International Cyanide Management Code



Re-Certification Audit of:

Víctor Masson Transportes Cruz del Sur S.A. Sodium Cyanide Solution Transportation Operations

Summary Audit Report

Submitted to: The International Cyanide Management Institute 1400 I Street, NW – Suite 550 Washington, DC 20005 USA

2019 Audit Cycle





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Signature of Lead Auditor

November 30, 2019 Date



Víctor Masson Transportes Cruz del Sur S.A. Sodium Cyanide Transportation Operation Summary

Company Names & Contact Information

Name and location of Operation:	Víctor Masson Transportes Cruz del Sur S.A. Autopista Ricchieri y Boulogne Sur Mer, Nave D3, Tapiales, Mercado Central de Buenos Aires, Provincia de Buenos Aires, Argentina Claudio Rabe – Audits Coordinator Claudio Rabe – Audits Coordinator	
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Description of Operation

Víctor Masson Transportes Cruz del Sur S.A. (Cruz del Sur), with 62 years in the market, is one of the main providers of comprehensive transport and logistics services in Argentina. Cruz del Sur was founded in 1957. Throughout its history, it has provided services to the industry, the trade and individuals in their interchange operations at country level. Its various business units include Transportation Department, Integral Logistics Department, Distribution Department and Mining Department.

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With the largest coverage in the country, Cruz del Sur offers services through its vast network of branches and inter-zone services in over 2,500 towns in Argentina. A fleet of more than 800 units, allows the most remote points of the country to be joined, providing coverage at national level.

With branches specializing in the main mining hubs and the production sites of supplies for the field, they are positioned as reliable suppliers. They cover and accompany all the logistical needs that this particular activity demands.

Cruz del Sur is also a sodium cyanide transporter in Argentina, transporting sealed containers with cyanide from Argentina ports, directly to mine sites, without the intervention of secondary storage facilities.

Currently Cruz del Sur transports cyanide packaged by the producers in a super-sack within a polyethylene bag to protect the material from water and humidity and placed in a wooden box. No less than 20 boxes are placed in a standard 20-foot shipping container; an exact number of boxes are placed to prevent boxes lateral movement in the container. In addition, blocking and bracing is applied to the cargo. 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.

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Auditor's Finding

This operation is in full compliance with the International Cyanide Management Code. This operation has not experienced any cyanide incidents or compliance problems during the previous three-year audit cycle.

Audit Company:	Management System Solutions, Inc. www.mss-team.com
Audit Team Leader and Technical Expert:	Bruno Pizzorni E-mail: CodeAudits@mss-team.com
Date(s) of Audit:	November 29 – 30, 2019

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 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.

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Cyanide Transportation Verification Protocol

Detailed Audit Results

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

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with

<u>Transport Practice 1.1:</u> Select cyanide transport routes to minimize the potential for accidents and releases.

Transport Practice 1.1?
☑ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance
Explain the basis for the finding.
Cruz del Sur uses the work instructive <i>Risk Itinerary Assessment and Route Approval</i> updated to April 2018, for the route selection process. This document describes the necessary parameters to take into account for the approval of road routes for the transport of sodium cyanide. The route evaluation must be done physically, that is through a tour of it.
The procedure takes into account population density, infrastructure, pitch & grade, proximity to water bodies, and the prevalence and likelihood of poor weather and resulting poor driving conditions. The route evaluation also details location of dangerous curves, resting places, main cities and population density, significant bridges, railroad crossings, landslides areas, ice, snow, fog areas, environmentally sensitive areas and high theft zones.
Cruz del Sur work together with customers to determine the safest and best route for transport. Records of completed forms RAR - <i>Risk and Route Approval</i> were found to be acceptable for all documented routes. In many situations there is only one truck route possible. Cruz del Sur management personnel performs the risk ranking with input from truck drivers, road information available through the internet and personal knowledge of the routes. When options exist, the

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route with the lowest risk is chosen in order to minimize the potential for accidents and/or releases.

Cruz del Sur evaluate the risks of the selected cyanide transport routes and take the measures necessary to manage these risks by means of the mentioned work instructive *Risk Itinerary Assessment and Route Approval*, in order to minimize the risk of accidents due to poor road conditions, as well as facilitating the attention of transportation incidents that may happen. Application of this procedure covers national and international routes used for cyanide transportation.

