

# **INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE**

## **Cyanide Transportation Re-verification Summary Audit Report**

*of*



**Chemours, Inc.**

**Mexico Supply Chain**

*To The*

***International Cyanide Management Code***

**December 2016 Transportation Verification Protocol**

**Environmental Technology & Management**

## SUMMARY AUDIT REPORT

Name of Cyanide Transportation Operation: **Chemours Mexico Supply Chain**  
Name of Operation Owner: **Chemours, Inc.**  
Name of Operation Operator: **Chemours, Inc.**  
Name of Responsible Manager: **Mr. Brian R. Morris, Global Product Stewardship Manager**  
Address: **2571 Fite Road**  
City: **Memphis** State/Province: **TN** Country: **USA**  
Telephone: **(901) 353-7420**

## Location detail and description of operations:

On February 7 - 17, 2017 Environmental Technology & Management conducted a reverification audit of Chemours Mexico Supply Chain to the Transport Practices of the International Cyanide Management Institute Transportation Code. This Mexican Supply Chain was originally certified to the ICMI Cyanide Code in 2010 and recertified in 2014. Chemours (formerly E.I. DuPont de Nemours) was one of the original Cyanide Code signatory companies obtaining Cyanide Code certification for its Memphis Solid Cyanide Plant and its packaging operations in June 2006.

Chemours contracts with long-time truck and rail partners to transport sodium and potassium cyanide briquettes from the Memphis Manufacturing Plant and packaging plants near Memphis and in Nevada into Mexico through Laredo, TX and Nogales, AZ. All cyanide is transported to Chemours warehousing and trans-loading / repackaging facilities in San Luis Potosi and Hermosillo. Ferrocarril Mexicano Railroad (Ferromex) is the rail carrier serving Hermosillo, beginning at a rail yard in Nogales, and Kansas City Southern de Mexico (KCSM) serves the San Luis Potosi facility starting in Laredo. Chemours determines through due diligence evaluations of the rail carriers that their management of environmental, health, safety and security continues to align with ICMI code requirements. Box cars transport Flo-bins (semi-bulk) and packaged product to Hermosillo, while box cars transport packaged product and hopper cars transport bulk product to San Luis Potosi. Warehousing and trans-loading operations at these two locations are described in separate Production Reverification Audit Reports.

All trucked product enters Mexico through Laredo, Texas. Empire Express, a signatory to the Code, drops off van trailers of product at a trans-shipping terminal and yard in Laredo operated by Interamerica Forwarding (IAF), a Grupo FH company. IAF completes the freight forwarding documentation to enable another Grupo FH company, FH Logistica (FHL), to transport the Empire trailers across the border to a trans-shipping terminal and yard operated by Auto Lineas Regiomontanas S.A. de C.V. (ALR). ALR, with headquarters and main terminal in Monterrey, transports the trailers to Chemours San Luis Potosi and Hermosillo facilities. The last leg of the supply chain, the segment between the two Chemours facilities and numerous consignees, is carried out by Transportes Especializados S.A. de C.V (Segutal), a dedicated transporter to Chemours, with headquarters in Mexico City and operations located at the Chemours facilities. Product may be transported in ISO Container on chassis, or packaged in van trailers or in straight-line trucks called "Thorntons".

Chemours Mexico Supply Chain

Name of Facility

Signature of Lead Auditor

February 7-17, 2017

Audit Date

Chemours Mexico manages the ICMI aspects of the supply chain through monitoring and due diligence audits on its transportation partners. Chemours also uses the First Order Process (FOP) to select and evaluate the primary and alternate routes used by Segutal to take product to the consignees, and the consignees' ability to safely handle and use cyanide. Chemours re-evaluates routes and consignees abilities during every site visit. Chemours Mexico also conducts cyanide awareness training and coordinates and oversees all emergency response involving cyanide, using the Chemours Cyanides Global Response Plan for Off-site Incidents and Cyanide Transportation Policy & Procedures. The Chemours Mexico Reverification Audit was conducted at its headquarters in Mexico City by interviewing personnel in management, product stewardship, logistics, rail transportation purchasing and supply chain planning. Policies and procedures reviewed included the Chemours Cyanide Transportation Security Protocol, Chemours Cyanides Global Response Plan for Off-site Incidents and Chemours Cyanides Emergency Response Guidelines. Records reviewed to verify sustainment of processes over the three year cycle included Shipping Plans, Import Permits, First Order Process Reports and their Reviews/ Approvals/ Authorizations, Customer Performance Questionnaires, Route Assessments and Highway Carrier Performance Questionnaires.

This audit report contains:

- results of the re-verification audit of Chemours Mexico regarding its management of the Mexico Cyanide Supply Chain,
- results of the re-verification audits of each of the three trucking companies involved in the Mexico Supply Chain (Segutal, ALR, and FH Logistica),
- results of the re-verification audits of the two interchange trans-shipping terminals, (Interamerica Forwarding and ALR), and
- reviews of the Due Diligence results for the two rail carriers (KCSM and Ferromex).

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

**SUMMARY AUDIT REPORT**

*Auditor's Finding*

The Chemours Mexico Supply Chain is

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


Furthermore, the auditor verified that there have been no significant changes to processes, policies and procedures for the management of cyanide, no significant releases or exposures\* and no compliance issues over the past three years associated with this supply chain.


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: **February 7-17, 2017**

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 reverification audit. I further attest that the reverification 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.

\* One highway transportation accident did not result in any release or exposure (See Segutal report)

<u>Chemours Mexico Supply Chain</u>		<u>June 26, 2017</u>
Name of Facility	Signature of Lead Auditor	Date

<u>Chemours Mexico Supply Chain</u>		<u>February 7-17, 2017</u>
Name of Facility	Signature of Lead Auditor	Audit Date

## CHEMOURS MEXICO REVERIFICATION 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:*

Chemours Mexico is in full compliance with Transport Practice 1.1. Chemours has consistently used the First Order Process (FOP) for new and re-instated customers over the past three years. The FOP requires Chemours Product Stewards to work with their carriers in selecting primary and alternate transportation routes that minimize the potential for accidents and releases. The auditor confirmed that the FOP considers all of the risk factors required by this Transport Practice. Chemours also used the Customer Performance Questionnaire (CPQ) initially and whenever Product Stewards visited customer sites to review safety and cyanide handling procedures on those sites. The CPQ is scored to determine frequency of follow-up. The auditor verified that 1. Chemours and its truck and rail carriers evaluate the risks of primary and alternative routes during the FOP, 2. Chemours reevaluates the risks of routes when visiting consignee sites, 3. rail carriers reevaluate routes at least annually and 4. its truck carriers reevaluate the route during each trip. The auditor verified that Chemours documents the measures taken to address the risks identified with selected routes during the FOP and subsequent Route Assessments. Evidence indicated that truck carriers conferred with Chemours on measures to be taken during initial and subsequent Route Assessments. Chemours obtains all required import permits and licenses from government agencies to import and transport cyanide. In Mexico, government agencies dictate routes, requiring hazardous materials to use toll highways wherever they are available. A transporter may pay a fine if the designated route is not followed. The government requires convoys in areas traversed by ALR along the U.S. border, where security concerns have been identified. One escort vehicle is required between each pair of trucks. Additionally, trucks must be separated by a distance of 1 km. Chemours offers to advise external responders, medical facilities and communities of their roles during an emergency around mines and Chemours facilities. A doctor has been retained to team up with Chemours technical personnel to train medical staff at these locations. Chemours Mexico subcontracts all of its cyanide transport to its truck and rail transportation partners. Contractual agreements with these carriers specify that they will comply with Chemours requirements, which are aligned with ICMI Code requirements. Chemours audited its carriers using a special Carrier Performance protocol and/or the ICMI Transportation Protocol, during the certification period.



