



RESPONSIBLE CARE[®] Verification Report

BASF Canada Inc.

October 11 - 14, 2016

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[®] 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 BASF Canada Inc. The verification was undertaken on September 9, 2016 at the Corporate Head Office in Mississauga Ontario and after included team visits to the Nisku, Alberta and the Saskatoon, Saskatchewan sites during the week of October 11 to October 14, 2016. The verification team also conducted interviews with other company personnel on the management system efficiency and with the community representatives of the Cornwall, Windsor and Toronto, Ontario sites and the Alberta Blackie site to inquire about the company Community Outreach practices and effectiveness. This is the seventh Responsible Care(RC) verification completed for BASF Canada Inc. The last verification was completed on October 15 to 18, 2013.

While considering all aspects of the Responsible Care Commitments during this verification the team placed an emphasis on conducting an in-depth examination of company aspects related to:

- Corporate Health, Safety and Environment (HSE) management procedures and site compliance to these procedures.
- The RC codes of practice cross reference document with applicable BASF procedures to ensure codes compliance.
- The Management of Change process (MOC) and its application.
- Process Safety Management (PSM), operating sites worst case scenarios and related emergency plans.
- Local sites Community outreach program and practices.
- Logistics management including road and rail transportation along with distribution and toll manufacturing activities.
- Key performance indicators (BASF Canada corporate and operating sites).
- Scrutiny of the corrective action plans to address the one Finding Requiring Action (FRA) and the "Opportunities for Improvement" (O.I.) highlighted in the 2013 RC report.

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. The team did not identify any "Finding Requiring Action" or, "Works in Progress", and believes that the company is capable of responding to the seven suggested "Opportunities for Improvement" highlighted in the report. The verification is complete and no further involvement is required by the verification team.

Signed: Marcel Émond
Verification Team Leader

Date: 1 December 2016

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:

Erika Harris
EHS & Responsible Care Specialist
telephone; 1-226-826-2187
e-mail; erika.harris@basf.com

SUMMARY OF VERIFICATION TEAM OBSERVATIONS

Findings Requiring Action

None to report

Works in Progress

None to report

Improvement Opportunities

O.I. # 1. The BASF guidance document on "Short Line" railways should be revisited to take into account the CIAC RC guidelines to evaluate the safety and security standards as well as performance of these rail carriers that could transport their products.

O.I. # 2. Site Outreach activities - The Plant Manager of the Nisku and Saskatoon sites should take the opportunity on their next Outreach communication exercise to discuss with their adjacent neighbours and obtain information on their emergency scenarios and how the BASF sites could be impacted during an emergency situation.

O.I. # 3. The hard copies of the Nisku site policies and procedures that are posted at the facility should be updated along with the latest published BASF corporate policies.

O.I. #4. The Nisku site "Orientation Program" should be reviewed to better promote Responsible Care in the same manner as the Saskatoon site "Orientation Program".

O.I. # 5. The Blackie site should review and formalise its community outreach program, community representative selection and communication schedule especially with the neighbours living close to the plant.

O.I. # 6. The Saskatoon site should evaluate the benefit of implementing trending data on reported "Near-Miss" and "Behaviour Based Safety" activities to proactively eliminate the related HSE hazards.

O.I. #7. BASF should evaluate the benefit of promoting Responsible Care by putting the RC logo on their own tank truck trailers.

Successful Practices

1. The BASF "9 Steps Management of Change" (MOC) procedure and its numerous application.

2. The BASF Kid's Lab chemistry program for elementary school students is delivered to communities where BASF operates across Canada, as well as Indigenous communities. The activities could be performed also at the request of one of their customers or service providers.

3. The BASF "ECO Efficiency" program offered to their customers to evaluate their product life cycle assessment and carbon footprint to improve their overall environmental performance.

4. As a result of the Cornwall outreach program and activities, the site has installed a wall to enhance the quality of life of their adjacent neighbours to address, noise and privacy concerns of adjacent residents.

5. The Saskatoon site production of step by step videos of all key operation activities to facilitate employee training with Standard Operating Procedures known as the BASF "Point of View " initiative.

- 6. The Saskatoon plant completed risk evaluation of all ergonomic positions for all employee tasks to alleviate injuries from repetitive movements (RULA /ERP program).**
- 7. BASF works with several Canadian universities to support research work and provide opportunities for CO-OP students to gain industrial expertise in the chemical field.**
- 8. The BASF Canada President's "Business Casual" program, which consists of meeting one on one with the employees, in an interview type setting to respond directly to their questions of interest.**

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 BASF Canada Inc. 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 are committed to do the right thing, and be seen to do the right thing.