Risks such as pitch and grade of roads, traffic congestion, seasonal traffic 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 cities is considered to be lower risk. Weather conditions are constantly monitored, and deliveries are postponed if a route is considered to be unsafe.

The *Risk Itinerary Assessment and Route Approval* procedure calls to periodically reevaluate the routes used or to receive information on route conditions by operators. As stated, if for a period of one year there were no transport services for a certain route, before making a new travel, it must be re-evaluated with the aim of recording the possible modifications that it could have suffered.

All routes are evaluated prior to first delivery and again formally thereafter periodically. In addition, routes are evaluated after each cyanide delivery. The driver submits a trip report where road and vehicle conditions, as well as any incidents, are reported.

Since the routes may undergo modifications over time, the convoy leader analyses these reports by means of the register *File of the Sodium Cyanide Convoy*, which is a fundamental tool to update the road assessment at any time that merits it. The information of the convoy leader will be recorded in the "*Report on Cyanide Convoy*".

Risk mitigation measures are noted on the route documentation, where applicable. The dispatch orders indicate the routes. Risk mitigation measures focus primarily on the avoidance of social unrest, high traffic times of day and the avoidance of roads that are dangerous in poor weather conditions. Drivers were interviewed and showed good awareness of risk mitigation measures necessary for driving through populated areas and parking overnight in route to a customer site.

The route planning procedure shows what considerations are made when planning a route. Interviews demonstrated that drivers, managers and other stakeholders are involved in the

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selection of routes and the implementation of risk mitigation measures. Extensive interaction occurs between Cruz del Sur, its drivers, the cyanide consignors and the mine customers as conditions at mine sites change and routes to the mine sites need to change. Examples of how communities are involved in the route planning process were observed. The invitation letters from Cruz del Sur to public health functionaries located on route, to police, firefighters and civil defense were reviewed. These community interactions are generally meetings called "Divulgation Journey" with City Councils and community leaders where cyanide transport activities are informed.

Cruz del Sur periodically shares information regarding its cyanide transport operation with CIPET (Center for Information on Emergencies in Transportation), a private organization created by the Argentine Chamber of Automotive Transport of Dangerous Goods and Residues (CATAMP) together with the National Directorate of Civil Protection of the Ministry of Interior of the Nation, with the objective of minimizing the effects of accidents on routes. CIPET operates continuously offering response in the emergency response in road transport and ensuring that roads are increasingly safe. Prior to any cyanide shipment to a new destination, Cruz del Sur in coordination with the client, conducts outreach talks.

Interviews demonstrated that stakeholders are involved in the selection of routes and the implementation of risk mitigation measures. The transport procedure establishes that all shipments from the port to the mines are performed in convoys and with at least one safety escort vehicle (where the convoy leader travels). According to the interviewed convoy leader all the operations are performed in convoys.

Cruz del Sur in coordination with the cyanide consignors, manages communications with local emergency responders. Cruz del Sur has periodically formal communication and training with local emergency responders and with hospitals. Records from community interactions covering the recertification period was reviewed and found to be acceptable.

Cruz del Sur does not subcontract any portion of their cyanide transportation operations. Tractors are owned by Cruz del Sur, Inc. ICMC requirements pertaining to subcontractors are, therefore, not applicable to the organization.

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<u>Transport Practice 1.2:</u> Ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

Finding : Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 1.2?
☑ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance
Explain the basis for the finding.
All Cruz del Sur drivers transporting cyanide have training in hazardous materials transport, defensive driving, materials compatibility, and in general goods transportation. According to local regulations, all drivers must be licensed and pass psychological, technical and medical examinations prior to being able to drive. In addition, Cruz del Sur provides internal training in securing cargo and a one hour training prior to each operation with cyanide which includes emergency response. A test is given to the drivers to reinforce the training. Drivers were interviewed and were found to have an appropriate level of knowledge and safety awareness. The convey leader has transport background, is knowledgeable on basic mechanics.
awareness. The convoy leader has transport background, is knowledgeable on basic mechanics, and have leadership qualities. The current convoy leaders have over five years of experience escorting hazardous materials convoys.
Operational training is given upon hire and there is a skills evaluation process to ensure that drivers are competent to perform their jobs and to drive the designated route prior to the first delivery alone. Safety-related training is given at defined intervals to ensure that all personnel operating cyanide transportation equipment can perform their jobs in a manner that minimizes the potential for cyanide releases and exposures. The training is carried out using videos, computer-based training, and classroom sessions. Training records were reviewed and found to be acceptable. Drivers were interviewed and were found to have an appropriate level of knowledge and safety awareness.

