



**SUSTAINABILITY**  
FUTURE GROWTH

**INTERNATIONAL CYANIDE MANAGEMENT CODE  
CYANIDE TRANSPORT OPERATIONS**

**QUBE BULK PTY LTD**

**Qube Bulk Pty Ltd ICMI Certification Audit  
Summary Audit Report  
November 2018**





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## **SUMMARY AUDIT REPORT**

### **Name of Company**

Qube Bulk Pty Ltd

### **Name of Company Owner**

100% owned by Qube Bulk Pty Ltd

### **Name of Mine Operator**

Qube Bulk Pty Ltd

### **Name of Responsible Manager**

Kylee Stewart, Senior HSE Advisor

### **Address**

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West Perth, WA 6005  
Australia

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## **LOCATION DETAIL AND DESCRIPTION OF OPERATION**

Qube Bulk Pty Ltd (Qube) transports cyanide by road in various forms on behalf of Australian Gold Reagents Pty Ltd (AGR) in Western Australia. AGR is the cyanide consignor for cyanide manufactured at the AGR facility in Kwinana, Western Australia, and transported to various mines in accordance with the ICMI certified AGR Western Australian Supply Chain.

Qube is contracted to provide road transport of cyanide products from AGR's manufacturing plant in Kwinana, and from the Aurizon rail terminal in Kalgoorlie to various mine sites in Western Australia. Some deliveries are also from AGR to the Aurizon rail terminal in Kwinana. The cyanide is transported in solid form in either Portable Tanks as solids to solution tanks (SST) or in IBCs packed freight containers. Cyanide is also transported as a liquid solution (30% cyanide) in Portable Tanks.

Two divisions of Qube Holdings Ltd are used for cyanide transport: Qube Logistics and Qube Bulk. As part of the same company both work to the same management procedures.

Qube's operations at Kwinana and Kalgoorlie are similar. Both are large, fenced areas with administration activities, large workshops and ample open spaces for vehicle manoeuvring. At each depot vehicles are routinely parked in designated areas according to a vehicle management plan. The workshops are used for standard maintenance activities; specialist work is contracted out to others.

When advised that cyanide is needed at a mine, Qube organises and dispatches appropriate vehicles to the collection point which will be either AGR premises in Kwinana or the Kalgoorlie rail container terminal. Prior to leaving the Qube depot, drivers log into the in-vehicle management system (IVMS). Following collection of the cyanide, vehicles depart for the mine using the specified routes advised by the consignor. Upon arrival drivers follow the appropriate procedure as required by the mine, then assist with the unloading of the cyanide before returning to the relevant depot.

### **AUDITOR'S FINDING**

This operation is:

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

with the International Cyanide Management Code.

### **Audit Company**

Sustainability Pty Ltd  
Suite 3, 118 Flora Terrace  
North Beach, WA, 6020  
AUSTRALIA

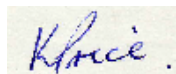
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### **Audit Team Leader**

Kenneth Price ([priceken@bigpond.com](mailto:priceken@bigpond.com))



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22<sup>nd</sup> October 2018

**Date(s) of Audit**

Inclusive of the period from 10th to 12th of September 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 Transport Operations and using standard and accepted practices for health, safety and environmental audits.

## **PRINCIPLE 1 – TRANSPORT**

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

### **Standard of Practice 1.1**

Select cyanide transport routes to minimize the potential for accidents and releases.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 1.1

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 1.1.

