives, no accidents have taken place.