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<u>Transport Practice 1.3:</u> Ensure that transport equipment is suitable for the cyanide shipment.

Finding : Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 1.3?
☑ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance
Explain the basis for the finding.
Equipment used by Cruz del Sur is capable and maintained to operate within the loads it will be handling. Equipment labels and manufacturers specifications were reviewed during the audit, to check the allowed load. All available tractors and trailers have been checked and are rated for weights that exceed maximum loaded weights.
The auditor reviewed the Preventive Fleet Maintenance Program. This program includes the types of maintenance for trucks and for platforms. In addition, prior to every cyanide transport operation, every vehicle is checked for visible possible failures and loose parts. Cruz del Sur has a special unit equipped with the necessary testing tools and is constantly reviewing all trailers and tractors stationed at Cruz del Sur parking area. Also, after each trip, the drivers submit their trip report where any vehicle failure or part needing attention is reported to the maintenance area.
Truck inspections and preventive maintenance actions are performed regularly to ensure that the equipment is safe to operate and that it can continue to carry the loads for which is it designated. Regulatory-required inspections are also scheduled, tracked and documented.
Cruz del Sur has implemented a software which allows to verify the adequacy of the equipment for the load it must bear. This is restriction system to ensure the vehicle is the adequate to the cargo according to its loading capability and antiquity of the vehicle, which among others, are parameters taken into account to transport hazardous materials, as the auditor checked during its visit to the Cargo Coordinator office.
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 interviews with convoy leaders and drivers. The load capacity of the platforms used by Cruz del Sur is 25 ton and larger; the
gross weight of an ocean container fully loaded with cyanide is approximately 22 ton (t) No
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other equipment is used. The container loading into trucks is performed by the port operator and the unloading of cyanide boxes is performed by the mine.

Loading is done by the port operator using scales to confirm the shipment weight. The loads being hauled are standard loads that do not vary in weight. Records were checked against weight capacities and weight limit regulatory information. The equipment is capable of transporting loads in excess of the maximum loads shipped. The regulatory limits on truck weight are typically the limiting factor that dictates the maximum amount of cyanide that can be transported. Office personnel and drivers all showed excellent awareness of weight capacities and regulatory requirements pertaining to maximum truck weight allowed.

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 completed for each truck in the convoy, this inspection is performed the day before the shipment.

<u>Transport Practice 1.4:</u> Develop and implement a safety program for transport of cyanide.

Finding : Is the transporter in full complia	nce, substantial compliance,	or non-compliance with
Transport Practice 1.4?		
☑ Full Compliance ☐ Substantial Con Explain the basis for the finding.	mpliance Non-Compliance	ce
Cruz del Sur transports only solid cyanide and unloading procedures ensure that the The transport procedure states the convoy for the trip, also to control the cyanide control the integrity of the packaging, the convo	truck and the trailer are not will review the containers to tainers seals at the exit of the	damaged during transit. ensure they are suitable port and as confirmation
The transport procedure establishes that	the load cannot be altered d	uring the transportation
process. To ensure this, tags are placed of	on the ocean container's loc	ks at the manufacturing
facility. These tags can only be removed	at the mine. The containers	received in the port are
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placed on platform trailers and hauled by trucks without the need for changing the packaging. Per the interview with the convoy leader, the load is not removed from the container.

Appropriate placards showing UN 1689 (solid cyanide) are displayed on all four sides of the sea containers. Drivers and convoy leader visually inspect the containers prior to each movement. Equipment markings were found to be adequate and conformant.

The transport procedure establishes that placards with cyanide's UN number and poison signs must be placed on the container; this is verified through the vehicle inspection checklist. The convoy leader has additional placards in case the container is missing one or more. Per the reviewed operation files, the presence of the placards was verified through the checklist.

Drivers conduct a pre-trip inspection the day before the vehicle departs to the port facility for loading (documented through the vehicle inspection checklist). Mechanical defects are called to the attention of the on-site mechanics. Issues that would affect safety and/or legal compliance are resolved prior to movement off-site. Drivers were interviewed and they demonstrated the process of performing pre-trip inspections; pre-trip inspection checklists were reviewed and found to be acceptable.

