

Cyanide Code Transportation Re-Certification Audit

SUMMARY AUDIT REPORT

Sentinel Sodium Cyanide Transportation Operations

Audit Dates: August 5-6, 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



SUMMARY AUDIT REPORT

Name of Cyanide

Production Operation: Sentinel Transportation, L.L.C. – Carlin Sodium Cyanide Terminal (Carlin, NV)

Names of Facility

Owners: Sentinel Transportation, L.L.C.

Names of Facility

Operators: Sentinel Transportation, L.L.C.

Kelly Carter – Terminal Supervisor
Sentinel Transportation, L.L.C.
3 miles east of Carlin on old Highway 40

Names and Addresses of Responsible Managers:

Carlin, NV 89822 USA
Tel. (775) 754-6046
Fax. (775) 754-2275
Email: k.Carte@sentineltrans.com

Location detail and description of operation:

This audit was a Cyanide Code re-certification audit for Sentinel Transportation, L.L.C. Sentinel is a hazardous material bulk trucking company that has operated in the US and Canada for over 50 years. The Sentinel sodium cyanide operation is located in Carlin, Nevada, and is part of the overall DuPont sodium cyanide transportation supply chain. The terminal is one of 45 Sentinel truck terminals located across the US. In Carlin, Sentinel occupies approximately 7 acres of a site that adjoins a sodium cyanide packaging operation that was certified to the ICMI Cyanide Code in mid-2006 and re-certified in 2009 using the Cyanide Production Protocol. Cyanide loading and packaging takes place at the packaging operation and was audited during the aforementioned certification process.

Sentinel headquarters is located in Wilmington, Delaware. Although only the Carlin terminal was within scope of the audit, upper level Sentinel management is very involved with the operation of the terminal. In addition to the nine Carlin Terminal employees, the U.S. Safety Manager and the Regional Operations Manager were audited in order to confirm conformance to Cyanide Code requirements. The Carlin employees include a Terminal Manager, a mechanic, and drivers.

Sodium Cyanide that is loaded by the adjoining packaging company is delivered by Sentinel to gold mining operations in the Rocky Mountain region and in western North America (including Canada). Sentinel has been the carrier providing this service from DuPont's Carlin sodium cyanide packaging operation since 1989.

Sentinel is responsible for route determination, shipment scheduling and tracking, inventory control, truck inspections, preventive maintenance, training, safety program management, and emergency response planning. The sodium cyanide is transported in bulk cargo tanks and semi-bulk metal bins to mine sites. The Carlin terminal is only used for the shipping of sodium cyanide.

Sentinel Sodium Cyanide Transportation Operation

Name of Facility

Lead Auditor

October 5, 2009

Date

SUMMARY AUDIT REPORT

Auditor's Finding

This operation is

- in full compliance
- in substantial compliance *(see below)
- not in compliance

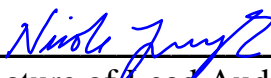
with the International Cyanide Management Code.

* For cyanide transportation operations seeking Code certification, the Corrective Action Plan to bring an operation in substantial compliance into full compliance must be enclosed with this Summary Audit Report. The plan must be fully implemented within one year of the date of this audit.


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:	August 5-6, 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 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 Cyanide Transportation Operations and using standard and accepted practices for health, safety and environmental audits.



Signature of Lead Auditor

Sentinel Sodium Cyanide Transportation Operation  October 5, 2009
Name of Facility Lead Auditor Date

SUMMARY AUDIT REPORT

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.

The operation is in full compliance with
 in substantial compliance with Transport Practice 1.1
 not in compliance with

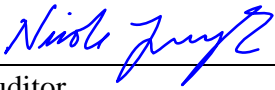
Summarize the basis for this Finding/Deficiencies Identified:

Sentinel continues to use a documented routing selection method that takes into account population density, infrastructure, pitch & grade, proximity to water bodies, and prevalence and likelihood of poor weather and resulting poor driving conditions. Records and interviews with the drivers, Terminal, Regional, and Safety Managers were used to confirm that all necessary considerations were made during the determination of all cyanide transportation routes. Records were available to demonstrate that procedures have been consistently followed since the original certification in 2006. Community input regarding the transport of cyanide is gathered through the use of the U.S. Department of Transportation (DOT) web site that indicates whether communities have restricted use of specific roadways for the transportation of hazardous materials. Interviews also demonstrated that individual community and/or specific road hazard information was discussed with the Terminal Manager and was incorporated into the driver instructions for the routes (e.g., acceptable overnight parking location, or timing of travel through areas). Truck routes are reviewed by multiple levels of the organization on an annual basis, records showed that this was done from 2006 through 2009. Sentinel is a registered hazardous materials transporter through the U.S. DOT Pipelines and Hazardous Material Safety Administration (PHMSA). As such, fees paid by the company are partially allocated to the training of a national emergency response network. Sentinel does work together with its customers to ensure that emergency responder roles are understood. Additionally, drivers carry emergency response information with them, including the widely accepted North American Emergency Response Guidebook (ERG). Sentinel does not subcontract any portion of their cyanide transportation operations. Cyanide Code requirements pertaining to subcontractors are, therefore, not applicable to the organization.

