ICMI International Cyanide Management Code
Summary Audit Report

Chemours Canada Cyanide Supply Chain Re-Certification Audit

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

2019 Audit Cycle

Contents

Chemours Canada Supply Chain Summary

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Chemours Supply Chain Overview

The Chemours Company (Chemours) is headquartered in Wilmington, Delaware and produces solid sodium cyanide for use in the gold mining sector at their Memphis, Tennessee plant in the United States. Chemours maintains numerous ICMC-certified Supply Chains and operations. The Canada Supply Chain includes Chemours organization and management of the Supply Chain and the trucking and interim storage operations in Varennes, QC and Rouyn-Noranda, QC Canada.

This Supply Chain interfaces with, and supplements, the following Chemours certified supply chains and operations:

- Memphis Plant Production (including Carlin, NV and Memphis, TN packaging operations)
- US/Canada Rail & Barge Supply Chain
- Global Ocean Supply Chain
- Canada Sodium Cyanide Bulk Transloading Facility" in Malartic, QC Canada

Each of these operations and supply chains is currently certified by the ICMI and is in good standing.

The Chemours Memphis, TN production facility ships cyanide to gold mines in Canada in the following ways:

1) Transport via truck using Groupe Robert and its interim storage facilities in Canada (this report).
2) Transport by rail to the Canada Bulk Transloading operation in Malarctic, Canada (separate certification), where it is picked up by Groupe Robert drivers for truck transport to the mines (this report).
3) Transport by ocean carrier to the Port of Montreal (separate report) where it is picked up by Groupe Robert drivers who are dispatched out of the Varennes Terminal (outside of Montreal) and brought to gold mines using the Groupe Robert Terminal operations and interim storage facilities in Rouyn-Noranda and Varennes (this report).

The Varennes Terminal functions as a Groupe Robert corporate office and activities such as the coordination of drivers and equipment, training of personnel, provision of emergency response services, the oversight of the proper maintenance, and the tracking of equipment and shipments were audited at this location. The product is transported from the Malartic facility to mine sites using drivers dispatched from the Groupe Robert Varennes Terminal or from the Groupe Robert terminal in Rouyn-Noranda, Quebec.

Groupe Robert personnel have been transporting dangerous goods in Canada safely for many years. The company was established in 1946 and is headquartered in Boucherville, Quebec. The company started transporting cyanide for Chemours in 2015. Groupe Robert is very diverse and has 41 distribution centers and terminals in Canada.

Groupe Robert manages all aspects of the trucking operations including driver selection, training, dispatch, communication, and emergency preparedness and response. Groupe Robert personnel were included in this ICMC Re-Certification Audit. Both the Varennes and Rouyn-Noranda Terminals and Interim Storage operations were physically audited on-site during this audit.
Both locations were found to be in full compliance with ICMC requirements.

Audit Implementation

This report contains information regarding the on-site International Cyanide Management Code (ICMC) re-certification audit of the Chemours Canada Cyanide Supply Chain management activities, specifically the Groupe Robert trucking operations in Varennes and Rouyn-Noranda, Quebec, Canada.

The audit was conducted on July 8-10, 2019 in Varennes and Rouyn-Noranda, Quebec, Canada. Personnel from Chemours, Groupe Robert in Varennes, and Groupe Robert in Rouyen-Noranda were included in the audit. Interviews were conducted, policies and procedures were reviewed, records were evaluated, operations were observed, and equipment and facilities were inspected. Records of the shipments to mine customers using Groupe Robert were also evaluated and found to be acceptable during this audit.

The supply chain was audited fully using the ICMI Cyanide Transportation Protocol. Chemours personnel were in attendance throughout the auditing process and were interviewed, as necessary, in order to verify supply chain compliance with the ICMC transport protocol questions.

The audit was performed by an independent third-party auditor who was pre-approved by the ICMI as a Lead Auditor for all types of International Cyanide Management Code (ICMC) audits and as a technical expert for ICMC audits of cyanide transportation and production operations.