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, BASF Canada Inc. must, every three years, participate in an external verification intended to:

1. 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;
2. Identify opportunities for assisting the company when benchmarking its own practices and performance against those of its peers, thus supporting continual improvement;
3. Contribute to the credibility of Responsible Care amongst company personnel and stakeholders, as well as the stakeholders of the broader industry;
4. Identify successful company practices that can be promoted to peers in the CIAC membership; and,
5. 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). BASF Canada Inc. 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, or by contacting CIAC Responsible Care Manager at glaurin@canadianchemistry.ca or (613) 227-6215 extension 233.

1.2 About BASF Canada Inc.

BASF Canada Inc. is a subsidiary of BASF SE with its head office in Ludwigshafen, Germany and is an Affiliate of BASF Corporation (USA) with its head office in Florham Park, NJ. BASF Canada Inc. is responsible for the governance of BASF Canada's operations and the development of the Canadian Market. The Canadian head office is located in Mississauga, Ontario.

BASF Canada operates on a shared services platform with BASF Corporation for the HSE and Logistic activities. BASF Canada operates several business units which reports into BASF Corporation. The main business units are Agricultural Solutions, Chemicals, Performance Products, Functional Materials & Solutions and Oil and Gas. Most BASF businesses operate by selling through BASF Canada to Canadian customers. A few businesses sell some products directly from the BASF Corporation to a customer or distributor in Canada.

In 2015, BASF's Canadian sales were about 1,63 billion dollars (CDN) and they have approximately 675 employees working in 11 production facilities and offices. Their production plants are located in Nisku and Blackie, AB, Saskatoon, SK, Toronto, Brampton, Windsor and Cornwall, ON and St-Leonard, QC.

Since the last RC verification in 2013, BASF has shut down the Smith Falls plant in Ontario and successfully and safely de-commissioned the site. Since the acquisition of the Nisku site the company worked to implement upgrades to meet BASF's building and equipment standards. The implementation was completed in 2013. They also closed the St-Laurent, QC sales office since the last verification. The Toronto and Cornwall sites were visited during the 2013 RC verification.

1.3 About This Verification

The verification of BASF Canada Inc. was conducted on September 9, 2016 at the head office and included team visits to the Nisku, AB and Saskatoon, SK plants from October 11 to 14, 2016 and for both plants, it was the first in-situ RC verification.

The verification team also conducted telephone interviews as required with other company personnel and some external stakeholders at locations the team was unable to visit. During the course of the verification, the team had the opportunity to interact with a wide range of company personnel, as well as stakeholders external to the company. Attachment 2 contains a list of those individuals interviewed and their affiliations.

This is the seventh verification exercise completed for BASF Canada Inc. All the BASF Canada operations are considered within the scope of this 2016 verification. The last RC verification was completed in October 2013.

The verification team was comprised of the following individuals.

Name	Affiliation	Representing
Marcel Émond	CIAC verifier	<i>Team Leader</i>
Ron Ormson	CIAC verifier	<i>Public-At-Large Verifier</i>
Gerry Mooney	Retired citizen community representative	<i>Saskatoon community</i>

2. TEAM OBSERVATIONS CONCERNING THE RESPONSIBLE CARE COMMITMENTS (CODES AND BENCHMARK AND COLLECTIVE EXPECTATIONS)

During the verification of BASF Canada Inc., the verification team looked for evidence that the company was addressing the expectations documented in the Responsible Care Commitments (i.e.; 152 code elements plus 28 benchmark and collective expectations). While considering all aspects of the Responsible Care Commitments, the team placed an emphasis on conducting a more in-depth examination of certain company aspects identified by the company or the team related but not limited to:

- Management of change (MOC).
- Process Hazards Analysis (PHA) including all sites worst case scenarios.
- Logistics operations including railway short line carriers and third party toller operations.
- Effectiveness of community outreach programs.
- Key performance indicators.
- Accident/incident/near-miss reporting and investigation with corrective action plans tracking.
- Alignment and compliance of the sites operation procedures with the corporate procedures and guidelines.

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 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 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 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 verification team has scrutinized the BASF's RC cross reference document which links each operation code of practice elements (OP-1 to OP-84) to key BASF procedures. We have made some spot observations of the documentation. Overall, it meets the Responsible Care code implementation expectations.

The company has detailed and comprehensive structures for direct management and for providing shared services to its manufacturing operations like Health, Safety and Environmental protection (HSE), Outreach and Logistics. The Corporate support (Canada/USA) is in place to provide guidance and direction on specific CIAC RC topics or for BASF required shared services that have to be in compliance with the CIAC RC specific requirements.

They also have an HSE internal audit process and each site is audited as per a set schedule. The verifiers have scrutinized some past corporate HSE site audits.

The company has an EHS score card with expanded performance indicators (8) and set corporate objectives (6). The indicators and set objectives are examined on a monthly basis.

