

# Responsible Care® Verification Report

***ARLANXEO Canada Inc.***

October 23, 2020



CHEMISTRY INDUSTRY  
ASSOCIATION OF CANADA



Responsible Care®  
Our commitment to sustainability.

## **Disclaimer**

This report has been produced by a team, convened by the Chemistry Industry Association of Canada (CIAC), to provide advice to the member-company and assist it in meeting its Responsible Care<sup>®</sup> commitments. The material in this report reflects the team's best judgment in light of the information available to it at the time of preparation. It is the responsibility of the CIAC member-company that is the subject of this report to interpret and act on the report's findings and recommendations as it sees fit. Any use which a third party makes of this document, or any reliance on the document or decisions made based upon it, are the responsibility of such third parties. Although CIAC members are expected to share the results of this guidance document with interested parties, the Association, its member-companies, their employees, consultants and other participants involved in preparing the document accept no responsibility whatsoever for damages, if any, suffered by a third party as a result of decisions made or actions based on this report.

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## EXECUTIVE SUMMARY

This report documents the observations and conclusions of the independent verification team tasked with conducting a Responsible Care Verification of ARLANXEO. The verification was undertaken on October 19 to October 29, 2020, utilizing a virtual format with the exception that two team members physically visited the Sarnia plant site on October 23. This was the third Responsible Care verification completed for ARLANXEO. The last verification was completed in June 2016.

As a result of the examination conducted, the verification team is of the opinion that the Responsible Care Ethic and Principles for Sustainability are guiding company decisions and actions, and that a self-healing management system is in place to drive continual improvement. As the result of our investigations there were no Findings Requiring Action, and the team believes the company will respond appropriately to the Opportunities for Improvement based on its commitment to Responsible Care.

The verification is complete, and no further involvement is required by the verification team.

Signed: \_\_\_\_\_

Date: 31 January 2021

**Gerry Whitcombe**

Verification Team Leader

For more information on this or a previous Responsible Care Verification Report, please contact your local company site or the company's overall Responsible Care coordinator:

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## Summary of Verification Team Observations

### Improvement Opportunities

1. To work with other CIAC members to propose that the new Sarnia/Lambton CAER organization be assessed using Responsible Care codes and the Ethic and Principles for Sustainability.
2. To use the waste diversion rate as an annual KPI metric. The waste diversion rate compares the amount of waste diverted to disposed and generated.
3. To enhance Responsible Care signage in general and specifically in the entrance to the London R&D facility.
4. In London and Sarnia, to broaden Responsible Care internal messaging to achieve a greater general understanding about the industry wide nature of Responsible Care
5. To promote a circular economy process when sourcing raw materials and evaluating products for reuse and/or recycling at the end of its life (e.g. cradle to cradle).
6. To formalize a RC review in London that will be used in conjunction with a similar review in Sarnia allowing the signing executive to confidently attest to the ongoing status of Responsible Care in ARLANXEO.
7. To promote the establishment of a community advisory panel as part of CAER to assist SLEA in directing their efforts towards preparing programs that fit the public's needs regarding Community Awareness during emergencies but more importantly, as a place to find accurate, timely and effective information about member companies anytime.
8. To bring the company's new direction/focus on PSM to ACAP, also consider other company topics (i.e. interesting maintenance techniques and the lowering of risk tolerance).
9. To strongly lobby the CAER board to speed up the implementation of Everbridge Pro.
10. To find a replacement for the US member on ACAP and search for an indigenous member.
11. To revisit TRANSCAER responsibilities and resolve to meet them
12. To institutionalize the Signing Executive process for attestation by adding it to the Sarnia Responsible Care Systems Manual and the London management system perhaps as an output of the Management System Review.
13. To standardize the structure of SOP-0649 such that it consistently references the next level of documentation.
14. To use the framework of the 8 topic areas in the Ethic and Principles for Sustainability to report progress to employees and ACAP and thus encourage a dialogue that could enhance further progress.

### Successful Practices

1. The processes supporting and empowering employees to act on a lower tolerance for risk in pursuit of zero incidents is a successful practice.
2. The company's response to the COVID 19 pandemic is a successful practice.
3. Arlanxéo's initiative to install the Everbridge system for neighbours and anyone in the area interested in receiving updates and working with SLEA to incorporate the system throughout local industries is a successful practice.

## 1. Introduction

### 1.1 About Responsible Care Verification

- As a member of the Chemistry Industry Association of Canada (CIAC), the most senior executive responsible for ARLANXEO's operations in Canada attests annually to CIAC and its peers that the company's operations conform to the expectations contained in the Responsible Care Commitments and are guided by Responsible Care Ethic and Principles for Sustainability.

#### **The Responsible Care® Ethic and Principles for Sustainability**

*We dedicate ourselves, our technology and our business practices to sustainability - the betterment of society, the environment and the economy. The principles of Responsible Care® are key to our business success, and compel us to:*

- Work for the improvement of people's lives and the environment, while striving to do no harm;
- Be accountable and responsive to the public, especially our local communities, who have the right to understand the risks and benefits of what we do;
- Take preventative action to protect health and the environment;
- Innovate for safer products and processes that conserve resources and provide enhanced value;
- Engage with our business partners to ensure the stewardship and security of our products, services and raw materials throughout their life-cycles;
- Understand and meet expectations for social responsibility;
- Work with all stakeholders for public policy and standards that enhance sustainability, act to advance legal requirements and meet or exceed their letter and spirit;
- Promote awareness of Responsible Care and inspire others to commit to these principles.