Chemours Mexico Supply Chain

Name of Facility

Signature of Lead Auditor

February 7-17, 2017

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:*

Chemours Mexico is in full compliance with Transport Practice 1.2. Chemours Cyanide Transportation Security Protocol requires Chemours' transportation partners to use only trained, qualified and licensed operators to operate its transport vehicles. The Protocol also requires Chemours' transportation partners to train all personnel operating cyanide handling and transport equipment to perform their jobs in a manner that minimizes the potential for cyanide releases and exposures. Chemours Mexico used the Highway Carriers Performance Questionnaire to verify compliance with these requirements over the three year period.

***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:*

Chemours Mexico is in full compliance with Transport Practice 1.3. Since Chemours loads virtually all trailers and rail cars at its production facilities, those facilities ensure only use of equipment that is designed and maintained to operate within the loads it will be handling. Carriers ensure the adequacy of tractors, for which Chemours specifies minimum requirements. In order to verify the adequacy of the equipment for the load it must bear, Chemours requires its truck carriers to have preventive maintenance programs for all their transportation equipment. Additionally, drivers are required to conduct pre-trip and periodic inspections of their vehicles while transporting cyanide. Chemours has procedures at its production facilities, including Memphis, Hermosillo and San Luis Potosi to prevent overloading of transport vehicles. Existence and use of these procedures over the last three years was verified by this auditor at the Hermosillo and San Luis Potosi facilities and documented in the re-verification audit reports of those two facilities.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

***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:***

Chemours Mexico is in full compliance with Transport Practice 1.4. Chemours production facilities in Memphis, Hermosillo and San Luis Potosi ensure that packaging integrity is maintained by inspecting empty trailers and rail cars prior to loading and through blocking and bracing procedures to keep loads from shifting. Those facilities also ensure that placards are used to identify the shipment as cyanide, as required by international standards. The auditor verified that all Chemours truck transportation partners maintain spare placards with their vehicles, should placards attached by the production facility become lost or unreadable. As stated previously truck drivers perform pre-trip inspections prior to each departure and each transportation partner has a preventive maintenance program, as required by Chemours. There are no limitations on driver hours of service, in Mexico, but Chemours imposes the requirement that operators transporting cyanide cannot drive between 10 PM and 5 AM, when statistics show that most fatigue-related accidents occur. Chemours empowers its transportation partners to modify or suspend cyanide transportation if conditions warrant it. Chemours only requires proper notifications to be made. All transportation partners in this supply chain have drug and alcohol abuse prevention programs with random testing, as required by Chemours. ALR has a particularly comprehensive program (See the section of this report on ALR). The auditor found records documenting each of these activities over the last three years.

***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:***

Chemours Mexico is in full compliance with Transport Practice 1.5 since shipments of cyanide by sea and air are not included in this supply chain.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

**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:*

Chemours Mexico is in full compliance with Transport Practice 1.6. The Chemours Cyanide Transportation Security Protocol requires transport vehicles to have means to communicate with the transport company, the mining operation, the cyanide producer and/or emergency responders, as appropriate. The Protocol also requires transporters to periodically test communication devices. Chemours uses the Highway Carriers Performance Questionnaire to verify that carriers have implemented these processes. The auditor verified that ALR and Segutal had procedures to deal with communication Blackout Zones along cyanide transportation routes. Chemours truck transportation partners use GPS systems and other means to track the location of cyanide shipments. Both rail carriers, KCSM and Ferromex, offer Chemours the ability to track shipments via the internet. Shipping weights and seal numbers are included in the documentation package originating at the Memphis production facility. If seals are broken along the route, e.g. by police for inspection purposes, drivers must call their dispatch, who in turn notifies Chemours. Shipping papers were reviewed by this auditor at every stage of the supply chain to verify that the amount of cyanide was included on the Bill of Lading (BOL) and that the package included Material Safety Data Sheets in English and Spanish, and an emergency notification sheet.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

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: *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:*

The design, construction and operation of Chemours trans-shipping and interim storage depots at Hermosillo and San Luis Potosi are detailed in separate Production Code reverification audit reports. Other than these, Chemours Mexico has not designed, constructed or operated any cyanide trans-shipping or interim storage sites. Therefore, Chemours Mexico is in full compliance with Transport Practice 2.1. However, according to ICMI guidance, “trans-shipping depots and interim storage sites” refers to facilities where cyanide is held temporarily when changing carriers. This occurs at two locations within the supply chain: IAF’s terminal in Laredo, TX and ALR’s terminal in Nuevo Laredo. Please refer to the sections of this report concerning highway transporters IAF and ALR for the audits of Transport Practice 2.1.

		
Chemours Mexico Supply Chain	Signature of Lead Auditor	February 7-17, 2017
Name of Facility		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:*

Chemours Mexico is in full compliance with Transport Practice 3.1. Chemours main emergency response documents, Chemours Cyanides Global Response Plan for Off-site Incidents and Cyanide Transportation Policy & Procedures adequately address all the requirements in Section 3 of the ICMI Transportation Protocol. A Response Flowchart in the Plan explains notification pathways, including circumstances where Chemtrec will notify the Chemours Cyanide Hotline which triggers implementation of the Cyanide Global Response Plan. Chemours manages emergency response for the entire supply chain utilizing this plan. Cyanide Code Due Diligence Surveys of two rail carriers serving this supply chain verified that these transportation partners also have Emergency response plans which include appropriate emergency communications and spill response. The auditor performed a full re-verification of the truck carriers within the supply chain, concluding that all three were in full compliance with Transport Practices 3.1 – 3.5. The Chemours Cyanides Global Response Plan for Off-site Incidents and Cyanide Transportation Policy & Procedures address emergency response over all transportation routes, emergency response for liquid and solid sodium and potassium cyanide, emergency response for truck, ocean and rail transportation, emergency response for all aspects of the transport infrastructure including condition of the road, railway, port, etc. and emergency response considering the design of transport vehicles. The Chemours Cyanides Global Response Plan for Off-site Incidents and Cyanide Transportation Policy & Procedures include descriptions of response actions, as appropriate for the anticipated emergency situation, and identifies the roles of outside responders, medical facilities or communities, in emergency response.