For each visited site, the team has scrutinized some incident, accident and near-miss reports to confirm that the investigation, root cause finding and corrective action plan were completed. The team also scrutinized some MOC applications (i.e.; BASF's 9 steps MOC program) at each site to confirm the effectiveness of the process.

2.1.1 Design and Construction of Facilities and Equipment

The company has a well-defined capital project review process in conjunction with the MOC process. All the step by step activities are well documented (template) and necessary approval are required for each step. The documentation is kept in Lotus Note (EHS Portal) and available to all stakeholders. The MOC process is applied for all changes.

The BASF "9 Steps Management of Change" (MOC) procedure and its numerous application is considered a successful practice.

2.1.2 Operations Activities

The verification team used as a guide the codes of practice cross reference document and made numerous spot checks to ensure that the company had the required procedures and related practices to be in compliance with the code. At each site, we examined necessary standard operating procedures (SOP) for the key activities.

The company has several review processes in place and HSE audits are scheduled at set intervals. Each site is supported by a business HSE specialist that has access to the HSE corporate group as required. The sites that were visited have a quality control laboratory and the company regularly reviews its laboratory procedures. The laboratories housekeeping was above average.

The company has various corporate procedures for preventive and predictive maintenance work (PM) and these procedures are adapted to each site specific piece of equipment. The Nisku and Saskatoon sites have such a PM program despite being considered low risk plants. Each site has access to pre-qualified contractors approved by the BASF Corporate Procurement Group.

The team has examined the Logistics activities including rail and road transportation, distribution, warehousing and toller operations. The company has corporate procedures to select, approve and regularly check the ongoing performance of its third party contractors based on product handling and related risks (HAZMAT). The team has scrutinized some third party performance evaluations to ensure the process is managed as planned. All third party service providers are verified on a 2-3 year cycle depending on the nature of the product that is handled. Corrective action plans are tracked through to completion. BASF performs these verifications with a combination of their own personnel or retaining third party consultants. The toller verification process has been formally implemented since 2014 and BASF has not yet completed the first toller verification cycle but they are planning to complete it within the next 2 years. After examining the BASF corporate guidelines for short line

railway carriers, the verification team is of the opinion that it does not follow the CIAC rail guidelines to confirm the safety and security performance of its short line railway carriers (refer to article 2.2.2 in the report).

2.1.3 Safety and Security

BASF has a thorough and rigorous approach to all HSE matters and support the achievement of ambitious improvement goals. The "Journey to Excellence" and "Safety by Choice" are amongst programs and practices BASF use to drive and support culture change and continuous improvement initiatives in all business activities. BASF has a dedicated HSE specialist to support each business and site additional support is provided as required by the BASF Corporate EHS team members. BASF conducts regular and scheduled site EHS audits to identify and correct deficiencies. Corrective action plans are followed through to completion.

Each site has a nominated Security Officer and each site has performed a site vulnerability assessment (SVA) that includes malicious intent such as cyber terrorism. Corrective action plans were completed at both operating sites visited by the verification team. They have access to an E-learning program for employee security awareness.

The company has excellent programs related to HSE. The visited sites housekeeping is excellent. The safety culture is well-entrenched as demonstrated by discussions with the various floor employees working in operational areas of the facility. The industrial hygiene programs are tailored toward specific aspects of each operations at both the Nisku and Saskatoon sites. The HSE programs are comprehensive and encompass new issues such as mental health awareness. The Nisku site was acquired by BASF in 2006, and the site itself has had no reportable accident since 1980.

The company has a rigorous system to identify and report incidents, accidents and near-misses. This system includes thorough investigation and root cause finding analysis with corrective action plans and tracking to completion with the AIM software. Data is available to all concerned employees. The team has scrutinized several reports at each site. The Saskatoon site has started a "behavior base safety" program (BBS) on employee safety habits and started to report events. Presently, the site does not trend data from near-miss and BBS activities in order to facilitate the identification of re-curing safety hazards.

O.I. # 6. The Saskatoon site should evaluate the benefit of implementing trending data on reported "Near-Miss" and "Behaviour Based Safety" activities to proactively eliminate the related HSE hazards. It could be applied to the other sites.

To facilitate ongoing awareness of key operational tasks, the Saskatoon plant has developed a web- based refresher training system on key standard operating procedures(SOP). To eliminate ergonomic related injuries, they also apply a "risk based" approach to identify and correct noted deficiencies due to repetitive movements (RULA & ERP).

The Saskatoon site production of step by step videos of all key operation activities to facilitate employee training with Standard Operating Procedures known as the BASF "Point of View " initiative is considered a successful practice.

The Saskatoon plant completed risk evaluation of all ergonomic positions for all employee tasks to alleviate injuries from repetitive movements (RULA /ERP program) is considered a successful practice.

