

# ICMI Cyanide Code Consigner Supply Chain Summary Audit Report

Cyanco Consignor Certification Audit – Bulk Liquid Rail Shipments of Sodium Cyanide from Winnemucca, Nevada - USA to Cadillac, Quebec - Canada

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

2010 Audit Cycle



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# Cyanco Winnemucca-Cadillac Rail Supply Chain Summary

# Consignor Name & Contact Information

Name of Cyanco

**Operation:** 9450 Double R Blvd. Suite 2, Reno, Nevada 89445 USA

Name and contact Bill Clark

information for ESHQ Compliance Manager Cyanco Contact: Email: bill.clark@cyanco.com

Tel. (623) 444-2989

# Operational Information - Cyanco Winnemucca-Cadillac Rail Supply Chain

Cyanco has production operations in Winnemucca, Nevada – USA and terminal operations in Cadillac, Quebec - Canada. CYANCO's liquid sodium cyanide production facility is located approximately 7 miles west of Winnemucca, Nevada. The corporate office (HQ) is in Reno, Nevada and Cyanco offices are also located outside of Montreal, Quebec.

This audit was used to evaluate Cyanco's management of the bulk liquid sodium cyanide deliveries made between its Winnemucca production facility and its Cadillac Terminal. The deliveries are made by rail in 20,000 gallon rail tank cars.

The 30% sodium cyanide solution is being delivered by rail car on the Union Pacific Railroad (UP) and the Canadian National Railway (CN) between the Winnemucca Plant sidings and the Cadillac Terminal sidings.

# Audit Information - Cyanco Winnemucca-Cadillac Rail Supply Chain

The audit of Cyanco as a Consignor/Transporter and the due diligence evaluation of the UP and CN railroads were performed by an independent 3rd-party auditor who was pre-approved by the ICMI as a Lead Auditor for all types of Code audits and as a Technical Expert for Code audits of cyanide transportation and production operations. The certification audit was conducted on October 4, 2010 with additional reviews of due diligence information following the audit.

Cyanide transportation management practices for the Cyanco liquid bulk rail movement from Winnemucca to Cadillac were evaluated against the Cyanide Code requirements documented in the ICMI Cyanide Code (2009), ICMI Cyanide Code Transportation Protocol (2009), and the

Cyanco Winnemucca-Cadillac Rail Supply Chain Wirol Jung March 1, 20

Name of Operation Signature of Lead Auditor

Date

ICMI Auditor Guidance for Use of the Cyanide Transportation Certification Protocol (2009). The audit was conducted through discussions and interviews with multiple individuals in crossfunctional roles at Cyanco and at service providers who support the management of the Cyanco rail supply chain.

Supply change management activities and processes included in this audit included the rail car evaluation and design approval process, the management of change process used in Winnemucca to load the rail cars, the tracking processes used to manage rail cars and inventory, the maintenance program used to manage preventive maintenance requirements of the rails cars, the management of change process used by Cadillac to safely unload the rail cars, and the emergency response processes in place to respond to any accident of incident involving cyanide. Records regarding incident tracking, security measures, rail safety information, shipment tracking, cargo labeling practices, shipping documentation, and emergency response records were sampled and found to be acceptable.

The Winnemucca and Cadillac operations were originally certified to the Cyanide Code as a Signatory Production Operations in 2006 and 2007, respectively. Recertification audits of the facilities were conducted in 2009 and 2010. The Due Diligence reviews of the UP and CN railroads were conducted using information on file at Cyanco and information available publicly.

The results of this certification audit and the related due diligence reviews indicate that Cyanco and its bulk liquid rail management practices and the UP and CN railroad operations used to transport cyanide between Winnemucca and Cadillac are in FULL COMPLIANCE with Cyanide Code requirements.

Cyanco Winnemucca-Cadillac Rail Supply Chain

Name of Operation

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# Description of the Cyanco Winnemucca-Cadillac Rail Supply Chain:

The railway that services Cyanco out of the Winnemucca, Nevada location is the Union Pacific Railroad (UP). The Canadian Railway (CN) services the Cadillac Terminal. Security and safety risks are minimized through the use of the shortest possible transit time for the shipments. There are no other choices of rail partners for this rail move as the railroad companies own the track that is used.

This evaluation included the following components:

Certification audit of Cyanco as Consignor/Transporter for the management of its Winnemucca-Cadillac Bulk Rail Supply Chain.