**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:*

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

Chemours Mexico is in full compliance with Transport Practice 3.2. Chemours and/or its transportation partners have provided initial and refresher emergency response training to the personnel selected for transportation of cyanide, particularly with regard to its Emergency Response Notification procedures. Annual refresher training may be carried out using the on-line Chemours E-Learning Suite. The Chemours Cyanides Global Response Plan for Off-site Incidents and a carrier specific document entitled Cyanide Transportation Policy & Procedures describe the specific emergency response duties and responsibilities of personnel. The Plan includes a list of all emergency response equipment that should be available during transport or along the transportation route. This Basic Equipment List for the Emergency Response Team includes necessary emergency response and health and safety equipment, including personal protective equipment during transport. The Chemours Cyanides Global Response Plan for Off-site Incidents and Cyanide Transportation Policy & Procedures require monthly inspection of emergency response equipment at all locations. Chemours uses contract carriers, or transportation partners, for all its cyanide transportation by sea, rail and truck. Chemours' policies and procedures require clear delineation of roles and responsibilities of transportation partners during an emergency response. Chemours ensures that these requirements are received and understood during training sessions and by conduct of due diligence audits.

***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:***

Chemours Mexico is in full compliance with Transport Practice 3.3. The Chemours Cyanides Global Response Plan for Off-site Incidents and Cyanide Transportation Policy & Procedures specify contact information and notification procedures meeting the requirements of this Transport Practice. In addition, a Transportation Emergency Information Sheet is attached to the Bill of Lading on every shipment. The Plan requires review of emergency response plans and procedures, and revision as necessary, following emergency drills and incidents in which the procedures were deployed, but in the absence of these, no less than annually.

***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

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*


Chemours Mexico is in full compliance with Transport Practice 3.4. The Chemours Cyanides Global Response Plan for Off-site Incidents and carrier specific Cyanide Transportation Policy & Procedures include procedures for remediation, such as recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill clean-up debris. These documents include procedures that prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that comes in contact with surface 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:*

Chemours Mexico is in full compliance with Transport Practice 3.5. The Chemours Cyanides Global Response Plan for Off-site Incidents requires review of emergency response plans and procedures, and revision as necessary, following emergency drills and incidents in which the procedures were deployed, or periodically in the absence of these events. The auditor verified implementation by reviewing records of drills and incidents as well as the revision history of the Plan. Records indicate that the Plan was revised in December 2013, August 2015, August 2016 and February 2017. Chemours Product Stewards verify implementation of drills by truck carriers during site visits. Due diligence report reviews confirm that rail carriers conduct emergency drills, as well, some in coordination with Chemours.

		
Chemours Mexico Supply Chain	Signature of Lead Auditor	February 7-17, 2017
Name of Facility		Audit Date

## Review of Rail Carrier Due Diligence Reports

In order to complete the re-verification of Chemours Mexico Supply Chain, the auditor reviewed reports of due diligence investigations carried out by Chemours on each of its rail carriers, Ferrocarril Mexicano Railroad (Ferromex) and Kansas City Southern de Mexico (KCSM), including relevant aspects of each one's performance over the past three years. Representatives from each of the carriers came to Chemours Mexico City office to make a presentation to the auditor describing their hazardous material transportation practices. The KCSM representative brought two Hazardous Materials Coordinators from HESCA Environmental Services, KCSM's emergency response contractor. Ferromex was represented by the Corporate Safety Manager.

Next, the Chemours Regional Product Stewards created the Due Diligence Audit - Cyanide Transportation Verification Protocol for Rail Segments, which captured all relevant requirements from the ICMI Code. Both rail carriers' representatives met with Chemours Product Stewards and completed the protocol forms with details of their processes. The auditor reviewed both responses and concluded that Ferromex and KCSM remain in conformance with the ICMI Transportation Code.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

## Grupo FH Companies\* Reverification Summary Audit Report

(\* Interamerica Forwarding [IAF]and FH Logistica [FHL])

The re-verification audit of the Grupo FH Companies took place February 7-8, 2017 in the Interamerica Forwarding facility in Laredo, TX. Management and staff from FH Logistica's terminal in Nuevo Laredo participated, bringing records on truck specifications and maintenance, driver licensing and training, etc. The audit included an inspection of the yard to re-verify Interim Storage practices. Interviews with personnel, including drivers and security guards, plus review of documents and records indicated that all applicable ICMI Transport Practices were being addressed and have been maintained over the three year cycle.

The Interamerica Forwarding (IAF) facility and yard marks the beginning of the Mexico Supply Chain. Empire Express, a signatory to the Code, drops off van trailers loaded by Chemours in Memphis at the secured IAF yard, where they are logged in and spotted in a dedicated area. Chain of Custody documentation, which notes seal numbers and a trailer inspection form that will follow the trailer on every leg of its round trip, was audited with IAF management, drivers and security guards. Records indicate that most trailers do not remain on the IAF site longer than 24 hours before FH Logistica (FHL) trucks transport them to a trans-shipping terminal in Nuevo Laredo operated by Auto Lineas Regiomontanas S.A. de C.V. (ALR).

The route between the IAF and ALR yards is not at all direct, but is prescribed by government authorities, as hazardous materials may only cross the Rio Bravo (Rio Grande) using the Columbia Bridge, several miles upriver from the closest crossing. This is because the Columbia Bridge was built with secondary containment to prevent any spilled materials from entering the river. FHL reports that it has not been necessary to take an alternate route although there are a few places where, for a short distance, it could do so. Nevertheless, Grupo FH Safety personnel have performed and maintained a Route Assessment, and drivers regularly complete Trip Reports.

Significant changes to Grupo FH cyanide policies and procedures have not been made over the last three years, with one exception. Occasionally, to get faster turnaround of Empire Express trailers, Flo-bins and packages of product are transferred to ALR trailers. To do this, the Empire and ALR trailers are spotted at adjacent loading docks, and the material transferred directly from one trailer to the other, so that the Bill of Lading remains the same. Therefore, there is no re-packaging or warehousing activity that would constitute Production, under ICMI guidelines.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

## GRUPO FH COMPANIES REVERIFICATION 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:***

The Grupo FH Companies, IAF and FHL are in full compliance with Transport Practice 1.1, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. IAF maintains a procedure that covers selection of transport routes. However, local government bodies on both sides of the border specify the route. Hazmat loads can only cross the Columbia Bridge over the Rio Bravo (Rio Grande), the only water body crossed. Infrequent fog in the area usually burns off by mid-morning, prior to the first cyanide transports of the day. The Columbia Bridge has less traffic than other bridges in the area. The procedure evaluates risks of the route, e.g. showing the location of arroyos (normally dry stream beds) and bridges. The procedure provides for route re-evaluation. Records showed three re-evaluations performed since Oct 2013. The highest risk is associated with the Columbia Bridge crossing. IAF met with CODEFRONT, the bridge authority, in May 2015 to discuss emergency response capabilities and held a drill with CODEFRONT in Feb 2017. Records of two additional Cyanide Spill Drills show participation by local emergency response groups and local government. Local government bodies on both sides of the border give their input in specifying the cyanide transport route. The risk assessments have not identified risks that would require a convoy on the relatively short route between Laredo and the ALR Yard in Nuevo Laredo. The auditor reviewed documentation showing agreements and discussion with the City of Nuevo Laredo, SETIQ-ANIQ (the Mexican Chemical Association) and USES (Emergency Responder). The USES Contract documents include a section on USES and IAF/FHL responsibilities during an emergency. Grupo FH does not subcontract cyanide transportation to any other 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

