

ICMC SUMMARY AUDIT REPORT

MAC TRANSPORT CYANIDE CONSIGNOR SUPPLY CHAIN LIMA, PERÚ 2018



**MLC. BERNALES 175 DPTO. 403 URB ORRANTIA
MAGDALENA DEL MAR,
LIMA, PERÚ
+51-987-185-843
MARIPILLARRESE@GMAIL.COM
WWW.MOBER.COM.PE**

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Signature of Lead Auditor

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Information on the Audited Operation

Name of Cyanide Transportation Facility:	Mac Transport S.A.C.		
Name of Facility Owner:	Mac Transport S.A.C.		
Name of Facility Operator:	Mac Transport S.A.C.		
Name of Responsible Manager:	Raúl Álvarez Casanova - Deputy Managing		
Address:	Calle Monte Rosa 240 Of. 401 Chacarilla, Surco		
State/Province:	Lima	Country:	Perú
Telephone:	C: +(51) 989 087 116 T: +(51-1) 623 8782		
E-Mail:	Gerencia@mactransport.com.pe		

Location Detail and Description of the Operation:

Mac Transport, S.A.C. (Mac Transport) office is located in Lima, Peru. On behalf of its mining client, Mac Transport manages the purchase of sodium cyanide from the manufacturer Hebei Chengxin Co., Ltd, in the People's Republic of China. Hebei is a cyanide manufacturer certified in the International Cyanide Management Code (ICMC) in October 2012 and recertified in December 2015. Cyanide purchases are made according to customer's requirements in batches ranging from 7 to 15 feet sea containers of 20 feet. Each container contains 20 boxes of sodium cyanide in briquettes.

Cyanide is transported to Callao port in Lima, Peru, via Shanghai port in China, through the Hebei Chengxin Co Ltd Global Ocean Supply Chain, ICMC certified in August 29, 2017. Hebei contracts the marine transportation of solid cyanide within its Supply Chain to major international shipping companies with the ability to offer scheduled container services from point of origin to destination. Callao port is included within Hebei's supply chain, according to the audit report published on the ICMI website.

Once in Callao port, the cyanide shipment is discharged directly to the platforms of Transportes Meridian SAC (Meridian), a trucking company ICMC certified in December 07, 2016. Cyanide is transported by Meridian until Ransa warehouse, also in Callao. From Ransa cyanide shipments is delivered to the client's mining operations, by means of Transportes Zetramsa S. A. C, (Zetramsa) trucking company ICMC certified first in March 10, 2014 and then recertified in November 30, 2017.

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The scope of this ICMC certification audit comprises the cyanide trucking transport operations from Callao port to Ransa warehouse and from Ransa to the client mining operations. Ransa warehouse is not in the scope of this audit.

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Auditor's Finding

This operation is

- ☒ in full compliance
- ☐ in substantial compliance
- ☐ not in compliance with

with the International Cyanide Management Code.

Audit Company:	Mober Operaciones	maripili.arrese@gmail.com
Audit Team Leader:	Bruno A. Pizzorni	bpizzorni73@gmail.com
Transport Technical Auditor	Bruno A. Pizzorni	
Date(s) of Audit:	May 28 and 29, 2018	

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.

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

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

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 1.1
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Mac Transport as the cyanide consignor, requires all trucking transporters in his cyanide supply chain implement procedures for selecting transport routes that minimizes the potential for accidents and releases. Mac Transport has developed and implemented the Management Manual for Sodium Cyanide and Transport Contractors (Cyanide Manual) where require all cyanide transporters to evaluate for all routes previous to the first cyanide shipment, the population density, existing infrastructure conditions of the roads, pitch and grade and presence of water bodies and visibility due to weather conditions. Mac Transport presented various route evaluations carried out by its carriers.

The auditor met with representatives of the two transport companies that work with Mac Transport: Transportes Meridian SAC (Meridian) and Transportes Zetramsa SAC (Zetramsa), both ICMC certified, verifying that they have implemented the required procedures and have carried out the corresponding routes evaluations.

Mac Transport's Cyanide Manual establishes to perform a risk analysis and the steps to follow for the preparation of roadmaps for all routes covered by the organization during the execution of the transport service. Once identified the risks is required to establish the necessary control measures to manage these risks.

