



**ICMI International Cyanide Management Code  
Consigner Supply Chain  
Summary Audit Report**

**Cyanco Pre-Operational Certification Audit –  
Western United States Supply Chain**

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

*2012 Audit Cycle*



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## Cyanco Western U.S. Supply Chain Summary

### *Consignor Name & Contact Information*

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### *Pre-Operational Information – Cyanco Western U.S. Supply Chain*

Cyanco maintains a corporate office in Reno, Nevada, a liquid sodium cyanide production facility near Winnemucca, Nevada, terminal operations in Cadillac, Quebec - Canada, an office outside of Montreal, Quebec, and has recently built a solid sodium cyanide plant in Alvin, Texas.

The new production plant is located at the industrial park of the Chocolate Bayou Plant of Ascend Performance Materials at Alvin/Texas. The plant produces solid sodium cyanide briquettes and is expected to be shipping product along this Western United States Supply Chain at the end of 2012 or early 2013. Initial plans are to ship product in one metric ton bag/boxes packed into intermodal containers. Cyanco has several other methods of shipping, however, including hopper cars and ISO containers. Cyanide produced at this location will be shipped to Western U.S. destinations using truck, rail, and barge.

This pre-operational Western U.S. supply chain includes Houston as the point of manufacture, truck movements to the Union Pacific rail head in Houston, transportation via rail to the rail head in Seattle, Washington. Shipments will then be transported either by truck to destinations in Washington, or along a more complicated route to Alaskan destinations. Shipments to Alaska move along the following route: truck transportation to the Port of Seattle (Harbor Island), rail- barge-rail transportation via the Alaska Railroad and Alaska Marine Lines to the Port of Whittier and onto Fairbanks, Alaska. The cyanide is shipped by rail directly to the Alaska West Express interim storage yard from which point it is distributed to customers in Alaska.

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## Consignor Summary

### *Operational & Audit Information for Consignor*

Supply chain management activities and processes included in this audit included Cyanco's due diligence evaluations and management of trucking, rail, and barge supply chain partners, ports, and interim storage facilities. The processes that will be used to track Western U.S. shipments and the emergency response processes in place to respond to any accident or incident involving cyanide were also included in the evaluation.

Plans and procedures were reviewed and personnel at Cyanco and transportation partners were interviewed during this pre-operational certification audit. All plans, procedures, and Due Diligence actions taken to ensure that Western U.S. shipments are made in compliance with ICMI requirements were found to be acceptable.

The results of this certification audit demonstrate that Cyanco's management practices used to ensure fulfillment of International Cyanide Management Code requirements during Western U.S. shipments are in FULL COMPLIANCE with pre-operational ICMI Cyanide Management Code requirements.

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Cyanco Pre-Operational Western U.S. Supply Chain *Nicole J. [Signature]* August 27, 2012  
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## Cyanco Consignor / Transporter - Auditor's Finding

Cyanco Consignor / Transporter operations are

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

with the pre-operational requirements of the International Cyanide Management Code.

|                           |  |
|---------------------------|--|
| Audit Company:            | MSS Code Certification Service<br><a href="http://www.mss-team.com">www.mss-team.com</a>       |
| Lead / Technical Auditor: | Nicole Jurczyk<br>E-mail: <a href="mailto:CodeAudits@mss-team.com">CodeAudits@mss-team.com</a> |
| Date(s) of Audit:         | May 17, 2012 (on-site); Due Diligence Evaluations: May 9 – August 10, 2012                     |

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Certification 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 Certification Auditors.

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

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|--|---------------------------|--------------------|
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Alaska West Express will store sodium cyanide for Cyanco at its Fairbanks Terminal in Alaska. Alaska West Express is a certified ICMC Signatory company that was audited for transportation and the interim storage of sodium cyanide at this location in May 2012. Interim storage operations were found to be compliant by the third-party auditing firm.

Cyanco plans to have its product loaded onto railcars which are loaded onto barges at the Harbor Island port in Seattle, Washington. The transfer of the intermodal containers onto the railcars that will be used to transport the product will be done by SEA-PAC Transport Services, LLC, a company that specializes in the packaging of cargo that is being loaded onto barges. SEA-PAC was audited during this pre-operational certification audit. Confirmation was made that SEA-PAC is an authorized hazardous materials transportation company, that the company has an emergency response plan, chain of custody processes, and that employees have received cyanide safety training. Cyanide is not stored at SEA-PAC, it is offloaded from trucks and placed onto railcars either immediately or in a short amount of time. SEA-PAC is providing a service to Alaska Railroad due to the logistics of the material entering Seattle at the Union Pacific railhead and needing to be loaded onto a barge at Harbor Island at the Port of Seattle. Cyanco does not plan to store cyanide at this 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.*

The operation is  in full compliance with  
in substantial compliance with Transport Practice 3.1  
not in compliance with

*Summarize the basis for this Finding:*

Cyanco has committed to developing and implementing an Emergency Response Plan that is appropriate for its Western U.S. supply chain. Details regarding the response procedures to be used in each region of the world, mode of transportation, and type of incident were being revised at the time of the audit. Existing emergency response plans were also reviewed during this pre-operational audit.

Current emergency response plans do consider the physical and chemical form of the cyanide. The only form of cyanide to be shipped on this supply chain is solid. Emergency response procedures address actions to be taken in response to a solid cyanide spill.

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Cyanco has committed that its emergency response plans will consider the method of transport. This requirement is reflected in the Cyanco ICMC Manual. Cyanco has committed that the emergency response plans will include descriptions of response actions, as appropriate for the anticipated emergency situation. The Cyanco plans are universally applicable to all types of emergencies. At the time of the audit, emergency procedures were being further enhanced to specifically consider all aspects of responses that may be needed for emergency situations in the Western U.S. supply chain.