Drivers perform a driver vehicle inspection at the end of each day of operation. Completed checklists are submitted into the office at the end of each trip. Pre- and Post-trip inspection records were sampled for the recertification period and were found to be completely filled out and signed.

Cruz del Sur has a *Preventive Maintenance Management* work instructive in order to ensure proper operation and shelf life of machine, equipment, instrument and software and / or installation plausible to be maintained. By mean of the software SMR (*Resource Maintenance System*), they manage, and record preventive and corrective maintenance performed. The system emits the work orders on time. Records were sampled for tractors and trailers covering the recertification period and were found to be acceptable, indicating the maintenance is being conducted as scheduled.

The procedure *Automotive Transportation of Sodium Cyanide* includes limitations on drivers' hours in accordance with local regulations and states that drivers transporting cyanide only drive during day light hours. Drivers are informed of the legal requirements regarding limits on driving hours. Operators must rest at least 8 hrs. prior to a trip, should not drive for over 12 consecutive hours, and take a 10 minute break approximately every two hours. Breaks are at pre-selected stop points where the risk has been assessed and ranked as low. The convoy leader ensures that these are the only pre-established stops. The fulfillment of these requirements was

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confirmed through the operation logs, the operation files, and interviews with the drivers and the convoy leader.

The transport procedure states it is the driver's responsibility to ensure stability of loads with four pines and two wedges. The driver is responsible for counting with these elements before the departure of the units and the leader of the convoy will be responsible for verifying that they have the elements and the correct use of them at the right time. By mean of the checklist *Cyanide Operational File*, the driver supervised by the convoy leader, verifies before departing and once the vehicle is loaded, that the cyanide container is adequately secured to transport trailers with twist locks. The auditor reviewed several completed checklist covering the recertification periods.

The transport procedure establishes that load shifting within the container is not considered possible as all containers are filled with 20 boxes and block and brace is applied at the cyanide production plant to prevent load movement.

The transport procedure describes the events according to which the transport can be modified or suspended if conditions such as bad weather or public unrest. The movement of the convoy will be dependent on the weather conditions; the convoy leader will evaluate the safety of the route in each case, being able to stop the convoy if in its opinion the conditions do not allow a safe transit. When there is reasonable evidence that there would be inconvenience on the route, it will require the Head of Traffic Control, which consult the relevant agencies (Police, Ministry of Transportation, highway to use), making sure that the route to continue is enabled and there are no obvious social or political conflicts during the trip.

If there was evidence of conflicts, the trip must be suspended, communicating the decision to the client and the final user (mine), if the client so requires. The suspension of the trip may also be required by the client or the mine. In the case of having to make a route diversion for some reason mentioned above, the leader must receive authorization prior by Cruz del Sur CODE (Emergency Coordinator), who will also communicate the situation to the client.

Drivers and convoy leaders are empowered to pull over whenever weather, fatigue or other conditions are unsafe to continue a trip. In such instances the convoy leader is to call into the office. 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 communicated to the mine and the cyanide provider. This information is recorded in the convoy control and follows the format included in the operation file. This policy was reviewed and confirmed through driver interviews.

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Prior to the departure of every shipment the drivers are given an alcohol test (blow tests documented in the convoy leader report). During cyanide transportation drivers have to pass through the alcohol test every day prior to departure. On the route, the convoy leader always maintain the drivers together in order to maintain better control, trying to have always lunch and dinner together.

The transport procedure requires at each stop for the night, the convoy leader must remember the prohibition of alcohol and drug use to drivers in service. The alcohol and drug abuse prevention program includes training in prevention of consumption of these substances. In case of a positive result on the alcohol test, the convoy leader travels with a substitute driver. The auditor reviewed several alcohol testing registers for the re-certification audit period. The records were found to be acceptable. Drugs test are not allowed by local regulations in Argentina, excepting in the case of accident, and then only by a court order.

Records were available to demonstrate that all activities above-mentioned have been conducted: vehicles inspections prior to departure, preventive maintenance program, limitations on operator or drivers' hours, procedures to prevent loads from shifting, procedures by which transportation can be modified or suspended and drug abuse prevention program. Records are maintained, retrieval was found to be excellent in all areas.

<u>Transport Practice 1.5</u>: Follow international standards for transportation of cyanide by sea and air.

Finding : Is the transporter in full compliance, substantial compliance, or non-compliance with
Transport Practice 1.5?
☑ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance
Explain the basis for the finding.
Cruz del Sur does not ship cyanide by sea or by air. This section of the ICMC does not apply to
the operation.