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 operation is in full compliance with
 in substantial compliance with Transport Practice 1.2
 not in compliance with

Sentinel Sodium Cyanide Transportation Operation
Name of Facility


Lead Auditor

October 5, 2009
Date

SUMMARY AUDIT REPORT

Summarize the basis for this Finding/Deficiencies Identified:

Records for the years 2007, 2008, and 2009 were reviewed. All drivers have a Class A Commercial Drivers License (CDL) with a Hazardous Materials endorsement. Annual Mine Safety and Health Administration (MSHA) training is also given. Training records were reviewed and were found to be acceptable. Drivers were interviewed and were found to have a very good level of knowledge and safety awareness. In addition to training required by law, internal training is given at defined intervals to ensure that all personnel operating and handling cyanide transportation equipment is trained in a manner that minimizes the potential for cyanide releases and exposures. The training is carried out using videos, computer-based training, and classroom sessions. Internal training records were reviewed and found to be acceptable.

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

The operation is	<input checked="" type="checkbox"/> in full compliance with <input type="checkbox"/> in substantial compliance with <input type="checkbox"/> not in compliance with	Transport Practice 1.3
------------------	---	------------------------

Summarize the basis for this Finding/Deficiencies Identified:


Sentinel transports cyanide using equipment designed by U.S. manufacturer engineers to meet U.S. DOT weight rating standards. Gross Vehicle Weight Rating (GVWR) is certified by the manufacturer and documented on each vehicle with a label. Equipment labels were reviewed during the audit. All Sentinel tractors and trailers, as well as DuPont cargo tank semi-trailers at Carlin have been inspected for suitability. All are rated for weights that exceed maximum loaded weights. Records show that maintenance activities are being performed as planned. Significant improvements regarding maintenance record-keeping systems were made since the original audit in 2006. Office personnel and drivers all showed excellent awareness of weight capacities and regulatory requirements pertaining to maximum truck weight allowed in each State. Product volumes and weights are confirmed by DuPont when the trucks are loaded. A review of shipping records from 2007-2009 confirmed that equipment is not being overloaded.

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

The operation is	<input checked="" type="checkbox"/> in full compliance with <input type="checkbox"/> in substantial compliance with <input type="checkbox"/> not in compliance with	Transport Practice 1.4
------------------	---	------------------------

Summarize the basis for this Finding/Deficiencies Identified:

Bins and cargo tanks are inspected before starting a trip to ensure all closures are properly secured and all lines, valves and caps are closed. Bins are secured to flat bed trailers to insure they do not move or tip over during transportation. Appropriate placards are displayed on all four sides of the transport vehicles. Pre-defined checklists showing the required maintenance tasks are used to record actions. The incoming and outgoing condition of the equipment is recorded on the checklists and associated repair orders. The Safety Program includes limitations

Sentinel Sodium Cyanide Transportation Operation		October 5, 2009
Name of Facility	Lead Auditor	Date

SUMMARY AUDIT REPORT

regarding cyanide hazards and emergency response. Records and interviews confirmed that Sentinel has appropriate control over the movement of the cyanide shipments.

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

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

The operation is in full compliance with
in substantial compliance with Transport Practice 2.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Storage at the Sentinel site is limited to pre-shipment storage in trailers prior to a delivery. All vehicles are parked within a secure perimeter fence. Additionally, the site is secured through the use of multiple security measures including cameras and alarm systems.

There are signs that warn people not to come on-site. Visual contact is maintained with all visitors after they enter the gate. Once they reach the office, they are escorted at all times. Several different systems are used to secure the vehicles while they are parked and when they are in transit. The transportation equipment is designed to securely contain the contents. A checklist is used by the packaging facility to confirm that the secondary containment on the cargo tank is secure. Loading of cyanide is done within secondary containment at the adjoining packaging operation. No other materials or chemicals are stored at this location and there is no storage within any buildings.


