



RESPONSIBLE CARE[®] Verification Report

Jungbunzlauer Canada Inc.

April 26 - 27, 2017



Chemistry Industry
Association of Canada



Responsible Care[®]
Our commitment to sustainability.

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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 Jungbunzlauer Canada (JBLC). The verification was undertaken on March 16 and April 26 and 27, 2017. It included team visits to the company's Canadian plant site located in Port Colborne, Ontario. The verification team also conducted interviews with other company personnel and external stakeholders. This was the fourth Responsible Care verification completed for Jungbunzlauer Canada. The last verification was completed in May 2014.

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:

- The Overall Responsible Care Management system;
- The Environmental Management system; and,
- The Process safety Management System (PSM).

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 believes that the company is capable of responding to the range of Findings Requiring Action identified during the verification- summarized below and discussed in detail in the report. The verification is complete and no further involvement is required by the verification team.



Signed:

Date: May 9, 2017

André Denis

Verification Team Leader

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

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SUMMARY OF VERIFICATION TEAM OBSERVATIONS

Findings Requiring Action

1. There is a Finding Requiring Action to put in place a procedure requiring each member of the emergency response team (ERT) to confirm to the company his/her medical fitness for the job (OP27).
2. There is finding requiring action to develop a formal systematic Process Safety Management system that covers the company's entire process systems as per OP 28 to 30.

Works in Progress

1. There is a Work in Progress to cover the human risks in the critical infrastructure/business continuity plan risk assessment.
2. There is a Work in Progress for JBLC to fully complete the Management of Change (MOC) checklist.
3. There is a Work in Progress for JBLC to put in place a documented and comprehensive environmental management system to cover all its initiatives related to environmental matters.
4. There is a Work in Progress for JBLC to formalize its Overall Responsible Care Management System. The company has established procedures and control measures but there is no overall method to link its RC management system with the "plan-do-check-act" (PDCA) principles and other components. The company should consider electronic records embedded into the cross-reference matrix that supports information for each code element.

Improvement Opportunities

1. Presently the company has a low frequency rate for lost time injuries, but to enhance its existing health and safety initiatives, the company should consider the implementation of a behavioral-based safety program.
2. There is an Improvement Opportunity to clearly identify the resource conservation and sustainability considerations on the company's MOC process checklist.
3. The Company maintains a matrix that covers training for each employee. Although this matrix is updated regularly, there are presently no key performance indicators (KPIs) to summarize training status and completion rates. The company should consider establishing KPIs to have an overview of its training system.

Successful Practices

1. The company has completed a real time online Energy Balance Monitoring System (on their Digital Control System) that allows monitoring of steam, energy use and heat recovery. This system is being used to optimize the recovery of heat; the use of natural gas; and, ultimately the reduction of air emissions. This tie into the company scorecard goals for resource conservation.
2. The Company has done plant tours for local secondary and postsecondary students and has showcased Responsible Care to those students including an RC orientation session. The company's Vice President of Operations has also delivered guest lectures on company operations including Responsible Care at Universities in Southern Ontario.
3. Following a noise issue brought up by neighbors, JBLC voluntarily installed silencers on certain process equipment even though the plant was in full compliance with regulatory environmental noise requirements.
4. The Spirit process is a confidential questionnaire survey started by the CEO that is conducted every two years. JBLC's management uses information from the survey to enhance company performance by engaging employees in trying to look out for their morale and perspective on work. The survey is detailed and can be broken down by plant site and departments. It is then used by management to enhance communication; reinforce positive trends; promote employee engagement (e.g. ethics and bench marking); and, to establish corrective action plans if required.

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 Jungbunzlauer 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, Jungbunzlauer 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 Report is made publicly available via CIAC website (www.canadianchemistry.ca). Jungbunzlauer 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 glaurin@canadianchemistry.ca or (613) 227-6215 extension 233 at CIAC.