US / Canada Rail Winnemucca-Cadillac Supply Chain. The two transportation partners that are covered under this combined Cyanco certification audit / due diligence investigations are:

- 1) Union Pacific Railroad (UP)
- 2) Canadian National Railway (CN)

The due diligence evaluation also considered the primary rail yards, the shipping point, and the destination point.

# Cyanco Winnemucca-Cadillac Rail Supply Chain - Auditor's Finding

#### The Cyanco Winnemucca-Cadillac Rail Supply Chain is:

#### **☑** in full compliance

in substantial compliance not in compliance

with the International Cyanide Management Code.

Audit Company:	Management System Solutions, Inc.
	www.mss-team.com
Lead / Technical Auditor:	Nicole Jurczyk
	E-mail: CodeAudits@mss-team.com
Date(s) of Audit:	October 4, 2010

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 the Audit Reports accurately describe 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.

Cyanco Rail Winnemucca-Cadillac Supply Chain Wirol March 1, 2011

Name of Operation Signature of Lead Auditor Date

Cyanco Winnemucca-Cadillac Rail Supply Chain Wind Jung Name of Operation Signature of Lead Auditor

# **Consignor Summary**

# Operational & Audit Information for Consignor

Supply change management activities and processes included in this audit included the rail car evaluation and design approval process, the management of change process used in Winnemucca to load the rail cars, the tracking processes used to manage rail cars and inventory, the maintenance program used to manage preventive maintenance requirements of the rails cars, the management of change process used by Cadillac to safely unload the rail cars, and the emergency response processes in place to respond to any accident or incident involving cyanide. Records regarding incident tracking, security measures, rail safety information, shipment tracking, cargo labeling practices, shipping documentation, and emergency response records were sampled and found to be acceptable.

The results of this certification audit demonstrate that Cyanco's management practices used to ensure fulfillment of Cyanide Code requirements in the Winnemucca-Cadillac bulk rail supply chain are in FULL COMPLIANCE with Cyanide Code requirements.

Cyanco Winnemucca-Cadillac Rail Supply Chain Wint Jung Name of Operation Signature of Lead Auditor

Personnel interviewed during the Cyanco Consignor/Transporter Certification Audit:

Transport Practice Discussed →  Audit Participants	1.1 Route selection Risk Assessment	1.2 Driver / Operator Training & Qualifications	1.3 Equipment Suitability	1.4 Safety Program & Preventive Maintenance	1.5 Ocean Transport N/A	1.6 Tracking of shipments	2.1 Interim Storage	3.1-3.5 Emergency Response	Supply Chain Management - General Discussions
Cyanco ESHQ Compliance Manager	X	X	X	X	-	X	-	X	X
Quality Transportation Services, Inc.					-	X	-	X	
Quality Transportation Services, Inc.					-	X	-	X	
Manager Shop Operations, Rail Services - Service Provider			X	X	-		-	X	
Site Engineer, Rail Services - Service Provider			X	X	-		-		
Administration & Project Coordinator Cyanco Cadillac Terminal	X	X		X	-	X	-	X	

# Cyanco Consignor / Transporter - Auditor's Finding

Cyanco Consignor / Transporter operations are

## **☑** in full compliance

in substantial compliance not in compliance

with the International Cyanide Management Code.

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	www.mss-team.com
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Cyanco Winnemucca-Cadillac Rail Supply Chain Wirol June March 1, 2011
Name of Operation Signature of Lead Auditor Date

Cyanco Winnemucca-Cadillac Rail Supply Chain Wind Jung Name of Operation Signature of Lead Auditor

# Description of Consignor's role in ensuring compliance of its carriers

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

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

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:

Cyanco transports bulk liquid sodium cyanide solution by rail between Winnemucca and Cadillac. Transportation studies have shown that rail transportation of hazardous materials is significantly safer than truck transportation. The shipments originate at the Cyanco Winnemucca rail sidings and terminate at the Cyanco Cadillac rail sidings. Both of these locations were evaluated and found to be suitable and secure during the Cyanco production certification audits completed in 2009 and 2010, respectively.

Interviews were conducted to confirm that before Cyanco initially qualifies a new customer for sodium cyanide, they follow a standard practice to determine that the cyanide can be safely delivered to the customer mine site. Cyanco does not control the routing of shipments via rail. The risk evaluations associated with this supply chain were processed through the Cyanco management of change processes and focused primarily on the evaluation of risks associated with the rail car and the transport of liquid instead of solid cyanide. Cyanco worked closely with engineers from the rail car manufacturer to determine which rail tanker car would be most appropriate for the delivery of the cyanide solution. Rail car modifications were made to each rail car to reduce the risk of a cyanide spill in the event of a rail accident or incident. The specifications for the modified rail cars and the engineering sign-offs from the manufacturer were reviewed during the audit. The rail car design was accepted by the railroads through the OT5 approval.