The company's standards and practices for process safety management (PSM) meet the Responsible Care code and the "Process Safety Management Guide 4th Edition for Implementation Expectations". The BASF process safety management system includes corporate global directives to establish minimum requirements for each

plant on process safety. This management system involves periodic reviews with specifically defined documentation.

The visited sites had Emergency Response plans and they had identified their operational risks and worst case scenarios and communicated it to the local first responders. All sites are supported by the Corporate HSE personnel (24/7 hot line) in case they have to respond to an emergency and need additional support. This support includes also assistance from BASF's corporate communication team.

The company has established business-specific continuity plans. These plans account for potential disruptions to both productions and product supply to customers. Alternative product supplies are identified with the BASF supply chain. The critical infrastructure and business continuity plans are managed globally by the BASF Group along with each business entity.

2.1.4 Environmental Protection

BASF has a thorough and rigorous approach to all HSE matters. It supports the achievement of ambitious improvement goals. As noted above, the "Journey to Excellence" and "Safety by Choice" are amongst programs and practices to drive and support culture change and continuous improvement initiatives in all business activities. BASF has a dedicated HSE specialist to support each business and site operations. BASF conducts regular and scheduled site EHS audits to identify and correct deficiencies. Corrective action plans are followed through to completion.

The Environmental protection approach is integrated with the Health and Safety practices. Please refer to section 2.1.3 of this report for additional comments.

Globally, the BASF Group has a strong commitment for reducing its global greenhouse gas emissions by 25% per M. tons of sales products on a worldwide basis and each site and each business has to contribute to the 40% global reduction goal by 2020 (benchmarked on 2012 data). This initiative is also linked to their resource conservation program and carbon footprint reduction activities. Each site reduction improvement is tracked with a KPI on a score card.

The BASF Group has a stated goal to prevent and reduce waste. All wastes contractors are approved by the corporate supply chain department. Each site has a waste reduction program with a goal of zero discharge. All the wastes production is tracked for optimal reduction.

The Nisku and Saskatoon sites are classified as low emission plants and their air emissions are solely due to their heating requirements. Water washes from the process vessels at the Nisku site are recycled up to 95% and are used in multiple product batches. The waste water washes (5%) are minimized and sent for disposal at a BASF approved waste contractor site. The Nisku site has implemented a "Raw Material" tote recycling program. They are using them (100%) for the delivery of their products to their customers thus eliminating the need to send them to recycling or disposal as waste.

2.1.5 Resource Conservation

The BASF Group has a comprehensive corporate sustainability direction which include multiple goals for resource conservation. The company objective is to review on a continual basis all their products for all its businesses in order to reduce their environmental footprint. As an example, a global objective is to produce more efficient products to reduce energy consumption and more effective products that require less product demand. An example is their BASF construction business ad-mix product additives which are used to produce a stronger concrete for lower usage by project. (Down by 40%).

The company has also initiated partnership with their customer to extend their ECO Efficiency internal study to help their customers to reduce their environmental footprint in their product life cycle. Up to now they realized some 600 studies, most of them in collaboration with their customers. These studies drive innovation solutions on environmental and human impact. It also permits BASF to advise their customers on how to use their products more effectively.

The BASF "ECO Efficiency" program offered to their customers to evaluate their product life cycle assessment and carbon footprint to improve their overall environmental performance is considered a successful practice.

2.1.6 Promotion of Responsible Care by Name

BASF Canada takes many opportunities to promote Responsible Care by name with their suppliers, service providers, customers and different stakeholders. The general public has access to the BASF Group and BASF Canada web sites where BASF clearly explains how RC is an integral part of their daily activities and business objectives.

The verification team has scrutinized several site activities and procedures with respect to the promotion of Responsible Care.

Several of the Nisku site posted policies were dated from 2006/2007 while some corresponding corporate policies were dated from 2015/2016.

The Nisku site contractor orientation program is comprehensive but its RC content is less detailed and thorough than the one currently in place in Saskatoon.

The company tank truck trailers servicing the Nisku site did not have the RC logo printed on their tank.

O.I. #3. The hard copies of the Nisku site policies and procedures that are posted at the facility should be up-dated along the latest published BASF corporate policies.

O.I. #4. The Nisku site "Orientation Program" should be reviewed to better promote Responsible Care in the same manner as the Saskatoon site "Orientation Program".

O.I. #7. BASF should evaluate the benefit of promoting Responsible Care by putting the RC logo on their own tank truck trailers.

2.2 Team Observations Concerning Stewardship Code

The verification team scrutinized the RC cross reference document which links each Stewardship codes of practice elements (ST-85 to ST-124) to key BASF procedures and has made some spot observations of those documents. Overall, the company's procedures address the Responsible Care code implementation expectations.

The Company meets or exceeds the Stewardship code implementation expectations and was an active association partner in drafting the initial code elements.

