

***INTERNATIONAL CYANIDE
MANAGEMENT INSTITUTE***

**Cyanide Transportation
Summary Audit Report**

Action Resources, Inc.

To The

International Cyanide Management Code

October 2009 Verification Protocol

By

Environmental Technology & Management

2323 Clear Lake City Boulevard, Suite 180-237, Houston, TX 77062-8032

(281) 480-8019

SUMMARY AUDIT REPORT

Name of Cyanide Transportation Facility: **Action Resources, Inc. Pasadena Terminal**

Name of Facility Owner: **Action Resources, Inc.**

Name of Facility Operator: **Action Resources, Inc.**

Name of Responsible Manager: **Calvin Lewis, Terminal Manager**

Address: **5001 Underwood Road**

City: **Pasadena**

State/Province: **TX**

Country: **USA**

Telephone: **(281) 909-8080** Fax: **(281) 930-4849** E-Mail: **clewis@action-resources.com**

Location detail and description of operations:

On November 24-25, 2014 Environmental Technology & Management conducted an audit of Action Resources, Inc.'s cyanide transportation activities against the Transport Practices of the International Cyanide Management Code. In 2013, a shipper began to use Action Resources, Inc. as a transporter of sodium cyanide briquettes from its Alvin, TX manufacturing plant to the Port of Houston for export to customers overseas. This is the first transportation segment in the shipper's Global Ocean Supply Chain. Action Resources, Inc. was previously audited to the Code, and the results of that audit were reported in an addendum to Cyanco's Global Ocean Supply Chain.

Action Resources, Inc., founded in 1995, provides transportation services of Specialty Chemicals and Hazardous Waste throughout the U.S. and Canada. All of its tractors are satellite equipped to provide real time communication and tracking of shipments from pick up to delivery. Action Resources, Inc.'s cyanide transportation activities are based at its **Pasadena Terminal**, and include transporting sodium cyanide (NaCN) briquettes in Sea Containers and ISO Tanks from the the shipper's manufacturing facility, in Alvin, TX to Port of Houston container terminals and to other consignees. The shipper loads the briquettes into specially designed FIBC boxes, securely packed into 20' Sea Containers, and in bulk into ISO Tanks. The shipper's personnel, as well as Action Resources, Inc. drivers, perform inspections on the container exteriors before leaving the production site.

Action Resources, Inc. has selected and evaluated a primary route to each consignee, subject to approval by the shipper. Details of the selection process are provided in this report. All routes follow major two lane roads and divided freeways and toll-ways, well travelled by chemical transporters.

The shipper provided initial cyanide handling and emergency preparedness and response training to Action Resources, Inc. drivers selected for cyanide service. Thereafter, the shipper provided materials, oversight and support for refresher and new driver training delivered by Action Resources, Inc. personnel. Action Resources, Inc. has contracted with Garner Environmental Services to provide emergency response and cleanup in the event of a cyanide release. Because of the shipper's strong product stewardship ethic and its expertise in the area, the shipper has taken the lead on advising and training external responders, medical facilities and communities along the selected routes.

Action Resources, Inc.

Name of Facility




Signature of Lead Auditor

November 24-25, 2014

Audit Date

This report provides the detailed findings regarding Action Resources, Inc.'s conformance to the requirements of the Cyanide Transportation Verification Protocol. Findings are based on approximately 540 movements by Action Resources, Inc. on behalf of the shipper completed at the time of this audit.

Action Resources, Inc.
Name of Facility


Signature of Lead Auditor

November 24-25, 2014
Audit Date

SUMMARY AUDIT REPORT

Auditor's Finding

This operation is

- in full compliance
- in substantial compliance with the International Cyanide Management Code.
- not in compliance

Audit Company: **Environmental Technology & Management**

Audit Team Leader: **John B. (Jack) McVaugh, PE, RCMS/EMS-LA**

E-mail: **jbkm.etm@att.net**

Names and Signatures of Other Auditors: **NA**

Date(s) of Audit: **November 24-25, 2014**

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.

Action Resources, Inc.
Name of Facility



Signature of Lead Auditor

April 17, 2015
Date

Action Resources, Inc.
Name of Facility



Signature of Lead Auditor

November 24-25, 2014
Audit 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:

Action Resources, Inc. is in full compliance with Transport Practice 1.1. Action Resources, Inc. has policies, practices and procedures in place, and has used them to fully evaluate and select transportation routes for the subject destinations. Action Resources, Inc. has utilized PC Miler[®] software from ALK Technologies, route inspection by Action Resources, Inc. management, GPS data and driver feedback to select transport routes that minimize the potential for accidents and releases as well as the potential impacts of accidents and releases, should they occur. The process also considered infrastructure, pitch and grade, and prevalence of water bodies and fog. Action Resources, Inc.'s Cyanide Transportation Procedures call for Action Resources, Inc. to take and document measures to manage the risks, and to re-evaluate cyanide routes through driver feedback as well as re-inspections and re-evaluations performed by management. Action Resources, Inc. has contingency plans in place for truck breakdown en route, and for instances of shipments delayed beyond the Port's closing time. At the time of this audit, no truck breakdowns had occurred. Action Resources, Inc. has contracted with Garner Environmental Services to supply all emergency response and remedial services. Action Resources, Inc. has proactively sought and received input from communities and governmental agencies along the route. Although Action Resources, Inc. has plans to address safety and security concerns, if either Action Resources, Inc. or the shipper determines, or is advised by law enforcement, that special safety or security concerns have developed, Action Resources, Inc.'s Cyanide Transportation Procedures call for consideration of additional safety and/or security measures, such as escort services, convoys or route re-assignment. Because of the shipper's strong product stewardship ethic and its expertise in the area, the shipper will take the lead on advising and training external responders, medical facilities and communities. Lastly, Action Resources, Inc.'s only subcontracting for cyanide transport is with drivers who are Owner/Operators, and all of these drivers are subject to the same high standards in hiring, training and qualification as company drivers.



Action Resources, Inc.
Name of Facility

Signature of Lead Auditor

November 24-25, 2014
Audit Date

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

Summarize the basis for this Finding/Deficiencies Identified:

Action Resources, Inc. is in full compliance with Transport Practice 1.2. All Action Resources, Inc. drivers, including Owner/Operators, are trained, qualified and licensed to operate its vehicles. All drivers must meet all applicable Federal Motor Carrier Safety Regulations, be at least 23 years of age, possess a valid Class A Commercial Drivers License with Tank Truck and Hazardous Materials endorsements, and have a good driving record. All drivers are subject to Action Resources, Inc.'s Drug and Alcohol Plan and background investigations, including that required for Transportation Worker Identification Credential (TWIC) identification. All drivers receive training required by OSHA (29CFR), DOT (49CFR) and EPA (40CFR) regulations, during their initial orientation after hiring. Refresher and on-going training is provided by means of Quarterly Safety Meetings at each terminal, interactive monthly computer-based training (CBT) and individual remedial training sessions, when necessary. Furthermore, drivers transporting cyanide must attend Cyanide Safety Awareness for Transporters training including reviewing the Cyanco Cyanide Safety video and passing a test, thus demonstrating competency. The auditor reviewed the Dispatcher's records which listed 33 current drivers as having received training. Additionally, the auditor reviewed sign-in sheets and test records to verify that all 16 drivers who have transported cyanide at the time of the audit have completed the training and passed the test.


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

The operation is in full compliance with
 in substantial compliance with Transport Practice 1.3
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Action Resources, Inc. is in full compliance with Transport Practice 1.3. Action Resources, Inc. has a tractor specification process and maintenance program that ensures

Action Resources, Inc.
Name of Facility


Signature of Lead Auditor

November 24-25, 2014
Audit Date

that its transport equipment retains a load-bearing capacity adequate for the anticipated load. This includes periodic inspections and testing as well as appropriate specifications for equipment and parts that may be replaced during maintenance. Tractors owned by Owner/Operators are required to meet the same standards of design and maintenance as company power units. The shipper provides the intermodal chassis, ISO Tanks, Sea Containers and IBC's, and ensures that equipment for which it is responsible meets appropriate construction and performance standards. Action Resources, Inc. employs a systematic preventive maintenance program for each piece of company owned or leased equipment, using a schedule based on factory recommendations or accepted industry standards. Tractors owned by Owner/Operators are required to meet the same maintenance schedule as company units. The shipper performs all cyanide loading according to its own procedures. Product weights are specified on shipping papers, and the shipper uses its own scales to weigh empty and loaded ISO Tanks and Sea Containers, including chassis. The shipper reports these weights to Action Resources, Inc. to aid the transporter in selecting the appropriate tractor. Because some loads are slightly over the maximum weight limit for vehicles on the routes selected, Action Resources, Inc. has purchased 13 state-issued Overweight Permits and placed them on 4 company owned and 9 Owner/Operator tractors to use whenever necessary to accommodate such loads.