1.2 About Jungbunzlauer Canada Inc.

Jungbunzlauer Canada Inc. (JBLC) is a registered Ontario Company owned by Jungbunzlauer Holding AG located in Basel, Switzerland. The company has only one plant in Canada located in Port Colborne, Ontario. The main product of the plant is anhydrous and aqueous citric acid. It also manufactures tri-sodium citrate and tri-potassium citrate. The tri-potassium citrate product was introduced at the plant since the last verification. Citric Acid is a naturally-derived raw material that is used in a diverse range of products including cleaning materials, soft drinks, cosmetics and pharmaceuticals. All these products are of low toxicity. The main raw material for the company is corn syrup glucose made from corn grown and harvested locally or elsewhere in North America.

This facility, which began production in 2002, is located on a 240-acres site on the old Welland ship canal in Port Colborne, Ontario in an industrial area known as Carbohydrate Valley. Before 2015, the glucose syrup raw material for JBLC was supplied by an adjacent glucose plant previously operated by Casco, and subsequently by Ingredon. This neighboring glucose plant has recently been bought by JBLC and is now part of the JBLC Canadian operation. As integration of the newly acquired glucose plant is underway but not fully completed, the scope of the present verification covers the citric acid plant only. JBLC anticipates that the next CIAC Responsible Care verification will cover both the glucose and the citric acid plant.

The company's products are manufactured through a fermentation process. The company generates most of its electricity through a co-generation process involving both electricity and steam. The site's main waste product, biomass sludge, is processed and sold as an organic-based fertilizer. Other process waste solids, known as Mycelium, are processed and sold as an animal feed ingredient. JBLC ships direct to customers and two distributors in Canada. The majority of the production is shipped to United States and invoiced through JBL (Boston) Inc. All shipments from US warehouses to customers are under the control of JBL (Boston) Inc. The newly acquired glucose facility and the citric acid plant operate continuously, 24 hours per day, year round. The purchasing of the new plant has added 37 new employees to the 80 employees of the citric acid plant. Both sites are unionized.

For more information about the company please visit their web site at: <http://www.jungbunzlauer.com/>

1.3 About This Verification

The verification of Jungbunzlauer Canada was conducted on March 16 and April 26 and 27, 2017 and included team visits to the company's single Canadian plant located in Port Colborne, Ontario. 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 fourth verification exercise completed for Jungbunzlauer Canada. The last verification was completed in May of 2014.

The verification team was comprised of the following individuals.

Name	Affiliation	Representing
André Denis	CIAC	<i>Team Leader</i>
Ron Ormson	CIAC	<i>Public-At-Large Verifier</i>
Gary Bruno	JBLC Community Advisory Panel	<i>Community Representative</i>

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

During the verification of JBLC, the verification team sought evidence that the company addressed the expectations documented in the Responsible Care Commitments (152 code elements plus 28 benchmark and collective expectations). While considering all aspects of the Responsible Care Commitments, the team emphasized conducting a more in-depth examination of certain company aspects identified by the company or the team related to:

- Overall Responsible Care Management system;
- Environmental Management system;
- The Process Safety Management system (PSM).

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, benchmarks, and expectations stated 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

2.1.1 Design and Construction of Facilities and Equipment

The engineering design of the plant and production processes are under the overall control of the Jungbunzlauer Corporation headquartered in Europe. All major capital investments and plant modifications are subject to corporate review. The company uses this approach to ensure consistency on an international basis between plant sites and to maintain its high standards for food grade production and industrial hygiene. The

company uses a Management of Change Process (MOC) to handle local-scale changes/modifications to the Port Colborne facility.

2.1.2 Operations Activities

JBLC OP01-08 work instruction governs transportation modes and the vetting and selection of freight forwarders. Most of JBLC's finished product is transported by highway and marine routes. Before the hiring of a new highway carrier, the overall safety and performance of a carrier is carefully checked through government online registries and official websites. Carriers going to the United States represent approximately 90% of all carriers and must be C-TPAT compliant. JBLC has started to use Export Control documents and corporate JBLC software to check customers to address OP code element 48 (Malicious Intent). This allows JBLC to conduct due diligence and blacklist checks for countries, organizations and potential customers that the company does not wish to do business with. Once a highway carrier is retained, a transport agreement is signed between the carrier and JBLC. Each year major carriers are also audited by an external consultant. Those audits are considered valid for a period of three years. Highway trailers are subject to a seven point inspection by JBLC before loading. The truck and the trailer are also inspected by the carrier. These inspections are mandatory as per the C-TPAT Highway Carrier Security Criteria.