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date





*Summarize the basis for this Finding/Deficiencies Identified:*


The Grupo FH Companies, IAF and FHL are in full compliance with Transport Practice 1.4, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. Empire Express trailers are loaded by Chemours manufacturing personnel who inspect trailers prior to loading for issues that could cause packaging damage, and use time-tested techniques for blocking and bracing to keep loads from shifting. ALR trailers trans-loaded in Laredo by IAF are also inspected prior to loading, and are loaded using Chemours loading patterns and blocking and bracing procedures. Empire Express trailers transported into Mexico remained sealed throughout IAF's and FHL's custody. Empire Express trailers are intended to arrive at IAF's yard with proper placards on all four sides. IAF tractors also have a placard on the front as required by Mexican regulations. IAF maintains spare placards at Laredo in case of damage or loss of those on trailers received. Tractor and trailer pre-trip inspection records were reviewed and FH drivers were interviewed. The process for generating a repair work order when deficiencies were noted by a driver, were discussed. Empire Express and ALR are responsible for preventative maintenance on their respective trailers. FH procedures for tractor preventive maintenance (40,000 km until 1<sup>st</sup> PM on new tractors, then 16,000 km after initial) were reviewed for 9 trucks in cyanide service. None exceeded these frequencies. FH Maintenance pulls trucks in whenever they are within 900 km (one refueling) away from the specified interval. Because of the nature of this short-haul business, US DOT regulations for Hours of Service are always maintained. There is an internal Grupo FH policy not to exceed US DOT requirements. Empire Express Trailers are loaded by Chemours manufacturing personnel who use time-tested procedures for blocking and bracing to prevent loads from shifting. IAF uses the same procedures when loading ALR trailers at its Laredo facility. Chemours and IAF have policies and procedures to suspend transportation if conditions warrant, e.g. should the Columbia Bridge close. An incident was reviewed during which the Columbia Bridge closed due to high water. The Grupo FH Politica de Alcohol y Drogas and program was reviewed and found to be complete, including random drug testing.

***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:*

The Grupo FH Companies do not transport cyanide by sea or air. Therefore, Grupo FH is in full compliance with Transport Practice 1.5, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance.

<u>Chemours Mexico Supply Chain</u>		<u>February 7-17, 2017</u>
Name of Facility	Signature of Lead Auditor	Audit Date

**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:*

The Grupo FH Companies, IAF and FHL are in full compliance with Transport Practice 1.6, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. All drivers have cell phones provided by the company and a list of contacts to call in case of emergency, attached to their ID badges. This was verified through driver interviews. Cell phones are tested before each trip by calling the dispatcher. If a phone is inoperable, contact can be made using a GPS phone on every tractor in cyanide service. A contract with AT&T ensures quick repair or replacement. No blackout areas have been identified along this relatively short route. The auditor reviewed Tracking Reports and GPS Screens for Trailers and Trucks to verify that processes to track shipment progress have been maintained. Bills of Lading (BOL's) specify weights of cargo received into the yard and the Trailer Monitor lists the trailers that are in the yard. IAF recently began transferring cyanide from Empire trailers to ALR's trailers on a one-for-one basis, thus the BOL information is passed on to ALR intact. Besides the BOL, chain of custody documentation includes a trailer inspection form that follows each trailer along its route from Memphis to Chemours Mexico facilities and back. Several packages of shipping papers for loads leaving Laredo were examined to verify that amount of cyanide is included on the Bill of Lading (BOL) and that the package includes Material Safety Data Sheets in English and Spanish, and an emergency notification sheet.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

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: 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:*

The Grupo FH Companies, IAF and FHL are in full compliance with Transport Practice 2.1, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. The auditor verified that signage was in place in the section of the IAF yard where cyanide trailers are parked alerting workers that cyanide is present and that smoking, open flames, eating and drinking are not allowed. Signs posted before exiting to the warehouse and yard cover personal protective equipment requirements. The auditor verified that the yard is fenced, monitored by contract security and by cameras 24/7 to prevent unauthorized access to cyanide. Security measures are in conformance with C-TPAT requirements. The procedure for receiving cyanide was last modified to add a provision for segregating cyanide trailers from incompatible materials. The auditor verified this requirement is being maintained. Only one other trailer was parked in the cyanide trailer parking area with 14 cyanide trailers, and that trailer contained furniture. When being trans-loaded from Empire to ALR trailers, cyanide containers are moved directly from one trailer to the other using adjacent loading docks. This offers no opportunity for cyanide to come near incompatible materials. All cyanide briquettes in trailers transported by IAF are packaged in Flo-Bins or Eco-Paks, which are inherently water-proof. Chemours manufacturing personnel are responsible to inspect Empire Express trailers for integrity before loading in Memphis. IAF is responsible for inspecting ALR trailers for integrity. Trailer integrity inspection minimizes use of a leaking trailer and also prevents damage to Eco-Paks, both of which conditions could allow water to come in contact with cyanide. IAF stores cyanide trailers outside, thus preventing build-up of hydrogen cyanide gas, in the extremely unlikely event that the product comes in contact with water. Spill kits were confirmed at IAF's Laredo facility and at ALR's Nuevo Laredo yard capable of containing any spill and diverting water from any spilled material on-site. Spill kits include recovery drums of various sizes at each location.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date





*Summarize the basis for this Finding/Deficiencies Identified:*

The Grupo FH Companies, IAF and FHL are in full compliance with Transport Practice 3.4, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. The Emergency Plan and procedures call for yard employees and drivers to keep people from the spill area and notify outside emergency responders, who are readily available along this route. Therefore, plans do not provide detailed remediation procedures for drivers and other employees. No incidents requiring cyanide remediation have occurred in the last three years. The auditor verified that spill procedures instruct outside emergency response agencies, such as USES, not to use hydrogen peroxide, sodium hypochlorite and ferrous sulfate to treat cyanide released into surface 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 Grupo FH Companies, IAF and FHL are in full compliance with Transport Practice 3.5, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. The Emergency Plan and procedures have been reviewed in conjunction with the annual drill, according to the Annual Safety Meeting and Drill Schedule and records. Emergency Response Drills have been conducted annually over the past cycle. The auditor reviewed sign-in sheets for participants, as well as drill critiques for the annual drills. Sign-in sheets verified that yard personnel and drivers participated in the drills, although as stated in Transport Practice 3.1.8, plans only call for yard employees or drivers to keep people from the spill area and notify outside emergency responders. The Emergency Plan calls not only for annual review of emergency procedures, but also a review after their implementation. There have been no incidents involving cyanide transport, but analyses of other incidents have driven reviews of the plan, as verified through record review.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