Zetramsa trucking company requires in its respective procedure, to prepare and update the roadmap when there is a new route, modification of conditions or a request from the customer recording the aspects related to: unsafe conditions (road condition, weather conditions and traffic), speed of handling by sections, signs and prohibitions of the road, heights of bridges, tunnels, ridges of hills, water, population density, mist zones and other aspects of transport safety.

Mac Transport requires in its Cyanide Manual that transporters must reevaluate periodically their routes used for cyanide deliveries or when road conditions require an update. Also, require the drivers to provide feedback on the route conditions. Feedback regarding routes chosen is gathered during the partner re-evaluation process.

Mc Transport maintains a policy to only utilize ICMC certified signatory transporters for the truck transport of cyanide, collaborating closely with its transporters, Meridian and Zetramsa, to ensure that all new routes are formally evaluated for risk against ICMC risk criteria before delivery to a mine can commence. Mac Transport maintains formal documentation with its

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transportation partners to ensure that roles and responsibilities are clearly defined and agreed upon by all parties.

Meridian and Zetramsa management members were interviewed and confirmation was made that feedback regarding routes is discussed between them and Mac Transport. When feedback from a driver suggests that a route needs to be revised, the trucking companies revise the routes and communicates new information to drivers. Records showing that all Mac Transport shipping routes are maintained up-to-date with current information were reviewed during the audit.

Mac Transport and its carrier's management members were interviewed, and confirmation was made that risks and risk mitigation measures are detailed, route by route. Mac Transport meets with Meridian and Zetramsa to discuss risks and risk mitigation measures. Records showing that all Mac Transport shipping routes are maintained up-to-date with current risk and risk mitigation information were reviewed during the audit.

Both truck carriers use a formally documented procedure to determine routes. Route evaluations for the transportation routes used for Mac Transport shipments were complete and records were available for review.

Each route segment is evaluated for risks associated with population density, infrastructure, pitch & grade, proximity to water bodies, and likelihood of encountering poor driving conditions. Routes are also evaluated for security issues and for cell phone coverage. Only those routes deemed to be safe are approved.

Mac Transport Cyanide Manual require the truck carriers to interact with communities, governmental agencies and emergency responders in the development of risk management measures. In most cases there is only one route to access to the mine sites. There was evidence of communications of its cyanide carriers to hospitals and firefighters in Lima and along the transport routes. Letters sent to firefighters and medical centers were reviewed to communicate their roles in case of any emergency and to open communication channels between the transporters and the emergency support providers.

Mac Transport carriers use convoys and escorts in all cyanide shipments deliveries to the mines sites, according to the mine client requirements.

The interviewed management personnel from Mac Transport and its carriers confirmed all the cyanide operations are performed in convoys and that the need for additional safety or security measures is reviewed. Trip reports and recommendations are provided by convoy supervisor in the report issued for each trip.

Mac Transport carriers have provided external responders with cyanide safety Data Sheets (SDS), and emergency information to support emergency centers (emergency responders, medical centers, and fire fighters) along the routes, and they must sign an acknowledge receipt of the letter of such information. There is evidence of the request for support to transportation to related entities such as firefighters, police, hospitals and communities along the routes.

Mac Transport carriers do not subcontract any portion of their cyanide transportation operations. Tractors and trailers are owned by Meridian and Zetramsa.

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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 ☒ Full Compliance
☐ in substantial compliance with Transport Practice 1.2
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Mac Transport maintains a policy to only utilize ICMC certified signatory transporters and collaborates with its transporters to ensure that all drivers are qualified and trained in the operation of cyanide transport equipment, cyanide safety, and emergency response procedures. Both trucking companies Meridian and Zetramsa maintain formal training procedures and programs and use trained, qualified and licensed drivers. Drivers are trained on cyanide safety prior to being dispatched for the first time. Training is refreshed annually, and testing is performed to confirm competency.

Mac Transport's Cyanide Manual require transporters to maintains a formal training program for its employees that ensures that relevant procedures on cyanide safety, cyanide loading, cyanide unloading, and emergency response is completed prior to working with cyanide. Requires training is refreshed at least annually and testing is performed to confirm competency. Records were available to show that both Meridian and Zetramsa refreshes cyanide safety and operations training with its drivers regularly.

