

***INTERNATIONAL CYANIDE
MANAGEMENT CODE***

***Orica Australia Pty Ltd.
Latin American Supply Chain Addenda***

***ORICA COLOMBIA SUPPLY
CHAIN***

***Pre Operational Summary Audit Report
2019***

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SUMMARY AUDIT REPORT

Contents

1. TRANSPORT:.....5
1.1 Transport Practice 1.1:.....5
1.2 Transport Practice 1.2: Ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.7
1.3 Transport Practice 1.3: Ensure that transport equipment is suitable for the cyanide shipment.....8
1.4 Transport Practice 1.4: Develop and implement a safety program for transport of cyanide.9
1.5 Transport Practice 1.5: Follow international standards for transportation of cyanide by sea and air.11
1.6 Transport Practice 1.6: Track cyanide shipments to prevent losses during transport. 11
2. INTERIM STORAGE:13
2.1 Transport Practice 2.1:13
3. EMERGENCY RESPONSE:.....13
Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response.....15
Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.....16
Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.17
Transport Practice 3.5: Periodically evaluate response procedures and capabilities and revise them as needed.18

Orica Colombia S.A.S.
Name of Facility

[Handwritten Signature]
Signature of Lead Auditor
Page 1 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

Name of Cyanide Transport Operation:	Latin America Supply Chain	
Name of the Company Ownership	Orica Australia Pty Ltd	
Name of Operating Company:	Orica Colombia S.A.S.	
Name of Responsible Manager:	Sergio Andrés Quintero Iriarte Logistics & Transportation Coordinator - Mining Services	
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Location Detail and Description of Operation:

This is a preoperational ICMI certification audit report for Orica Colombia Supply Chain, with the intention to include it into Orica's Latin America Supply Chain.

Orica in Colombia is planning to have a cyanide supply chain to deliver marine containers with solid sodium cyanide within Colombia from the Cartagena Port to its mining clients, through a local trucking company Transportes TDM (TDM), which is included in the scope of this audit.

Orica is an Australian-owned, publicly listed company with global operations. The Orica Mining Chemicals unit's main product is cyanide, which is manufactured at Orica's Yarwun cyanide production facility in Queensland, Australia. Orica's Yarwun Facility, commenced operations in 1989 and is engaged in the manufacture of cyanide (both solid and liquid forms), among other chemicals.

Solid cyanide is packaged in either sparge isotainers, which have a maximum gross weight of 26 tons, or Intermediate Bulk Containers (IBCs), which in turn, are packed into a shipping container – twenty-foot equivalent units (TEUs). A maximum of 20 IBCs can be packed into a single TEU with a maximum gross weight of 28 tons. Liquid cyanide is packaged into isotainers with a maximum gross weight of 26 tons.

Cyanide manufactured at the Yarwun Facility is used in gold mining operations. Orica's Yarwun Facility was re-certified as being in full compliance with the Code on 22 February 2017. The facility is not part of the scope of this audit.

Solid cyanide from the manufacturing facility in Yarwun, Australia, is transported to the ports of Brisbane, Gladstone, Alma and Melbourne. Orica's Australian Supply Chain was re-certified as being in full compliance with the Code on April 9, 2018. This Supply Chain is not part of the scope of this audit.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 2 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

The Global Marine Supply Chain is a consolidation of all marine carriers and ports used by Orica to distribute their cyanide from Australia to their global customers. The Global Marine Supply Chain conforms the marine link between the certified Australia Supply Chain Section and the certified supply chain or certified transporter relevant to the customer site. Orica's Global Marine Supply Chain was re-certified as being in full compliance with the Code on January 16, 2018. This Supply Chain is not part of the scope of this audit.

Orica's Latin America Supply Chain includes transportation of sodium cyanide within Peru and Argentina from ports to mining operations using the certified transporters. Orica's Latin America Supply Chain was re-certified as being in full compliance with the Code on January 31, 2018. This Supply Chain is not part of the scope of this audit.