As an element of this commitment to Responsible Care, ARLANXEO must, every three years, participate in an external verification intended to:

- Provide the Executive Contact with an external perspective when assessing if the company is indeed meeting the intent of the Responsible Care Commitments, along with advice on areas that may require attention;
- Identify opportunities for assisting the company when benchmarking its own practices and performance against those of its peers, thus supporting continual improvement;
- Contribute to the credibility of Responsible Care amongst company personnel and stakeholders, as well as the stakeholders of the broader industry;
- Identify successful company practices that can be promoted to peers in the CIAC membership; and
- Support the identification of areas of common weakness so that collective tools and guidance can be developed to improve performance in those areas across the CIAC membership.

Verification is conducted according to a common protocol, developed by the association's members and others, including several critics of the chemical industry. The verification is conducted by a team consisting of:

- Knowledgeable industry experts with experience in Responsible Care;
- A representative of the public at large (usually with a public interest background and with experience in Responsible Care gained from serving on the CIAC's National Advisory Panel) and
- One or more representatives of the local communities where the company's facilities are located.

Once completed, the Verification Report is made publicly available through the CIAC website ([www.canadianchemistry.ca](http://www.canadianchemistry.ca)). ARLANXEO is also expected to share the report with interested persons in its communities and other stakeholders as part of its ongoing dialogue processes.

Additional information on Responsible Care and/or the verification process can be found at the CIAC website [www.canadianchemistry.ca](http://www.canadianchemistry.ca), or by contacting the Responsible Care staff at CIAC at [glaurin@canadianchemistry.ca](mailto:glaurin@canadianchemistry.ca) or (613) 237-6215 extension 233.

## 1.2 About ARLANXEO

ARLANXEO is synthetic rubber company with sales of around EUR 3 billion in 2019, about 3,900 employees and a presence at more than 12 production sites in 9 countries and 7 innovation centers around the world. Headquartered in The Hague, Netherlands, the company's core business is the development, manufacturing and marketing of synthetic high-performance rubber for use in the automotive and tire industries, the construction industry, and the oil and gas industries.

Since January 2019 ARLANXEO is a subsidiary of Saudi Aramco.

The manufacturing site in Sarnia is comprised of a Butyl Rubber manufacturing facility as well as a C<sub>4</sub> Olefins (1,3-butadiene, Raffinate-2) operation, both operated 24 hours per day, 7 days per week. There is also a research facility located in London Ontario near the University of Western Ontario.

There are about 370 employees, with 350 at the Sarnia site and 20 in London. Of the Sarnia employees about 200 are day workers and 150 are shift workers. There are, typically, about 150-200 contractors on site.

## 1.3 About This Verification

The verification was undertaken on October 19 to October 29, 2020, and due to COVID social distancing concerns and requirements, utilized the recently released CIAC Virtual Verification format with the exception that two team members physically toured the Sarnia plant site on October 23.

Based on the Lead Verifier's previous experience with ARLANXEO, but subject to any need to perform code deep drills, we generally accept that the company has fully implemented the codes and are effectively managed by the company's Responsible Care management system (Responsible Care Management System Manual (SOP-0649) referred to as RCMSM in this report).

Thus, our theme or focus was generally related to examining the company's Responsible Care commitment and performance for each area investigated.

Specifically:

- Is the company sufficiently meeting the expectations communicated in the Responsible Care Commitments (Codes and Benchmark and Collective Expectations)?
- Is an effective and self-healing management system sufficiently in place for setting and meeting all company goals and is it driving continual improvement?
- Is the commitment to the Responsible Care Ethic and Principles for Sustainability tangible and does it sufficiently guide the company's judgement, decisions and actions, internally and externally?

During the course of the verification, the team had the opportunity to interact virtually with a wide range of company personnel, as well as stakeholders external to the company and in-person with several company employees during the aforementioned tour. Attachment 2 contains a list of those individuals interviewed and their affiliations.

This was the third Responsible Care verification completed for ARLANXEO. The last was completed in June 2016.

The verification team was composed of the following individuals.

Name	Affiliation	Representing
Gerry Whitcombe	CIAC Verifier	Industry (team leader)
Brenda Lorenz	CIAC Verifier	Public-At-Large
Mary Jean O'Donnell	Community Verifier	Sarnia Community

## 2. Team Observations Concerning the Responsible Care Commitments (Codes and benchmark and Collective Expectations)

During the verification of ARLANXEO, the verification team looked for evidence that the company was addressing the expectations documented in the Responsible Care Commitments (157 code elements plus 28 benchmark and collective expectations).