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<u>Transport Practice 1.6:</u> Track cyanide shipments to prevent losses during transport.

Finding : Is the transporter in full complian Transport Practice 1.6?	ce, substantial compliance, or	non-compliance with
☑ Full Compliance □ Substantial Comp	nliance □ Non-Compliance	
Brun Comphance Substantial Comp	phance in Non-Comphance	
Explain the basis for the finding.		
Cyanide shipments are tracked using a GPS Drivers log into the system to communica provided with a cellular phone and a satellit is responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones as a back-up responsible for communicating with Cru drivers also have cell phones and cell phones are communicating with the communicating with the communicating with the cell phones and cell phones are cell phones as a back-up responsible for communicating with the cell phones are cell phones and cell phones are cell phones and cell phones are cell phones are cell p	te the status of the delivery. te phone. The convoy leader a uz Del Sur in case of an eme	The convoy leader is lso has a radio and he
The communication and tracking equipmed inspections, and is maintained along with the tractor. Each truck is tracked by GPS. A cobserved during the audit. The system is use confirmed at that time. Communication equal the test is part of the vehicle inspection checked.	he formal preventive maintenance demonstration of real-time transed each day and correct operation to the dependent is tested prior to the dependent in the dependent is the dependent in the dep	nce program for each acking capability was ation of the system is
According the interview with the convoy however, the convoy leader carries a satellit		
Cruz del Sur communications and GPS tra location of the convoy. Every time a cyan <i>Center</i> is notified via email for convoy trac properly functioning. Satellite tracking syst tracking company that provides the securit progress of the convoy, based on the information regarding position of service s other information of interest to the carrier.	ide convoy is to departure, the cking. A satellite code is activated is provided by DORSAC, ty service. They emit reports nation provided by the leader of the convoy. DORSAC's v	reacted and checked for a vehicle monitoring every 2 hours on the of the convoy and via web console includes
In addition they use the <i>Point-to-Point Sys</i> vehicle, the name of the driver, both real and of this system, the auditor was able to track	d historical speed, and GPS sig	gnal quality. By mean
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They have a third emergency monitoring system called NEO, which provides information about position of all Cruz del Sur units in the country, so they can locate the nearest vehicle to provide aid in case of an accident on route.

Personnel responsible for tracking the shipment status from Cruz del Sur were interviewed, the GPS systems were demonstrated, and logs showing that shipment status was being recorded were reviewed and were found to be complete. Cruz del Sur's procedure for tracking of a shipment's status was reviewed during the audit and found to be in compliance with current practices.

The transport procedure establishes that the convoy leader must report the progress of the convoy at pre-selected points. The convoy leader communicates with Cruz del Sur upon dispatch, upon arrival at the customer sites, and after unloading is complete. The progress report is provided by phone to the base which informs the interested parties of the convoy's progress by email. A report is generated with the estimated and actual time of arrival to the selected stop points.

The transport document (like 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 shows the amount of cyanide delivered, it includes the number of the container and net weight in transit. The mine receipt stamps the transport document which is used for invoicing.

This paperwork is used to document the chain of custody and is signed upon delivery of the product to the customer. The amount of cyanide delivered is carefully monitored in person by the driver and remotely through the Cruz del Sur dispatch office. The containers are locked and tagged at the manufacturer's facilities. These tags are only removed at the mine.

Drivers were interviewed regarding this process of monitoring amounts delivered, and maintaining control over the shipment. Awareness and process knowledge was excellent. Additionally, the containers are locked and tagged at the manufacturer's facilities. 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 his/her training, licenses, and the cyanide MSDS. The convoy leader confirms that these documents are available prior to travel. The amount of cyanide delivered is carefully monitored in person by the driver and remotely through the Cruz del Sur office.

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

<u>Transport Practice 2.1</u>: Store cyanide in a manner that minimizes the potential for accidental releases.

Finding : Is the transporter in full compliance, substantial compliance, or non-compliance with
Transport Practice 2.1?
☑ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance
Explain the basis for the finding.

Cruz del Sur does not have any interim storage responsibilities. Additionally, no trucks containing cyanide are allowed to be stored at the terminal. If a delivery is interrupted, loaded cyanide trucks would be stored in a secure location. The scope of this audit is for the ground transportation operations performed by Cruz del Sur from Buenos Aires and Punta Arenas ports to mines in Argentina. This Transport Practice do not apply to Cruz del Sur cyanide transport operation.