Qube's transport routes are selected and prescribed by Australian Gold Reagents Pty Ltd (AGR) as the cyanide transport consignor for AGR's certified Western Australian Supply Chain. Qube has developed Journey Management Plans (JMPs) for each route based on their own Cyanide Transport Management Plan (TMP). Each JMP considers: population density; infrastructure construction and condition; pitch and grade, and; prevalence and proximity of water bodies and fog. Drivers have the ability to communicate with the Qube Fleet Monitoring Centre to deviate from, and subsequently adjust if necessary, the JMP in response to changed circumstances. The Qube JMP is a document specific to each route and includes specific information regarding the measures taken for risks identified for that route, such as railway crossings, potential road closures, flooding, alternate routes and information obtained from road condition reports. There are no security or safety circumstances warranting use of convoys for the routes prescribed by AGR. However a Convoy Management Procedure has been developed should the circumstances change for any of the AGR prescribed transport routes. AGR, as the certified transport consignor for the Western Australian Supply Chain, is responsible for consultation with and provision of advice to external responders, medical facilities and communities in regards to emergency response roles. No subcontracting of transport operations is carried out by Qube.

### Standard of Practice 1.2

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

in full compliance with

The operation is  in substantial compliance with Standard of Practice 1.2

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 1.2.

Qube only uses drivers who have the required training, qualification and licensing as set out in the TMP. Qube runs a training management system (Rapid) which manages all training and licensing requirements for drivers and individual records are kept for every driver. Training covers heavy vehicle licences, Dangerous Goods Transport licences, CN awareness, first aid, fire extinguisher use, and emergency response. The Company manages and monitors the currency of all licences for drivers.

All Qube personnel involved in handling and transport for cyanide have had specific training to minimise the potential for cyanide releases and exposures. A training matrix identifies the specific training required for each operational position. The Kalgoorlie based drivers are also inducted into all mines where cyanide delivery takes place. Qube does not sub-contract its cyanide transport activities.

### Standard of Practice 1.3

Ensure that transport equipment is suitable for the cyanide shipment.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 1.3

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 1.3.

Qube operates a fleet of vehicles licensed to transport in Western Australia, which, as such, are designed to operate within the loads it will be carrying. Qube implements procedures to verify the adequacy of equipment for each load. All Qube trucks are weighed for each load and records are maintained to verify compliance and to prevent overloading. No subcontracted vehicles are used by Qube for cyanide transport activities.

### Standard of Practice 1.4

Ensure that transport equipment is suitable for the cyanide shipment.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 1.4

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 1.4.

In accordance with the Transport Management Plan, Qube drivers inspect the liquid cyanide isotainers or other containers prior to and during each transport consignment to ensure the integrity of the container is maintained. All liquid sodium cyanide isotainers or other containers are property of AGR and maintained by AGR through a preventative program.

All transport loads are placard in accordance with Australian Dangerous Goods transport regulations and as specified in the TMP. Qube has implemented a safety program as documented in its TMP that includes: documented prestart checks for each transport event; a scheduled vehicle maintenance program with programmed servicing of prime movers and trailers; a driver fatigue management program in accordance with regulatory requirements; procedures for securing of all loads; provisions for route changes or suspension of transport due to weather and flooding, and; alcohol and drug testing program for drivers and other Qube personnel. All records of the above controls are kept in Qube's document management system.

### Standard of Practice 1.5

Follow international standards for transportation of cyanide by sea and air.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 1.5

not in compliance with

not applicable to

#### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk operations is Not Applicable to Standard of Practice 1.5.

NA. No sea or air transport in this operation.



**Standard of Practice 1.6**

Track cyanide shipments to prevent losses during transport.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 1.6

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 1.6.

All Qube trucks are fitted with an In-Vehicle Monitoring System (IVMS), which monitors the position, speed and driving behaviours of all drivers continuously from the centralised fleet monitoring centre in West Perth. Each vehicle has available communications with suppliers, customers and emergency responders via mobile and satellite telephones along all routes. The IVMS and satellite phone functionality is part of the prestart check requirements and it is checked daily. The mobile phone coverage has been assessed for all routes and, with satellite phone coverage across all routes, there are no blackout areas. Qube maintains inventory control of the volumes of sodium cyanide transported through consignment documentation and through ensuring all isotainers seals remain intact until point of delivery.

Shipping records indicating the amount of cyanide in transit and Safety Data Sheets (SDS) are available during each shipment in each vehicle and from the Fleet Monitoring Centre.