In communicating its observations, the verification team will make repeated reference to the following categories of observations:

1. **Findings Requiring Action** document instances where the verification team observes specific company actions (or the absence of company actions) which are inconsistent with the detailed codes and benchmark and collective expectations contained in the Responsible Care Commitments. Where possible, the verification team will communicate, based on their experience and judgment, why it is inconsistent and how the observation relates back to a possible gap in the expected management system and / or the ethic and principles underpinning company actions. The team may also provide advice on how the situation might be responded to.
2. **Works in Progress** document instances where the verification team has observed the company self-initiating actions in response to identified gaps and deficiency arising from other internal or external audit and review activities, or where the company has self-initiated important improvement opportunities.
3. **Successful Practices** document instances where the team believes the company has taken actions that strongly support sustained excellence in performance, and which should be communicated throughout the CIAC membership.
4. **Improvement opportunities** identify instances where the verification team has observed company actions and decision making as being largely consistent with the expectations detailed in the Responsible Care Commitments, but for which the team is of the opinion that the company could support further improvement by considering alternate or additional benchmarks when undertaking its planning and decision making.

The verification team's observations of how the company has addressed the Responsible Care Commitments are as follows:

### 2.1 Team Observations Concerning Operations Code

The team met with the ARLANXEO Sarnia site management team representing procurement, manufacturing, human resources, maintenance and logistics.

Responsible Care is well understood and is incorporated within standards and procedures relevant to each function. Importantly The Responsible Care Ethic and Principles for Sustainability generally guide daily operation. Examples (large and small) of this include:

- Supplier vetting and ongoing interactions
- Reduction in the use of paper not only because of reductions in staffing but also because of increases in the use of electronic access for documents. Currently the site has only 10% of the printers it had in 2010. It is noted that this is an important step forward in ensuring that outdated paper copies of procedures are not accidentally in use.
- Strong Responsible Care relationship, support and/or direction with respect to:
  - Quality systems (ISO 9000)
  - Safety (many systems in manufacturing)
  - Customer interactions (Say what we do and do what we say)
  - Community (ACAP (ARLANXEO Community Advisory Panel) site tours)
- Is a component of job postings, external advertisements and employee onboarding
- Is promoted on business cards
- Strong driver in frequent interactions with external maintenance contractors

- Helps to protect people and the environment by keeping units reliably running (are trending positively and tracking well on global company key performance indicators (KPIs)).
- Supports a philosophy of innovation in operations (the site developed, with R&D, a process chemical that reduced 5-7 incidents of plugging per year to 0).
- Supports waste reduction (plant scrap has been reduced substantially over the past ten years).

The team also met with three Joint Health and Safety Committee (JH&SC) representatives and found that Responsible Care has been thoughtfully and comprehensively integrated into daily routines. Practices that empower employees to act on situations (safety in particular) are in place and are supported. It is well understood that Responsible Care is meant to ensure the health and safety of employees, the environment and the community. No impact on the community is one of the core values of Responsible Care and ARLANXEO has done an excellent job of ensuring its employees understand this and act to achieve it.

The team notes that knowledge and understanding of Responsible Care being an industry initiative (with the condition that its implementation is mandatory for all members of the Chemistry Industry Association of Canada (CIAC)) is diminishing (this has generally been noted with other CIAC members as well). There is an opportunity in section 2.1.6 (Promotion of Responsible Care by Name) describing this.

### 2.1.1 Design and Construction of Facilities and Equipment

This area was not reviewed.

### 2.1.2 Operations Activities

#### a. General Considerations

Operations management maintains a comprehensive system of KPIs to monitor performance in (but not limited to) safety, health, quality, throughput, and reliability (equipment availability). Performance is reviewed at a minimum on a fixed time basis or whenever demanded by virtue of trending data, an incident, or hazard identification. Overall responsibility is held primarily by site leadership, but each operational area is expected to conduct their own reviews which are rolled up to the site.

The company maintains a goal of zero injuries (Goal Zero) and currently it has been more than 1000 days since the last lost time injury.

Operations management believe, supported by data, that they have very good systems in place for maintaining and improving safety and quality. A key feature is their system for traceability which supports root cause analysis should an investigation be necessary.

One important element of a safety culture is employee feedback, and the company employs three main programs to ensure everyone can be heard:

- TASR (Task Analysis Safety Review) is an industry typical process used to ensure all people involved in a job discuss that job prior to commencement,
- AMS (ARLANXEO Management System) contains the company Incident Management System and
- hazardous reporting and ideas for improvement, also contained within the AMS software.

The company has demonstrated overall excellent safety performance and is currently guided by what needs to be done to understand and overcome the remaining obstacles in achieving Goal Zero. A very competitive marketplace demanding innovation and continuous improvement in quality and reliability (and leading to ongoing engineering, design, construction, and maintenance activities) strongly influences the road to Goal Zero.

As an example, ARLANXEO is a leader among their peers in product quality and has increased first pass quality while maintaining or improving safety performance.

To keep a focus on safety the company uses multiple approaches and adapts when necessary. Currently they maintain an employee focus group to obtain specific feedback, they utilize employee 'PDays' (quarterly

training Progress Days) for discussion and feedback and also maintain a participation KPI for employee use of the AMS system.

Each department has a discretionary budget to direct funds for small projects that is directed by the group. This is a visible way of accomplishing change through involvement of all employees.

#### **b. Laboratory Practice**

ARLANXEO's production quality control laboratory is certified under ISO 9001 and thus has many levels of controls in place. These and the requirements of the lab to conform with company policy has provided an environment and culture which strongly promotes employee health and safety.

