



RESPONSIBLE CARE[®] Verification Report

Shell Chemicals Canada

May-June 2017



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[®] 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

The scheduled 2016 verification of Shell Chemicals Canada was completed in June 2017. The delay was due to unforeseen circumstances unrelated to the verification process or the company's commitment to Responsible Care. The verification consisted of a three day visit to the Scotford AB facility on May 30th, 31st and June 1st. and a two day visit to the Sarnia ON site on June 6th and 21st. The verification involved a site tour at each location, interviews with senior management, functional managers, wage roll employees and applicable representatives from the respective communities. This was the seventh verification of Shell Chemicals Canada. This verification focused on the presence of applicable Responsible Care management systems, areas of focus suggested by the company and current CIAC verification focus areas. The verification did not include a detailed review of the entire 152 Responsible Care Code elements.

As a result of this verification process "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. There were not any Findings Requiring Action noted during this verification.

There were eleven Opportunities for Improvement, one Work in Progress and six Successful Practices identified by the verification team.

The team believes that the company is capable of responding to the improvement opportunities identified during the verification and complete the "work in progress" related to community dialogue and risk communication.

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



Signed: _____

Date: August 1st, 2017

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

Findings Requiring Action:

There were not any Findings Requiring Action noted during the verification.

Works in progress:

There is a work in progress at the Sarnia site to revise the Community Dialogue management system based on the planned bi-annual community survey. Although specific Shell Chemical plant risk scenarios do not progress beyond the site fence line the general public does not differentiate embedded facilities from the refinery should an event occur. The team has listed an Opportunity for Improvement in relation to the proposed management system revisions which are in line with both Responsible Care and the Shell commitment to sustainability.

Improvement Opportunities:

1. There is an Opportunity for Improvement at the Sarnia site utilize the (planned) bi-annual community survey to include questions concerning people's knowledge of action required in the event of an on-site emergency (shelter in place) and how many people in the survey subscribe to MYCNN. In addition, similar surveys could be promoted within the CAER membership.

2. There is an Opportunity for Improvement, at both the Scotford and Sarnia sites, to inform residents and community organizations surrounding each site how to access the CIAC website to view applicable Responsible Care verification reports and other information about Responsible Care.

3. There is an Opportunity for Improvement at the Scotford site to share Health, Safety, Security and Environmental best practices with the Northeast Capital Industrial Association member companies.

4. There is an Opportunity for Improvement at the Scotford site to post Responsible Care information and updates in the chemicals area process control building. Employees report directly to this facility when beginning their work day and they may not be exposed to Responsible Care information postings elsewhere on the site.

5. There is an Opportunity for Improvement at the Scotford site to consider the benefits of developing a Shell specific Community Advisory Panel (CAP) with the objective of developing an effective two-way dialogue process as a method to receive regular community input on issues important to the community. The current outreach processes are viewed as information venues as opposed to a venue for two-way community dialogue.

6. There is an Opportunity for Improvement at the Sarnia site to consider the benefits of developing a Shell specific Community Advisory Panel with the objective of developing an effective two-way dialogue process with the residential and business neighbours, in close proximity to, the manufacturing site. Local site-specific issues and two-way dialogue can be lost in the community-wide objectives of Sarnia CAER and the Bluewater CAP.

Team note: Other CIAC member companies have developed effective "mini" CAPs with three to five members from the community.

7. There is an Opportunity for Improvement at the Sarnia site to utilize the annual newsletter for sharing site waste management and resource conservation metrics with the community.
8. There is an Opportunity for Improvement at the Sarnia site to post to the SMC internal webpage of Royal Dutch Shell, for required viewing by site employees, the video of Royal Dutch Shell CEO Ben van Beurden (at the time of the video Executive Vice President of Shell Chemicals) extolling the virtues of Responsible Care as a management philosophy.
9. There is an Opportunity for Improvement at the Sarnia site to share site risk information with other CIAC member companies in the area.
10. There is an Opportunity for Improvement at both the Scotford and Sarnia sites to consider the possible implications of extreme weather in assessing site risks.
11. There is an Opportunity for Improvement to align the document mapping (cross referencing) comparison of the 152 Responsible Care Codes and Shell HSSE Control Framework and the site's Management Systems and identify and address any remaining gaps.