JBLC use maritime containers to export its finished products globally. Each shipment is made through a contract with a maritime shipper. The shipping line used by the company is ISO 9001 and ISO 14001 certified. The broker is evaluated by an external consultant. JBLC maritime shipments represent a relatively smaller overall part of total export sales.

2.1.3 Safety and Security

Currently the company does not have a formal method to identify Emergency Response Team employees that could have a health problem while using a self-contained breathing apparatus during their work. There is a Finding Requiring Action to create a procedure requiring each emergency response team member (ERT) to confirm his or her medical fitness for the job to the company (OP27).

In the last CIAC verification report there was an opportunity for improvement to review the company's critical infrastructure/business continuity plan. Since then, the company has made a risk assessment of the hazards that could occur and possibly interrupt JBLC business continuity. The current verification team has checked the assessment and has noted that the human risks were not completely covered. JBLC is actively updating this part of its plan. As a result, there is a Work in Progress to cover the human risks in the critical infrastructure/business continuity plan risk assessment.

Safety observations are done by Managers and Supervisors (i.e. the entire Leadership Group) on a monthly basis. A standardized safety observation checklist is used to guide the observations. These observations are to look at worker behavior in the various departments. Each month, the Leadership Group members perform a formalized safety inspection. A safety inspection checklist is used for that purpose. This covers equipment, process, materials, people and the environment. Non-management employees do not use these checklists but their work is covered under the scope of the inspections. Each Leadership group member must fill in "The Supervisor Monthly Safety Review Form" that is used to confirm the inspection work of each Leadership group member and other information.

Presently the company has a low frequency rate for lost time injuries and has a good long term safety record. As an opportunity for improvement, JBLC could support and enhance its existing health and safety initiatives by considering the implementation of a behavioral-based safety program.

The company has put in place a comprehensive MOC process. Following review of the documentation supplied by the company, the verification team noticed that the company does not fill the "Check and Act" part of the

MOC checklist. An outside consultant has conducted a risk assessment for the major chemical risks (i.e. HCL and aqueous ammonia storage) to identify the worst cases scenarios and to support the site emergency preparedness plan. There are also regular updates of the emergency preparedness plan. JBLC “Managing Hazards at our Workplace” (2013) is a PowerPoint presentation that demonstrates the company’s JHA (job hazard assessment) protocol. There is a Hazard Assessment Form as part of this system. Company rates major, moderate and minor hazard classes as part of job analysis. The hazard assessments are reviewed annually. The JHA system is more oriented toward health, safety and environmental matters rather than PHA (Process hazard assessment) matters. The team did not observe a formal Process Safety Management system as per code element OP 28 to 30.

There is a finding requiring action to develop a formal systematic Process Safety Management system that covers their entire process systems as per OP 28 to 30.

There is a Work in Progress for JBLC to fully complete the MOC checklist.

With respect to transportation, JBLC is a C-TPAT certified member. The last recertification is dated July 2013. The C-TPAT is a voluntary initiative between U.S. Customs and Border Protection (CBP) and private business to build relationships that strengthens international supply chains and improves U.S. Security at the border.

2.1.4 Environmental Protection

Since the last verification, the company has written and used an Environmental Management System (EMS) document that is comprehensive and based on the Plan-Do-Check-Act principles. The verification team conducted an in-depth review of the EMS document. The company has made a risk assessment of its environmental hazards and has identified four major hazards called Significant Environmental Aspects (SEA). Objectives and targets have been developed to control these hazards. Other SEAs relate to environmental performance objectives and sustainability with respect to waste generation, recycling, energy use and emissions. SEAs are used to assess decreases in environmental outputs (e.g. like the demineralized water make-up and the landfill materials related to the co-products building) and to track potential increases or net changes relative to production (e.g. CO₂ air emissions from the Cogen Plant and energy consumption). Facility investments and improvements have allowed increases in citric acid production between the years 2014 and 2016 without significant corresponding increases in emissions.