Mac Transport provides operational training to its personnel upon hire and there is a skills evaluation process to ensure personnel is competent to perform their job in the cyanide supply chain, prior to their first delivery. Safety-related training is given at defined intervals to ensure that all personnel can perform their jobs in a manner that minimizes the potential for cyanide releases and exposures. Training records were reviewed and found to be acceptable.

Zetramsa maintains a formal training procedure and program and uses only trained, qualified and licensed drivers. Confirmation was made that drivers have driver's licenses that permit the transport of hazardous materials. Drivers are trained on cyanide safety and all procedures prior to being dispatched for the first time. Training is refreshed annually, and testing is performed to confirm competency.

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

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 1.3
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

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Mac Transport works closely with its transporters, to ensure that all transport equipment is suitable for the transport of cyanide. Both Meridian and Zetramsa use trailer loading checklists to ensure that trailers are suitable for transportation prior to loading cyanide, they and use formal procedures and checklists to ensure that loads are evenly loaded as well as blocked and braced.

Fleet specification files were available for review during the Mac Transport audit. The tractors and trailers were found to be capable of carrying the loads for which they were being used. Tractor and loaded trailer weights are carefully monitored to ensure that trucks are not overweight. Both transporters have formal preventive maintenance program to ensure that its tractors and trailers are safe for transport.

Mac Transport manages standard amounts of cyanide with known weights that it loads into its transporters trailers. Loading instructions with loading diagrams are maintained by the transporters, including instructions to verify the adequacy of the equipment for the load it must bear. The transporters train its operators to inspect the trailers prior to loading. Pre-trip inspections of the truck are formally performed by the transporters as part of its agreement with Mac Transport.

To prevent overloading of the transport vehicle, Mac Transport has established that each platform will be loaded with only one cyanide 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 interviews.

The load made by the port operator is weighed to confirm the weight of the shipment. 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 more than 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. Mc Transport office personnel showed awareness of weight capacities and regulatory requirements pertaining to maximum truck weight allowed.

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

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 1.4
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

As the cyanide consignor, Mac Transport maintains a formal safety program for the receipt, load, transport, and unloading of solid cyanide. Procedures and formal checklists were available demonstrate that Mac Transport manages several of the Transport Practice 1.4 requirements in addition to these requirements being met by the trucking companies. Formal procedures and contracts are in place to ensure that roles and responsibilities between Mac Transport and its transporters Meridian and Zetramsa are clearly defined.

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Both transporters perform pre-trip inspections to ensure that trailers are locked and secured and that placards are on all four sides of the trailers. They transport only solid cyanide in 20 t boxes within sealed containers. Normal safe driving procedures and unloading procedures ensure that the truck and the trailer are not damaged during transit. The transport procedures 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. Per the interviewed personnel, the load is not removed from the container.

As the cyanide consignor, Mac Transport requires all sea containers to have appropriate placards showing UN 1689 (solid cyanide) are displayed on all four sides of the sea containers. Also, it is required drivers visually inspect the containers prior to each movement.

The transporters procedures 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. Per the reviewed operation files, the presence of the placards was verified through the checklist.

Mc Transport requires in its Cyanide Manual that all cyanide transporters in the supply chain to have formal safety procedures for the receipt, load, transport, and unloading of solid cyanide to ensure that all 1.4 Transport Practice requirements are fulfilled. Roles and responsibilities between Mac Transport and its transporters Meridian and Zetramsa are clearly defined contractually.

Confirmation was made during the interviews with the trucking companies management that perform pre-trip inspections to ensure that trailers are locked and secured and that placards are on all four sides of the trailers, that they perform preventive maintenance to their vehicles according a stablished schedule. Also, was confirmed that both transporters maintain a drug and alcohol abuse prevention policies, which were reviewed during the audit.

According to the transporters procedures, the transport will only be carried out during daytime hours, in the same way, drivers must rest at least eight hours before the destination of the trip. The working day of drivers traveling with sodium cyanide may not exceed twelve hours a day discontinuous, allowing stoppings every two to three hours for ten minutes or more for equipment review, feeding and active stops.

