

TransWood, Inc. Winnemucca Terminal Sodium Cyanide Solution Transportation Operations

ICMI International Cyanide Management Code Re-Certification Audit

SUMMARY AUDIT REPORT

Audit Dates: July 7 - 8, 2016

Submitted to:
The International Cyanide Management Institute
1400 I Street, NW – Suite 550
Washington, DC 20005
USA
2016 Audit Cycle



www.mss-team.com



Name and TransWood, Inc. – Winnemucca Terminal

Location of 3109 Desert Gem Rd **Operation:** Winnemucca, NV 89445

Bulk liquid transportation of sodium cyanide to gold mines in Nevada and

Audit Scope: the Western U.S.

Phil Bennett - Terminal Manager

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Name and contact Winnemucca, NV 89445

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Email: winnemuccanv@transwood.com

Location detail and description of operation:

The TransWood, Inc. Winnemucca Terminal transports liquid sodium cyanide in bulk tankers from the Cyanco production facility in Winnemucca, Nevada to gold mines in Nevada and the Western USA. The terminal is located 1.5 miles west of Winnemucca on Jungo Road. The terminal is one of 30 TransWood terminals serving 22 states in the USA. The carrier transports dry and liquid bulk loads and is headquartered in Omaha, Nebraska.

TransWood maintains a formal environmental, health, safety, and security (EHSS) management system that is certified by a third-party auditing firm to the American Chemistry Council's Responsible Care Management System (RCMS®) technical specification. The Winnemucca Terminal is part of this centrally-managed management system. The RCMS processes are applied to all operations and are used to ensure compliance to all legal and voluntary EHSS requirements, including the ICMI International Cyanide Management Code (ICMC).

This TransWood terminal is dedicated exclusively to the maintenance and dispatch of bulk cyanide loads for Cyanco. The terminal has a full service maintenance shop and all equipment is maintained on-site. The terminal is approximately 5 miles away from Cyanco. No cyanide is stored at this location. Empty trucks may be staged for maintenance or inspection activities, but loaded trucks are kept within a secure perimeter at Cyanco.

Cyanide Code compliance is achieved in close collaboration with Cyanco. Trucks are loaded by Cyanco operators, driven by TransWood drivers, and monitored throughout transit by Cyanco and TransWood. TransWood also works very closely with Cyanco to ensure that all ICMC requirements are fulfilled. Cyanide training, emergency response planning, and route determination are areas of compliance are all jointly managed.

This operation is in FULL COMPLIANCE with the International Cyanide Management Code.

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Name of Facility

Lead Auditor

September 13, 2016

Date

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Auditor's Finding

This operation is **\overline{\overli**

This operation has not experienced any cyanide incidents or compliance problems during the previous three-year audit cycle.

Audit Company:	MSS Code Certification Service, a Division of Management
	System Solutions, Inc.
	www.mss-team.com
Audit Team Leader and	Bruno Pizzorni
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Date(s) of Audit:	July 7 – 8, 2016

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

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

Signature of Lead Auditor

TransWood Cyanide Transportation Operation

Lead Auditor

September 13, 2016

Name of Facility



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

and releases.

Select cyanide transport routes to minimize the potential for *Transport Practice 1.1:*

accidents and releases.

☑ in full compliance with

in substantial compliance with The operation is

Transport Practice 1.1

not in compliance with

Summarize the basis for this Finding:

TransWood maintains a documented route selection process that takes into account population density, infrastructure, pitch & grade, proximity to water bodies, and the prevalence and likelihood of poor weather and resulting poor driving conditions. Cyanco and TransWood personnel work together with mining customers to determine the safest and best route for transport. The routes are evaluated prior to first delivery and again formally every three years thereafter.

Drivers have access to the Terminal Manager daily when they return to the Terminal. Interviews with drivers and management personnel were used to confirm that feedback about driving conditions is communicated daily, as needed. Special conditions noted by customers are noted and communicated to all drivers assigned to the route. The routes driven by TransWood vary in length. Drivers can often complete more than one trip in a day, although a small number of routes are long distance trips.