2.2.1 Expectations of Companies

The company has a comprehensive process and rigorous management follow up in; all research and development phases, stewardship activities with their suppliers and customers and other activities through the value chain. This includes the promotion of RC and the compliance to specific code elements for their service providers, suppliers and customers, as required.

The company uses a comprehensive "Phase Gate" process to initiate manage and eventually transfer research projects through manufacturing.

The BASF Group is actively involved in research projects leading to reduce or replace fossil fuel base raw materials with those sourced from renewable resources.

Since 2014, the company has implemented a HSE verification process for its numerous "tollers" and the first round of verification work is well underway. The verification process is based on the risk characterization of the raw materials and/or the tolling process. All site verifications are made with a set verification template. These verifications are performed by BASF personnel or by a third party service provider.

BASF Canada takes many opportunities to promote Responsible Care by name with their suppliers, service providers, customers and different stakeholders. Contracts for customers and service providers have a Responsible Care clause that states obligation with respect to RC Principles and also for compliance with some specific BASF HSE requirements. The company's basic products' information (e.i.; SDS) are available on the company web site. The company also provides numerous product handling training courses to assure that their customer properly and safely handle their products.

2.2.2 Expectations with Respect to Other Parties

The verification team has scrutinized the company's service providers verification process to confirm compliance to BASF guideline, rules and RC code related elements. The company uses third party verification consultants. Reports from these consultants are available on request. All verification findings are followed up by the responsible BASF individual. On a 2-3 year cycle BASF verifies its carriers, leased terminals and contract warehouse/packaging operations. Since 2014, all their toll manufacturing sites are included in that verification program. The waste contractors are also audited along with the raw material suppliers to assure the safe handling of these waste chemicals.

The team has scrutinized the BASF railway guidelines from an HSE point of view. With respect to the short line railway policy, it was noticed that the BASF guideline does not take into account the content/spirit of the CIAC guideline document for railway safe product handling. At the time of the verification, it was unclear if BASF is using short line railway itself or that the contracted class 1 railway (e.i.; CP or CN) are using (by subcontract) some of them to carry their products on their behalf.

O.I. # 1. The BASF guidance document on "Short Line" railways should be revisited to take into account the CIAC RC guidelines to evaluate the safety and security standards as well as performance of these rail carriers that could transport their products.

2.3 Team Observations Concerning Accountability Code

The verification team has scrutinized the RC cross reference document which links each Accountability Code of Practice elements (AC-125 to 152) to key BASF procedures/practices and made some spot observations of those documents. The company fully meets the Responsible Care code implementation expectations.

The company has an outstanding community dialogue and outreach program. It maintains guidelines for all plant sites that correspond to the risk profile of their products and operations. To that end, the company has developed a specific performance standard (ES-5416). That standard is clear and concise. It defines responsibilities and accountabilities for compliance to all outreach-related code elements and specifies what is required to meet those expectations. BASF also has specific site community brochures that are distributed to local residents. Those brochures explain the site risks and how to cope with an emergency situation if it occurs.

Plant site individuals who are responsible for the community outreach communication must report to the corporate head office on any community concerns. In addition, the corporate HSE personnel are closely involved in supporting the site outreach communication. All the sites conduct "Open House" session for their residents on a 2-3 year interval to familiarize interested stakeholders with their operations and to answer their questions and concerns.

The company also has a Social Responsibility policy and a corresponding Code of Conducts that is rigorously implemented.

2.3.1 Operating Site Communities

The team assessed the Nisku and Saskatoon community outreach program and communicated with the community representatives selected for the following sites; Nisku and Blackie AB, Windsor, Toronto and Cornwall, ON. All community representatives were satisfied and appreciative of the communications efforts by the company except the one for the Blackie site. The community representative for the Blackie site had some concerns about the quantity of information that was given to him especially after an electrical fire that occurred at the plant last year. A discussion with the Blackie site BASF representative highlighted some discrepancy between the community representative communication expectations of the nearest neighbors and the communication efforts by the BASF site representative. After scrutiny of the annual outreach efforts in Nisku and Saskatoon, it was noted that the company would benefit by more fully understanding the operations of their adjacent neighbors and assessing if some of their adjacent industrial neighbors emergency situations could affect their own plant. The Saskatoon site has just joined the Saskatoon CAP in June 2016 along with two other industry participants that are CIAC members (ERCO/Akzo Nobel).

O.I. # 2. Site Outreach activities - The Plant Manager of the Nisku and Saskatoon sites should take the opportunity on their next Outreach communication exercise to discuss with their adjacent neighbours and obtain information on their emergency scenarios and how the BASF sites could be impacted during an emergency situation.

O.I. # 5. The Blackie site should review and formalise its community outreach program, community representative selection and communication schedule especially with the neighbours living close to the plant.