The scope of this pre-operational audit comprises the future cyanide trucking transport operations from Cartagena port to mine sites in Colombia. Orica Colombia S.A.S will be the Cyanide Consignor and *Transportes TDM* (TDM) will be the trucking company in charge of the cyanide transportation. The ICMC certified transportation of sodium cyanide within Colombia, will be included into to Orica's Latin America Supply Chain. No interim storage is considered in this transport operation.

Depending on weather, cargo types, journey length, customs clearance and other operational matters, the Cartagena port operator may unload the cargo at the terminal facility to temporary set down. Once formalities are complete, the cyanide containers are collected by the respective road transporter for continuation of the cargo delivery. Such temporary storage will not occur within Orica's Colombia Supply Chain. Orica has no control over when and where this happens, but through its due diligence assessments to the port will ensure that in case of temporary storage, the port operator undertakes the necessary measures to properly store the product in accordance with the requirements of the Code requirements and in a professional and safe manner. At no stage along the Orica's Colombia Supply Chain, cyanide is removed from the containers prior to unloading at customer mine sites.

Road Transportation to the mine sites will be performed by TDM, a trucking company dedicated to logistics and to transport diverse cargo, included hazardous materials. With headquarters in Medellín, Antioquia, Colombia, at the time of the audit TDM was transporting Orica's products, other than cyanide, to mine sites in Colombia.

TDM has the capacities required to carry out the transport of goods nationwide. Between main cities and to different destinations throughout the Colombian geography. A fleet of more than 100 vehicles allows them to move merchandise from the main cities to a large number of destinations throughout the national geography. TDM has a great fleet of semi low bed trailers, which are driven by certified drivers and are supported by a demanding control and maintenance program. They have a wide range of equipment and vehicle configurations.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 3 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

Auditor's Finding

This operation is

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

with the International Cyanide Management Code.

Audit Company:	Bruno Pizzorni	
Audit Team Leader:	Bruno Pizzorni	E-mail: bpizzorni73@gmail.com
Names and Signatures of Other Auditors:	Bruno Pizzorni	
Date(s) of Audit	August 26 – 27, 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 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.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor

August 27, 2019
Date

SUMMARY AUDIT REPORT

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

Summary basis for this Findings:

Orica Colombia S.A.S. (Orica), as the Cyanide Consignor, has implemented the corporate Risk Route Analysis (RRA) standard procedure for selecting transport routes that minimizes the potential for accidents and releases or the potential impacts of accidents and releases. Orica requires to evaluate any route previous to the first cyanide shipment and that all trucking transporters in his cyanide supply chain implement procedures for selecting transport routes that minimizes the potential for accidents and releases.

The auditor reviewed the RRA from February 18, 2019, performed for the route between Cartagena Port and Continental Gold mine operation for the future cyanide transport operation. In this exercise they chose between two possible routes after evaluating a series of factors which determined the safer route to operate, including population density, roadway infrastructure construction and condition, pitch and grade, and prevalence and proximity of water bodies and fog, among others.

TDM, the trucking company to transport the shipping containers with sodium cyanide, has the formal procedure PES Route Study to select routes in order to identify transport hazards and reduce risks during their different transport operations and they have already performed the route evaluation between Cartagena Port and the vicinity of the mine operation. After the route assessment is performed, each driver receives a copy of the roadmap where issues in the route are highlighted in red letters. TDM presented various route evaluations carried out by its carriers. Orica and TDM interact to integrate their routes evaluations; next interaction with this purpose will be in October 2019, as stated by Orica's Logistics & Transportation Coordinator.

Both Orica and TDM evaluate the risks of selected cyanide transport routes and take the measures necessary to manage these risks by mean of the RRA and the PES Route Study procedures, respectively. These procedures 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 minimize and manage these risks.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 5 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

Each company requires in its respective procedure, requires 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.

Orica RRA procedure requires its transporters to periodically reevaluate 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.

Orica maintains a policy to only utilize transporters evaluated for ICMC compliance for cyanide transport, collaborating closely with its transporters, to ensure that all new routes are formally evaluated before delivery to a mine can commence. Orica as the Cyanide Consignor maintains formal documentation with its transportation partner TDM to ensure that roles and responsibilities are clearly defined and agreed upon by all parties.