Successful Practices:

1. Shell Chemicals, the parent company of Shell Chemicals Canada, has produced a video, featuring Royal Dutch Shell CEO Ben van Beurden (at the time of the video Executive Vice President of Shell Chemicals) extolling the virtues of Responsible Care as a management philosophy.
2. Over the past three years Shell chemicals Canada, represented by Mike Drumm, have invested financial and human resources to support and improve the viability and performance of the CIAC TransCAER support mechanism.
3. On a global scale, if employees are travelling on company business meeting the required criteria, Royal Dutch Shell requires they develop a Journey Management Plan to ensure a safe journey supported by the appropriate rest periods. Journey Management Plans are also a requirement for drivers of third party trucking companies contracted by Shell Chemicals.
4. At both the Scotford and Sarnia sites, as a methodology to improve contractor safety performance during turn around operations, individual managers are assigned safety mentoring responsibilities for specific individual contractors.
5. At the Sarnia site, as part of continuous site safety improvements, "Sarnia, Our Way" Safety Leadership Journey was implemented in 2016. Performance metrics, shared with the verification team demonstrated measurable improvements in site safety performance. The team suggests featuring a presentation on this management system at a CIAC Safety & Health Analysis Recognition & Exchange network meeting.
6. At the Sarnia site, volunteers from the Shell Economics and Scheduling department and the Project Development department participated in a program entitled "Return the Landscape" in conjunction with representatives from Aamjiwnaang First Nations. This program selected wild plants native to the area and a local greenhouse maintained by the Aamjiwnaang cultivated the plants for sale to the public thus saving these native plants from extinction.

INTRODUCTION

About Responsible Care Verification

As a member of the Chemistry Industry Association of Canada (CIAC), the most senior executive responsible for Shell Chemicals Canada 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

As an element of this commitment to Responsible Care, Shell Chemicals Canada 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). Shell Chemicals Canada 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 the Director, Responsible Care at CIAC glaurin@canadianchemistry.ca or (613) 237-6215 extension 233.

Verification Team Members

Name	Affiliation	Representing
Cameron Dillabough	CIAC	<i>Team Leader</i>
David Powell	CIAC	<i>Community at large representative</i>
Stan Ouellette	Sarnia Community Representative	<i>The Sarnia & Corunna Communities</i>
Don Moman	Scotford Community Representative	<i>The Scotford Community</i>

About Shell Canada Chemicals:

Shell Chemicals Canada (SCC) was founded in 1997 and is based in Calgary Alberta. Shell Chemicals Canada operates as a subsidiary of Royal Dutch Shell PLC based in the Netherlands. SCC produces styrene, ethylene glycol and isopropyl alcohol at manufacturing sites in Scotford Alberta and Sarnia Ontario.

For additional information: www.shell.com/business-customers/manufacturing-locations

About This Verification:

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

Operations Activities

The requirements and expectations of the CIAC Responsible Care Operations Code, such as an effective and proactive process safety management system, are addressed by the Shell “Down Stream Manufacturing” Management System. This management system is very comprehensive and has as a management system component a requirement for a self-healing Plan, Do, Check and Act continual improvement process. The verification team has noted two Successful Practices pertaining to this area.

Successful Practices:

(2.) Over the past three years Shell Chemicals Canada, represented by Mike Drumm, have invested financial and human resources to support and improve the viability and performance of the CIAC TransCAER support mechanism.

(4.) At both the Scotford and Sarnia sites, as a methodology to improve contractor safety performance during turn around operations, individual managers are assigned safety mentoring responsibilities specific individual contractors.

Safety and Security

There are appropriate and comprehensive management systems in place at the Scotford and Sarnia sites to support the Shell Chemicals Canada Responsible Care Commitments evident in the areas of Occupational Health and Safety, Security, Business Continuity, Process Safety management, Emergency Management, Incident investigation and Malicious Intent. These management systems are based on the Shell global commitment to a high level of performance in the areas of Health, Safety, Security, Environment and Social Performance. (HSSE&P)

As stated in the 2016 Sustainability Report the corporate ambition is to achieve “Goal Zero” or “No Harm and No Leaks” and as methodology to achieve these goals the focus would be on effective management systems for personal safety performance, process safety management and transportation safety. The following guidance statement is from the 2016 Corporate Sustainability Report.