## **PRINCIPLE 2 – INTERIM STORAGE**

**Design, construct and operate cyanide trans-shipping depots and interim storage sites to prevent releases and exposures.**

### **Standard of Practice 2.1**

Store cyanide in a manner that minimizes the potential for accidental releases.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 2.1

not in compliance with

not applicable to

### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk operations is Not Applicable to Standard of Practice 2.1.

Qube does not have trans-shipping depots or interim storage of cyanide as part of its cyanide transport operations.

## **PRINCIPLE 3 – EMERGENCY RESPONSE**

**Protect communities and the environment through the development of emergency response strategies and capabilities.**

### **Standard of Practice 3.1**

Prepare detailed emergency response plans for potential cyanide releases.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.1

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 3.1.

Qube has prepared a detailed Sodium Cyanide Specific Emergency Response Plan (ERP) for its cyanide transport operations that is appropriate for all aspects its prescribed transport routes, the road transport methods and equipment and is appropriate for the liquid and solid cyanide products transported. The ERP includes comprehensive descriptions of response actions for all identified feasible emergencies. This is supplemented by information in the JMP for each journey and information in the Driver Information Booklet. The ERP has clear instructions about the roles of all participants including outside emergency responders, medical facilities and communities. The major emergency response actions are allocated to AGR, which has dedicated cyanide emergency response capability as the transport consignor, and AGR's contracted emergency response service provider who provides services for the management of contaminated materials including containment, decontamination, collection, disposal and monitoring.

**Standard of Practice 3.2**

Designate appropriate response personnel and commit necessary resources for emergency response.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.2

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 3.2.

The Qube Emergency Response Plan sets out emergency response training requirements for Qube and mock exercise schedules. Qube has provided this training for all drivers. All drivers have also been through Qube induction and minesite inductions for all mines they deliver to. All these inductions include emergency response training. The emergency response training is required to be refreshed periodically. The Emergency Response Plan sets out the roles and responsibilities of Qube personnel and external providers in case of a cyanide emergency. The emergency response equipment required for each cyanide shipment is specified in the Emergency Response Plan. The equipment is subject to frequent checks to ensure its ongoing availability and suitable condition.

### Standard of Practice 3.3

Develop procedures for internal and external emergency notification and reporting.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.3

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 3.3.

The Qube Emergency Response Plan contains procedures for Qube to immediately notify the consignor (AGR) and Western Australian Fire and Emergency Services Authority (FESA) of any emergency. The plan includes the responsibility of AGR, as the consignor, to undertake all further notifications including customers, external responders, medical facilities, regulatory agencies and potentially affected communities. The Emergency Responses Plan and the Driver Information Booklet provides clear detail of the required contact information to AGR and Emergency Services for initial notification. The contact details for emergency notification are frequently checked to ensure currency.

### Standard of Practice 3.4

Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.4

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 3.4.

The Qube Emergency Response Plan includes details of specific emergency response duties, responsibilities and actions for remediation, recovery of and neutralization of solutions and solids, decontamination of soils or other contaminated media and management and/or disposal of spill clean-up debris.

The Plan details the prohibition of hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide discharge in surface water and ensures that the driver or site representative only completes treatment under the direction of an approved emergency responder.

**Standard of Practice 3.5**

Periodically evaluate response procedures and capabilities and revise them as needed.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.5

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Qube Ports & Bulk is in Full Compliance with Standard of Practice 3.5.

The Qube Emergency Response Plan prescribes a review of the plan annually and after exercises or incidents to incorporate lessons learned. The plan has been in existence for less than one year and has been reviewed and revised by Qube management twice. The Emergency Response Plan prescribes two-yearly mock emergency exercises involving Qube, AGR and emergency service providers. Mock exercises have been completed more frequently than that prescribed in the Plan. Records of mock exercises have been retained including documentation where improvements to emergency response have been identified.