TDM management members were interviewed and confirmation was made that feedback regarding routes is discussed between them and Orica for the current transport operations, although not cyanide transport operation has begun yet. When feedback from a driver suggests that a route needs to be revised, the trucking company revise the routes and communicates new information to drivers.

By interviews confirmation was made that risks and risk mitigation measures are detailed by each route. They meet to discuss risks and risk mitigation measures. Records showing that both Orica and TDM shipping routes are maintained up-to-date with current risk and risk mitigation information were reviewed during the audit.

The truck carrier use a formally documented procedure to determine routes. Route evaluations for the transportation routes used for shipments were complete and records were available for review. Routes are also evaluated for security issues and for cell phone coverage. Only those routes deemed to be safe are approved.

Orica seeks input from communities, other stakeholders and applicable governmental agencies as necessary in the selection of routes and development of risk management measures. On February 16, 2019, there has been interaction in the route between Orica and the firefighters, the police and with hospitals. Orica distributed letters delivering the cyanide Material Safety Data Sheet (MSDS) and a safety brochure regarding cyanide including the name and address of contact in the card and where symptoms due to exposure to cyanide were also identified. In this opportunity people could also express their questions, doubts and concerns in this regard.

TDM the trucking company, as a chemicals transporter, has an agreement with emergency response contractor "Destino Seguro" (Safe Destiny) which also maintains contact in the route with stakeholders. In addition TDM is member of the support net to chemicals emergency response "Plan Nacional de Respuesta ante Emergencias" (National Emergencies Response Plan). Orica has monthly meetings with TDM as the auditor saw in the meeting minutes, where incidents are shared, learned lessons learned, an action plans are made.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 6 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

Where routes present special safety or security concerns, Orica's Standard Operation Procedure (SOP) Cyanide Transport Procedure requires the transporter to use convoys, escorts or other additional safety or security measures to address the concern. The interviewed management personnel from Orica and TDM confirmed that the cyanide transport operations will be performed in convoys escorted by a vehicle with the necessary implements of communications, first aid and equipment to contain spills.

TDM, in addition to convoys, can use "satellite seals" locking the sea containers doors, also can provide additional drivers with special license as required, stated TDM's Risk Manager. Trip reports and recommendations are provided by convoy supervisor in the report issued for each trip.

Orica has provided external responders, medical facilities and communities of their roles and mutual aid during an emergency response. Information was spread by mean of letters and brochures, as mentioned before, to emergency responders, medical centers, and fire fighters along the routes. There is evidence of the request for support to transportation to related entities such as firefighters, police, hospitals and communities along the routes, according to the established in their Cyanide Transport Procedure.

TDM, the transport company, stated they will not subcontract any portion of their cyanide transportation operations. Tractors and trailers are owned by TDM. ICMC requirements pertaining to subcontractors are, therefore, not applicable to the organization.

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

The operation is in full compliance with Transport Practice 1.2
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

Orica maintains a policy to only utilize ICMC evaluated transporters and collaborates with its transporter to ensure that all drivers will be qualified and trained in the operation of cyanide transport equipment, cyanide safety, and emergency response procedures.

TDM trucking company maintains formal training procedures and programs and use trained, qualified and licensed drivers. The auditor reviewed TDM's drivers database where, for each driver, information is kept on their driving experience, municipal license to drive, and if they are authorized to transport dangerous loads and cargo in general. Through this database they have control over the expiration dates of driver's licenses.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 7 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

All drivers assigned to the cyanide transport operation will be trained on cyanide safety prior to being dispatched for the first time. Training is refreshed annually, and testing is performed to confirm competency. On the occasion of the audit, the auditor verified that a good number of drivers had already received training in cyanide safety.

Orica 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.

Orica 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 will be 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.

TDM 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. All drivers will be trained on cyanide safety and all procedures prior to being dispatched for the first time. Training is refreshed annually at TDM, 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 in full compliance with Transport Practice 1.3
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

Orica works closely with its transporters, to ensure that all transport equipment is suitable for the transport of cyanide. TDM uses trailer loading checklists to ensure that trailers are suitable for transportation prior to loading cyanide, 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 TDM 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. The transporter has formal preventive maintenance program to ensure that its tractors and trailers are safe for transport.