## **Auto Lineas Regiomontanas (ALR) Reverification Summary Audit Report**

The re-verification audit of Auto Lineas Regiomontanas S.A. de C.V. (ALR) began on February 8, 2017 at ALR's terminal in Nuevo Laredo, Tamaulipas, Mexico and continued on February 15 at the company's headquarters and main terminal in Monterrey, Nuevo Leon, Mexico. The audit included an inspection of the terminal yard at Nuevo Laredo to re-verify Interim Storage practices. Interviews with personnel, including management, technical staff (maintenance, quality and tracking departments), drivers and security guards, plus review of documents and records indicated that all applicable ICMI Transport Practices were being addressed and have been maintained over the three year cycle.

ALR is a large carrier in Mexico that transports trailers dropped off at its Nuevo Laredo terminal by FH Logistica (FHL) to Chemours facilities at San Luis Potosi and Hermosillo. Primary routes to each facility are largely dictated by Mexican regulations that require hazardous materials to use toll highways whenever possible. Nonetheless, ALR Performs extensive route assessments, noting places to eat, fuel and safe places to rest. Security is of special concern, especially in the vicinity of Nuevo Laredo and along the US/Mexico border on the Hermosillo route.

Transports follow a common route from Nuevo Laredo to just past Monterrey, after which they diverge, the route to San Luis Potosi going south, while the much longer route to Hermosillo turns to the northwest. ALR has a very notable drug and alcohol testing program, requiring breathalyzer tests for every driver before leaving a terminal. Furthermore, ALR has set up a roadside testing station along the beltway around Monterrey, at which all ALR transports going to and from Nuevo Laredo must pass. All cyanide drivers, and half of drivers carrying other cargo, must stop and undergo drug testing.

ALR owns and maintains a fleet of late model tractors designed to carry trailers over mountainous highway terrain. Drivers are thoroughly trained, including training on cyanide emergency response. ALR enjoys an exceptionally high driver retention rate, by US standards, allowing it to maintain the most skilled and experienced drivers. ALR has procedures to prevent spills and releases of cyanide, and terminals and trucks are equipped with all necessary emergency response equipment, including personal protective equipment, to contain and clean up any spills.

ALR has not made significant changes to its cyanide transportation policies and procedures over the last three years. The auditor also noted that there have been no emergency incidents involving cyanide transportation over that same three year period.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

## ALR REVERIFICATION 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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 1.1, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. ALR continues to utilize P-751-09 Evaluation & Analysis of Routes, which considers all the risk factors required by the Code. The auditor reviewed the procedure along with Route Evaluations for Nuevo Laredo to Hermosillo. This route considers the airport infrastructure to locate nearest points for Emergency Response Brigades to reach by air. Safe stopping points for food, fuel and overnight rest are also located on the graphic assessment. Three mountainous areas are identified on the Hermosillo route for pitch & Grade considerations, rain & fog prone areas. Routes for hazardous material transportation are essentially determined by government authorities, i.e. transporters must use toll highways whenever these are available. Route Evaluations for both routes identified risks and instructed on mitigation measures. For example, risk of robbery near Nuevo Laredo is managed by not stopping to eat or fuel in that area. Measures are also discussed at Convoy Start Safety Briefings based on driver feedback from the previous trip. The auditor reviewed sign-in sheets from several of these briefings to verify this. Records indicate that each route is re-evaluated at least every 2 years. Also, drivers complete Condiciones de la Ruta during each trip and update evaluation information. Feedback is discussed during the Convoy Start Safety Briefing of the next day's convoys. Risk mitigation measures were observed to be documented in the Route Evaluations. For example, risk of robbery near Nuevo Laredo is mitigated by instructing drivers not to stop to eat or fuel in that area. As stated previously, government agencies essentially determine routes. Input is also sought from ANIQ and local police along the routes. ANIQ also provides a list of emergency telephone numbers for services. Chemours requires convoys for these two routes and contracts with a private security firm to escort the convoys, using one escort for every two trucks. The escort vehicle drives between the trucks, which are required to keep a 1 km interval between them. Chemours and ALR have advised external responders, medical facilities and communities of their roles and/or mutual aid during an emergency response. ALR informs SETIQ of each shipment, and SETIQ informs all emergency responders and medical facilities along the route. Lastly, ALR does not subcontract cyanide handling or transportation to any other carrier.



Chemours Mexico Supply Chain

Name of Facility

Signature of Lead Auditor

February 7-17, 2017

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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 1.2, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. ALR uses only trained, qualified and licensed drivers to operate its transport vehicles. The auditor reviewed Recruitment & On-boarding processes and found them to be exemplary. Pre-qualification testing includes Psychometric testing and Physical health exams. Drivers must have an E-type license (Hazardous Materials), and are subjected to an Anti-doping Test. Driver vital signs are checked before every movement, along with a breathalyzer test. The Driver Champion (trainer), based in Monterrey, drives the route from Monterrey to Nuevo Laredo with new drivers to assess their abilities. Drivers must have two years truck driving experience to be hired, then have one year experience with ALR before driving cyanide. Drivers receive annual refresher training on vaccine programs, CPR and First Aid. ALR enjoys a very low 3% annual turnover rate, which indicates an ability to retain the safest drivers. ALR has a Certified Training Center for their drivers. The auditor reviewed training curricula and procedure to verify that Cyanide drivers must take 7 training courses annually, three of which specifically address cyanide handling. Each course has a test to ensure competency with a passing score of 80%. If the score is below 80%, training starts completely over.

***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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 1.3, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. ALR only uses equipment designed and maintained to operate within the loads it will be handling. Most trailers in cyanide service are specified, selected and maintained by Empire Express. The few ALR owned trailers are specified for much higher payloads than those loaded by Chemours. Records show 44 tractors in cyanide service. The oldest is a 2011 model year. Kenworths with Cummins engines and Volvos with Volvo Engines are specified with cargo hauling capacity of 185,000 lbs. This is a much higher capacity than necessary for

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

any loads coming from manufacturers in the USA. Regular preventive maintenance and pre-trip inspections verify adequacy of the equipment, including tractors and trailers. Trailer inspections are recorded on a form, Inspection & Interchange Agreement (Empire), that follows each trailer during its trip to Chemours facilities and return. Preventive Maintenance schedules and records were reviewed and verified that preventive maintenance intervals have not been exceeded. Empire Express trailers are loaded by Chemours manufacturing personnel who ensure weights do not exceed maximum payload and U.S. DOT highway limits. Starting late in 2016, the contents of a few Empire Express trailers are being transferred directly into ALR trailers by IAF at Laredo, remaining in the original packaging, and using the same loading patterns and blocking and bracing procedures as those employed by Chemours, in Memphis. Trailers remained sealed throughout ALR’s custody, unless the seals are broken by police during roadside inspections.