The 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. At the same time, trailers have pins where the container is embedded preventing it from shifting. Cyanide travels in sealed containers, which are secured to the platform safely, eliminating the possibility of displacement during transport.

According to the Zetramsa procedures, the convoy supervisor reports the state of progress of the operation and in any unsafe event can stop the convoy. Transport can continue only if the leader of the convoy has provided the relevant conditions. It also indicates that if something happens that does not allow the convoy to reach its destination, it will be parked in an

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appropriate place (service stations or inns) in front of or next to a police station that the convoy leader has contacted.

Before each trip, Zetramsa drivers must undergo alcohol testing and periodically **discard** evidence of drug use. Violation of this policy has resulted in the separation of the worker from the organization.

Records documenting all the above are maintained in hard copy at the transporters office for a period of time.

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

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 1.5
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Mac Transport does not ship cyanide by sea or by air.

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

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 1.6
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Cyanide shipments are tracked using a GPS tracking system that is monitored by Mac Transport and its trucking companies' partners. 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 its transport company, with Mac Transport, the mine client and emergency responders in case of an emergency. The drivers also have cell phones as a back-up means of communication.

Mac Transport Cyanide Manual states that all vehicles carrying hazardous materials must have a GPS system in each of the trucks to provide their exact location and information, cell phone in the truck and escort, and satellite phone if necessary. Trucks are in contact at all times with dispatch by cell phone, satellite phone, or an onboard communication system.

All communication equipment is confirmed to be operational at the start of each trip. Cell phone blackout areas are identified by the transporters during the route planning process. The dispatcher ensures that the driver has a working satellite phone when driving these routes. Interviews were conducted to confirm that these practices are in place.

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Communication systems is part of the pre-work inspections and is maintained along with the formal preventive maintenance program. The system is used each day and correct operation of the system is confirmed at that time. They prove their communications and actions to be taken through the drills performed.

Cell phone black-out areas during the different routes from the ware house to mining operations sites are defined by the transporters in their cyanide transportation route description. Zetramsa issues a satellite phone to the convoy leader who is being dispatched on a route with a known cell phone blackout area. A review of procedures and interviews were used to confirm this practice. A communications protocol has been established before entering and on exit from blackout areas.

Mac Transport has a communication and GPS tracking system which allows continuously monitoring of the location of the convoy. The cyanide transporter communicates Mac Transport upon dispatch, upon arrival at the customer sites, and after unloading is complete. Personnel responsible for tracking shipment status from Mac Transport were interviewed, the GPS system was demonstrated, and logs showing that shipment status was being recorded were reviewed and were found to be complete. Mac Transport procedure for tracking of shipment status was reviewed during the audit and found to follow current practices.

Shipping paperwork was found to be conformant to ICMC requirements, including chain of custody requirements. A waybill accompanies the transportation which includes chain of custody data such as container numbers, the amount of cyanide delivered, waybill numbers, shipping documentation, SDS, packing list, bill of lading, customs declarations and producer invoice, among others. The transport document shows. 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 by the driver and remotely through the Mac Transport dispatch office.

Documentation used to track inventory and movement of cyanide includes the amount of cyanide in transit and the Safety Data Sheet from the cyanide producer Hebei, that is appropriate for the type of sodium cyanide being shipped (solid). The bills of lading and shipping papers indicate the number of packages and amount of material. Information was found to be compliant Mac Transport shipments.

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

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

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 2.1

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☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Mac Transport does not have any interim storage responsibilities. 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 Mac Transport with its transporters partners from Callao port to Ransa warehouse and from this warehouse (not included in the scope of this audit) to mines in Peru.

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

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

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 3.1
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Mac Transport maintains an emergency response plan (ERP), included in its Cyanide Manual, that is appropriate for its Global cyanide supply chains to respond to potential releases of cyanide during transport. The ERP includes details regarding the responsibilities of each actor of the cyanide supply chain, communications procedures to be used in case of incidents and an updated list of notification numbers for emergency responders.

The Plan is appropriate and designed for the specific circumstances. The document was found to be up-to-date and appropriate for this solid sodium cyanide transportation operation. Mac Transport do not have interim storage facility.