In 2015, the company made a major investment in additional wastewater treatment capacity and storage with the construction of a new state of the art emergency storage basin that is lined and instrumented to augment the existing wastewater storage capacity along with additional concrete aeration basins and an additional clarifier.

JBLC has a comprehensive waste management and recycling program in place and keeps detailed records of its waste management activities that are available for tracking waste reduction and recycling initiatives. In 2016, additional cleaning and segregation efforts led to an increase in recyclables. A corporate goal has been set to achieve zero filter aid wastes.

The company uses two waste contractors. These contractors deal with spent filter waste and recyclables (mainly metal, plastic, cardboards) and waste oils and lubricants. A local battery recycler accepts light bulbs, light tubes, electronic waste and spent batteries. These contractors and their facilities are formally evaluated by the Environment Manager prior to use. JBLC requires its waste contractors and recycler to enter into a Responsible Care agreement confirming the company’s requirements and expectations under the operations codes 69 and 70. They have also been audited by an external consultant.

Since the last verification, in an effort to reduce site-wide particulate emissions, the company has installed sensing equipment on dust collectors, new dry scrubbing technology and paved roads that were previously loose surfaced. The company is also exploring potential means to re-use wastewater for use within its process for filter cleaning.

In 2016, the company has added insulation to its equipment to reduce heat loss and energy consumption. The Ontario Ministry of the Environment and Climate Change (MOECC) view JBLC's effluent management and reduction as a model program and have used JBLC as an example for other companies annual reporting obligations that generate process effluent.

Following the revision of the JBLC Environmental Management System, the verification team has noticed that the company has made a lot of effort to improve its environmental management system but has not yet put in place a real procedure-based documented environmental management system. There is a Work in Progress for JBLC to put in place a documented and comprehensive environmental management system to cover all its initiatives related to environmental matters.

2.1.5 Resource Conservation

JBLC, through the years, has put an emphasis on air emission control from its Cogeneration plant, energy consumption, water consumption and waste mitigation. Those four targets were identified as significant environmental aspects as explained in Section 2.1.4 of this report.

JBLC recycles some of its solid waste coming from the Waste Water Treatment plant and sells it as an organic base fertilizer known as Citrosoil®. The company also recycles the solids left over from the biological fermentation process and sells it as an approved animal feed ingredient known as Mycelium.

The company has implemented an ultrafiltration process, which has reduced and hopefully will replace the existing precoat filtration process (Celite) in the future (Long Term Goal). This change has significantly reduced the amount of spent filter aid generated for landfill disposal.

The MOC checklist does not currently identify resource conservation and sustainability considerations as items that are assessed as part of change management. The team found direct evidence that these considerations are made routinely by JBLC. There is an Improvement Opportunity to clearly identify the resource conservation and sustainability considerations on the company's MOC process checklist. This would enable further tracking of these aspects of Responsible Care.

Successful practice: The company has completed a real time online Energy Balance Monitoring System (on their Digital Control System) that allow monitoring of steam, energy use and heat recovery. This system is being used to optimize the recovery of heat, use of natural gas and ultimately the reduction of emissions. This ties into the company's scorecard goals for resource conservation.

2.1.6 Promotion of Responsible Care by Name

JBLC has shown leadership in promoting Responsible Care by name at the corporate, plant site and community level.

All employees conduct annual refresher awareness training on Responsible Care. The training session is built on a Power Point presentation and is given by the Responsible Care Coordinator. Since the last verification, JBLC has built an online Responsible Care questionnaire that JBLC employees can use to match their knowledge with the Responsible Care program.

Successful practice: As part of its outreach activities, the Company has done plant tours for local, secondary and postsecondary students and has showcased Responsible Care to those students including an RC orientation

session. The company's Vice President of Operations has also delivered guest lectures on company operations, including Responsible Care at Universities in Southern Ontario.

The Company includes Responsible Care branding and logo on its regulatory reporting to Ontario Ministry of the Environment and Climate Change and other federal and provincial agencies.

2.2 Team Observations Concerning Stewardship Code

2.2.1 Expectations of Companies

The company does not conduct specific research in Canada. JBLC does conduct process optimization through its Management of change process.