Cyanco obtains necessary governmental approvals and export / import licenses for international shipments. Extensive interactions with applicable government agencies are required during the import approval process. Canada requires the development of an official emergency response plan that is called an Emergency Response Assistance Plan (ERAP) which is on file with the Canadian Government. The rail routes are pre-designated routes used for all hazardous material shipments. Cyanco also interacts with stakeholders through full simulation emergency response

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drills, participation in the Local Emergency Planning Committee (LEPC) in Winnemucca, and participation in a Community Advisory Panel (CAP) group near the Cadillac Terminal.

Cyanco trains community responders and hospitals in Winnemucca and Cadillac. Cyanco uses its documented procedures and formal contracts with safety, health, environmental, and security terms and conditions to ensure that cyanide is appropriately handled and transported by its transportation partners.

<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:

Cyanco only uses trained and qualified personnel to load and unload tank rail cars. Confirmation was made that personnel have been trained in the operation of the load/unload equipment and that the work areas are constructed in a way to minimize the potential for cyanide releases and exposures. Loading procedures, unloading procedures, checklists, and training records were reviewed for personnel in Winnemucca and Cadillac. Records were available to show that Management of Change (MOC) processes were used at each location and that the changes to operations had been properly authorized. Cyanco does not have any responsibilities for training of personnel who work for the railroads.

<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:

Cyanco is using a modified bulk rail tank car for this rail segment. According to an interview with the EQMS Manager, Cyanco personnel worked closely with the rail car manufacturers to develop the specification for the modified rail car. The modifications of the rail cars were done

Cyanco Winnemucca-Cadillac Rail Supply Chain

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to prevent accidental loss of the material in case of derailment. The modifications also reduce the risk of unauthorized unloading of the material.

Each modified rail tank car goes through a verification and acceptance process when it is ready to be put into service. The rail cars must also go through what is known as an OT-5 approval process before they can be accepted into service by the rail partners. Interviews were conducted with the engineers performing the rail car modifications, personnel from the company used to process the OT-5 approvals, and the Cyanco EQHS Manager on this topic. Interview discussions and records showed that rail car specifications were appropriate for the load and the material being shipped. The completed OT-5 approvals were on file.

According to interviews and a review of records, the tankers are not loaded with more weight than they can transport. Records showed that the engineering group responsible for the rail car modifications approved the design for the transport of this material at the designated weights. Records from the initial shipments were reviewed to confirm that equipment was not overloaded. The Winnemucca Sodium Cyanide Loading Procedure was also reviewed during the audit. Appropriate measures are taken to ensure that railcars are not overloaded. According to interviews with Cyanco personnel, a high level alarm is used to ensure that the railcars are not overloaded.

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

**☑** in full compliance with

in substantial compliance with Transport Practice 1.4 not in compliance with

Summarize the basis for this Finding:

The operation is

The Winnemucca bulk railcar loading procedures call for the sealing of the dome on the railcar. The railcar is the only "packaging" on this transportation segment. The seal numbers are recorded on the shipping paperwork according to the loading procedure and are checked again at the Cadillac Terminal. Records were available to confirm this practice. The number UN3414 for liquid sodium cyanide is displayed on all tank rail cars. Records were available to show that Cyanco worked with appropriate governmental agencies to ensure that rail car placards were correct and compliant with regulations.

Records were available to demonstrate that the applicable requirements of each of the Safety Program sections of the Cyanide Code had been fulfilled. Rail tank cars are inspected prior to shipment. Completed checklists from the Winnemucca plant were available for review and were acceptable. Cyanco does not perform maintenance of rail cars; they have outsourced their preventive maintenance program to a rail car maintenance provider. At the time of this audit the railcars were just entering the fleet and it was too early to review maintenance records. Records

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were available, however, for the initial railcar modification and approval process. This requirement is not applicable to Cyanco regarding its role as a Consignor. Limitations on worker hours in the U.S. / Canadian rail industry are strictly regulated and enforced by the respective governments. U.S. and Canadian federal regulations require that railroads conduct random drug and alcohol testing and that drug abuse prevention programs are maintained. Cyanco also has these requirements as part of its contractual standard terms and conditions.