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

<u>Transport Practice 3.1</u>: Prepare detailed emergency response plans for potential cyanide releases.

Finding : Is the transporter in full compliant Transport Practice 3.1?	nce, substantial compliance, or non-compliance with
☑ Full Compliance □ Substantial Com	npliance Non-Compliance
Explain the basis for the finding.	
cases of accidents in transport and to prote and equipment involved. The scope of the	y Response Plan (ERP) to provide rapid response in act the population, the environment, personnel, loads a Plan is to address any emergency detected during an the ports to the different mines in Argentina.
reviewed and was found to be acceptable. an emergency response, but its role is Emergency response is then directed and personnel if the emergency happens at a memergency response security training, and during transport. Cruz del Sur only transport the plan were related to truck accidents	ents for the transportation of cyanide. The plan was Cruz del Sur convoy leader vehicle has material for mainly for notification and isolation of the area. It carried out by emergency responders, and mine nine site. Drivers have hazardous materials training, they keep a copy of the ERP with them at all times orts cyanide via truck and all scenarios considered in second sodium cyanide (the only physical form erences, and the roles of the different emergency
response actions in case of cyanide spills a act in coordination with the cyanide con transport contingency plans, describing	il in the Plan appendices, addressing all the necessary and exposures. For second response it is planned to assignors and mining clients, which have provided secondary actions to control spills along the ance is required as soil remediation, Cruz del Sur will sponse company.
1 · · · · · · · · · · · · · · · · · · ·	tion regarding its cyanide transport operation with gencies in Transportation), a private organization
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created by the Argentine Chamber of Automotive Transport of Dangerous Goods and Residues (CATAMP) together with the National Directorate of Civil Protection of the Ministry of Interior of the Nation, with the objective of minimizing the effects of accidents on routes. CIPET operates continuously offering response in the emergency response in road transport and ensuring that roads are increasingly safe.

The ERP was found to be acceptable for the Cruz del Sur defined routes. Emergency procedures are described in general. Cruz del Sur drivers only have a first response and notification role in emergency response.

The ERP includes the contact names and phone numbers for the mines and describes the most likely emergency scenarios on each route based on the route assessments. Five general scenarios based on the relevant variables of injured persons, spilled cyanide, spilled and wetted cyanide, and presence of wind are included in the ERP. The specific actions to be taken by the convoy leader and each of the convoy members in case of an emergency (only for the first response) are also included.

Cruz del Sur has a monitoring center called *Traffic Monitoring Center* where any accident will be followed up. Once and emergency is reported, all information is recorded in the *Cyanide Accident Report Form*. Beside the Monitoring Center is located the crisis management room, with cartography of Argentina, emergency telephone lists and communications systems.

The Plan considers transportation of solid sodium cyanide, the only form of cyanide that is transported. Detailed information regarding the chemical form of the solid cyanide is on the material data safety sheets (MSDS) that are kept in the truck at all times. All drivers have emergency response training. Awareness of the steps that would need to be taken in the event of an emergency was confirmed during this re-certification audit.

The only transport method by truck, is addressed by the ERP. All emergency scenarios that appears in the ERP are related to ground transportation of cyanide. Scenarios include spilled cyanide in dry conditions, spilled cyanide that comes in contact with water, and with the presence of wind.

The differences in infrastructure for the defined routes are addressed in the ERP. As there are not multiple modes of transportation, the different road types such as highway, public, private, and rugged mine site were considered. Drivers showed good awareness of the need to use different routes depending on weather conditions.

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The ERP does not specifically mention the design of the transport vehicle. The emergency response actions outlined in the ERP are primarily notification actions. Professional emergency responders together with technical guidance from the cyanide consignors would be responsible for addressing issues involving the way in which the structure of the container should be managed after an emergency.

All the scenarios in the ERP are in relation with accidents of trucks hauling a platform trailer carrying a 20-ft container, which is the only transportation modality used by Cruz del Sur. The plan is linked to the Sodium Cyanide Transportation procedure which includes the characteristics of the vehicles used.

The plan include descriptions of response actions, as appropriate for the anticipated emergency situation. The convoy leader will report the situation to the Operations Manager and to Cruz del Sur Traffic Control Center, will assist the victims, isolate the area, inform the firefighters not to use water over the cyanide cargo to control a fire and report the accident to the local police, among others.