The lab can participate in production trials initiated by the plant or by the Research Laboratory in London. Their involvement is dictated by specifically written trial procedures and/or the company Management of Change (MOC) procedure.

#### **c. Transportation and Physical Distribution**

##### **Material Handling**

This area is responsible for the on-site handling and movement of materials via rail and truck loading/unloading facilities and the inter-company pipeline (which includes inspection, maintenance and operation). They are well covered by SOPs (Standard Operating Procedures) and perform quarterly technical reviews and semi-annual quality reviews.

They are guided by ensuring the reliable operation of their area and over the last six years have performed at better than 99% reliable.

They closely monitor air emissions from the equipment they are responsible for and have an active leak detection program. Since they can have an impact on site water quality, they have an active monitoring plan for water as well.

#### **d. Maintenance**

This area is fundamentally guided by the desire to increase equipment reliability by proactively scheduling maintenance thus preventing emergency (reactive) maintenance. Scheduled maintenance is either Preventive Maintenance (PM) or Predictive-Preventive Maintenance (PPM) and a multitude of programs are in place to guide scheduling. KPIs reflect this direction and the department is currently at 70%/30% proactive vs reactive. The principal metric is conformance to the maintenance schedule.

One program demonstrating success is completed vessel inspections where yearly compliance is 100% and currently monthly performance is 90%.

Each trade has their own processes or programs, and it is typical for them to discover unexpected issues which can then be scheduled to prevent an emergency repair. This has proven to be a significant contributor in reducing failures.

The department is expected to contribute to unit health and safety KPIs and in doing so track (among others) TARS participation and, in AMS, incidents and training compliance.

In the normal process of understanding where improvements can be made to achieve Goal Zero there is a current focus on housekeeping and ergonomics related to maintenance tasks.

### **2.1.3 Safety and Security**

#### **a. Occupational Health and Safety**

The company has made significant progress in improving its safety performance over the last number of years. Since 2002 the recordable incident rate has been reduced from 5 to 0.2 (incidents per 200,000 hours). Recently the target rate has been set at zero (Goal Zero).

The path the company has chosen to get to this level began with the understanding that cultural change would be necessary, and it would have to begin with the leadership group adopting and demonstrating a lower tolerance for risk. This step was essential for the creation of a road map which included improved onboarding, training, hazard identification and analysis. A critical component was the acceptance by all employees in identifying hazards at a lower risk tolerance level and acting to mitigate the hazard. The company's AMS with its Ideas for Improvement feature (scheduled for replacement) empowers employees to act on their observations.

The COVID pandemic led the company to an understanding that a workplace forced to operate under strict social distancing requirements (combined with general stress from the virus itself and community isolation) could cause increased employee mental health issues. To help address these issues the Company brought in representatives from the Canadian Mental Health Association (CMHA) to speak with employees. It is noted that safety was not compromised as a result of operating to COVID prevention requirements.

There is recognition that achieving Goal Zero involves on-site contractors and programs (including logging lower risk hazards) are in place to get them involved.

As well, the importance of the Industrial Hygiene (IH) ("science dedicated to the anticipation, recognition, evaluation and control of environmental stressors") in achieving Goal Zero has been recognized and a new IH resource person has been hired.

#### **Successful Practice.**

The processes supporting and empowering employees to act on a lower tolerance for risk in pursuit of zero incidents is a successful practice.

#### **b. Process Safety Management**

The move to a lower risk tolerance has caused site Process Safety Management (PSM) to make changes to the company's historical risk matrix. Since all PSM reviews are based on that risk matrix this will help align these reviews with Goal Zero.

#### **c. Emergency Management**

The company recently restructured their emergency response plan to become the primary responder to a site emergency event and to use City resources as backup. This is a fundamental change for the site and has resulted in the training of an increased number of emergency responders. Those in this highly structured and specialized role have been on-boarded with the appropriate training related to the new lower tolerance for risk in the Goal Zero program.

The company is fully engaged with Sarnia CAER (Community Awareness / Emergency Response) activities having both committee and board roles.

The team discussed current activities involving the CAER group and the frustrations experienced by the general public on progress in several areas. It was noted that the CAER board is moving forward on putting effective and efficient community notification and communication plans in place but has not yet engaged the public in understanding their needs. The team believes there is an opportunity to engage the public through formation of an external advisory panel. As well, the notification app (Everbridge Pro) has been announced but has not yet been rolled out. This is a long-awaited improvement that has somehow stalled, a situation that should be addressed. There are two opportunities in §2.3.1 Operating Site Communities covering these.

CAER and CVECO have been rolled up under one banner, CAER, which might provide an opportunity for local CIAC companies to suggest a review of CAER operations opposite relevant CIAC Responsible Care codes and the Ethics and Principles for Sustainability. Ostensibly CAER will be providing services that satisfy or augment particular requirements of Responsible Care. In some cases, a member may use a CAER service

instead of fulfilling the requirement on its own. It is in the CIAC's interest to ensure that CAER's direction is aligned (and complies) with those particular requirements of Responsible Care

#### **Opportunity for Improvement**

- To work with other CIAC members to propose that the new Sarnia/Lambton CAER organization be assessed using relevant Responsible Care codes and the Ethic and Principles for Sustainability.