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

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 via air or sea on this transportation segment.

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:

Cyanco contracts with a rail tracking service provider who uses a secure web-based rail car tracking system to track the movement of Cyanco and other rail cars. Appropriate action is taken to ensure that cyanide shipments keep moving, stay on pre-designated routes, and that their location can always be confirmed. The daily tracking reports were reviewed during the audit and confirmation was made that railcars are being tracked continuously from the point at which they are put into service and enter the fleet.

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

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

The operation is in substantial compliance with **Transport Practice 2.1** 

not in compliance with

Summarize the basis for this Finding:

This supply chain does not include any interim storage activities.

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

development of emergency response strategies and

capabilities

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

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:

Cyanco maintains several documents for emergency response involving cyanide releases. Cyanco's emergency response plans are appropriate for all modes of transportation used by Cyanco. Required response actions are described for emergencies involving cyanide releases and/or human exposures at the terminal and during transportation via rail or truck. The ERP describes the different possible scenarios involved in an emergency situation. The methods of transport (rail and truck) and the potential transport infrastructure are addressed in the plans. According to interviews, professional emergency responders, with technical guidance from Cyanco, would be responsible for addressing issues involving the way in which the structure of the vessel should be managed after an emergency. This was accepted by the auditor as a reasonable response. The emergency response plans describe the different levels of response actions for anticipated emergency situations. All of the plans and emergency response information clearly outline the roles and responsibilities of internal and external responders.

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*Transport Practice 3.2:* Designate appropriate response personnel and commit

necessary resources for emergency response.

☑ in full compliance with

in substantial compliance with The operation is

Transport Practice 3.2

not in compliance with

Summarize the basis for this Finding:

Cyanco contracts with professional emergency response service providers in North America. All personnel are trained prior to working in the field. Annual refresher training is given in accordance with governmental training requirements. The roles and responsibilities of relevant internal and external personnel are clearly described in the ERP. The ERP lists the emergency response equipment that is available for emergency response.

According to the ERP, all emergency response personnel must complete initial and annual training commonly referred to as 40-hour or "HAZWOPER" training. Cyanco personnel also receive annual training in emergency response. This was confirmed during the on-site audit of the Cadillac Terminal earlier in 2010. Emergency equipment is maintained by Cyanco's contracted professional emergency response service providers. Cyanco uses its documented procedures and formal contracts with safety, health, environmental, and security terms and conditions to ensure that cyanide is appropriately handled and transported by its transportation partners.

Develop procedures for internal and external emergency *Transport Practice 3.3:* 

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 plans. Cyanco information and other emergency contact information is contained in the ERP. The Cyanco emergency response plans for the Winnemucca and Cadillac locations include emergency contact information for local emergency responders, hospitals, and governmental agencies. The Emergency Response Assistance Plan (ERAP) is updated annually, as per Canadian governmental regulations. The review frequency for each of the other ERPs is documented in the respective plans. The ERPs are reviewed as necessary, but at least on a biannual basis.

Cyanco Winnemucca-Cadillac Rail Supply Chain Wirol Tury Name of Operation Signature of Lead Auditor

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

additional hazards of cyanide treatment chemicals.

☑ in full compliance with

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

not in compliance with

Summarize the basis for this Finding:

Specific details regarding the remediation, neutralization, decontamination, and disposal of clean-up debris are contained within the Emergency Response Procedures. Extensive descriptions of necessary action steps depending on the incident scenario are clearly outlined in the documentation.

Interviews with Cyanco personnel during this and previous Cyanide Code audits showed a high level of awareness that the use of treatment chemicals is prohibited if cyanide spills into surface waters. Procedures for responding to cyanide spills in water detail that any contaminated water is to be placed in wastewater containers prior to treatment. The dangers associated with the different treatment chemicals are also detailed in the ERP.

*Transport Practice 3.5:* Periodically evaluate response procedures and

capabilities and revise them as needed.

**☑** in full compliance with

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

not in compliance with

Summarize the basis for this Finding:

Each plan is reviewed at least bi-annually. All information reviewed during this evaluation had been revised within 12 months prior to the audit. Cyanco has conducted and/or participated in numerous mock emergency drills with their stakeholders and external emergency responders. The most recent drills were conducted in 2009. As a part of the ERP it is stated that the ERP has to be evaluated after any emergency or in specific cases such as technical changes that require a revision. This is in accordance with the management of change procedure maintained by Cyanco.