“Every Shell company, contractor and joint venture under Shell operational control is required to have a systematic approach to the management of Health, Safety, Security, the Environment and Social Performance (HSSE&SP), designed to ensure compliance with the law and to achieve continuous performance improvement, while promoting a culture in which all Shell staff and contractors share this commitment. Each Shell company is expected to set targets for HSSE&SP improvement and measure, appraise and report progress towards “Goal Zero”.

For further information visit www.shellsustainabilityreport.com. The verification team has noted one Successful Practice pertaining to this section and the verification team has also listed one Opportunity for Improvement

Improvement Opportunities:

(9.) There is an Opportunity for Improvement at the Sarnia site to share site risk information with other CIAC member companies in the area.

Successful Practices:

(5.) At the Sarnia site, as part of continuous site safety improvements, “Sarnia, Our Way” Safety Leadership Journey was implemented in 2016. Performance metrics, shared with the verification team demonstrated measurable improvements in site safety performance. The team suggests featuring a presentation on this management system at a CIAC Safety & Health Analysis Recognition & Exchange network meeting.

Environmental Protection

There is a comprehensive Environmental Management System in place at both the Scotford and Sarnia sites. These management systems are based on an ISO 14001 Environmental Management System which is comprised of standards developed to provide a framework for effective management of environmental issues including a requirement for continual improvements of the Environmental Management System. Certification is maintained through triennial third-party certification audits.

At both locations, the verification team reviewed the management systems for handling site waste water including storm water. All site waste and storm water is treated before it is released. At Scotford, deep well injection is utilized for contaminated process water which is untreatable with present water treatment technology. A land farm site located at the Sherwood terminal is in the process of being decommissioned and reclamation is part of the five-year environmental improvement plan. The Scotford site has conducted a risk assessment to prepare the site for extreme weather events that could be exacerbated by climate change weather patterns. The verification team has noted an Opportunity for Improvement to conduct similar assessments at the Sarnia site.

Site environmental management improvement goals support corporate improvement objectives such as a reduction in greenhouse gas emissions and flaring. For further information visit www.shellsustainabilityreport.com tab “towards a low carbon future”.

Other notable management systems reviewed during the verification.

At the Scotford site:

- A management system for continual monitoring of ambient air emissions.
- A five-year plan for improvements in environmental performance.
- A comprehensive non-hazardous waste management system with reduction targets of 10% over five years.
- Biosolids from waste water treatment have their water content removed before disposal to reduce the volume of material sent to landfill disposal.

At the Sarnia site:

- A program to assess wastes for potential reuse or recycle which has reduced the number of site waste streams diverted to off-site disposal. A proactive component of the program is to investigate and develop opportunities where site waste streams can be utilized as a viable product by others.

(10.) There is an Opportunity for Improvement at both the Scotford and Sarnia sites to consider the possible implications of extreme weather in assessing site risks.

Resource Conservation

From a global perspective Royal Dutch Shell has committed to alternative fuels, a reduction of greenhouse gas emissions and developing alternative energy sources. From a site perspective, it is the expectation of

the Downstream Manufacturing management system that key performance indicators will include a reduction in carbon dioxide emissions and a reduction in energy and water usage.

Promoting Responsible Care by Name

Both the Scotford and Sarnia manufacturing sites promote Responsible Care name recognition and as previously mentioned the “Goal Zero” philosophy supports a Responsible Care commitment. The community newsletters produced at each site reference the company’s commitment to Responsible Care. Responsible Care related commitments are included in third party contracts, audits and product stewardship related value chain contracts and agreements.

The Shell Chemicals video promoting a Responsible Care philosophy is available for viewing on most internal websites.

The verification Team has listed an Opportunity for Improvement the posting of the video to the SMC webpage. The verification team has noted two Opportunities for Improvement and one Successful Practice pertaining to this area.

Improvement Opportunities:

(4.) There is an improvement opportunity at the Scotford site to post Responsible Care information and updates in the chemicals area process control building. Employees report directly to this facility when beginning their work day and they may not be exposed to Responsible Care information postings elsewhere on the site.

(8.) There is an Opportunity for Improvement at the Sarnia site to post to the SMC internal webpage of Royal Dutch Shell, for required viewing by site employees, the video of Royal Dutch Shell CEO Ben van Beurden (at the time of the video Executive Vice President of Shell Chemicals) promoting the virtues of Responsible Care as a management philosophy.