Chemours Supply Chain Re-Certification Audit - Auditor's Finding and Attestation

Cyanide management practices for the Chemours Canada Supply Chain were evaluated for ICMC compliance using the *ICMI Cyanide Transportation Protocol.* Chemours and Groupe Robert internal policies, standards, and procedures regarding the management of the Cyanide Transportation Supply Chain were reviewed. Records of the shipments to mine customers using Groupe Robert were also evaluated and found to be acceptable during this audit.

The audit was conducted through discussions and interviews with Chemours and Groupe Robert personnel. Operations, facilities, and equipment were physically evaluated. Records regarding shipment tracking, security measures, shipping documentation, community involvement, operational procedures, training, and emergency response records were randomly sampled during the audit and were also found to be acceptable.

All personnel were very well prepared for the audit. The auditor found that the overall level of preparedness and understanding of ICMC requirements was excellent.

No cyanide environmental spills or human exposures have occurred in this supply chain.

Confirmation was made during this audit that Chemours personnel confirmed continuous ICMC compliance through the performance of internal audits of the previous supply chain operations several times between 2016 and 2019. Recent shipment records were available for review during this audit. According to records and interviews, all operations within this supply chain (previous and current warehouse and Groupe Robert) were maintained in compliance with ICMC requirements continuously since the previous ICMC certification audit in 2016.

The Chemours Canada Sodium Cyanide Supply Chain Groupe Robert trucking company was found to be in FULL COMPLIANCE with the ICMI International Cyanide Management Code requirements.

Audit Company:	CN Auditing Group www.cnauditing.com
Lead / Technical Auditor:	Ralf Jurczyk E-mail: rj@cnauditing.com
Date(s) of Audit:	July 8-10, 2019

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Certification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute for Code Certification Auditors.

I attest that the Audit Reports accurately describe the findings of the re-certification audit. I further attest that the re-certification 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.

Chemours Canada Supply Chain		September 30, 2019
Name of Operation	Signature of Lead Auditor	Date

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:

Groupe Robert has implemented a process to address ICMI requirements regarding route selection, route risk assessment, route approval, and driver feedback. Records were available to show that ICMC route determination, risk assessment, and risk mitigation requirements were fulfilled. Population density, road infrastructure, pitch and grade of the roads, and proximity of the routes to water bodies were considered during the route evaluation process.

Risk assessments are conducted regularly, and route specific risk mitigations are considered. Driver feedback is routinely collected in real time via a satellite communication system and integrated into routing plans when appropriate. The Groupe Robert Transportation Manager reviews the cyanide routes and the associated risks. Drivers have direct communication with the dispatchers and route planners and give feedback on routes, as necessary.

Records were available to show that the Groupe Robert Transportation Manager evaluated risks associated with routes when they were initially established. Specific routes, risks, and risk mitigation measures are detailed in the records, including consideration of spring thaw weight limits and potential poor winter driving conditions.

The use of only government-designated hazmat routes ensures adherence to local requirements regarding hazardous materials. Hazmat roads are readily available and there are no special concerns associated with these routes. Stakeholder concerns are also considered by Chemours during the establishment of the Emergency Response Assistance Plan (ERAP) that is on file with the Canadian government (Transport Canada).

There are no special security concerns. The containers are sealed. Trucks originate at the Memphis, TN production facility and are transported to either Octium Solutions interim storage facility located in Malartic, Quebec or the Groupe Robert Varennes Terminal outside of Montreal. The product is then transported to mine sites using drivers dispatched from the Groupe Robert Varennes Terminal or from the Groupe Robert terminal in Rouyn Noranda, Quebec. Drivers are instructed not to stop in undesignated locations or take detours from the pre-established routes.