2.2.2 Expectations with Respect to Other Parties

The sale of the JBLC finished products is made through JBL Boston Inc. The Boston office uses C-TPAT compliance checks for distribution. There is a close relation between JBLC and the JBL Boston Inc. sale office. JBLC knows its clients and distributors but JBL Boston Inc. controls the marketing and the sales of JBLC products. Since the products made by the plant are listed as low risk and are used as food-grade additives, the verification team is satisfied with the present product stewardship management system in place.

2.3 Team Observations Concerning Accountability Code

2.3.1 Operating Site Communities

The company has a defined and documented Community Engagement and Accountability management system (RC01-00) that it uses for community outreach and dialogue. The company maintains a CAP consisting of a current municipal councilor, a former municipal councilor/current business owner representative and the local Fire Chief. The Committee meets one to two times per year. Since the last verification, a community advisory panel newsletter is generated by the company's Human Resources Department each quarter that is shared with the community and by the various members of the CAP. The company has also used plant open houses to engage local residents. The company's Responsible Care Coordinator sits on the local municipal environmental advisory committee. In 2017, the company won the business award of excellence from the Port Colborne-Wainfleet Chamber of Commerce for its efforts in the community.

The verification team met with the local Community Advisory Panel (CAP) during the verification process. The verification team found that there is an excellent relationship between the company and the local CAP. The Company is very proactive and open with the CAP and there is a two-way dialogue between its members and the Company.

Each year, the Jungbunzlauer Kahane Family foundation evaluates community-based projects and programs from the company's various plant site communities. The JBLC plant has submitted successful applications to the foundation and has been awarded many generous donations that have helped the Port Colborne and surrounding community.

JBLC maintains a serious commitment to the Accountability Code and its relationship with the local community. One example of a successful practice in this regard was noted by the team concerning a noise matter raised by a certain neighbor near the JBLC facility. Following a perceived noise issue brought up by neighbor, JBLC voluntarily installed silencers on certain process equipment even though the plant was in full compliance with regulatory environmental noise requirements.

Although not required, the company has worked diligently to maintain its E2 Voluntary Emergency Plan under CEPA. JBLC has put in place this very comprehensive Emergency response plan that is risk based and revised on

a regular basis. The verification team has met with the fire chief and confirmed that the relations between the Port Colborne fire department and the plant are excellent. Each year, both the professional and volunteer fire fighters tours the plant and mock exercises are done on a regular basis. The local fire department also have hazmat trained members and a fire prevention officer that also is intimately aware of the JBLC operation.

2.3.2 Other Stakeholders

The JBLC plant management is active in advocacy including local municipal government, the Province of Ontario and major utility providers. There are also active participants in the CIAC West Leadership Group and TransCAER.

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 JBLC 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:

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.

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 and develop and document standards, procedures and programs, as applicable.

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.

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 need 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.

SYNOPSIS

The JBL group requires that each of its production plants adheres to the Responsible Care program. The company has established a Corporate Social Responsibility Policy covering employment contract, health and safety conditions, business practices, observance of rules and regulations, etc. In 2014, the CEO of the JBL group of companies endorsed a Code of Business Conduct that confirms the Jungbunzlauer Group's commitment to business ethic, integrity, credibility and preservation of the company's reputation. It covers the charitable donations, sponsorships or contribution through the Karl Kahane Foundation.

The company establishes its objectives annually beginning in June with completion in December. That includes a mix of corporate and local objectives. Each year, the corporate office establishes the overall production targets, quality requirements, health, safety and environmental objectives for the company's plants. The Vice President Manufacturing presents these objectives to the Port Colborne senior management that is composed of the Vice President Finance and Administration and the Vice President Operations. The Port Colborne Leadership group made up of the two Vice Presidents, nine department managers and ten coordinators or supervisors is responsible for the implementation and the follow up of these objectives. Local objectives are also identified through monthly departmental meetings, the monthly safety meetings and other management activities. These objectives are then vetted corporately to develop capital investment projects at the plant level. Major JBLC KPI are established and listed in a document called "PC Balanced Scorecard 2017". All local capital requests that are approved by the Leadership group as a result of an MOC result in a formal capital project that is assigned a project number. The Leadership Group has autonomy for health and safety decisions and expenditures. The Leadership Group has an allowance for a maximum of five overdue health and safety items per month.