Successful Practices:

(1.) Shell Chemicals, the parent company of Shell Chemicals Canada, has produced a video featuring, Royal Dutch Shell CEO Ben van Beurden (at the time of the video Executive Vice President of Shell Chemicals) promoting the virtues of Responsible Care as a management philosophy.

TEAM OBSERVATIONS CONCERNING STEWARDSHIP CODE

3) Expectations of Companies with Respect to Other Parties.

This code describes the expectation of companies to have management systems in place to responsibly manage production and transport of their products, manage the raw material supply chain and the sale of services and technologies. Product stewardship is a “cradle to grave” concept that requires acceptance of responsibility for the use and disposal of raw materials and the products made from those raw materials. It also covers the development of new products and services and their transfer to operations (production) and full commercialization. There is an expectation of a full understanding and appropriate management of the full life cycle of raw materials, products, manufacturing processes and services. There is also an expectation that the company will have management systems in place to ensure third parties that store, transport or provide raw materials or use the company’s finished products have complete knowledge of these raw materials and products and conduct their operations according to the codes and Ethic of Responsible Care.

Shell has in place management systems to comply with the Stewardship Code requirement and expectations. Of note, Shell has developed a comprehensive management system for selection and monitoring for marine, rail and road transport. A “macro” level description of the various management system components and a link to the company’s Responsible Care commitment can be viewed at the website highlighted below.

For further information visit: www.shell.com/business/customers/chemicals/safeproducthandling-and-transportation.html

Research and Development (R&D) Expectations

There are not any Shell Chemicals Canada research and development activities in Canada. Corporate Responsible Care and Sustainability commitments would apply to corporate level research and development projects.

Expectations Beyond R&D

- c) Security.
- d) Communication through the value chain.
- e) Historical Hazardous Waste Sites.

This section of the Stewardship Code focuses on management systems to systemically evaluate products and services to reduce the risk profile. Ensure raw material and product risk information (material safety data sheets) are available up to date, and understood. And to record monitor and remediate, if feasible, previously used waste disposal sites. Shell has comprehensive Management systems to comply with these Code expectations. The verification team noted that the corporate security management system was very thorough for transportation and third-party warehouses. Company and third-party driver requirements for a journey management plan has been noted as a Successful Practice. Plans are in place at the Scotford site to map and remediate areas where spills may have occurred.

Historical Hazardous Waste Sites.

There are no legacy waste sites related to chemical plant operations.

ACCOUNTABILITY CODE.

Operating Site Communities

As part of the Shell corporate commitment to sustainability there is a stated goal to; “work closely with communities to understand their concerns and identify how to address them. We (Shell) aim to avoid or reduce any adverse impacts and to manage those impacts that may be unavoidable”.

In support of this statement each Canadian manufacturing site has in place a Community Dialogue and Risk Communication management system. The Scotford site Community Dialogue and Risk Communication management system varies somewhat from the Sarnia system because of the Province of Alberta legislated requirements and the structure of the North East CAER group which encompasses most major industries in the Fort Saskatchewan area.

The verification team has listed a Work in Progress and six Opportunities for improvement for this section of the Accountability Code. The verification team has noted six Opportunities for Improvement and one Work in Progress pertaining to this area.

Works in progress:

There is a work in progress at the Sarnia site to revise the Community Dialogue management system based on the planned bi-annual community survey. Although specific Shell Chemical plant risk scenarios do not progress beyond the site fence line the general public does not differentiate embedded facilities from the refinery should an event occur. The team has listed an Opportunity for Improvement in relation to the proposed management system revisions which are in line with both Responsible Care and the Shell commitment to sustainability.

Improvement Opportunities:

(1) At Sarnia, there is an Opportunity for Improvement to consider utilizing the (planned) bi-annual community survey to include questions concerning people's knowledge of action required in the event of an on-site emergency (shelter in place) and how many people in the survey subscribe to MYCNN. In addition, similar surveys could be promoted within the CAER membership.

(2.) There is an Opportunity for Improvement, at both the Scotford and Sarnia sites, to inform residents and community organizations surrounding each site how to access the CIAC website to view applicable Responsible Care verification reports and other information about Responsible Care.