The Plan considers the physical and chemical form of the cyanide. The only form of cyanide to be shipped using this supply chain is solid sodium cyanide. Emergency response procedures address actions to be taken in response to a solid sodium cyanide spill. The Plan includes the sodium cyanide SDS where is defined the physical and chemical form of cyanide: solid white granular cyanide and specific information regarding the hazardous material to be transported.

All emergency response plans reviewed consider the method of transport, trucking to the final destination. The operations only include truck transport of solid cyanide solution. The emergency response actions in the emergency plans are appropriate for this type of product and method of transportation.

Mac Transport transporters partners, Meridian and Zetramsa, consider all parts of the transportation infrastructures including the conditions of the roads (mine road versus highway) and urban areas. The plans consider the conditions of the roads, existing water

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courses, bridges conditions and danger of landslides on the route, among others. The Plans address the emergency response to events that occur in relation to these risks and hazards.

Mac Transport transporters partners consider the trucks design as the transport vehicles in their ERPs. The documents define the appropriate trucks and chassis to use to transport cyanide. They must follow local regulation DS 021-2008-MTC of the Ministry of Transport and Communications. It states that trailers must be of conventional type or of the low bed type. The procedure indicates cyanide is transported in 20' containers.

Mac Transport transporters partners specifically consider in their ERPs, response actions that may be needed for emergency situations during transportation. The plans include detailed response actions for each case, including spills in both current and stander open water bodies and for the other risks identified on the routes. The plans consider a series of instructions covering the potential hazards that could occur during the loading, transportation and unloading of the cyanide cargo. It includes emergency response actions against collision or rollover, spillage of dry cargo to water sources, on the road and landslides.

The plans also establishes the logical line of actions that the leader and convoy drivers must take when irregularities arise during transport of sodium cyanide, including civil commotion, adverse conditions, bad weather, traffic congestion and unplanned stops.

All ERPs reviewed establish the role of outside responders and medical facilities in emergency response procedures. The police will provide support and safety to the transport units during the passage through cities and towns medical facilities and will take control of traffic routes in case of an accident. The firefighters on arrival, will take control of the emergency.

3.2 Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 3.2
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Mac Transport requires in its Cyanide Manual, that all its transport partners must provide emergency response training to drivers, convoy leaders and supervisors. Both Meridian and Zetramsa personnel are trained in appropriate emergency response in safe cyanide management (spill and intoxication), firefighting, first aid, hazardous materials Level I and Level 2. Training is provided by external companies as workouts which are renewed annually complying with the training plan and verifying compliance with specific skills.

Transporter's H&S Managers were interviewed, and awareness of emergency procedures and documentation was confirmed. Training records for the certification period were reviewed and were found to be acceptable.

The roles and responsibilities of relevant internal and external personnel are clearly described in Mac Transport Cyanide Manual and in the transporters partners ERPs. Information is

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available regarding the contents of emergency kits and the types of equipment maintained were found to be appropriate by the auditor.

Meridian and Zetramsa drivers, managers, and maintenance shop personnel receive an appropriate level of training to enable them to fulfill their role in emergency response. Formal emergency response training is refreshed annually.

Mac Transport transporters partners have defined in their ERPs the materials required for emergency response during transportation along the route including spill response equipment. The lists of equipment includes Tychem suits, leather and impermeable gloves, PVC boots, safety goggles, area isolating tape rolls, hydrogen cyanide (HCN) gas detector, water analysis kit, disposable respirators, oxygen, shovels, sweeps, polyethylene bags, calcium hypochlorite and empty containers.

The ERPs define what equipment must be available in each truck and extra personal protective equipment is available in each bag. Equipment is checked as part of the pre-trip inspection process.

Mac Transport ensures through contractual terms and periodic review that the emergency response equipment maintained by its transporters partners is available at all times.

In addition, the convoy escort vehicle is required to have a complete emergency response equipment, including personal protective equipment, spills containment kit, dilute calcium hypochlorite and amyl nitrite ampoules. It is also required the emergency equipment and materials to be checked prior to each cyanide delivery. A checklist is used to verify that it is available, and it is part in the operation files. Both Meridian and Zetramsa are ICMC certified transporters and were found in compliance with this requirement during their certification audits.