#### **d. Malicious Intent**

The company has their own security department, atypical of the industry where security is normally contracted to third parties.

The site is C-TPAT (Customs - Trade Partnership Against Terrorism) certified signalling that the site conforms to stringent logistics requirements related to terrorism demanded by U.S. Customs and Border Protection (CBP). These requirements typically satisfy CIAC Responsible Care requirements.

#### **e. Critical Infrastructure/Business Continuity**

As is required of all member companies ARLANXEO had a business interruption plan (loosely covering a response to a pandemic) but had little understanding of the magnitude of response that would be required by COVID 19. Fortunately, on-board professional health staff, having responded to the 2002/03 SARS (Severe Acute Respiratory Syndrome) epidemic, were quickly able to modify the generic plan and adapt to the ever changing situation. Working from home, mask wearing, and frequent use of hand sanitizers were immediately put in place and a testament to that early response is the fact that there was little change to those original procedures implemented in April 2020.

Nevertheless, assessment and modification of procedures and development of new procedures were a constant feature of the response which included early engagement of the supply chain and suppliers, increasing the frequency of facility cleaning to daily, responding to questions and suggestions by employees, i.e. limiting the number of people in the control room. From the early stages anyone with symptoms in line with public health guidelines had to clear return to work with medical. An ongoing symptom is the psychological effect of isolation, more prevalent with (but not limited to) home workers, that prompted engaging CMHA for assistance. Employees are aware of the available support and are making use of it. Calls are even coming in from Retirees asking about the status of the plant and employees.

Safety meetings were being held monthly prior to the onset of COVID restrictions and were increased to weekly and then to daily as it was determined that distancing restrictions could be maintained, and it would be a way to create social interactions helping to limit the feelings of isolation.

There have been no reported cases of COVID 19 among employees and the company does have a plan to communicate should someone come down with the virus.

The aforementioned ongoing editing of policy and procedures has led the company to have a comprehensive pandemic response procedure.

#### **Successful Practice.**

The company's response to the COVID 19 pandemic is a successful practice.

#### **f. Incident Reporting and Investigation**

The company has an incident reporting component fully integrated into its AMS software application. They are transitioning to a global standard investigation component called Tap Root.

#### **2.1.4 Environmental Protection**

Governmental regulation, Responsible Care codes, Responsible Care Ethics and Principles for Sustainability and ISO 14001:2015 certification have all contributed to a comprehensive suite of policies, standards, procedures and practices supporting these requirements.

A changing manufacturing reality, legacy requirements, governmental direction and continual progress on reducing emissions and wastes have created clear and ongoing KPIs for this general area. Management systems are in place that require rigorous reviews (annual) to determine progress against targets, adjusting existing targets and the setting of new targets.

As a result, the company performs at a high level in making progress at reducing its impact on the environment. Some examples are:

The 'West' site, on Vidal Street, had previously been remediated (facilities and equipment going back to the late 1940's). The same process will be used with the recent sale of the olefins facility on this site. This location is transforming into an industrial park for which ARLANXEO provides the infrastructure.

It was observed that there is very strong rapport with Ministry of the Environment, Conservation and Parks (MOECP) personnel. The company is voluntarily reporting changes in various environmental metrics rather than strictly permit exceedances as required under the regulations. Recently a MOECP employee was granted unrestricted access to the site to become familiar with the overall operation.

Chlorine and bromine process chemicals are off-loaded in an enclosed building and all fugitive gases are neutralized in the facility. As a result, there are minimal site Cl<sub>2</sub> and Br<sub>2</sub> emissions.

ARLANXEO's main product is a rubber bale that when off spec and unrecoverable may be sent to landfill. Some off spec material can be integrated into new material, but the better solution is to increase the amount of first-pass prime material and a trending reduction in landfill amounts is testament to company success in this area.

A large concern is water load on Biox due to contaminated water from the plant and general run-off from rainfall. The feeding of water from storage ponds to Biox has been developed into procedures and untreated water releases to the river has been lowered from approximately 20 times per year to between 2-5 times per year. Performance in this area is reviewed monthly.

The butyl plant has optimized their flare procedures to run the flare at maximum efficiency (optimizing the heat profile of the flare) by operating at the optimum fuel/emission gas ratio. The additional fuel required to operate in this manner ensures maximum destruction of the gases being flared.

Acid and caustic wastes have been repurposed into neutralization chemicals for the Biox unit.

The company's liquid hazardous wastes are collected by an approved waste handler. If the waste is scheduled for incineration, then the 3rd party, selected by the above waste handler, must be approved by ARLANXEO.

The company tracks and is well aware of the amount of waste which is sent to landfill. They do not track the amount of waste that is recycled, repurposed, etc. compared to the total amount of waste generated. This may be a useful KPI to track.

### **Opportunity for Improvement**

To use the waste diversion rate as an annual KPI metric. The waste diversion rate compares the amount of waste diverted to disposed and generated.