(3.) There is an Opportunity for Improvement at the Scotford site to share Health, Safety, Security and Environmental best practices with the Northeast Capital Industrial Association member companies.

(5.) There is an Opportunity for Improvement at the Scotford site to consider the benefits of developing a Shell specific Community Advisory Panel (CAP) with the objective of developing an effective two-way dialogue process as a method to receive regular community input on issues important to the community. The current outreach processes are viewed as information venues as opposed to a venue for two-way community dialogue.

(6.) There is an Opportunity for Improvement at the Sarnia site to consider the benefits of developing a Shell specific Community Advisory Panel with the objective of developing an effective two-way dialogue process with the residential and business neighbours, in close proximity, to the manufacturing site. Local site-specific issues and two-way dialogue can be lost in the community-wide objectives of Sarnia CAER and the Bluewater CAP.

Team note: Other CIAC member companies have developed effective "mini" CAPs with three to five members from the community.

(7.) there is an Opportunity for Improvement at the Sarnia site to utilize the annual newsletter to share successful site waste management and resource conservation metrics with the community.

Successful Practices:

(6.) At the Sarnia site, volunteers from the Shell Economics and Scheduling department and the Project Development department participated in a program entitled "Return the Landscape" in conjunction with representatives from Aamjiwnaang First Nations. This program selected wild plants native to the area and a local greenhouse maintained by the Aamjiwnaang cultivated the plants for sale to the public thus saving these native plants from extinction.

APPENDICES TO CODES: SOCIAL RESPONSIBILITY

The statement below is from the Shell 2016 Sustainability Report.

“In 2016, the United Nations adopted 17 sustainable development goals. These goals build on the preceding Millennium Development Goals and seek to tackle the world’s economic, social and environmental issues by 2030.

Achieving the sustainable development goals (SDGs) will require action by governments, non-governmental organisations and the private sector. Companies can contribute to the achievement of the SDGs by reducing the negative impact of their operations and seeking to contribute positively to the environments and communities in which they work.”

The sustainability goals highlighted in the 2016 sustainability report are most closely related to the topics that were identified as most relevant or prominent for Shell in 2016 and are covered in this report.

For further information www.shellsustainabilityreport.com

APPENDICES TO CODES: INVOLVEMENT IN PUBLIC POLICY PROCESS

Shell Chemicals Canada representatives are active within the CIAC membership. The Scotford site representatives participate in the Northeast Region CAER group, the Fort Air Partnership and Alberta’s Industrial Heartland promoting Eco-industrial development. The Sarnia site representatives participate in the Sarnia CAER group and the Sarnia Bluewater Community Advisory Panel.

TEAM OBSERVATIONS ON THE COMPANY MANAGEMENT SYSTEM

Comprehensive management systems are in place to support the Responsible Care commitments of Shell Chemicals Canada. The Management Systems are designed on the Plan, Do, Check and Act model of continual improvement. Corporate level planning and implementation strategies are developed as a long term continual improvement process and in the short term annual and quarterly objectives are developed by each Business and Manufacturing facility. Annual improvement plans, including those controlled by individual managers, are developed and reviewed on an appropriate frequency. Multiple levels of internal and external audits, including external third-party audits, are conducted as required. Process Effectiveness Reviews and Management reviews are examples of the continual improvement process in place at Shell Chemicals Canada.

The Scotford and Sarnia manufacturing facilities that participated in this verification are termed “Downstream Manufacturing” which references the process of further refining and enhancing crude oil by products to produce the specialty chemicals manufactured at both sites.

While the chemical processing facilities embedded at both the Scotford and Sarnia sites are technically the focus of the verification there is almost complete integration with the refinery operations and most support services are shared including those supporting the HSSE management systems. Shell Corporate Sustainability objectives include a commitment to a “Goal Zero” philosophy which focuses on management systems that will move the company toward a goal of no harm and no leaks across all operations. While Responsible Care terminology and references is not site wide the philosophy of “Goal Zero” and the supporting management systems mirrors the “Do no Harm” philosophy of Responsible Care. Alignment of the Corporate Responsible Care policy and standards with the Responsible Care Codes is achieved at the

corporate level which is the control mechanism for the Canadian site policies and procedures which may not reflect all 152 code elements.

Improvement Opportunities:

(11.) There is an Opportunity for Improvement to align the document mapping (cross referencing) comparison of the 152 Responsible Care Codes and Shell HSSE Control Framework and the site's Management Systems and identify and address any remaining gaps.