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/Deficiencies Identified:

Sentinel Transportation, LLC has a detailed emergency response plan (ERP) for the corporation and a Carlin Terminal addendum that addresses all of the additional requirements for the transportation of cyanide. Both documents were reviewed in detail and were found to be

Sentinel Sodium Cyanide Transportation Operation  October 5, 2009
Name of Facility Lead Auditor Date

SUMMARY AUDIT REPORT

appropriate. Records were available to show that the ERP was reviewed for adequacy at defined intervals and that several minor updates have been processed since the original audit in 2006. Drivers have the following information with them at all times: the ERP and the ERP Addendum, emergency response fact sheets from DuPont, and the North American Emergency Response Guidebook (ERG). Sentinel only transports cyanide via truck. Different chemical and physical forms of cyanide, roadway infrastructure differences, and the roles of the different emergency responders are discussed in the plan. The roles of internal personnel and external responders are clearly defined in the Sentinel emergency response documentation.

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/Deficiencies Identified:


Training on the emergency response plan including the Addendum was given to all employees. Records from a classroom session were reviewed. Training is refreshed annually and records from 2007, 2008, and 2009 were available to demonstrate conformance to internal requirements. Drivers were interviewed and awareness of emergency procedures and documentation was confirmed. The emergency equipment list is part of the pre-trip checklist. Sign-off sheets are brought into the office prior to a delivery. These sign off sheets are maintained as records and confirm that emergency items such as the North American Emergency Response Guidebook (ERG), Material Safety Data Sheets, personal protective equipment and spill equipment are on the truck. Interviews with drivers confirmed that they understood their responsibilities to confirm that the emergency equipment is in working condition.

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

The operation is in full compliance with
in substantial compliance with Transport Practice 3.3
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The notification procedures are described in detail within the Emergency Response Plan (ERP) Addendum and the Manager's checklist. During the emergency, the notification actions of the driver, local manager, regional, and national safety managers are detailed and are practiced once per year. The notification call list is checked for accuracy once per year when the plan is reviewed and tested. The DuPont Cyanide Hotline offers much of the support in determining further notification needs. CURA is a service provider that is contracted by Sentinel to manage all regulatory notifications following an emergency or release. The phone numbers for the

Sentinel Sodium Cyanide Transportation Operation  October 5, 2009
Name of Facility Lead Auditor Date

SUMMARY AUDIT REPORT

DuPont Cyanide Hotline and for CURA are both part of the ERP Addendum. The ERP and Addendum are reviewed and tested once each year. During this activity, the phone numbers are checked for accuracy.

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

The operation is in full compliance with
in substantial compliance with Transport Practice 3.4
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:


Remediation of a spill would be managed by an emergency response service provider named CURA. The cyanide experts at the DuPont Cyanide Hotline would coordinate with CURA to ensure appropriate clean up and remediation of contaminated solids or soils. Remediation of soils is, therefore, not addressed specifically in the Sentinel documentation. The Emergency Response Plan (ERP) Addendum, however, does address the requirement that none of the chemicals such as sodium hypochlorite, ferrous sulfate, or hydrogen peroxide be used to treat a release to surface water. The ERP Addendum statement reads as follows: "If any sodium cyanide briquettes or runoff reaches surface water, no chemical neutralization will be attempted during remediation that involves the introduction of sodium hypochlorite, ferrous sulfate and hydrogen peroxide into the contaminated water".

Transport Practice 3.5: *Periodically evaluate response procedures and capabilities and revise them as needed.*

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/Deficiencies Identified:

The Emergency Response Plan (ERP) including the Carlin Terminal Addendum and the notification call list are reviewed and / or tested on an annual basis. An ERP refresher training is also given annually. The last drill conducted was done in coordination with a mine site and the DuPont Cyanide Hotline. Hands on drills were conducted with mines and with the DuPont packaging operation since the original audit. Evidence was available to show that the ERP is being reviewed and updated on an appropriate frequency. The telephone numbers on the call list were reviewed and checked for accuracy during the audit. The Emergency Response Plan's performance is reviewed after actual emergencies and after the annual drill. Changes are made to the plan, as needed. Pages 16 and 17 of the ERP are used to critique the drill and/or execution of the plan in the case of an actual emergency.

Sentinel Sodium Cyanide Transportation Operation  October 5, 2009
Name of Facility Lead Auditor Date