TDM will manage standard amounts of cyanide with known weights that will load into its transporters trailers. Loading instructions with loading diagrams are maintained by the

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 8 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

transporter, including instructions to verify the adequacy of the equipment for the load it must bear. The transporter 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 Orica.

To prevent overloading of the transport vehicle, TDM 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 of shipments, other than cyanide, 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. TDM 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 in full compliance with Transport Practice 1.4
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

As the cyanide consignor, Orica has prepared a formal safety program for the receipt, load, transport, and unloading of maritime containers with solid sodium cyanide. Procedures and formal checklists were available to demonstrate that Orica manages several of the Transport Practice 1.4 requirements in addition to these requirements being met by the trucking company. Formal procedures and contracts are in place to ensure that roles and responsibilities between Orica and its transporter TDM are clearly defined.

TDM performs pre-trip inspections to ensure that trailers are locked and secured and that placards are on all four sides of the trailers. They will transport only solid cyanide in Intermediate Bulk Containers (IBCs) 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.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 9 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

As the cyanide consignor, Orica 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.

TDM transporter procedures establishes that placards with UN number and poison signs must be placed in all containers to identify the product; this is verified through the vehicle inspection checklist. Per the reviewed operation files, the presence of the placards is verified through a checklist.

Orica requires in its *Cyanide Transport Procedure* 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 Orica and its transporter TDM are clearly defined contractually.

Confirmation was made during the interviews with the trucking company 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 the transporter maintains drug and alcohol abuse prevention policies, which were reviewed during the audit.

According to the transporter's procedures, the transport will only be carried out during daytime hours, in the same way, drivers must rest at least eight hours before departing on 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 IBCs 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 TDM procedures, the convoy supervisor will report 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 appropriate place (service stations or inns) in front of or next to a police station that the convoy leader has contacted.

Before each trip, TDM drivers must undergo alcohol testing and periodically disclose evidence of drug use. Violation of this policy will result 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. The operation will retain records documenting its safety program over a three-year ICMC audit cycle.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 10 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

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

The operation is in full compliance with Transport Practice 1.5
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

Orica Colombia Supply Chain will not ship cyanide by sea or by air. This section of the ICMC does not apply to the operation.

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

The operation is in full compliance with Transport Practice 1.6
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

Cyanide shipments are tracked using a GPS tracking system that is monitored by TDM and that can be accessed by Orica at any time. The convoy leader will be provided with a cellular phone and a satellite phone if needed. The convoy leader has also a radio and he is responsible of communications with TDM. Then the transport company will communicate, with Orica, the mine client and emergency responders in case of an emergency. Truck drivers have also cell phones as means of communication.

Orica Cyanide Transport Procedure states that all vehicles carrying cyanide shipments must have a GPS system in each of the trucks to provide their exact location and information, cell phone in the truck, escort and satellite phone if necessary. This system will allow trucks to be in contact at all times with dispatch by cell phone, satellite phone, or an onboard communication system.

As states the Cyanide Transport Procedure, all communication equipment will be 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.

Orica Colombia S.A.S. _____ August 27, 2019
Name of Facility Signature of Lead Auditor Date
Page 11 of 18

SUMMARY AUDIT REPORT

TDM's communication system 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.

Communication blackout areas along the planned transport route have been identified during route risk assessments performed both by Orica and TDM. As these areas are minimal, they consider there is no need to implement a special procedure for the blackout areas. Trucks GPS equipment have a "panic button" which is considered to be actioned in an emergency. Also, trucks are monitored along the route in real time, and any delay will be immediately notice at the control board.

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

Orica will implement inventory controls and chain of custody documentation to prevent loss of cyanide during shipment. Shipping paperwork will be conformant to ICMC requirements, including chain of custody requirements. A waybill will accompany the transportation which includes chain of custody data such as container numbers, the amount of cyanide delivered, waybill number, shipping documentation, Material Safety Data Sheets (MSDS), packing list, bill of lading, customs declarations and producer invoice, among others. This paperwork will be used to document the chain of custody and will be signed upon delivery of the product to the customer. The amount of cyanide delivered will be carefully monitored by the driver and remotely through Orica and TDM's office.