All of the plans and emergency response information clearly outline the roles and responsibilities of internal and external responders. Cyanco is committed to enhancing its emergency response procedures to further detail the roles of outside responders for its Western U.S. supply chain.

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

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

*Summarize the basis for this Finding:*

Cyanco has committed to providing emergency response training of Cyanco personnel and to ensuring that its transportation partners are also providing emergency response training to their personnel.

The roles and responsibilities of relevant internal and external personnel are clearly described in the Cyanco emergency response plans and Cyanco is committed to enhancing its procedures to more specifically address roles and responsibilities of internal and external personnel involved in the Western U.S. supply chain.

Current emergency response procedures state that Technical Advisory Team (TAT) Rapid Response Kits are maintained by an emergency response contractor. Information is available regarding the contents of these emergency kits. The types of equipment maintained were found to be appropriate by the auditor.

Cyanco ensures through contractual terms and periodic review that the emergency response equipment maintained by its emergency response provider is available at all times.

Cyanco is committed to using formal policies, procedures, and contracts with safety, health, environmental, and security terms and conditions to ensure that cyanide is appropriately handled and transported by its transportation partners.

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

*Summarize the basis for this Finding:*

Cyanco is committed to periodically reviewing its emergency response plans and evaluating the plan's adequacy. The ICMC Manual requires that table top simulations be run annually and that emergency response drills are run every 3-5 years. Interviews during the audit indicated that an emergency response drill is planned to occur at least once in each region of the world during the first five years after shipping commences. This is in addition to the annual tabletop simulations that are planned.

Records were available to demonstrate that Cyanco regularly participates in emergency response drills with its mine site customers.

Cyanco is committed to reviewing and revising its emergency response plans as necessary after responding to an actual emergency and after emergency response drills.

## **Western U.S. Supply Chain – Pre-Operational Due Diligence Investigations and Auditing**

Cyanco plans to ship its sodium cyanide using supply chain transportation partners that meet recognized Environmental, Health, and Safety (EHS) standards and that are experienced in the handling of dangerous goods. According to Cyanco's ICMC Manual, all carriers and transportation partners used for cyanide shipments need to be either Certified Signatory companies, have been audited for ICMI Code compliance, or have had a Due Diligence review of their ability to fulfill ICMI Code requirements.

In this supply chain, the trucking companies, Quality Carriers and Alaska West Express, are certified International Cyanide Management Code (ICMC) Signatory companies. Their compliance with all ICMC requirements was confirmed during their certification audits.

Union Pacific Railroad (UP) operations were evaluated by Cyanco through a Due Diligence evaluation. UP operations, including the security maintained at all railheads, the cargo dispatch process, and the hazardous materials tracking processes were evaluated during the Due Diligence review process. The results of this evaluation are included in the Cyanco U.S./Canada Rail Supply Chain certification report, posted by ICMI on April 7, 2011.

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The Due Diligence review of Alaska Marine Lines (AML) was conducted as an on-site evaluation of operations in Seattle and Whittier as part of this pre-operational certification audit. AML personnel were interviewed, documentation and records were reviewed, equipment was inspected, and loading and unloading operations were observed. Routing of the barges is planned to ensure the safest route possible. Barges are held in, or routed to safe harbors in poor weather conditions. The tracking of the barges was demonstrated during the audit. Tracking of barges is done using state-of-the-art GPS systems. Real-time data was available for review during the audit.

AML uses formal policies, procedures, and plans for loading and unloading operations, load securement, barge inspections, maintenance, emergency response, barge tracking, and security planning. Personnel demonstrated a high level of awareness with regards to the handling and proper management of hazardous materials. Records were available to show that barges were being properly maintained. Records showing that the U.S. Coast Guard regularly inspects AML for compliance with U.S. transportation regulations were available. The company has been transporting sodium cyanide safely for a different cyanide manufacturer for many years. AML was found to be in full compliance with ICMC requirements by the auditor.

A Due Diligence evaluation of Alaska Railroad operations was also performed as part of this pre-operational certification audit. Alaska Railroad personnel were interviewed, procedures and records were reviewed, and operations in Seattle and the Port of Whittier were evaluated. Alaska Railroad personnel showed a high level of awareness regarding the hazards of cyanide and the need for ensuring that ICMC requirements are fulfilled. Once shipments along this supply chain commence, Alaska Railroad will coordinate the transportation segment from the point at which the cargo is moved from the truck in Seattle to the Alaska Railroad railcar on Harbor Island (Port of Seattle) to the interim storage location in Fairbanks, Alaska.

The Due Diligence of Harbor Island was used to confirm the suitability of the port for the transport of cyanide. The entire area is under security surveillance by the Seattle Port Authority. The equipment and actual loading dock used for the loading of the cyanide onto the barge is locked at all times when not in use. Access to the area is restricted at all times.

Alaska Railroad personnel provide an oversight function in Seattle to ensure that cargo is properly loaded onto the railcars by SEA-PAC, that the cargo is held in a secure rail yard, and that the cargo is safely loaded onto the AML barge using an Alaska Rail loading dock / rail spur. In Whittier, Alaska Railroad unloads the cargo which is in intermodal containers on railcars. Although this was a pre-operational certification audit for Cyanco, sodium cyanide is already being transported using these supply chain partners for another supplier.

The unloading of sodium cyanide was observed during the audit. The unloading operation was a very well coordinated effort between AML (barge operator) and Alaska Railroad. The operation

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