***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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 1.4, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. Chemours and IAF maintain procedures during empty trailer inspection and loading product to ensure that the cyanide is transported in a manner that maintains the integrity of the producer’s packaging. ALR only receives trailers that have been pre-loaded and sealed by Chemours, in Memphis, or by IAF, in Laredo. Driver pre-trip inspection records show that the exteriors of trailers are examined for any damage or leaking product, as part of the Interchange Agreement. The auditor verified that drivers’ emergency response kits contain silicone caulking and duct tape, should a leak be discovered in transit. Placards are placed on all four sides of trailers by the shipper. In addition to those on the trailer, Mexican regulations require a placard on the front of the tractor. The auditor verified that drivers and terminal personnel carry spares, to replace any that have become damaged or missing in transit. Maintenance of the Pre-trip Inspection program over the three year period was verified. Risk mitigation measures are also discussed at Convoy Start Safety Briefings based on driver feedback from the previous trip. The auditor reviewed sign-in sheets from several of these briefings to verify this. A Preventive Maintenance program is managed in Monterrey. Tractors are scheduled in for Preventive Maintenance every 60,000 km. Procedure states that these must be performed within a range of -3000 to + 10,000 km. Records for trucks in cyanide service indicate all were serviced within this window. Minor repair, e.g. light replacement may be done at Nuevo Laredo. While Mexican regulations do not limit driver hours, Chemours requires cyanide to be moved between the hours of 7 AM and 10 PM. Safe zones are identified during the route assessment, and drivers are not permitted to stop and rest for the night in any other location. On the Hermosillo route the lack of safe havens requires drivers to drive longer hours than permitted on the second day of the trip, ALR only receives trailers and ISO Tanks that have been pre-loaded and sealed. Empire Express Trailers are loaded by Chemours manufacturing personnel who use time-tested procedures for blocking and bracing to prevent loads from shifting. IAF uses the same procedures when loading ALR trailers at its Laredo



facility. ALR Safety Procedures require drivers to stop and call the ALR Safety Department in cases of severe weather or civil unrest. The Safety Dept will locate the convoy on GPS and advise the drivers on the nearest safe place to stop. ALR has a very active Drug and Alcohol Program. Roadside teams conduct random urine tests on company drivers at selected check points, such as toll booths. The drivers of 100% of all cyanide loads get drug tested. Before every trip, drivers' vital signs are checked and if outside of normal parameters, they will be drug tested. A Breathalyzer Test is given to each driver before the trip, as well. Records were found on all practices above. Records are generally on paper, but are well maintained and protected against damage, deterioration and loss.

***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:*

ALR does not transport cyanide by sea or air. Therefore, ALR is in full compliance with Transport Practice 1.5, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance.

***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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 1.6, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. ALR maintains a GPS transponder in each tractor and drivers have a cell phone which they use to communicate with ALR's Tracking Department. The day before each trip, the Tracking Department is notified of the shipment. Tracking checks to ensure the GPS is functional on the unit. A report is sent to the customer three times each day showing location and speed of the convoy. Drivers are contacted on their cell phone the day before each cyanide shipment to test the proper function of the communication device. Drivers are also contacted at random each day that they are in transit. Drivers are also required to call the Tracking Dept each day before starting the day's drive and during every stop, according to cyanide transportation procedures. Both routes to San Luis Potosi and Hermosillo have blackout areas. The GPS on each tractor automatically sends a signal to the Tracking Department when a truck goes into a blackout area and when

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

it emerges. Tracking notes the time and estimates the expected time of emergence. This was demonstrated to the auditor during the visit to ALR's Monterrey Headquarters. The GPS on each tractor allows the Tracking Department to follow the progress of cyanide convoys. A report is sent to the customer three times each day showing location and speed of the convoy. ALR only receives trailers that have been pre-loaded and sealed by Chemours, in Memphis, or by IAF, in Laredo. Shipping weights and seal numbers are included in the documentation package. If seals are broken along the route, e.g. by police for inspection purposes, drivers are required to call their dispatch, who in turn calls Chemours. Chain of Custody is also assured by completing the Inspection & Interchange Agreement (Empire) form on each trailer during Pre-trip Inspections. Several packages of shipping papers for loads leaving Laredo were examined to verify that amount of cyanide is included on the Bill of Lading (BOL) and that packages include Material Safety Data Sheets in English and Spanish, and an emergency notification sheet. The auditor also verified MSDS's in ALR drivers' notebooks.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

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: *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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 2.1, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. The auditor confirmed that warning signs were posted as required by the Code. ALR is subject to C-TPAT, which requires the property to be well lit and surrounded by a fence meeting certain height specification. Gates were found to be normally closed and attended by guards from a contract security service. Guards recorded identities of all entering and leaving the terminal. Sealed trailers of cyanide are parked in a dedicated section of the terminal yard, segregated from all other trailers of material on the site. Cyanide remains in its water proof packaging, in trailers loaded and sealed at the manufacturer's or IAF Laredo site, while parked at ALR's Nuevo Laredo terminal. Trailers are parked in the open yard, not in any containment or under roof. Thus no gases can build up. A fully equipped spill kit was located at the terminal. Also, trucks are fully equipped with equipment, including personal protective equipment to contain any spilled cyanide and minimize extent of release and human contact.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 3.1, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. The Plan for Emergency Response in Transport describes emergency response procedures. The Plan compliments the Route Assessment for each route in that any hazards identified along the routes are addressed. The Plan, together with the route assessments, considers all aspects of the transport infrastructure: condition of the road, location of hospitals, airports (for Emergency Response Brigades to quickly reach emergency scenes), etc. The Plan is written for truck transport of solid cyanide briquettes and considers design of the transport vehicles, consisting of tractors and van trailers. The Plan includes descriptions of spill response actions including barricading, management of the area, spill containment and clean-up. Responses to other emergencies are included, as well, including robbery. The Plan identifies the roles of outside responders, including paramedics, police, emergency response brigades, security guards, etc. Chemours and ALR have advised external responders, medical facilities and communities of their roles during an emergency response. ALR informs SETIQ of each shipment, and SETIQ informs all emergency responders and medical facilities along the route.