Risks such as pitch and grade of roads, traffic congestion, seasonal traffic issues (winter weather and summer tourist congestion), and proximity to water bodies were considered during the development of the routes. In some cases, the pitch and grade of the roads are significant and transit through cities is considered to be lower risk. Stakeholder input (Cyanco, mine customers, and local authorities) is considered when routes are determined. Records were available to show that Cyanco and TransWood participate in community meetings together with their mining customers each year. The results of these community meetings are used in the overall cyanide delivery planning processes. Appropriate risk mitigation measures are used. Weather conditions are constantly monitored and deliveries are postponed if a route is considered to be unsafe. Drivers are empowered to stop a delivery if the conditions are considered to be unsafe. Interviews were used to also confirm that drivers adhere to designated routes and request authorization prior to deviating from the established routes.

Cyanco coordinates emergency response for cyanide deliveries made by TransWood. Cyanco also coordinates communications with local emergency responders and advises them of their role

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should there be an emergency situation. Cyanco's stakeholder interactions were audited as part of their ICMC 2016 re-certification audit and were also found to be acceptable.

TransWood drivers are employees and tractors are owned by TransWood. No subcontractors are used.

<u>Transport Practice 1.2:</u> Ensure that personnel operating cyanide handling and

transport equipment can perform their jobs with

minimum risk to communities and the environment.

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 1.2

not in compliance with

Summarize the basis for this Finding:

Training records from 2014, 2015, and 2016 as well as interviews with drivers, dispatch, management, and maintenance personnel were used to confirm that personnel operating cyanide transportation equipment can perform their jobs safely and appropriately. Training related to cyanide and the delivery of cyanide is given by Cyanco in formal classroom sessions.

Regulatory training and qualification requirements were fulfilled for all drivers. TransWood training management processes ensure that driver training is up-to-date. Trucks are loaded by Cyanco operators and unloaded by TransWood drivers. Drivers showed very good awareness of unloading procedures and of emergency shut-off procedures that would help mitigate the risk of having a cyanide release during an unplanned event. No cyanide handling equipment is used by TransWood.

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

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 1.3

not in compliance with

Summarize the basis for this Finding:

TransWood equipment was found to be in excellent condition and was deemed suitable for delivering bulk liquid cyanide solution. The tractors and trailers are enhanced with upgraded

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equipment and heavy duty frames to ensure safe travel over rough terrain to the mine sites. Tires are replaced on a frequent basis and regular maintenance activities and inspections are conducted. Safety and emergency shut-off systems are designed into the delivery equipment and were found to be appropriate for mitigating the risk of chemical spill. Equipment bridge calculations are done at the time the equipment is specified and procured to ensure that equipment is able to carry the loads it must carry. Loading of the trucks is done by Cyanco personnel using automated equipment. Trucks are weighed on their way into the loading areas and again on the way out of the loading area to ensure that weights are appropriate.

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

☑ in full compliance with

in substantial compliance with The operation is **Transport Practice 1.4**

not in compliance with

Summarize the basis for this Finding:

TransWood has a formal safety program that clearly addresses all ICMC safety program requirements. Liquid cyanide solution is transported in bulk tanker trailers using UN 3414 shipping placards for sodium cyanide solution on all sides of the truck. Vehicle inspections are done prior to every shipment and maintenance is performed every 10,000-12,000 miles. Maintenance records were found to be complete. Driver hours are limited by U.S. Department of Transportation regulations. TransWood carefully monitors and audits driver hours for compliance at the local and corporate level of the organization.

Interviews were conducted with drivers and procedures were reviewed during the audit to confirm that drivers are empowered to modify or suspend a shipment if unsafe conditions exist. Such a change in delivery plans would be done in close coordination with the TransWood dispatcher, Cyanco personnel, and with the mining customer. Random drug and alcohol testing is done in accordance with U.S. regulations. Records were available to show that all parts of the TransWood safety program are effectively being implemented.

Follow international standards for transportation of cyanide by sea *Transport Practice 1.5:*

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and air.

The operation is

☑ in full compliance with in substantial compliance with

Transport Practice 1.5

not in compliance with

Summarize the basis for this Finding:

No shipments are made by sea or by air. This clause is not applicable to this operation.

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

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 1.6

not in compliance with

Summarize the basis for this Finding:

Cyanide shipments are tracked using a Qualcomm / GPS tracking system that is maintained and operated by Cyanco. Drivers log into the system to communicate the status of the delivery. The GPS tracking system was demonstrated during the audit and real-time information regarding the current position of trucks was found to be very accurate. Shipments are tracked by both Cyanco and TransWood personnel. TransWood drivers also have cell phones as a back-up means of communication. The communication and tracking equipment is properly maintained and is used daily. No blackout areas exist for the Qualcomm / GPS tracking system. Bill of Lading paperwork shows the amount of cyanide delivered. This paperwork is used to document the chain of custody and is signed upon delivery of the product to the customer. Examples of shipping papers were reviewed and were found compliant with ICMC requirements. The amount of cyanide delivered is carefully monitored by the driver and remotely through the TransWood dispatch office. Trucks are weighed when dispatched and when they return to ensure proper chain of custody for all cyanide shipped. All necessary permits, MSDS information, and emergency contact information is kept in the trucks at all times.