Chemours communicates emergency response information to external responders who would respond in the event of an emergency. Chemours has trained its Canadian response contractor, per the Chemours Emergency Response Assistance Plan (ERAP) that is required by Canadian regulations. A letter from Transport Canada was reviewed and indicates that the ERAP is current and includes sodium cyanide. The ERAP covers transport of the materials by road, rail, and marine modes. All of Canada is covered by the ERAP.

Groupe Robert does not use subcontractors for any portion of its cyanide transportation operations.

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 ☐ not in compliance with	Transport Practice 1.2

Summarize the basis for this Finding:

Groupe Robert uses only trained, qualified and licensed drivers. Drivers are required to have five years of Commercial Driver's License experience and three years of hazardous material driving with no incidents.

Hazardous Materials Training and Global Harmonization System (GHS) training are required every three years. Chemours training including general awareness, first aid, and cyanide transportation modules is required for all employees. *Chemours Transportation Emergency Information* training was reviewed and contains information on minimizing the potential for cyanide releases and exposure.

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 ☐ not in compliance with	Transport Practice 1.3

Summarize the basis for this Finding:

Groupe Robert maintains a "Weight and Restrictions" (Charte de Poids) procedure that details the allowed weights and distribution per axle and per trailer. In addition to this procedure, printed weight requirements are issued to drivers for normal conditions and thaw conditions. The dispatch system will reject the truck and/or driver if not qualified or the weight is incorrect. Confirmation was made that Groupe Robert equipment is suitable for Chemours' standard shipping weights indicated on shipping papers.

The equipment is capable of handling loads far in excess of the amounts of cyanide that are shipped by Chemours. This was confirmed through a review of records and specification information for the equipment.

Groupe Robert drivers check the axle weights upon departure with a cyanide shipment to ensure that the load is evenly distributed and to ensure that packaging integrity is retained. Automatic warning systems are in place to provide notification if the load is overweight.

Groupe Robert does not use subcontractors for any portion of its cyanide transportation operations.

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 ☐ not in compliance with	Transport Practice 1.4

Summarize the basis for this Finding:

Groupe Robert has a documented safety program that includes all of the ICMI required topics. Chemours and its packaging partners load the cyanide into ISO tanks and trailers using formal procedures and checklists. ISO tanks are inspected prior to shipment to ensure that the unit is secure and ready for shipment. Groupe Robert drivers do not open the containers or handle the cyanide. Groupe Robert drivers check the axle weights to ensure that the product is evenly distributed and to ensure that packaging integrity is retained.

UN 1689 placards are displayed on all four sides of the trailers and containers to clearly identify the shipment as cyanide. Drivers maintain records of inspections and their results. Vehicle inspections are required by procedure, the performance of the inspection is recorded in the electronic log system and in paper logs. There is a formal preventive maintenance program in place. The frequency of preventive maintenance tasks is defined by the type of activity for which that equipment is used. Trucks undergo preventive maintenance on a defined frequency and are fully inspected at least annually, as required by Canadian law.

Groupe Robert drivers use designated truck stops and limit driver hours of service, in accordance with Canadian law. The Transportation Manager receives a warning if anyone is driving beyond the allowed hours. Logs demonstrated that drivers are not exceeding limitations.

Groupe Robert maintains a procedure entitled "Load Securing Labels and Tags". The ISO containers are all sealed. The loads are secured by the shipper and the loads are not opened by the driver.

Interviews indicate that Groupe Robert drivers are empowered to stop a shipment if weather conditions or road conditions are unsafe. There is also a driver fatigue program to ensure that drivers know that they can stop a shipment and rest if necessary. Drivers need to notify the dispatcher if they want to stop or delay a shipment. If severe weather is expected, the route will be preemptively canceled and trucks on the route may be recalled.

There is a documented Drug and Alcohol policy entitled *Illicit drugs and alcohol* which was reviewed. There is a zero tolerance for drug and/or alcohol use while on duty. The policy expressly forbids driving while under the influence of illicit drugs and alcohol. Random, regular, post-accident, reasonable doubt, and follow up testing are addressed in the manual. The Dispatcher and Manager have the ability to send individuals for immediate testing.