#### **a. Emissions and Waste Reduction**

Covered in the main topic area, above

#### **b. Handling, Treatment and Disposal of Wastes**

Covered in the main topic area, above

### 2.1.5 Resource Conservation

Well established chemical processes don't often offer many opportunities to conserve resources. Nevertheless, improvements in quality usually means less raw materials are necessary for the same production output. This has been a continuous company pursuit that has demonstrated positive results over the last several decades. Recently a small step change was realized with a change in a production additive that significantly reduced waste.

As was previously mentioned the company use of printers and printer paper has been significantly reduced by combinations of lower employee count and advancement in portable, intrinsically safe tablet style computer use.

### 2.1.6 Promotion of Responsible Care by Name

The team observed that the company has enshrined this requirement into their management system (4.7.11.5). This has resulted in many observable references, from business cards to flags and posters indicating Responsible Care Verification. The site orientation video has excellent references to Responsible Care. It appears that every opportunity to promote Responsible Care is being made and in monthly (daily during COVID) safety meetings the Responsible Care Ethic and Principles for Sustainability were used as a topic.

From our conversations with employees, we believe Responsible Care is well understood but find that it is not readily understood to be an industry initiative that is intended to raise the performance of all CIAC members and result in safer communities. This and improvements in signage at the London facility are improvement opportunities to consider.

#### Opportunities for Improvement

To enhance Responsible Care signage in general and specifically in the entrance to the London R&D facility.

In London and Sarnia, to broaden Responsible Care internal messaging to achieve a greater general understanding about the industry wide nature of Responsible Care.

## 2.2 Team Observations Concerning Stewardship Code

### 2.2.1i Research and Development (R&D) Expectations (85-92)

The London R&D facility is a combination of a fundamental research facility, technical service lab (customer issues) and process support lab for the Sarnia, Texas and Belgium production plants. Customer and process issues take priority over pure research.

The Lab is well run and conforms to Responsible Care requirements. Examples of assessments leading to permanent change (chemical storage) and innovation to enhance processes (additives eliminating waste) were discussed.

With regard to sustainability, there is a recognition that society has moved beyond a 'cradle to grave' stewardship philosophy to 'cradle to cradle', that is, a circular economy. This is difficult to achieve with a rubber product as the molecule is particularly large and not as easily recycled as even plastics are. They have some limited involvement with industry associations related to rubber and tire products but as a major rubber producer the team believes the company should be active in the promotion of the circular economy.

#### Opportunity for Improvement

To promote a circular economy process when sourcing raw materials and evaluating products for reuse and/or recycling at the end of its life (e.g. cradle to cradle).

This site has a Responsible Care management system particular to its operation, and as such it is not part of the Sarnia Site management system. They contribute to an annual review with Sarnia so that they will be incorporated into the process that allows the CIAC signing executive to annually attest to the Responsible

Care implementation status of the company. Because the Sarnia Site and the R&D Lab are operating under separate management systems the team suggests that the Lab initiate a formal sign off of a local version of the attestation document and forward it for review and inclusion into the overall sign off. The process should be included in the local management system and a separate opportunity is presented in the Management System part of this report related to formalizing the signing executive sign-off process.

### **Opportunity for Improvement**

To formalize a RC review in London that will be used in conjunction with a similar review in Sarnia allowing the signing executive to confidently attest to the ongoing status of Responsible Care in ARLANXEO.

The R&D Lab has done a good job of integrating internal communication about Responsible Care into its routine activities and externally business cards have long included the Responsible Care logo. As was identified under Section 2.1.6 Promotion of Responsible Care by Name, there are opportunities to enhance internal promotion by ensuring employees recognize that Responsible Care is an industry initiative whose goal it is to achieve safer, more sustainable communities.

### **2.2.1ii Expectations beyond R&D (93-114)**

#### **2.2.2 Expectations with Respect to Other Parties (115-124)**

This area covers suppliers and sales.

##### **Suppliers**

Operating procedures have been in place for quite some time and govern all aspects of managing existing or obtaining new suppliers. All suppliers must be approved and must undergo an onboarding exercise prior to first shipment. MOC is used in the evaluation of a new potential supplier. (North American Supplier Requirements and Procedure, and the Form: Supplier HSSEQ Self-Assessment)

The broad topic of sustainability is covered in global purchasing instructions.

In general, supplier performance is very good, and trending is positive with many companies Responsible Care verified. As expected, there is constant company pressure in the supplier management program for improvements in cost and, as is expected under Responsible Care, safety and environmental performance.

ARLANXEO's predecessor company, LANXESS, joined with five other global chemical companies to form Together for Sustainability (TfS) in 2011. Currently some 26 companies subscribe to the initiative. It's main focus is a single standard for auditing and assessment in the supply chain with the intent of improving sustainable sourcing practices. TfS is open to all companies who subscribe to country Responsible Care initiatives and has partnerships with several of those initiatives although not with CIAC. Nevertheless, ARLANXEO's parent is moving in this direction which will offer one additional formal level of accountability in the supply chain.

##### **Sales**

Sales commitment to Responsible Care is one of ensuring that, after the contracts are signed, ARLANXEO is dealing with responsible partners. In the chemical sales community this has become a consistent theme. What is also trending is customer assessments of suppliers related to sustainability (that is, ARLANXEO being assessed for its sustainability practices).

The principal guidance for Sales is a SOP for the evaluation of new customers.