As a result of the Cornwall outreach program and activities, the site has installed a wall to enhance the quality of life of their adjacent neighbours to address, noise and privacy concerns of adjacent residents. The team considered this project a successful practice.

2.3.2 Other Stakeholders

The code elements representing this area have been implemented by various functional areas within the company. The Nisku and Saskatoon site managers have maintained contact and communication with the local authorities as required.

BASF senior management personnel participate actively in the CIAC annual parliamentary day and are active in their Regional Leadership Group that have regular contacts/meetings with the Provincial and/or Federal ministry representatives.

The BASF Canada President takes every opportunity to talk about and promote Responsible Care when he talks or meets the various financial institutions, universities and other organizations.

BASF has developed a chemistry education program for elementary school students for a better understanding of chemistry and the related HSE requirements for a safe handling approach. It is delivered to schools in the communities where BASF operates, as well as Indigenous communities.

The BASF Kid's Lab chemistry program for elementary school students is delivered to communities where BASF operates across Canada, as well as Indigenous communities. The activities could be performed also at the request of one of their customers or service providers. This is considered a successful practice.

BASF is collaborating with multiple Canadian universities throughout the country in several research programs related to their sphere of activities. The company also supports universities that have a student co-op program by periodic hiring of the student to the work force.

BASF works with several Canadian universities to support research work and provide opportunities for CO-OP students to gain industrial expertise in the chemical field. This is considered a successful practice.

In Canada, BASF does not have a direct retail consumer presence but it does sell directly into end use application such as aftermarket paints and several building materials such as polyurethane applications. They also have numerous products that are used by the agriculture sector such as pesticides, insecticides and plants nutrients. They supply technical advice or services for all their products.

At the local level, BASF personnel participate in the Regional TRANSCAER committee activities.

The general public can reach (by email or phone) a BASF company representative by following the instructions on the web site home page of BASF Canada. Site managers participate as required in the municipal associations (e.i.; trade or economics) by attending meetings.

3. TEAM OBSERVATIONS ON THE COMPANY MANAGEMENT SYSTEM

It is a requirement of Responsible Care that companies have a documented, self-healing management system or systems capable of identifying and responding to deficiencies and otherwise supporting continual improvement across all company business units, functions, and sites and as a framework for implementing the Responsible Care Commitments.

The verification team studied BASF Canada Inc. management system(s) and compared and contrasted the attributes of that system(s) to those of a self-healing overall management system as discussed in the CIAC Management System Guide. The verification team's related observations to the company management system(s) are as follows:

The BASF Group Management System has a Global (worldwide) approach based on RC principles and as required is adapted to be region specific. It addresses a more stringent approach as opposed to the regulations. On an annual basis, the EHS leaders review the management of the 152 code elements to confirm compliance to the RC process. Noted deficiencies are corrected as required.

3.1 Observations on the PLAN Step

During the "PLAN" Step of the management system, the company decides what the goals of the company are and how they will be met. In determining those goals, it is expected the company will look inward, across its operations, but will also look outward, considering the expectations of: stakeholders; regulatory requirements; relevant CIAC Responsible Care Commitments and supporting tools; and other industry benchmarks. In considering the PLAN Step of the BASF management system, the verification team observed the following:

The company has multiple processes at all management levels of the organization and in all business activities for effective long term planning, effective goal setting and continual improvement activities. All the key activities are tracked on a score card as Key Performance Indicators (KPI).

Improvement activities or global goals are initiated by the BASF Group or the Business Centers and distributed through the organization. BASF has several projects on safety and sustainability to improve its performance and reduce its carbon footprint. Their three sustainability pillars are; smart energy (renewable), food (agriculture/nutrition) and urban living (quality of life/construction related products).

BASF continuously implements corrective action plans to correct HSSE internal and external audit outcomes and deficiencies as observed.

The BASF Group has continuous research and development projects and a defined budget for capital expenditures at the business and local plant level for continuous improvement.

Each business line and operations sites have an employee development program with tasks and technical training as required.

BASF makes an outstanding effort in promoting the Responsible Care policies and guidelines at all levels with their suppliers, customers and some specific stakeholders.

N.B. For some specific examples please refer to the comments written in the Section 2 of this report.

3.2 Observations on the DO Step

During the "Do" Step in the management system, the company converts the decisions of the PLAN Step into action and ensures awareness and understanding by all involved. It is expected that the company will implement an organizational structure, assign responsibilities to appropriate personnel, supply sufficient training and resources to execute planned actions, develop and document standards, procedures and programs, as applicable.

In considering the "DO" Step of BASF Canada management system, the team observed the following:

BASF's Responsible Care fundamentals are the same around the world for all the countries in which it operates and for all of its businesses. The BASF Corporation and BASF Canada have the same management structure and approach. Both entities assure the compliance to the Responsible Care code elements. The HSSE activities are managed by a centralized corporate group and all business units. Operation sites must be in compliance with the corporate HSSE procedures and practices.