**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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 3.2, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. ALR provides emergency response training to drivers and terminal personnel through classroom training on the Plan of Emergency Response in Transportation. Records showed all personnel as being up-to-date with this training. Brigade responders are sent to a training course at ECBE in Celaya sponsored by Chemours Mexico. Training

material identifies the roles of drivers, terminal personnel, including management, outside responders, including paramedics, police, emergency response brigades, security guards, etc. A List of Emergency Response Equipment at the Terminals was reviewed at the Nuevo Laredo terminal. Drivers have a list of equipment carried on each truck, which they use for inspection before every trip. Records of these inspections were verified as being included with each Pre-trip inspection packet. The drivers' list includes necessary emergency response and personal protective equipment during transport. ALR provides initial and annual refresher training to drivers through classroom training on the Plan of Emergency Response in Transportation. Records showed all cyanide drivers were up-to-date with this training. The Plan requires monthly inspections of listed Emergency Response Equipment at the terminals. Records in each location visited showed that these records are complete and well maintained. As stated above, drivers' inventories are checked before every trip.

***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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 3.3, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. The Plan of Emergency Response in Transportation includes a list of Chemours contacts and a list of telephone numbers for emergency response entities throughout the route system. Revision logs indicate that the emergency response notification and reporting information is reviewed each year and revised when necessary, including when a customer, such as Chemours, sends in amended information.

***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:*

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 3.4, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. ALR drivers and brigade

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

personnel are not trained to neutralize and clean up spill residue and debris. This would be coordinated with Chemours, who have their own team of experts, and if necessary, outside contractors. The Plan of Emergency Response in Transportation prohibits the use of sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide spilled into surface water. From reviewing Chemours' emergency response plan, the auditor verified that Chemours' plan contains these bans, as well.

***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:***

Auto Lineas Regiomontanas (ALR) is in full compliance with Transport Practice 3.5, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance. ALR's Quality System requires all plans and procedures to be reviewed annually. The Revision Log of the Plan for Emergency Response in Transportation verified that this has been maintained over the last 3 years. The Annual Simulation Schedule indicated that at least one spill and one evacuation drill each are conducted at Monterrey and at Nuevo Laredo annually. Records for 2016, complete with sign-in sheets, photographic review and evaluation forms, were audited and found complete. Sign-in sheets verified that drivers and terminal personnel participated in all drills. Recommendations from the review included more training for brigade members. This has been scheduled. Simulation records for 2014 and 2015 were found in training records for those years. The Plan includes procedures to evaluate the Plan's performance after its implementation and revise it as needed, and have they been implemented.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date



## Transportes Especializados S.A. de C.V (Segutal) Reverification Summary Audit Report

Transportes Especializados S.A. de C.V (Segutal) is a dedicated carrier to the Chemours Mexico Supply Chain, that transports bulk and packaged cyanide to consignees from Chemours facilities at San Luis Potosi and Hermosillo. Headquartered in Mexico City, Segutal uses the Chemours Hermosillo and San Luis Potosi facilities as terminals and bases of operations. Primary and any alternate routes to each consignee are selected by Segutal and approved by Chemours based on Chemours' First Order Process (FOP) route assessment. Segutal drivers perform detailed route evaluations, noting road conditions and special circumstances.

The re-verification audit of Segutal began on February 9, 2017 at Chemours' facility at Hermosillo, Sonora, continued on February 14 at the company's headquarters in Mexico City and ended at the Chemours facility at San Luis Potosi. Interviews with personnel at those locations, including management, technical staff (maintenance, quality and tracking departments) and drivers, plus review of documents and records indicated that all applicable ICMI Transport Practices were being addressed and have been maintained over the three year cycle.

Segutal owns and maintains a fleet of late model tractors designed to carry trailers and ISO tanks on chassis over mountainous terrain. Segutal also owns several straight-line trucks, called Thortons, that are used when mountain roads with tight switchbacks preclude the use of tractor/trailers or tractors with ISO tanks. Drivers are thoroughly trained, including training on cyanide emergency response. They are qualified to drive one type of vehicle, and must be re-qualified to drive another type. Segutal enjoys a high driver retention rate, allowing it to maintain the most skilled and experienced drivers. In fact, several drivers are family members of long term Segutal drivers. Segutal has procedures to prevent spills and releases of cyanide, and trucks are equipped with all necessary emergency response equipment, including personal protective equipment, to contain and clean up any spills.

Segutal has not made significant changes to its cyanide transportation policies and procedures over the last three years. However, the auditor verified that there has been one emergency incident involving cyanide transportation during the period, a rollover of a Thorton that swerved to avoid a collision with an oncoming truck. No product spilled, in part because of the use of wire mesh secured over the load of Eco-Paks and the use of metal wire to secure the lids on those Eco-Paks. The auditor reviewed the emergency response, which followed Chemours and Segutal emergency response plans and also the corrective action to prevent recurrence, which has proven effective.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

## SEGUTAL REVERIFICATION 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:*

Segutal is in full compliance with Transport Practice 1.1., thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. Procedimiento O-04 Evaluacion de Rutas covers all Code requirements in detail. The Route Assessment process includes a pre-assessment in the office, Route Assessment details, black-out areas, communication to drivers (Sign-in sheets) and a DVD of the route. Forms assure that all requirements of the Cyanide Code are addressed. Review of several Route Evaluation Forms showed that risks were identified and recommendations made to manage the identified risk. Procedimiento O-04 calls for route re-evaluations to be initiated by various events but the frequency for formal re-evaluations cannot exceed 2 years. Trip Logs are completed by drivers on each trip, thereby informally evaluating routes on a daily basis. The procedure requires, and review of route evaluations and Trip Logs confirmed, that measures were taken to address identified risk. Records showed that Government agencies (e.g. SCT and CAPUFE) were consulted during route evaluations and re-evaluations. Local Police along the routes were consulted because they can define routes on the basis of security concerns. Also chemical industry groups ANIQ and SETIQ were consulted. At present, convoys and escorts are only used for one mine, as required by State of Chihuahua. Chemours and Segutal have advised external responders, medical facilities and communities of their roles and/or mutual aid during an emergency response. Segutal is a member of ANIQ, and reports emergencies to SETIQ and Chemours, using a procedure in which emergency response roles are clearly defined. Segutal does not subcontract any cyanide handling or transport.

**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:*

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

Segutal is in full compliance with Transport Practice 1.2., thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. Segutal uses only trained, qualified and licensed operators to drive its transport vehicles. The company has set minimum driver qualification criteria. For initial driver training, new drivers ride with an experienced driver for 1 – 1.5 months. The experienced driver keeps evaluation records as the trainee gains knowledge of the job. At the end of the training the Chemours Operations Leader and the Segutal Manager at the terminal sign off, thereby attesting to the released driver's competency. Drivers are qualified to drive a certain type of truck, and must repeat the qualification process to drive another type of truck.

***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:*

Segutal is in full compliance with Transport Practice 1.3., thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. Procedure O-06 Loading of Units covers the design and maintenance of each unit. Specs on each unit (Tractor and Thorton) including carrying capacity, were reviewed. A minimum requirement specification for new tractors states 400 HP engine with a differential capacity of 40,000 lbs. The Thortons are three-axle fixed chassis trucks that are used for transporting along curvy mountain roads. Regular preventive maintenance and pre-trip inspections verify adequacy of the equipment, including tractors and trailers. All tractors and Thortons have maximum cargo weights specified by the type of road to be taken. Chemours and Segutal procedures at the manufacturing plant and terminals provide assurance against overloading.