Because their product is rubber (some of which becomes chewing gum) they don't have the type of Responsible Care performance issues that can accompany the shipment of hazardous materials. Performance of the area comes down to reliable, stable rail shipments in a deeply cyclical business. A business transaction involves a disparate network of company and customer personnel within which Sales is the focus. The ongoing relationship can involve a complex chain of up and down communications

involving the customer, Sales, technical and operations representatives and others. The sales group finds that the company's practices related to empowerment and open communication works particularly well in these situations.

## 2.3 Team Observations Concerning Accountability Code

### 2.3.1 Operating Site Communities (125-136)

The company has limited its promotion of Responsible Care in the community to mostly site and ACAP activities. They fly the Responsible Care flag, have the logo on company vehicles and have an excellent safety and site orientation video for company visitors at the front gate. They don't use social media by corporate direction. They have an excellent process to continually involve students (and teachers) from their education partner in the ACAP.

Responsible Care guidance refers to the promotion of Responsible care throughout all code areas. The company has done an excellent job of internalizing their commitment as well taking opportunities to promote throughout their value chain. There may be more opportunities to promote Responsible Care with local peers via the company's SLEA (Sarnia Lambton Environmental Association) membership. SLEA is comprised of 18 local industries, mostly non CIAC members. It collects and distributes environmental information and also administers CVECO and CAER (recently combined under CAER). As the company is on the SLEA board it is well positioned to promote Responsible Care.

#### Opportunity for Improvement

To promote the establishment of a community advisory panel as part of CAER to assist SLEA in directing their efforts towards preparing programs that fit the public's needs regarding Community Awareness during emergencies but more importantly, as a place to find accurate, timely and effective information about member companies anytime.

ARLANXEO has a dedicated Community Advisory Panel (ACAP) which has been in place for many years. It is a well-functioning panel according to both ACAP membership and company personnel.

The team observed that the company might be taking some of its technical accomplishments for granted vis-à-vis their ACAP (and generally in the promotion of Responsible Care). What is common to the company is quite likely remarkable to a layperson. When the ACAP is asked for meeting topic suggestions it probably would not ask for an explanation of how the PSM program is dramatically improving plant reliability. Yet a layman's explanation of the process and results would link dramatic outcomes with the Responsible Care Ethic and Principles for Sustainability.

#### Opportunity for Improvement

To bring the company's new direction/focus on PSM to ACAP and also consider other company topics (i.e. interesting maintenance techniques and the lowering of risk tolerance).

ACAP and the Verification Team (being from the Sarnia/Lambton area) are pleased with ARLANXEO's efforts in bringing the Everbridge Pro notification system to the community. It is our consensus, however, that its rollout and implementation are too slow.

#### Opportunity for Improvement

To strongly lobby the CAER board to speed up the implementation of Everbridge Pro.

#### Successful practice.

Arlanxéo's initiative to install the Everbridge system for neighbours and anyone in the area interested in receiving updates and working with SLEA to incorporate the system throughout local industries is a successful practice.

ARLANXEO's management system manual (RCMSM) and their ACAP terms of reference (ToR) document both cover the topic of identification of stakeholders. The ToR includes US Residents from across the St. Clair

River from the plant and local First Nations residents as potential members of ACAP and currently both of these seats are vacant. The search to fill these positions should continue.

**Opportunity for Improvement**

To find a replacement for the US member on ACAP and search for an indigenous member.

The company is only intermittently active in TransCAER activities. Due to resource limitations, they have focused on ERAP (Transport Canada's Emergency Response Assistance Plans) compliance and the training of their own response team.

**Opportunity for Improvement**

To revisit TRANSCAER responsibilities and resolve to meet them

### 3. Team Observations on the Company Management System

The company's management system continues to be based upon a totally integrated system incorporating all of the company's commitments and requirements. The guiding document is titled "ARLANXEO Responsible Care Manual V9" and the document number is "SOP-0649".

The document serves as the systems manual for the company's official ISO certification and as mentioned in the last report, incorporates CIAC Responsible Care and corporate ARLANXEO requirements.

The team recommends some form of documentation describing the high-level details of the CIAC signing executive process for annual attestation for the Sarnia and London locations be included. The document should describe the expectations of the facilities in reporting to the signing executive such that both locations can ensure those expectations are met.

**Opportunity for Improvement**

To institutionalize the Signing Executive process for attestation by adding it to the Sarnia Responsible Care Systems Manual and the London management system perhaps as an output of the Management System Review.

The management system outlines how each section is implemented and, in some cases, documents the specific procedure used. As in:

4.7.9 Mandatory training in the fields of health, safety, environment and quality (HSEQ) is defined by job position. This training can include classroom, field and computer-based training in the different aspects of HSEQ. Specifically, HSE training requirements are laid out in ARL INC's SOP-0019 – Health, Safety & Environment Training Matrix.

This style is not used consistently through the document. The following is one example of the more prevalent style:

4.7.6.3 Purchasing. There are several SOPs that describe ARLANXEO's requirements in a purchase order or purchase contract. In particular, the products or services to be ordered are clearly outlined regarding: 1) product or service specifications and supporting resources; 2) qualification of personnel; and 3) the quality management system. Purchase orders or purchase contracts are reviewed and approved for adequacy of the specified requirements prior to release.