Documentation to use for inventory tracking and movement of cyanide will include the amount of cyanide in transit from the cyanide producer and Material Safety Data Sheets, as is described in Orica's SOP Cyanide Transport Procedure. The bills of lading and shipping papers will indicate the number of packages and amount of material.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 12 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

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 in full compliance with Transport Practice 2.1
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

Orica Colombia Cyanide Supply Chain and his transporter TDM would not operate cyanide trans-shipping depots and interim storage sites in this Supply Chain. 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 TDM trucking company from Cartagena Port to mining clients within Colombia without any interim storage. Therefore this Transport Practice will not apply to the operation.

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 Transport Practice 3.1
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

Orica has the emergency response plan *Cyanide Transport Contingency Plan*, that is appropriate for its Colombia Cyanide Supply Chain to respond to potential releases of cyanide during transport. The Plan 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.

TDM, within its management system, establishes the contingency plan, where care protocols are defined for an unwanted event. For this they have the procedure *Business Continuity Plan*,

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 13 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

which contemplates among others, an action plan to deal with emergencies during different transport operations. A cyanide contingency plan will be included into this Plan and it will be communicated to all pertinent personnel before any cyanide transport operation is performed.

Orica's Plan is appropriate as the Cyanide Consignor and is designed for the specific circumstances of Orica Colombia Supply Chain. The document considers appropriate response actions for emergencies that could arise during cyanide transportation between Cartagena Port and the mining clients in the country. The Plan was found to be up-to-date and appropriate for this solid sodium cyanide transport operation.

Orica's 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 MSDS where is defined the physical and chemical form of cyanide: solid white granular cyanide and specific information regarding the hazardous material to be transported.

Orica's Plan considers the method of transport, trucking to the final destination. The operation only include truck transport of solid cyanide. The emergency response actions in the emergency plans are appropriate for this type of product and method of transportation.

Orica's and TDM emergency response plans consider all parts of the transport infrastructures including conditions of the roads (mine road versus highway) and urban areas. The plans consider existing water courses, bridges conditions and danger of landslides on the route, among others. The plans address the emergency response to events that could occur in relation to these risks and hazards.

Orica's Plan considers the trucks design of the transport vehicle in their emergency response procedures. The documents define the appropriate trucks and chassis to use to transport cyanide. It states that must follow local regulation and that trailers must be of conventional type or of the low bed type. The procedure indicates cyanide will be transported in 20 feet shipment containers.

Orica's Plan include descriptions of response actions, as appropriate for the anticipated emergency situation during transportation. It includes detailed response actions for each case, including spills in both current and standing open water bodies and for the other risks identified on the routes. The Plan 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.

The Plan establish the role of outside responders and medical facilities in emergency response procedures. The police will provide support and safety isolating the area and will take control of traffic routes in case of an accident. In case of fire, the firefighters on arrival, will take control of the emergency, advised by the trucking company personnel regarding water on cyanide.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 14 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

TDM the trucking company, as a hazardous material transporter, has an agreement with emergency response contractor *Destino Seguro* (Safe Destiny), contractor that will be in charge of remediation measures.

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

The operation is in full compliance with Transport Practice 3.2
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

Orica requires in its *Cyanide Transport Contingency Plan*, that all its transport partners must provide emergency response training to drivers, convoy leaders and supervisors. TDM drivers are trained in appropriate emergency response for diverse transport emergencies as spill and intoxication due to hazardous material, firefighting and first aids among others. TDM personnel is in the training process for cyanide emergencies and before the first cyanide shipment is being delivered their drivers and support personnel will have this training provided.

Training is provided both internally and by external companies as workouts which are renewed annually complying with the training plan and verifying compliance with specific skills. Transporter's TDM Managers were interviewed, and awareness of emergency procedures and documentation was confirmed.

The roles and responsibilities of relevant internal and external personnel are clearly described in Orica's *Cyanide Transport Contingency Plan* and in his transporter partner TDM emergency response plan called *Business Continuity Plan*. Information is available regarding the contents of emergency kits and the types of equipment maintained were found to be appropriate by the auditor. TDM will complement his emergency response plan to include elements for cyanide incidents response.