Records were available to demonstrate that all 1.4 Cyanide Code safety program requirements were fulfilled.

Groupe Robert does not use subcontractors for any portion of its cyanide transportation operation.

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 ☐ not in compliance with	Transport Practice 1.5

Summarize the basis for this Finding:

Groupe Robert does not transport containers by sea or by air. This section of the Cyanide Code does not apply to the supply chain.

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

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

Summarize the basis for this Finding:

Groupe Robert uses a satellite system and cell phones to ensure that drivers are always able to communicate with dispatch personnel and others, as necessary. The communication equipment is used on a daily basis and is checked during the pre-trip inspections to ensure that it functions properly. Interviews confirmed this practice. Blackout areas do not present a significant problem on the routes traveled due to the use of satellite tracking equipment.

Groupe Robert trucks are automatically tracked by GPS and by satellite tracking system and continuous communication is available, if needed.

Drivers have shipping documentation including the Bill of Lading with them at all times during a shipment. Bills of Lading were sampled and were found to be complete with amount of cyanide, full description of materials, emergency phone numbers; and receipt of material by the mine. Drivers carry the Safety Data Sheet (SDS) for the cyanide and the Emergency Response Guide with them during deliveries.

Groupe Robert does not use subcontractors for any portion of its cyanide transportation operations.

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
- ☐ not in compliance with

Transport Practice 2.1

Summarize the basis for this Finding:

Groupe Robert provides interim storage at both the Rouyn and Varennes terminals. Warning signs are posted alerting workers when cyanide is present. Signs are in place that forbid smoking, open flames, eating and drinking when cyanide is present. PPE requirements are identified.

Both terminals both have a locked fence with card access and remotely monitored camera surveillance. Unauthorized access is prohibited, and unknown personnel are challenged as a policy. Security guards conduct routine safety checks at the Varennes terminal. ISO tanks are sealed and secured and loaded trucks are locked and parked back to back in Varennes if they are kept overnight and in a locked garage in Rouyn-Noranda.

Product is stored in sealed iso tank and sea containers on chassis and is not lifted to the ground. s. The interim storage yards are used for temporary parking of the equipment loaded with solid sodium cyanide. The interim storage yards are gravel and daily inspections are done at each location to check for problems such as container breaches. Spill kits are available to minimize the extent of any release in the highly unlikely event that there is a container breach. The iso tanks and sea containers remain sealed while being transported and/or stored by Groupe Robert. This was accepted by the auditor.
At the Varennes and Rouyn terminals, sodium cyanide is stored at least 50m away from any incompatible materials such as acids, strong oxidizers and explosives. Containers are designed for outdoor use and transportation. They are received sealed and remain unopened while at the facility, so the potential for contact of the sodium cyanide with water is minimized. Adequate ventilation is provided at Varennes where trailers are stored outside. At the Rouyn terminal, the ISO containers are stored in a garage building with adequate ventilation available.

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 ☐ not in compliance with	Transport Practice 3.1

Summarize the basis for this Finding:

The Groupe Robert Emergency Response Guide is kept in the truck at all times. The Chemours document "Transportation Emergency Information" is also used by Groupe Robert. Groupe Robert also has a security plan that is based on risk assessment. The emergency planning information was found to be appropriate for the routes driven.

Only solid sodium cyanide is transported in this supply chain. All procedures and plans specifically reference the response steps that are to be taken for solid cyanide spills.

The emergency response plan maintained by Groupe Robert is specific to trucking. The Chemours ERAP addresses all modes of transport. Groupe Robert only transports cyanide via truck and all scenarios considered in the emergency planning documents were related to truck accidents or small cyanide spills from transportation. Solid sodium cyanide (the only physical form transported), roadway infrastructure differences, and the roles of the different emergency responders are discussed in the planning information.