Successful Practices:

(3.) On a global scale, if employees are travelling on company business meeting the required criteria, Royal Dutch Shell requires they develop a Journey Management Plan to ensure a safe journey supported by the appropriate rest periods.

Journey Management Plans are also a requirement for drivers of third party trucking companies contracted by Shell Chemicals.

Team Observations on the Application of the Responsible Care Ethic and Principles for Sustainability

1. WORK FOR THE IMPROVEMENT OF PEOPLE'S LIVES AND THE ENVIRONMENT, WHILE STRIVING TO DO NO HARM:

In the 2016 Sustainability Report Shell promotes the management concept of "no harm and no leaks" to drive continual improvement in areas related to Principle number one described above. Listed are three projects that demonstrate achievements in this area.

- Shell corporate biodiversity focus.
- The "Quest" Carbon Capture and Storage Project Located at the Scotford AB site.
- The development of fuels and lubricants from natural gas feed stocks which are less carbon intense than crude oil. (The Shell NGL "natural gas to liquids" division).

2. BE ACCOUNTABLE AND RESPONSIVE TO THE PUBLIC, ESPECIALLY OUR LOCAL COMMUNITIES, WHO HAVE THE RIGHT TO KNOW THE RISKS AND BENEFITS OF WHAT WE DO:

Generally, very good management systems are in-place but there are improvement opportunities at the Scotford site to promote two-way dialogue with the local community and Industrial Committees, and at the Sarnia site to inform the local community about site risks and what action to take in the event of a site emergency.

3. TAKE PREVENTATIVE ACTION TO PROTECT HEALTH AND THE ENVIRONMENT:

The Shell corporate philosophy of "no harm and no leaks" and the functional HSSE management system focus on "goal zero" comply with the expectations of Principle number three.

4. INNOVATE FOR SAFER PRODUCTS AND PROCESSES THAT CONSERVE RESOURCES AND PROVIDE ENHANCED VALUE:

From a global perspective Royal Dutch Shell has committed to alternative fuels, a reduction of greenhouse gas emissions and developing alternative energy sources. From a Canadian site perspective, it is the expectation of the Downstream Manufacturing management system that key performance indicators will include a reduction in carbon dioxide emissions and a reduction in energy and water usage.

5. ENGAGE WITH OUR BUSINESS PARTNERS TO ENSURE THE STEWARDSHIP AND SECURITY OF OUR PRODUCTS, SERVICES AND RAW MATERIALS THROUGHOUT THEIR LIFE CYCLES:

Shell Chemicals Canada fully complies with the expectations of Principle number five.

6. UNDERSTAND AND MEET EXPECTATIONS FOR SOCIAL RESPONSIBILITY:

The 2016 Shell Sustainability Report outlines the company's commitment to all facets of social responsibility. For additional team comments related to Principle number six please reference the section on Social Responsibility on page fifteen of this report. For further information www.shellsustainabilityreport.com

7. 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:

Shell Chemicals Canada managers are active participants on CIAC committees and sub-committees and other industry related associations that espouse this Principle. For additional team comments related to Principle number seven please reference the section on Social Responsibility on page fifteen of this report.

8. PROMOTE RESPONSIBLE CARE® AND INSPIRE OTHERS TO COMMIT TO THESE PRINCIPLES:

The concept of Responsible Care is recognized and supported by the parent company Royal Dutch Shell. Shell Chemicals is a signatory of the Responsible Care Global Charter.

VERIFICATION TEAM CONCLUSION

"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 Opportunities for Improvement identified during the verification. The verification is complete and no further involvement is required by the verification team."

COMPANY RESPONSE TO VERIFICATION REPORT

On behalf of Shell Chemicals Canada (SCC) I have reviewed this verification report. The observations and conclusions contained in the report have been discussed with the verification team.

Shell Chemicals Canada wishes to express its appreciation for the time, energy and commitment of the Responsible Care® Re-verification Team and for their review of our management systems and our performance in support of the RC ethic.