TDM 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.

TDM's has defined the materials required for emergency response during transportation of hazardous materials along the route including spill response equipment. The transporter will include the necessary elements to respond against cyanide emergencies during transportation. The lists of equipment includes Tychem suits, leather and impermeable gloves, PVC boots, safety goggles, area isolating tape rolls, disposable respirators, oxygen, shovels, sweeps, polyethylene bags and empty containers.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 15 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

The emergency response plan 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

TDM has available the necessary emergency response and health and safety equipment, including personnel protective equipment during transport. Before the first cyanide shipment, TDM will review this equipment to ensure it is appropriate for the cyanide transport operation and will complement it with all additional required items.

Orica requires the convoy escort vehicle to have a complete emergency response equipment, including personal protective equipment, spills containment kit and cyanide kit among others. It is also required the emergency equipment and materials to be checked prior to each cyanide delivery. A checklist will be used to verify that it is available, and will be part in the operation files.

TDM provides its drivers with appropriate level of training to enable them to fulfill their role in emergency response, which is limited to a notification role. TDM has already began providing formal training in cyanide emergency response to its personnel involved in the future cyanide activities. Records were checked during interviews with TDM Managers and awareness of emergency procedures was appropriate. Prior to each cyanide transport operation, TDM will provide the drivers with refresher training regarding cyanide handling and emergency response. This training session will be provided by the convoy leader prior to the start of the convoy.

TDM ensures that the emergency response equipment is inspected and maintained to have it at all times. Emergency equipment is checked as part of the pre-trip inspection process. This practice was confirmed through interview with their Managers and drivers. Among the control measures to adopt for the transportation of hazardous materials, TDM 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.

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

The operation is in full compliance with Transport Practice 3.3
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

The notification procedures, including telephone numbers, are described both in Orica's and TDM's emergency response plans. The shipper, the receiver, regulatory agencies, outside response providers, medical facilities and potentially affected community's information and

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 16 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

other emergency contact information is contained in these plans. It is listed current emergency numbers for local hospitals, and for ambulance, fire, and environmental responders. Phone lists also included up-to-date contact information for Orica and TDM personnel, regulatory agencies, and potentially affected communities.

According to the requirement in Orica's and TDM's emergency response plans, internal and external emergency notification and reporting procedures must be reviewed periodically. 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.

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 Transport Practice 3.4
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

As the cyanide consignor, Orica requires its transporters partners to describe how the recovery will take or neutralize the solid, the decontamination of soils, or other contaminated media and how these wastes are managed. Extensive descriptions of necessary action steps depending on the incident scenario are clearly outlined in the documents.

TDM will developed, assessed by Orica, the immediately actions to follow in case of cyanide 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 will be detailed in TDM's emergency response procedures.

Orica's emergency response plan prohibits the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water. 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. TDM will include this prohibition into his emergency response plan, addressing the remediation and neutralization of cyanide solutions before beginning any cyanide transport operation.

Orica Colombia S.A.S.
Name of Facility


Signature of Lead Auditor
Page 17 of 18

August 27, 2019
Date

SUMMARY AUDIT REPORT

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

The operation is in full compliance with Transport Practice 3.5
 in substantial compliance with
 not in compliance with

Summary basis for this Findings:

Orica’s emergency response plan states it must be periodically reviewed and to evaluate the plan’s adequacy. The Plan requires emergency drills simulations to be run annually.

TDM performs mock simulations and tabletop emergency response reviews on a regular basis, although not for cyanide yet. 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.

Both Orica’s and TDM’s emergency response plans stablish that mock drills must be carried out periodically. 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 will be held by Orica and TDM. The auditor reviewed TDM drills reports for hazardous materials, finding them to be effective. In all cases scenarios simulated human exposure with the testing of the decontamination procedures.

Both emergency response plans stablish that after any 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. Orica and TDM drill critiques were reviewed.

The written emergency response plans include a commitment to evaluate emergency response procedures following their implementation.

Orica Colombia S.A.S. _____ August 27, 2019
Name of Facility Signature of Lead Auditor Date
Page 18 of 18