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# Rail Carriers & Rail Yards - Summary of Due Diligence Investigations

# Operational and Audit Information for Rail Carriers and Rail Yards

This report addresses rail transport of sodium cyanide from the Cyanco Winnemucca Plant in Nevada, USA to the Cyanco Cadillac Terminal in Quebec, Canada. The two transportation partners that are covered under this combined Cyanco certification audit / due diligence investigations are:

- 1) Union Pacific Railroad (UP)
- 2) Canadian National Railway (CN)

The railway that services Cyanco out of the Winnemucca, Nevada – USA location is the Union Pacific Railroad (UP). The Canadian Railway (CN) services the Cadillac Terminal in Quebec, Canada. Security and safety risks are minimized through the use of the shortest possible transit time for the shipments. There are no other choices of rail partners for this rail move as the railroad companies own the track that is used.

The Due Diligence portion of this evaluation included a review of information available for the Union Pacific (UP) and Canadian National (CN) railroads, the two railroads used in this transportation segment. The railroads maintain control over routing and employ specific safety measures to ensure the safest transit of hazardous materials possible. The railroads have been certified Responsible Care® Partner companies for more than four years. As such, their rail management system, including rail yards and interchange point safety and security, has been audited by a 3<sup>rd</sup>-party auditing firm and has been found to be suitable and effective

Both the CN and UP have extensive information about their safety and security programs on their web-sites. Both companies have strong safety records and are continually improving their ability to monitor hazardous material shipments to ensure that they arrive safely and securely at their destination.

The CN and UP are also both part of the TRANSCAER® (Transportation Community Awareness and Emergency Response) organization. Information regarding safety performance and the commitment to safe transportation through communities were reviewed and found to be consistent with Cyanide Code requirements. Rail transport is generally understood to be safer than truck transport. The Association of American Railroads (AAR) evaluations have stated that trucks are 16 times more likely to be involved in an accident than trains. For this and other reasons, Cyanco has chosen to ship via rail for this segment of its supply chain.

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The point of loading the bulk tanker rail cars into the rail system is within the Cyanco Winnemucca plant site. The facility was evaluated during the 2009 ICMI Production Certification Audit. The rail sidings are within the secure fence-line of the facility and there is no storage of loaded rail cars outside the secure point of loading. The railroads maintain control over routing and employ specific safety measures to ensure the safest transit of hazardous materials possible.

# UP and CN Rail Carriers and Rail Yards - Auditor's Finding

Due diligence investigations have been performed so that it can reasonably be concluded that rail carriers including rail yards used by Cyanco for sodium cyanide shipments between the Winnemucca Plant and the Cadillac Terminal are:

## **☑** in full compliance

in substantial compliance not in compliance

with the International Cyanide Management Code.

Audit Company:	Management System Solutions, Inc.
	www.mss-team.com
Lead / Technical Auditor:	Nicole Jurczyk
	E-mail: CodeAudits@mss-team.com
Date(s) of Audit:	October 4, 2010

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

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# Description of Due Diligence Information Reviewed for Rail Carriers and Rail Yards

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.

## Summary of the basis for this finding:

The Cyanco bulk tank rail cars are shipped from Winnemucca on the Union Pacific Railroad (UP) and are switched to the Canadian National Railway (CN) in the Proviso, Illinois yard in Chicago. Security and safety risks are minimized through the use of the shortest possible transit time for the shipments. There are no other choices of rail partners for this rail move as the railroad companies own the track that is used.

The railroads maintain control over routing and employ specific safety measures to ensure the safest transit of hazardous materials possible. The railroads have been certified Responsible Care® Partner companies for more than four years. As such, their rail management system, including rail yards and interchange point safety and security, has been audited by a 3<sup>rd</sup>–party auditing firm and has been found to be suitable and effective. According to information that is publicly available, the rail yard where the rail cars cross the U.S./Canada border has undergone 3<sup>rd</sup>–party environmental, health, safety, and security evaluations through the CN Responsible Care® certified management system certification program.

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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.

The management of ☑ consistent with Transport Practice 1.2

Bulk Rail Transport using UP & CN is: substantially consistent

not consistent

#### Summary of the basis for this finding:

During this Due Diligence Review it was confirmed that the CN and UP railroads have continued to be certified Responsible Care® Partner companies for more than four years. As such, their training programs and employee qualification processes have been audited by a 3<sup>rd</sup>party auditing firm and have been found to be suitable and effective. The fulfillment of required training is a specific requirement of the Responsible Care Management System (RCMS). Although no railroad training files are maintained by Cyanco, information regarding the safety practices of the CN and UP railroads was available and was reviewed during the audit.