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

The operation is in full compliance with
 in substantial compliance with Transport Practice 1.4
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Action Resources, Inc. is in full compliance with Transport Practice 1.4. Action Resources, Inc. and the shipper have procedures in place to ensure packaging integrity during transport. The shipper loads ISO Tanks and IBC's with briquetted product and in turn, loads IBC's into Sea Containers, blocking and bracing each load. Action Resources, Inc. addresses placarding in its procedures. Placards are installed by the shipper's personnel and are checked by Action Resources, Inc. drivers. Action Resources, Inc. drivers inspect loads before shipment by completing Driver Vehicle Inspection Reports (DVIR's) and the shipper's personnel and Action Resources, Inc. drivers inspect each load as part of the Load Pick-Up Process. Preventive maintenance on company owned tractors is conducted at the Pasadena Terminal shop, as well as for Owner/Operator tractors at the Owner/Operators' discretion. Action Resources, Inc. complies with Part 395 of the Motor Carrier Safety Regulations which places strict limitations on driving

Action Resources, Inc.
Name of Facility


Signature of Lead Auditor

November 24-25, 2014
Audit Date

and on-duty hours. These are monitored automatically through a Qualcomm Electronic Logging System. Drivers are empowered to make decisions about suspending cyanide transportation for road or weather conditions or civil unrest. When travel on the approved route becomes difficult, Action Resources, Inc. drivers contact their dispatcher by an on-board communication system. The Action Resources, Inc. Alcohol & Controlled Substance Testing Program includes Pre-employment, Random, Post-Accident, Post-Incident and Reasonable Suspicion drug screening. The auditor found all records reviewed to be complete and well managed.

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


Since Action Resources, Inc. does not transport cyanide by sea and air, Action Resources, Inc. is in full compliance with Transport Practice 1.5.

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

The operation is in full compliance with
 in substantial compliance with Transport Practice 1.6
 not in compliance with


Summarize the basis for this Finding/Deficiencies Identified:

Action Resources, Inc. is in full compliance with Transport Practice 1.6. Each tractor has been equipped with satellite communications (Qualcomm®) and Electronic On-Board Recorders (EOBR's) that allow for two-way communication between drivers and dispatcher while accurately tracking truck location, driver hours of service (H-O-S) and other data. In addition, each driver carries a cell phone. (Note that cell phone use is subject to the Action Resources, Inc. Distracted Driving Policy, which strictly prohibits the use of hand-held cellular devices while the vehicle is under way). Drivers are furnished with a list of phone numbers for the shipper, their Terminal Manager, the Director of Transportation Safety and emergency phone numbers such as Chemtrec.

<u>Action Resources, Inc.</u> Name of Facility	 Signature of Lead Auditor	<u>November 24-25, 2014</u> Audit Date
---	--	---

Action Resources, Inc.'s Qualcomm® sets and EOBR's are in daily use, and if a failure occurs, electronic error messages are sent to Dispatchers and Operations personnel. Dispatchers have the cell phone numbers of each driver to ensure two-way communication if there is a system failure. Since Qualcomm® devices are essential for dispatch and H-O-S record keeping, Action Resources, Inc. must repair malfunctioning Qualcomm® devices as soon as they are returned to the Terminal. Because of the proximity of Producer and Port, and based on identified and approved routes, no blackout areas for either cellular or satellite communications have been encountered. The auditor verified that Qualcomm® tracks routes in real time, as well as location, direction, speed and position history of transport vehicles. Action Resources, Inc. will pick up Sea Containers and ISO Tanks fully loaded and sealed at the shipper's location and deliver them to the Port of Houston or consignee directly. Seal Numbers are recorded on shipping papers and drivers verify that the seals are intact at the point they relinquish control. The Shipping Document or Manifest serves as a chain of custody document. Action Resources, Inc. indicates the amount of cyanide in transit on the Straight Bill of Lading, and ensures that the shipping papers include a Transportation Emergency Notification Sheet and MSDS. Action Resources, Inc. transports cyanide, but does not otherwise handle it. Action Resources, Inc. does not broker or subcontract loads to any other transport company.

Action Resources, Inc.
Name of Facility


Signature of Lead Auditor

November 24-25, 2014
Audit Date

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

Transport Practice 2.1:


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:

Because Action Resources, Inc. does not operate any cyanide trans-shipping depots or interim storage sites, Action Resources, Inc. is in full compliance with Transport Practice 2.1.

Action Resources, Inc.
Name of Facility


Signature of Lead Auditor

November 24-25, 2014
Audit Date

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:

Action Resources, Inc. is in full compliance with Transport Practice 3.1. Action Resources has written a Cyanide Contingency Plan to notify Local Authorities, Emergency Response Providers, and Company Operations and Safety Management in the event of a release of sodium cyanide briquettes in transit. Drivers selected for transportation of sodium cyanide have been instructed in the Cyanide Contingency Plan, and a copy of the Plan is included in each packet of shipping papers. The Plan will be reviewed no less than annually and amended as needed. The Plan specifies the use of Garner Environmental Services whose capabilities extend to the entire area encompassed in the present Scope of Work. The Plan also specifies emergency contact information appropriate for the transportation routes. No interim storage facilities will be used by Action Resources, Inc. The Cyanide Contingency Plan specifies that the product is sodium cyanide and the physical form is solid briquettes, and furthermore that the method of transportation is by truck, using chassis and ISO Tanks or Sea Containers. The Cyanide Contingency Plan considers highway transportation over the approved routes. Action Resources, Inc. does not transport by rail or water, and its involvement at the consignee is to position the trailer for off-loading by the consignee’s employees or contractors. The Plan considers that the transport vehicle will consist of a power unit, chassis, and ISO-Tank or Sea Container (dry, water-tight, wind-tight steel container). ISO-Tanks load through three 24 inch man-way openings on their top. Sea Containers load through two center-opening rear doors that open outward from the interior. The Cyanide Contingency Plan specifies response actions to be taken by Action Resources, Inc. personnel in the event of a release of sodium cyanide in transit, and further stipulates that Law Enforcement provide traffic control and restrict access to the area, Fire and Emergency Medical Personnel provide triage and transport for injured individuals (if necessary), and Emergency Response and Clean-Up Services defer to Garner Environmental Services for instructions.