Drivers will park the truck in a safe place, off the road, to avoid chain collision risks. Will delimit the area with tape and cones. Will be available to the leader orders. If a fire occurs, will fight it with the dry chemical fire extinguisher. In case the convoy leader is not available, will communicate the emergency to Cruz del Sur and provide first aid to injured people.

The ERP identifies the roles of outside responders. The Police will conveniently the site preventing people from entering the area. The police / traffic must ensure the zone in a radius of 100 m. when there is a spill of product. The convoy leader will alert the firefighters that water cannot be used in the place of accident.

Combined emergency response drills are held with mine sites, local emergency responders, and cyanide consignors personnel to ensure that all parties understand their roles and responsibilities in the event of an incident or accident.

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<u>Transport Practice 3.2:</u> Designate appropriate response personnel and commit necessary resources for emergency response.

Finding : Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 3.2?
☑ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance
Explain the basis for the finding.
Training on the emergency response is given periodically to all employees related to cyanide management, including drivers and the convoy leader, according to require in the <i>Cyanide Training Manual</i> . Workers can find training sessions by mean of the <i>Health, Safety, Environment and Human Resources Matrix</i> , where the name, date and place of the course is indicated. It is mandatory to carry the emergency response training annually. Training include knowledge in the Cyanide Code, cyanide transport procedures and protocols, and emergency response.
Due to the wide coverage of its transport services, Cruz del Sur has training centers at Rio Gallegos, Bahia Blanca, San Juan and Buenos Aires. Online training is also available to facilitate drivers training as they are constantly travelling. Drivers receive this training with the presence of the person in charge.
Training records were reviewed for drivers and convoy leader. Emergency response training key facts are refreshed for cyanide drivers and the convoy leader prior to each transport operation. In addition, personnel involved in the cyanide transport operation receives training from the cyanide consignors and mining clients.
The ERP clearly 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 notification of and first response to the emergency while the Emergency Coordinator takes control over the emergency once notified that there has been an incident.
The plan include descriptions of response actions, as appropriate for the anticipated emergency situation. In the event of an accident, the convoy leader will report the situation to the Operations Manager and to Cruz del Sur Traffic Control Center, will assist the victims, isolate the area, inform the firefighters not to use water over the cyanide cargo to control a fire and report the accident to the local police, among others.
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Drivers will park the truck in a safe place, off the road, to avoid chain collision risks. Will delimit the area with tape and cones. Will be available to the leader orders. If a fire occurs, will fight it with the dry chemical fire extinguisher. In case the convoy leader is not available, will communicate the emergency to Cruz del Sur and provide first aid to injured people.

Cruz del Sur has defined the materials required for emergency response during transportation along the route including spill response equipment in the ERP. The list of equipment includes Tychem suits, leather and impermeable gloves, PVC boots, safety goggles, area isolating tape rolls, HCN detector, water analysis kit, disposable respirators, oxygen, shovels, sweeps, polyethylene bags, calcium oxide, sodium hypochlorite and empty containers.

The convoy leader transports a box with all the emergency equipment listed. The contents of the emergency equipment box is listed on a checklist. The box contents are checked prior to each cyanide delivery. Although Tychem suits are available in addition on each truck, the ERP only calls for the driver to mark the area, keep people away, and make notifications.

Per site management, the emergency equipment is transported in two wood boxes, one in the safety escort vehicle (including PPE, safety equipment, etc.) and in one of the trucks (including calcium oxide bags and sodium hypochlorite bags). In addition, amyl nitrite inhalant ampoules and a cyanide gas detector are transported inside the safety escort vehicle. A checklist is used to verify that it is available, and it is part of the operation files. Specific training records reviewed included cyanide emergency response and first aids, which includes assistance to the victim by administering amyl nitrite via inhalation.

Cruz del Sur drivers receive an appropriate level of training to enable them to fulfill their role in emergency response, which is limited to notification. Formal training in cyanide is given periodically. In addition, prior to each operation the drivers receive a one to two-hour training regarding cyanide handling and emergency response. This training session is provided by the convoy leader one day prior to the start of the convoy. All drivers must pass a test on *Sodium Cyanide Transportation*.