Our preference is for the former and recommend that as much as possible references to specific documents are given.

**Opportunity for Improvement**

To standardize the structure of SOP-0649 such that it consistently references the next level of documentation.

#### 4. Team Observations on the Responsible Care Ethic and Principles for Sustainability

There is an opportunity regarding the Responsible Care Ethic and Principles for Sustainability to consider formalizing on-going reporting to the ACAP (and employees) on progress on each of the 8 principles. This report would then be available to include in subsequent Verification Reports as a public update.

##### **Opportunity for Improvement**

To use the framework of the 8 topic areas in the Ethic and Principles for Sustainability to report progress to employees and ACAP and thus encourage a dialogue that could enhance further progress.

#### 5 Verification Team Conclusion

As a result of the examination conducted, and in consideration of the observations communicated within this report, the verification team is of the opinion that the Responsible Care Ethic and Principles for Sustainability are guiding company decisions and actions, and that a self-healing management system is in place to drive continual improvement. The team believes that the company is capable of applying that Responsible Care Ethic to the opportunities for improvement identified during the verification - summarized in “Summary of Verification Team Observations” at the beginning of this report and discussed in detail within the report. The verification is complete, and no further involvement is required by the verification team.

## Company Response to Verification Team Report

On behalf of ARLANXEO I have reviewed this verification report. The observations and conclusions contained in the report have been discussed with the verification team.

ARLANXEO will communicate the results of the verification exercise with its CIAC peers at their next meeting, and will discuss the verification results with our stakeholders, including those representing communities near our operating sites.

We will give consideration to the Improvement Opportunities identified by verification team and will assist the CIAC in communicating and sharing the identified Successful Practices to other CIAC members. Plans will be developed and implemented to respond to the Findings Requiring Action identified by the verification team. Our progress in implementing those plans will be discussed when preparing our Annual Statement of Re-Commitment to Responsible Care and communicated to the verification team at the time of our next verification.

A handwritten signature in blue ink, appearing to read 'JS', is positioned above the printed name and title of John Schmidt.

John Schmidt  
President and Site Manager  
ARLANXEO Canada Inc.  
April 20, 2021

## Interview Lists

## A: Company Personnel Contacted During Verification Process

Name	Position	Location
Chris Drope	HSE Advisor	Sarnia
Sarah Macklin	OHSE Manager	Sarnia
Peter West	Head TSS and HSEQ	Sarnia
David Knight	Engineering and Operations Manager – West Site	Sarnia
Steve LeBlanc	Account Manager (C4 – Olefins)	Sarnia
Kandarp Joshi	Head of Procurement: Sarnia Site	Sarnia
Christopher Ong	Head of Butyl Manufacturing	Sarnia
John-Rob Roy	Director of Operations	Sarnia
Christopher McCloskey	Production Engineer Manager – Butyl	Sarnia
Mark Drewitt	HSE and Training Supervisor – Butyl	Sarnia
Bryan Lucier	Lab and Quality Systems Manager	Sarnia
Monique Deschenes	Supply Chain Manager - Sarnia	Sarnia
John Strample	Maintenance Execution Manager – West Site	Sarnia
Micheal White	Maintenance Execution Manager – Butyl	Sarnia
Brian Mathews	Inspections Group	Sarnia
Marcio Rogerio	Head of Maintenance and Reliability	Sarnia
Patrick Dennis	Maintenance Scheduler	Sarnia
Tom Nisbet	HSE Advisor for Maintenance	Sarnia
Treena Crockett	OHS Advisor	Sarnia
Phoebe Yap	Industrial Hygienist	Sarnia
Leon Roegiest	HSE Advisor West Site	Sarnia
Florian Neumann	Supervisor Emergency Services and Plant Protection	Sarnia
Jamie Armstrong	Occupational Health Nurse (Lead)	Sarnia
Leon Roegiest	HSE Advisor for West Site	Sarnia
Joseph Lasowski	Environmental Engineer	Sarnia
Lucy Shen	Waste Water/BIOX Engineer	Sarnia

Gilles Arsenault	Chemist	London
Rayner Krista	Chemist	London
Adrain Murray	Chemist	London
Sharon Guo	Head Technical Services and Development	London
John Schmidt	President and CEO	Pittsburg, PA

#### **B: External Stakeholders Contacted During Verification Process**

Name	Position	Location
Kathy Alexander	Bluewater Health Foundation - Executive Director	Sarnia
Janet Doyle	St. Clair Catholic School Board - Coop Education Teacher	Sarnia
Piper Elliott	Grade 12 Student - GLSS	Sarnia
Marc Guilbeault	Lambton College Foundation and Alumni Association - Director	Sarnia
Carrie McEachran	Sarnia Lambton Rebound - Executive Director	Mooretown
Mary Jean O'Donnell	Self Employed - MJ Waste Solutions	Sarnia
Barbara Rogers	Occupational Health and Safety Coordinator	Sombra
Bela Trebics	Health and Safety Specialist	Wallaceburg
John Turvey	Wanstead Farmers Cooperative - General Manager	Petrolia
Bryan Boyle	Facilitator	Plympton-Wyoming





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