***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:*

Segutal is in full compliance with Transport Practice 1.4., thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. The methods in Procedure 0-07 Blocking and Bracing provide assurance against damage to packaging. In addition to conventional blocking & bracing, Segutal uses heavy duty webbing over the load to further secure the load in case of a roll-over. Segutal's Procedure O-06 covers proper placarding. Although the shipper is responsible for placarding, Segutal drivers carry spare placards should the ones affixed by the shipper become lost or damaged. Furthermore,

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

Segutal affixes a placard to the front of its tractors, in compliance with Mexican law. Records verified that vehicle pre-trip inspections were being done and notifications of any deficiencies were being communicated to Maintenance. Procedure O-08 Preventive Maintenance and Correction covers the preventive maintenance requirements of the Code. There is no company policy or procedure limiting hours of service, but Segutal promotes a best practice of 10 hours maximum with periodic rests, and no longer than 6 hours without stopping. Also, drivers cannot drive between 10 PM and 5 AM. Drivers have autonomy to stop or modify transportation if conditions warrant. Although Segutal management and drivers corroborated that this is true, and understood, there is no written policy or procedure. Procedure O-01 Recruitment of Personnel describes the drug and alcohol abuse program. The program calls for an alcohol test before each trip. Drug tests are conducted randomly on the road and randomly when leaving a mine. Complete and extensive records were reviewed to verify each of the above practices have been sustained over the last 3 years.

***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:*

Segutal does not transport cyanide by sea or air. Therefore, Segutal is in full compliance with Transport Practice 1.5, thereby helping ensure the Chemours Mexico Supply Chain remains in full compliance.

***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:*

Segutal is in full compliance with Transport Practice 1.6., thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. Drivers have personal cell phones to communicate with Chemours and Segutal while in transit. Segutal supervisors will then contact the mine to let them know the shipment is on the way. Drivers test their cell phones pre-trip and then use it for frequent communication during stops. Segutal terminal and headquarters personnel can detect if the GPS on a truck (used for tracking purposes) is not working properly. Twenty route Assessments were reviewed to verify that black-out zones are identified. Procedure O-05 requires drivers to contact their supervisor before entering a blackout area and again after emerging from it. Segutal uses a SkyWorld GPS system to

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

track shipments. The system was demonstrated for the auditor at Segutal's Headquarters. Inventory controls and chain of custody documentation indicate seal numbers on cargo doors and ISO Tank dome lids. Shipping papers reviewed showed the seal numbers. If a seal is removed, for instance for a road side inspection, the driver must call the supervisor. Drivers carry shipping papers showing weight of the shipment. MSDS's along with emergency contact telephone numbers are kept in a binder titled Carpeta de Operador in each driver's truck.

**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:*

Segutal does not have any trans-shipping depots or interim storage sites of its own. Segutal operates exclusively out of the Chemours Hermosillo and San Luis Potosi Facilities. Trans-shipping and interim storage activities at those facilities have been audited to the ICMI Production Code and are covered in separate reports. Because Segutal does not have any trans-shipping depots or interim storage sites, it is in full compliance with Transport Practice 2.1, thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

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:*

Segtural is in full compliance with Transport Practice 3.1., thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. Segtural has developed and maintains Procedure O-09 Emergency Response Procedure. The plan covers accidents on the road, fire, robbery, spill, and bad weather. The plan is based on transport of solid sodium cyanide briquettes by truck. It considers conditions of the road, which may be unpaved, curvy mountain roads. The plan does not distinguish between the type or design of transport vehicle in providing emergency response procedures, except that a new trailer or a new chassis might be sent to the scene of an accident depending on whether a van trailer or ISO Tanks was involved. The Plan identifies roles of drivers, transporter base personnel, Chemours terminal personnel and outside parties in emergency response. It also includes phone numbers to local civil protection authorities and SETIQ.

**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:*

Segtural is in full compliance with Transport Practice 3.2., thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. Training matrices show that annual Emergency Response Plan training is provided to all positions. The Plan identifies roles of drivers, Segtural base personnel, Chemours terminal personnel and outside parties in emergency response. The Plan includes a list of emergency response equipment located at each terminal, a list of emergency response equipment in each truck and a list of Personal Protective Equipment. The last two are turned into check lists used by drivers to ensure all necessary equipment is available during emergencies. Training matrices show that annual Emergency Response Plan training is required for all positions, including drivers. Records show that all drivers are current with respect to their Emergency Response Plan training. Records covering the

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date

last three years confirmed that emergency response equipment is inspected monthly by terminal personnel and by drivers.

***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:*

Segutal is in full compliance with Transport Practice 3.3, thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. Current emergency contact information is maintained in the Emergency Response Plan and on laminated cards attached to ID badges. Segutal procedures call for review of the Plan after drills and actual emergencies, but with no less frequency than once every two years. The Plan is revised as necessary.

***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:*

Segutal is in full compliance with Transport Practice 3.4, thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. The Emergency Response Plan includes procedures for trans-loading into replacement equipment after an accident or breakdown, recovery of product, neutralization of solids, decontamination of soils and management of clean-up debris. As stated under Transport Practice 3.1.8, the Plan identifies roles of drivers, transporter base personnel, Chemours terminal personnel and outside parties in emergency response. It also includes phone numbers to local civil protection authorities and SETIQ, which would be notified in the event of an emergency. The Plan prohibits the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water.

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



Chemours Mexico Supply Chain

Name of Facility

Signature of Lead Auditor

February 7-17, 2017

Audit Date

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:*

Segutal is in full compliance with Transport Practice 3.5., thereby helping ensure that the Chemours Mexico Supply Chain remains in full compliance. Segutal procedures call for review of the Plan after drills, actual emergencies, but with no less frequency than once every two years. The Plan is revised as necessary. A Revision Log at the back of the Plan shows revisions in 2011, 2013, 2015 and 2016. The Plan calls for periodic drills at terminal locations of a table top or field nature. Records of three drills in 2015 and one in 2016 were reviewed and found to have provided training and continuous improvement opportunities. Sign-in sheets verified that drivers, transporter base personnel and Chemours terminal personnel participated in the drills.

The Plan was implemented once in the past three years. The incident investigation for a Thorton rollover in February 2015 found that the driver swerved to avoid an oncoming coal truck on a 2-lane paved road. Dispatch procedures were amended for the route to prevent a cyanide truck traversing that section of the route at the time of day when coal trucks are coming the opposite way. Emergency response procedures, including trans-loading, tarping the area, etc. (no material spilled) were reviewed and found adequate. The practices of securing Eco-Pak lids with metal wire and placing heavy-duty wire mesh over Eco-Paks as part of the blocking and bracing procedure were credited as contributing to prevention of any spilled material.

Chemours Mexico Supply Chain

Name of Facility



Signature of Lead Auditor

February 7-17, 2017

Audit Date