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2. INTERIM STORAGE: Design, construct and operate cyanide trans-shipping depots and

interim storage sites to prevent releases and exposures.

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

releases.

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 2.1

not in compliance with

Summarize the basis for this Finding:

TransWood does not have any interim storage responsibilities. Additionally, no trucks containing cyanide are allowed to be stored at the terminal. If a delivery is interrupted, loaded cyanide tankers would be brought to Cyanco to be stored in a secure location.

3. EMERGENCY RESPONSE: Protect communities and the environment through the

development of emergency response strategies and

capabilities

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

releases.

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 3.1

not in compliance with

Summarize the basis for this Finding:

TransWood uses the documented Cyanco emergency response plan (ERP) that addresses all of the ICMC requirements for the transportation of cyanide. The plan was reviewed and was found to be acceptable. In the event of an emergency, TransWood drivers perform a notification role only. Emergency response is then directed and carried out by Cyanco employees, emergency responders, and mine personnel if the emergency happens on a mine site. Drivers have hazardous materials training and security training, and they keep a copy of the Emergency Response Guide (ERG) with them at all times during transport. TransWood only transports cyanide via truck and all scenarios considered in the plan were related to truck accidents. Liquid sodium cyanide (the only physical form transported), roadway infrastructure differences, the construction of the transportation equipment (emergency shut offs), and the roles of the different emergency responders are discussed in the plan.

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<u>Transport Practice 3.2:</u> Designate appropriate response personnel and commit

necessary resources for emergency response.

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 3.2

not in compliance with

Summarize the basis for this Finding:

The roles and responsibilities of relevant internal and external personnel are clearly described in the emergency plan. The Cyanco emergency response team receives regular training on the emergency response plan. TransWood drivers also receive an appropriate level of training to enable them to fulfill their role in emergency response. Formal training is refreshed annually.

Drivers were interviewed and awareness of emergency procedures was appropriate. The emergency plan defines what equipment must be available in each truck and extra personal protective equipment is available in each bag. A random sampling methodology is used to inspect emergency equipment bags on a regular basis when the trucks are brought in for maintenance and inspections. The pre-trip inspection process is also used to confirm that required emergency equipment is available on the trucks during transport.

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

and reporting.

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 3.3

not in compliance with

Summarize the basis for this Finding:

The notification procedures, including telephone numbers, are described in the Emergency Response Plan. Drivers have the necessary telephone numbers noted on the paperwork they carry in their trucks. Interviews confirmed that Cyanco works closely with TransWood to ensure that notification procedures and telephone numbers remain current. Contact information was randomly sampled and confirmation was made during the audit that the information was up-to-date. The plan, including notification information, is also reviewed each year for adequacy.

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Transport Practice 3.4: Develop procedures for remediation of releases that recognize the

additional hazards of cyanide treatment chemicals.

I in full compliance with

The operation is in substantial compliance with **Transport Practice 3.4**

not in compliance with

Summarize the basis for this Finding:

The Cyanco / TransWood emergency response plan includes text that addresses the remediation and neutralization of cyanide solutions and solids. 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.

Transport Practice 3.5: **Periodically** evaluate response procedures and

capabilities and revise them as needed.

☑ in full compliance with

in substantial compliance with **Transport Practice 3.5** The operation is

not in compliance with

Summarize the basis for this Finding:

The emergency plan defines that the procedures will be reviewed annually by Cyanco and TransWood, and that drills are to be conducted annually. Emergency drills have been held in 2013 and 2014, missing 2015 but shortly after the audit TransWood personnel along with Cyanco emergency response team conducted a mock drill of an employee exposure on Thursday, July 28, 2016. The drill report was evaluated by the auditor and was found to be effective. The audit finding was closed with no further corrective actions required. Drill results were acceptable. Interviews and written procedures confirmed that the plan would also be reviewed after any deployment of the plan. Any necessary changes would be made, as necessary.

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