

TransWood, Inc. Winnemucca Terminal Sodium Cyanide Solution Transportation Operations

ICMI Cyanide Code Re-Certification Audit

SUMMARY AUDIT REPORT

Audit Dates: August 12-13, 2009

Submitted to:
International Cyanide Management Institute
888 16th Street, NW – Suite 303
Washington, DC 20006
USA

Management System Solutions, Inc. 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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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

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. Cyanide training and emergency response processes are managed by CYANCO. Route determination is co-managed by the organizations in collaboration with customers.

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

<u>TransWood Cyanide Transportation Operation</u>

Name of Facility

10000

October 9, 2009

Auditor's Finding

This operation is **I** in full compliance with the International Cyanide Management Code.

Audit Company:	Management System Solutions, Inc.
	www.mss-team.com
Audit Team Leader and	Nicole Jurczyk
Technical Expert:	E-mail: CodeAudits@mss-team.com
Date(s) of Audit:	August 3-4, 2009

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.

Nivel Jung Z Signature of Lead Auditor

TransWood Cyanide Transportation Operation

Name of Facility

Lead Auditor

October 9, 2009

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

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

accidents and releases.

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 1.1

not in compliance with

Summarize the basis for this Finding:

TransWood uses 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 work together with 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 and provide feedback about driving conditions 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, 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. Appropriate risk mitigation measures are used and in one case an escort is used at the request of the city through which the trucks must travel. Weather conditions are constantly monitored and deliveries are postponed if a route is considered to be unsafe. Interviews confirmed 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 and also manages communications with local emergency responders and advises them of their role should there be an emergency situation. CYANCO's stakeholder interactions were audited as part of the 2009 Cyanide Code audit and were found to be acceptable.

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

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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.

☑ 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 and interviews 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 have been 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.

Transport Practice 1.3: 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 very good condition and is suitable for delivering bulk liquid cyanide. The equipment is purchased with extra heavy duty frames to compensate for the rough terrain that must be traveled at 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.

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

☑ in full compliance with

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

not in compliance with

Summarize the basis for this Finding:

TransWood has a formal safety program that clearly addresses all Cyanide Code Safety Program requirements. Liquid cyanide 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. Drivers are limited by U.S. Department of Transportation regulations. TransWood carefully monitors driver hours at the local and corporate level of the organization. Procedures are available to explain the process for modifying or suspending a shipment if unsafe conditions exist. 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.

Transport 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 **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

in substantial compliance with The operation is **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

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operated by CYANCO. Drivers log into the system frequently to communicate the status of the delivery. Shipments are carefully 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. 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.

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

interim storage sites to prevent releases and exposures.

Store cyanide in a manner that minimizes the potential for *Transport Practice 2.1:*

accidental releases.

☑ in full compliance with

in substantial compliance with The operation is **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

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

releases.

☑ in full compliance with

in substantial compliance with The operation is 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 Code requirements for the transportation of cyanide. The plan was reviewed and was

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found to be acceptable. 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, and the roles of the different emergency responders are discussed in the plan.

Transport 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 **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 given 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.

Transport Practice 3.3: Develop procedures for internal and external emergency

notification and reporting.

☑ in full compliance with

in substantial compliance with The operation is **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. The plan, including notification information, is also reviewed each year for adequacy.

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<u>Transport Practice 3.4:</u> Develop procedures for remediation of releases that recognize the

additional hazards of cyanide treatment chemicals.

☑ 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.

<u>Transport Practice 3.5:</u> Periodically evaluate response procedures and

capabilities and revise them as needed.

☑ in full compliance with

The operation is in substantial compliance with Transport Practice 3.5

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. Records were available to show that emergency response drills with other stakeholders are occurring as planned. 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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