The ERP defines what equipment must be available in the convoy leader vehicle and extra personal protective equipment in the trucks. A procedure is used to inspect emergency equipment boxes on a regular basis when trucks are brought in for maintenance and inspections. The transport procedure establishes that the emergency response equipment must be carried by the convoy leader in the safety escort vehicle and/or in one of the trucks. A checklist is used to verify that it is available prior the convoy's departure and it is kept in the operation file. The availability and completeness of the material was confirmed during the audit.

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<u>Transport Practice 3.3:</u> Develop procedures for internal and external emergency notification and reporting.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 3.3?
☑ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance
Explain the basis for the finding.
The notification procedures are described in the Emergency Response Plan (ERP). Appendix 5. Emergency Communication Chain by means of a communications flow chart. Direct communications include contacts with Traffic Control; the Operations Manager; the client; ERT Q66 (Cruz del Sur emergency responders' team along the Argentinean territory); Assistance Groups (CIPET, RESTEC, DORSAC); police and firefighters as external responders for the emergency. The plan includes emergency telephone contact lists in its appendices. The notification call list is checked for accuracy once per year when the plan is reviewed and tested. CIPET, the Center for Information on Emergencies in Transportation, offers much of the communications support in determining further notification needs to external emergency response providers including hospitals.
The ERP is reviewed and tested (by means of a drill and/or tabletop exercise) once each year. During this activity, the phone numbers are checked for accuracy. CIPET, among other services, provides updated communication services guaranteeing rapid communications with the various emergency aid agencies during transportation of hazardous materials in the vast Argentine territory. Records were available to show that this is done. The Plan establishes that it must be reviewed whenever modifications are required or, at least, once a year.

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<u>Transport Practice 3.4:</u> Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

Finding : Is the transporter in full compliance, substantial compliance, or non-compliance with
Transport Practice 3.4?
✓ Full Compliance □ Substantial Compliance □ Non-Compliance
Explain the basis for the finding.
The carrier has defined that the responsibility of the company will be the containment of the
spill in the event of an accident involving the transport of hazardous materials, including sodium cyanide. Decontamination activities and final disposal of the product will be the responsibility of the cyanide consignor.
Nevertheless, Cruz del Sur ERP includes text that addresses the remediation and neutralization of solid cyanide. General information is given, and the hazards associated with using cyanide treatment chemicals are recognized. Neutralization chemicals are not allowed to be used in or near surface water bodies. In case further assistance is required, Cruz del Sur will contact RESTEC, a specialized emergency response company.
Cruz del Sur would not be directly involved in the remediation of a cyanide spill. The ERP,
however, does address the requirement that none of the chemicals such as sodium hypochlorite, ferrous sulfate, or hydrogen peroxide be used to treat a release to surface water.
<u>Transport Practice 3.5:</u> Periodically evaluate response procedures and capabilities and revise them as needed.
Finding: Is the transportant in full compliance substantial compliance or non-compliance with
Finding : Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 3.5?
☑ Full Compliance □ Substantial Compliance □ Non-Compliance
Explain the basis for the finding.
The Emergency Response Plan establishes that it must be reviewed whenever modifications are
required or, at least, once a year. Records were available for the recertification period to show
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that emergency response was reviewed. Interviews and written procedures confirmed that the plan would also be reviewed after any deployment of the plan. Any necessary changes would be made, as necessary.

The Emergency Response Plan establishes that at least one emergency drills must be performed every year, together or not with the client and/or the mine site. Cyanide related emergency drills have been held annually during the re-certification audit period.

On December 2017 with Chemours, the cyanide consignor, simulated a crash traffic accident between a truck carrying cyanide and a car with no spills.

On December 2018 Cerro Vanguardia in coordination with Cruz del Sur, conducted a mock emergency drill with spillage and cyanide exposure at the entrance of the convoy to the mine site. The drill, organized by the mine, was without prior notice to its personnel.

The Protection Area, which is in charge to follow up all vehicles from the Traffic Monitoring Room, conducted 2 desktop emergency drills in 2019. On occasion of the audit, the auditor could verify that Cruz del Sur has scheduled to conduct a drill in December.

It is stated in the Emergency Response Plan's that itsperformance will be reviewed after actual emergencies and after annual drills. No cyanide related incident occurred during this certification period; therefore the operation has not evaluated and/or revised its emergency response plan due to this reason. Nevertheless changes are made to the plan, as needed. Drill critiques were reviewed showing opportunities for improvement and actions to be taken which have been implemented.

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