We are very pleased with the outcome of this verification. We welcome the various observations that have been made as "Opportunities for Improvement". Shell Chemicals Canada also appreciates the many positive comments the Re-verification Team shared with Shell Chemicals personnel while visiting each of the facilities and highlighted in the report as "Best Practices". We are grateful for the recognition provided to many of our employees and Shell Chemicals ongoing commitment to supporting the various CIAC public safety outreach initiatives such as TRANSCAER. This positive approach will help reinforce our commitment to the Responsible Care® Ethic and Principles.

We appreciate that the Reverification Team further recognized various additional HSSE best practices originating from both the Shell Refinery Operations in Canada and Shell HSE Control Framework (such as Journey Management Planning) as being aligned with the ethic of Responsible Care.

Shell Chemicals 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 international and national stakeholders, including those representing communities near our operating sites.

We will turn our attention 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. The appropriate plans will be developed and implemented as deemed necessary to respond to the Opportunities for Improvement 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.

Zoe Baldwin
General Manager
Shell Chemicals Canada

INTERVIEW LISTS

A: Company Personnel Contacted During Verification Process

NAME	POSITION	LOCATION
Zoe Baldwin	General Manager SCC	Calgary
Mike Drumm	HSSE Country Lead, SCC	Calgary
Peter Zebedee	General Manager, Scotford	Scotford
Roberta Mcleod	HSSE Integration Lead, RC Site Focal	Scotford
Stephen Velthuizen	External Relations Manager	Scotford
Beena Jacob	HHSE Systems Lead	Scotford
Jessica Blackmore	Community Liaison Officer	Scotford
Sam Kalinocka	Process Safety Manager	Scotford
Christina Koning	Production Manager	Scotford
Wayne Munsterman	Technology Assurance Manager	Scotford
Mario Kulas	HSSE Manager	Scotford
Wendy Konsorada	Environment Manager	Scotford
Craig Mutch	Environment Tech Lead	Scotford
Celina Duong	Environment Engineer	Scotford
Gary Leavitt	Waste Supervisor	Scotford
Brendan Curly	Production Unit Manager – East	Scotford
Sean McBean	Production Excellence Manager	Scotford
Michael Sprague	Quality Assurance Manager	Scotford
Gary Burkholder	Distribution Coordinator (Road Transport)	Scotford
Melanie Chestnut	Management System Focal	Scotford
Mike Healy	Emergency Preparedness Specialist	Scotford
Chris Holmes	Emergency Preparedness Specialist	Scotford
Brandy Dewart	Security Manager	Scotford
Mark Dziwenko	Production Specialist, South	Scotford
Rod McQuiston	Distribution Coordinator, East	Scotford
Steve Mousseau	Contractor HSSE Management Focal	Scotford
Ian Butler	Work Process Focal	Scotford
Clayton Amos	Production Team Lead (tour)	Scotford
Karen Miller	General Manager, Sarnia Manufacturing Centre	Sarnia
Randy Provencal	External Relations Manager	Sarnia
Glenda Prudom	Environmental Lead, RC Site Focal	Sarnia
Kristina Zimmer	External Relations Advisor	Sarnia
Reggie Newkirk	Environmental Waste Specialist	Sarnia
Scott Vangaver	Chemical Plant Operator	Sarnia
Stephen Lloyd	HSSE Manager	Sarnia
Dan Degurse	Safety Lead	Sarnia
Mike Gardner	Environmental Specialist – Land and Water	Sarnia
Mike Wedemire	Production Specialist – Waste Water Treatment	Sarnia

Justin Hagan	Emergency Response/Safety Specialist	Sarnia
Dana Mitchell	Manufacturing Excellence Analyst	Sarnia
Rima Rizkallah	Manufacturing Excellence Manager	Sarnia

B: External Stakeholders Contacted During Verification Process

NAME	POSITION	LOCATION
Sherry & Bob Cote	Resident	Bruderheim AB
Ardelle McPherson	Resident	Scotford AB Community
Mary Chartrand	Resident	Scotford AB Community
Del Hankinson	Business Owner	Scotford AB Community
Sheena Massey	Business Employee	Scotford AB Community
Vanessa Goodman	Life in the Heartland	Scotford AB Community
Brenda Gheran	North East CAER Chair	Scotford AB Community
Steve Arnold	Mayor of St. Clair Township	Corunna ON
Maryanne Ryan & Dave Tremain	Residents	St. Clair Township (Froomfield)
Sharilyn Johnston	Environmental Coordinator	Aamjiwnaang First Nations ON



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