HSSE KPI's are monitored monthly and corrective action plans are triggered as required. BASF Canada has a Responsible Care Coordinator who is responsible for code elements compliance and who is supported by an EHS specialist for each business.

The company conducts regular site and business HSE audits along with financial and security audits as required.

BASF has a career planning program that is coupled with specific training topics (general to technical) to enhance the work force and individual knowledge.

All the necessary procedures and guidelines are available to manage the various business lines. Information on operations, sales and logistics activities are available electronically to all concerned employees.

BASF has a comprehensive cross-reference document that links all BASF procedures/guidelines/practices to all code elements to assure compliance with the RC codes of practice and the 152 code elements.

The BASF Canada Inc. president does frequent operation site visits to engage all employees about the importance of the company's business activities, including HSE. He takes that opportunity to engage in discussions with any employee on any topic he/she would like to discuss.

The BASF Canada President's "Business Casual" program, which consists of meeting one on one with the employees, in an interview type setting to respond directly to their questions of interest, is considered a successful practice.

3.3 Observations on the CHECK Step

During the "CHECK" Step in the management system, actions carried out in the DO Step are assessed to determine if they are actually being carried out according to plan, and whether they are achieving the desired outcomes and delivering continual improvement. Here, the overall management system and components will be reviewed along with employee competences for assigned responsibilities, internal and external audits will be undertaken, incidents will be assessed to identify root causes, and performance measurement will be conducted and reviewed.

In considering the Check step of BASF Canada Inc.'s management system, the team observed the following:

The company has comprehensive processes to measure and monitor performance against goals, in particular, its Responsible Care score card that keeps track of all programs on a quarterly basis and that provides indices to meet company commitments. The HSE program has a similar score card that is monitored on a monthly basis.

BASF uses a mechanism of internal audits to assure compliance with its HSSE activities. This includes a combination of internal and external audits by third party assessors to verify the HSE performance of its contracted services providers.

Also, on a regular basis the specific business HSE specialist will assure/confirm the compliance of the HSE procedures and guidelines with actual company practices.

3.4 Observations on the ACT Step

During the "ACT" Step in the management system, the company translates the results of the CHECK Step into corrective actions for improvement. This includes revisiting the PLAN Step to decide whether changes are needed to the company's stated goals or action plans, policies and procedures for achieving those goals. Considerations when examining the ACT Step include whether and how: audit and review findings are responded to; performance is communicated internally and externally; employee and contractor performance is rewarded or corrected, etc.

In considering the Act step of BASF Canada Inc.'s management system, the verification team observed the following:

The company has a comprehensive software that is used to record all incidents, accidents, near-misses, MOC and audit findings. With that software, they monitor the related corrective action plans to ensure follow up and completion. Any delay in a completion date is flagged and an adjustment is made as deemed necessary. The information is available to the concerned employees.

The Responsible Care score card is reviewed on a quarterly basis and an annual review is conducted by the Responsible Care Steering committee to confirm the RC compliance activities that will result in the annual RC

recommitment by the CEO. They also have an annual review of the management system for the businesses and the operation sites.

4. TEAM OBSERVATIONS ON THE RESPONSIBLE CARE ETHIC AND PRINCIPLES FOR SUSTAINABILITY

Each CIAC member company is formally committed to the ethic of “*Doing the right thing, and being seen to do the right thing.*” This ethic, along with the principles for sustainability is expected to guide the company’s decision making and practices. In conducting the verification, the team is looking to understand how well the ethic is understood and adopted within the company, and the degree to which the principles inform the manner in which the company does its business.

The verification team carefully observed BASF Canada Inc.'s decision making processes and actions and compared and contrasted the attributes of those with the attributes of a company guided by the Responsible Care Ethic and Principles for Sustainability as discussed in the Responsible Care Commitments (Appendix E). The verification team’s related some observations of the company’s application of the *Responsible Care Ethic and Principles for Sustainability* and they are as follows:

The company has a comprehensive "Code of Conduct" which is applicable to its suppliers, service providers, customers and all its employees.

BASF's corporate goals are clearly identified on its web site with annual reporting of its progress and achievement on sustainability issues, environmental footprint reduction and resources conservation (e.g.; walk the talk).

BASF Group key business objectives are to replace on an ongoing basis their raw materials with renewable sources when technically feasible.

BASF Canada Social Responsibility involvement in the education sector by such activities like the "Kids Lab" program and continuous support to Universities with their "know how" transfer (technical/resources).

BASF Canada supports of their suppliers and customers by voluntarily helping them to improve their environmental footprint through the "ECO Efficiency" program.