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

☑ consistent with Transport Practice 1.3 The management of

Bulk Rail Transport using UP & CN is: substantially consistent

not consistent

#### Summary of the basis for this finding:

The CN & UP railroads maintain Responsible Care Management System® certifications and undergo a full management system audit at least every three years which includes a review that the preventive maintenance program for transportation equipment is suitable, adequate and effective. The proper maintenance of rail equipment is heavily regulated and inspected by the U.S. Federal government, which also helps to ensure fulfillment of rail equipment preventive maintenance and inspection requirements.

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<u>Transport Practice 1.4:</u> Develop and implement a safety program for transport of cyanide.

The management of **consistent with Transport Practice 1.4** 

Bulk Rail Transport using UP & CN is: substantially consistent

not consistent

#### Summary of the basis for this finding:

Both the UP and CN are Responsible Care® certified for their safety, health, environmental and security management programs. Adherence to governmental safety regulations such as limits on operator hours and drug testing are evaluated at least every three years by a 3<sup>rd</sup>—party auditing firm. Limitations on worker hours and drug testing in the U.S. and Canadian rail industry are also strictly regulated and enforced by governmental agencies. The safety programs, including preventive maintenance programs for both companies have been found to be suitable and effective, year after year.

#### Transport Practice 1.5:

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

Not applicable.

#### Summary of the basis for this finding:

No shipments are made via air or sea on this transportation segment.

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

Bulk Rail Transport using UP & CN is: substantially consistent

not consistent

#### Summary of the basis for this finding:

Both the UP and CN railroads use Data Electronic Interchange (EDI) tracking technology to manage shipments for their customers. Rail shipping paperwork was reviewed during this audit. Accurate descriptions were available showing the type of material, the weight of the shipment, and the shipping and arrival information.

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

interim storage sites to prevent releases and exposures.

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

accidental releases.

Not applicable.

Summary of the basis for this finding:

There is no interim storage in this supply chain.

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 management of ☑ consistent with Transport Practice 3.1

Bulk Rail Transport using UP & CN is: substantially consistent

not consistent

#### Summary of the basis for this finding:

Information for both rail carriers was reviewed to confirm that they and their affiliates have emergency response plans in place which include the prompt notification of all involved parties. Cyanco provides shipping papers showing the emergency contact information which is then transferred to the hazardous cargo declaration.

Cyanco Winnemucca-Cadillac Rail Supply Chain Wish Jung Name of Operation Signature of Lead Auditor

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

The management of

☑ consistent with Transport Practice 3.2

Bulk Rail Transport using UP & CN is: substantially consistent

not consistent

#### Summary of the basis for this finding:

Cyanco offers immediate technical assistance through its contracted emergency response service providers for any cyanide spill, and offers emergency resources for spills that might occur near a Cyanco site. Cyanco contracts with CHEMTREC to ensure that appropriate notifications and emergency response is initiated if there is an incident.

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

The management of

☑ consistent with Transport Practice 3.3

Bulk Rail Transport using UP & CN is:

substantially consistent

not consistent

#### Summary of the basis for this finding:

The CN and UP are both part of the TRANSCAER® (Transportation Community Awareness and Emergency Response) organization which helps with notifications requirements. Cyanco contracts with appropriate organizations to ensure that appropriate notifications and emergency response is initiated if there is an incident on any rail or truck movement.

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

Not applicable.

#### Summary of the basis for this finding:

Cyanco and its emergency response service providers would lead any remediation efforts involving cyanide. No information regarding this requirement was investigated for CN and UP.

Cyanco Winnemucca-Cadillac Rail Supply Chain

Name of Operation

Signature of Lead Auditor

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

capabilities and revise them as needed.

Bulk Rail Transport using UP & CN is: substantially consistent

not consistent

## Summary of the basis for this finding:

As part of the rail carrier safety programs such as TRANSCAER® (<u>Transportation Community Awareness and Emergency Response</u>), drills and exercises (not necessarily cyanide specific) are conducted to test response capabilities. Additionally, both railroads have been certified Responsible Care® Partner companies for more than four years. As such, their emergency response systems have been audited by an independent 3<sup>rd</sup>-party auditing firm and found to be effective. One requirement of any certified Responsible Care Management System ® is that the emergency response plans be up-to-date and that emergency response plans be tested periodically.

Cyanco Winnemucca-Cadillac Rail Supply Chain

Signature of Lead Auditor

Date