Mac Transport require drivers receive an appropriate level of training to enable them to fulfill their role in emergency response, which is limited to a notification role. Transport partners provide formal training in cyanide periodically to personnel involved in cyanide activities. Records were checked during interviews with both transporters H&S Managers and awareness of emergency procedures was appropriate.

Zetramsa, prior to each cyanide transport operation, provide the drivers with refresher training regarding cyanide handling and emergency response. This training session is provided by the convoy leader prior to the start of the convoy.

Mac Transport ensures through contractual terms and periodic review that the emergency response equipment is inspected and maintained by its emergency response provider is available at all times. At Meridian and Zetramsa, emergency equipment is checked as part of the pre-trip inspection process. This practice was confirmed through interview with their H&S Managers.

Among the control measures to adopt for the transportation of hazardous materials, Zetramsa ERP addresses to perform inspections to the emergency equipment before loading the truck. A checklist is used to verify that it is available prior the convoy's departure and it is kept in the operation file. Completed checklist were reviewed during the audit.

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

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 3.3
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The notification procedures, including telephone numbers, are described in Mac Transport's Cyanide Manual. The shipper, the receiver, regulatory agencies, outside response providers, medical facilities and potentially affected community's information and other emergency contact information is contained in the Manual.

Both Meridian and Zetramsa ERPs list current emergency numbers for local hospitals, and for ambulance, fire, and environmental responders. Phone lists also included up-to-date contact information for Mac Transport personnel, regulatory agencies, and potentially affected communities.

According to the requirement in the Mac Transport's Cyanide Manual, internal and external emergency notification and reporting procedures must be reviewed at least once each year. During this activity, the phone numbers are checked for accuracy to ensure that internal and external emergency notification contacts are kept current. Records were available to show that this is done.

3.4 Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals

The operation is ☒ Full Compliance
☐ in substantial compliance with Transport Practice 3.4
☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

As the cyanide consignor, Mac Transport requires his transporters partners to describes how the recovery will take or neutralize the solid, the decontamination of soils, or other contaminated media and how these wastes are managed.

Meridian and Zetramsa ERPs addresses the immediately actions to follow in case of spills, preventive measures to avoid, cleaning methods and how to treat waste. Specific details regarding the remediation, neutralization, decontamination, and disposal of clean-up debris are contained within Zetramsa emergency response procedures. Extensive descriptions of necessary action steps depending on the incident scenario are clearly outlined in the documents.

Mac Transport personnel showed awareness that the use of treatment chemicals is prohibited if cyanide spills into surface waters. Mac Transport Cyanide Manual specifically prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide for

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treating a cyanide spill into surface water and requires all its transporters partners to ban the use of these treatment chemicals for spills into surface water.

Zetramsa and Meridian ERPs include text that addressing the remediation and neutralization of cyanide solutions. 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.

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

☒ Full Compliance

The operation is ☐ in substantial compliance with Transport Practice 3.5

☐ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Mac Transport Cyanide Manual states the ERP must be periodically reviewed and to evaluate the plan's adequacy. The Manual requires that table top simulations be run annually.

Both cyanide transporters, Meridian and Zetramsa, perform mock simulation and table top emergency response reviews on a regular basis. Detailed records were available for review. Driver review of policies and procedures occurs yearly. Procedures and emergency plans are updated as necessary after drills and actual emergencies. Records were available to show that this is done.

All ERPs establish that mock drills must be carried out periodically, at least every year. Also, that the practices will be scheduled in coordination with the client, to keep the personnel permanently prepared for an emergency.

Cyanide related emergency drills have been held by Zetramsa and Meridian annually. The auditor reviewed the drills reports finding to be effective. In all cases scenarios simulated human exposure with the testing of the decontamination procedures.

All ERPs establish that after the mock drill, the analysis of the observations or failures detected during the exercise will be carried out, for which it will have to prepare a schedule of actions and courses that must be received by the personnel to correct these observations and of that to complete the equipment or information needed for a real case. Drill critiques were reviewed for the audit re-certification period. The drills all had positive results.

Mac Transport S.A.C

Name of the Facility



Signature of Lead Auditor

October 9, 2018

Date