BASF Canada's multiple activities and gestures to support RC and promotes its benefits to their customers, suppliers and key stakeholders in the community. Its multi-year work on the comprehensive ecological restoration of a wastes storage site at Fighting Island, Ontario is an example of that commitment.

BASF's rigorous HSE approach to all its activities and rigorous monitoring and identifying multiple opportunities for improvement along with capital funding.

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 responding to the range of improvement opportunities identified during the verification, as summarized in the Executive Summary and discussed in detail in the report. The verification is complete and no further involvement is required by the verification team.

CIAC Verification Team Leader:

Marcel Emond

COMPANY RESPONSE TO VERIFICATION TEAM REPORT

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

As BASF works towards a sustainable future, we are committed to Responsible Care. The health and safety of our employees, communities and the environment remains our highest priority. We thank the verification team for conducting a thorough review of our processes and for providing recommendations for continuous improvement.

BASF Canada 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.



Marcelo Lu
President
BASF Canada
December 2, 2016

INTERVIEW LISTS

A: Company Personnel

Name	Position	Location
Marcelo Lu	President	Mississauga Ontario
Peter Dulik	EHS Hub Manager OH,MI, Canada	Wyandotte, MI, USA
Bradley H. Roy	EHS Team Leader, MI/OH	Whitehouse, Ohio, USA
Brett Rajkumar	EHS Team leader, Canada	Windsor Ontario
Erika Harris	EHS & Responsible Care Specialist	Windsor Ontario
David M. Peters	EHS Senior Specialist	Mississauga, Ontario
Craig Cummings	Site Manager Nisku Site	Nisku , Alberta
Mark Timbres	Plant Manager Saskatoon Site	Saskatoon, Alberta
Jonathan Sherman	EHS Specialist	Saskatoon/Nisku*, Alberta
Murray Yourkowski	Production Manager	Saskatoon, Alberta
Allison Gallinger	Regulatory Product Manager	Saskatoon, Alberta
R.R. Piran Cargeeg	Product Development Manager	Saskatoon, Alberta
Lauri Simonson	Quality Assurance Manager	Saskatoon, Alberta
Chris Gurney	Production, Supervisor	Saskatoon, Alberta
Ashley Moskwa	Supply Chain Coordinator	Saskatoon, Alberta
Tom McGourty	Manager Safety & Security	Florham Park, NJ, USA
Greg Elkins	Logistics & Procurement Manager	Mississauga, Ontario
Esther Lawrence	Senior Transportation Support Specialist	Mississauga, Ontario
Tom Vandemoortele	EHS Team Leader	Mississauga, Ontario
Jamie Apfelbeck	Internal Communications Manager	Mississauga, Ontario
Lauren Reid	Communications Specialist	Mississauga, Ontario
Anthony Raffaelli	Regional Security Manager	Florham Park, NJ, USA
Bruce Uhlman	Product Steward Team Leader	Florham Park, NJ, USA
David DiMarcello	EHS Center of Expertise Manager	Angleton, TX, USA
David White	EHS Emergency Response Manager	Florham Park, NJ, USA
David Williams	Senior EHS Specialist	Angleton, TX, USA
Diana Rourke	Cornwall Site Manager	Cornwall, Ontario
Elgina McCoy	Senior EHS Audit Specialist	Wyandotte, MI, USA
Joanne Livote	Corporate Medical Director	Florham Park, NJ, USA
Jodi Visco	Manager EHS Product Stewardship	Florham Park, NJ, USA
Dean Clevett	Manager Technical Engineering Services	Windsor, Ontario
Kent Jennings	Toxicology/Biotech Manager	Mississauga, Ontario
Lenora Kline	Procurement Governance Manager	Florham Park, NJ, USA
Jeff Lieb	Senior EHS specialist	Belvidere, NJ, USA
Kavesseri Raja Ramanathan	Human Resources Business Partner	Mississauga, Ontario
Kevin Sullivan	EBN Operations Manager	Beachwood, OH, USA
Stuart Lawton	Treasurer/ Taxation Manager	Mississauga, Ontario
John Mucciaccio	Divisional Sales Manager (EB)	Brampton, Ontario

B: External Stakeholders

Name	Company / Organization	Position	Location
Tim Underwood	Terra Impact Management Inc.	Community rep.	Nisku, Alberta
Sheila Duke	Retired citizen - CAP	Community rep	Windsor, Ontario
David Cederta	Retired citizen	Community rep.	Blackie, Alberta
Zig Maleszwski	Retired citizen	Community rep.	Toronto, Ontario
Jason Jesmer	Retired Citizen - CAP	Community rep.	Cornwall, Ontario



CHEMISTRY INDUSTRY ASSOCIATION OF CANADA

Suite 805, 350 Sparks Street

Ottawa (ON) K1R 7S8

T: 613 237-6215 F: 613 237-4061

www.canadianchemistry.ca