The emergency planning information is appropriate for the type of product being transported, solid sodium cyanide. The emergency planning information was found to be appropriate for interim storage and in-transit operations The planning information is general but was found to be appropriate for the different types of containers and trailers that are used in this supply chain.

Groupe Robert maintains Vehicle Accident Procedures for accidents with and without spilled materials. The emergency procedures are thorough and are maintained as part of the Driver's Manual. The manual is required to be in the trucks during transport. In addition to this information, the Chemours *Transportation Emergency Information* (revised 4/4/2019) is available in the trucks during deliveries. The emergency planning information and Driver's Manual were found to be appropriate for the routes driven. The documentation describes what steps are to be taken in response to traffic accidents. The procedures include cyanide-specific response actions and general cyanide safety information.

Chemours maintains an Emergency Response Action Plan (ERAP) for all transportation modes in Canada, as required by regulations. These emergency plans are appropriate for this supply chain

and address all modes of transportation in Canada. Emergency Response Contractors are trained by Chemours every three years, as described in the ERAP.

Solid sodium cyanide (the only physical form transported), roadway infrastructure differences, and the roles of the different emergency responders are discussed in the planning information.

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 ☐ not in compliance with	Transport Practice 3.2

Summarize the basis for this Finding:

The annual Chemours training provided to drivers includes information on spill response. Drivers also receive Hazardous Materials training and Canada's Workplace Hazardous Materials Information System (WHMIS) training. The responsibilities of the drivers and/or interim storage personnel are clearly defined in the emergency planning information. The required emergency response equipment is captured in truck checklists and is integrated into the route planning process for the transportation routes. Groupe Robert provides the drivers with the required PPE and minimum spill response equipment.

Transport vehicle operators receive initial and periodic refresher training on what do in the event of a spill, fire, or accident and the emergency phone numbers to call every three years. If a driver has not transported cyanide for over three months, then training on emergency response must be refreshed per Groupe Robert's requirement. Chemours requires annual training on the emergency response procedures. Training records were reviewed and found to be in adequate.

The spill kit is inspected daily before the trip at the same time the trailer and truck are inspected. This has been integrated into the electronic pre-trip inspection system. The emergency response equipment needed is reviewed on an annual basis.

Groupe Robert does not use subcontractors for any portion of its cyanide transportation operations

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 ☐ not in compliance with	Transport Practice 3.3

Summarize the basis for this Finding:

Emergency numbers are listed in the Driver's Manual with a central emergency number. This will contact Chemours and put a predefined emergency response plan into action, including the shipper, the receiver, and as needed outside response providers, medical facilities and potentially affected communities. Emergency telephone numbers and contact information for Chemours, regulatory agencies, and medical facilities were available in the emergency response plan. The security plan specifies an annual review of these procedures. Internal and external emergency notification reporting information was found to be current and had been updated several times during the recertification period.

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 ☐ not in compliance with	Transport Practice 3.4

Summarize the basis for this Finding:

If remediation were to be necessary, the emergency response plan includes a requirement to notify Chemours of the spill. Chemours, if necessary, would contact and coordinate professional environmental cleanup. Groupe Robert would not perform remediation. The "Sodium Cyanide Emergency Response Guidelines" prohibits the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide in 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 ☐ not in compliance with	Transport Practice 3.5

Summarize the basis for this Finding:

The emergency procedures are reviewed by Groupe Robert at least annually to ensure adequacy and updated as necessary. Emergency response drills are conducted at least annually. Records of the drills conducted at Rouyn terminal and Varennes terminal in 2019 were available for review and were acceptable. The drills simulated both cyanide release and cyanide exposure incidents. Emergency plans are revised, as necessary, following drills and actual emergencies. Documents showing a review of the emergency drills were reviewed and deemed effective. No changes other than the occasional change to a telephone number were required following the drills and/or plan reviews. This was accepted by the auditor.