Action Resources, Inc.
 Name of Facility



Signature of Lead Auditor

November 24-25, 2014
 Audit Date


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:

Action Resources, Inc. is in full compliance with Transport Practice 3.2. Action Resources, Inc. has provided emergency response training to the drivers selected for transportation of sodium cyanide, particularly with regard to implementation of the Cyanide Contingency Plan. Garner Environmental Services provides Emergency Response Training to its own personnel. The Cyanide Contingency Plan clearly delineates the specific emergency response duties of drivers as well as emergency response personnel, including Garner Environmental Services. The auditor reviewed the Response Equipment Listing provided to Action Resources, Inc. by Garner Environmental Services and found it to be comprehensive. Action resources, Inc. and Garner Environmental Services have committed to providing all necessary emergency response and health and safety equipment including personal protective equipment in the event of a release during transport. Action Resources, Inc. has provided initial driver training conducted by its Director of Transportation Safety and the shipper's Safety Training Staff. Furthermore, Action Resources, Inc. is committed to re-evaluate its Cyanide Contingency Plan no less than annually, and after the plan is either deemed adequate or amended, all drivers in Cyanide Service receive updated refresher training. Action Resources, Inc. and Garner Environmental Services have committed to inspection of all their respective emergency response equipment in conformance with the manufacturers recommended schedule, Occupational Safety & Health Administration requirements, National Institute for Occupational Safety & Health and/or the American National Standards Institute recommendations. Action Resources, Inc. transports cyanide, but does not otherwise handle it. The transport company does not broker or subcontract loads to any other transport company.

Action Resources, Inc.
Name of Facility


Signature of Lead Auditor

November 24-25, 2014
Audit Date

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:

Action Resources, Inc. is in full compliance with Transport Practice 3.3. Action Resources, Inc.'s Cyanide Contingency Plan clearly provides for notification of CHEMTREC, the shipper, 911 Emergency Services, the National Response Center, Garner Environmental Services and any other agencies necessary to mount an effective response. Action Resources, Inc. maintains the Cyanide Contingency Plan as part of its' Standing Operating Procedures (SOP's). SOP's are dated with the date of their Origination and the date of their last revision or review. Review dates are noted in a task calendar database with automatic alerts to affected management personnel.


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:

Action Resources, Inc. is in full compliance with Transport Practice 3.4. In the event of a release during transportation, Action Resources, Inc. will be the generator of a hazardous waste with EPA Waste Code P106. Depending on the methods employed by Garner Environmental to recover and re-contain the product, every effort will be made to find a responsible user who will use the material for its' intended commercial application. Failing that, Action Resources, Inc. will arrange for destruction of the product by EPA approved methods. The auditor noted that Action Resources, Inc. is a licensed Hazardous Waste Transporter. Garner Environmental Services' Emergency Response Plan for Sodium Cyanide clearly states that the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water is strictly forbidden.

Action Resources, Inc.
Name of Facility


Signature of Lead Auditor

November 24-25, 2014
Audit Date


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:

Action Resources, Inc. is in full compliance with Transport Practice 3.5. Action Resources, Inc. maintains the Cyanide Contingency Plan as part of its' Standard Operating Procedures (SOP's). SOP's are dated with the date of their Origination and the date of their last revision or review. Action Resources, Inc. has committed to conducting Mock Emergency Drills and Table Top Drills annually with Garner Environmental Services in conjunction with the shipper's EH&S staff, as applicable. The Cyanide Contingency Plan will be reviewed at least once every 12 months and within one month of each table-top Emergency Response Drill or Mock Emergency Drill. In the event the Cyanide Contingency Plan is implemented, Action Resources, Inc. is committed to using Root Cause Analysis, Incident Investigation, and After-Action Reports as evaluation tools for the efficacy of the Plan. Revisions will be made as necessary. Any modifications to the Plan will trigger re-training for all Action Resources, Inc. personnel affected.

Action Resources, Inc.
Name of Facility


Signature of Lead Auditor

November 24-25, 2014
Audit Date