JBLC "Pulse Meetings" are a quarterly meeting of all JBLC employees that cover an overall corporate update. It includes both local and international data on safety, business, environment, production volumes, sales information, management's top priorities, company performance, budget information and company values. Once per year, the twenty two members of the Leadership Group attend a four to five hour meeting that focuses on priority projects, major KPIs, as well as providing a motivational opportunity through a social gathering. This meeting enhances team spirit and company values. Responsible Care is discussed at those meetings.

JBLC has a Responsible Care Steering Committee chaired by the RC Coordinator and with six other code coordinators. The Steering Committee members include the RC coordinator the two Vice Presidents, the HR Coordinator, the Purification Manager, the Logistics Manager, and the R&D/Quality Manager. The steering committee meets at least twice a year and more frequently as necessary. The committee deals with items from previous CIAC verifications, the Responsible Care Cross Check Document and sustainability initiatives. Formal minutes and records of those meetings are maintained that include assigned action items and gaps. JBLC maintains a Responsible Care Cross Check Document with the various code coordinators. Since the last verification, JBLC has put in place a Responsible Care Management Program (RC-01-00) and has made a gap analysis between the RC 152 Code elements and the elements of its management system.

RC-01-00 Responsible Care Management Program is a listing of all RC elements. At present, this program is not fully linked to the company's operating procedures and does not clearly identify what is covered under PDCA. Since the last verification, the Company has elaborated "The Management System review" that is the PDCA approach to the JBLC Responsible Care commitments. The company is evaluating the Cross Check Document relative to a set of stand-alone support documents for its Responsible Care Management System Review. The verification team is in the opinion that the Cross Check Document is a better tool to survey and track gaps and problems related to the three codes and the 152 RC code elements.

There is a Work in Progress for JBLC to formalize the Overall Responsible Care Management System. The company has established procedures and control measures but there is no overall method to link its RC management system with the PDCA principles and others components. The company should consider electronic records embedded into the cross reference matrix that supports information for each code element. Following the last verification finding, JBLC has put in place a whole set of written procedures covering health and safety.

JBLC's KPI are followed and tracked on a regular basis by the Leadership group and within the Monthly Departmental meeting and the Monthly Safety Meeting.

Improvement opportunity: The Company maintains a matrix that covers training for each employee. Although this matrix is updated regularly, there are presently no KPIs to summarize training status and completion rates. The company should consider establishing KPIs to have an overview of its training system.

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 Jungbunzlauer'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 observations on the company's application of the *Responsible Care Ethic and Principles for Sustainability* are as follows:

- 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.

Jungbunzlauer has a defined corporate sustainability policy that it uses to guide its operations. The policy is presented on the company corporate website.

For all of its operating sites, Jungbunzlauer has completed a corporate carbon footprint assessment per unit of production. This assessment was completed by an independent consultant based in Europe. The company has experienced a 20% reduction in carbon emissions from 2003-2015. This achievement is consistent with the Responsible Care Ethics principle number one and three.

During the verification process, the verification team has interviewed and exchanged information with the two Vice Presidents, department heads, supervisors, a Joint Health and Safety union member, hourly employees, the fire chief and CAP members. JBLC consistently demonstrated to the verification team that the Responsible

Care Ethic and Principles for Sustainability guide the company's activities. The Responsible Care Ethic message starts at top level management and extends down to the plant floor.

Throughout the verification and via the meeting with the local CAP, the verification team confirmed that JBLC has a good outreach program in place with the surrounding community. The company has demonstrated its commitment to be responsive and accountable to the local community and the public. The Community Outreach program is consistent with the Responsible Care Ethics and Principles for Sustainability number two. The 2017 Business award of excellence from the Port Colborne- Wainfleet Chamber of Commerce for its efforts in the community is consistent with the Responsible Care Ethics and Principles for Sustainability number two. The Ontario Ministry of the Environment and Climate Change (MOECC) view JBLC's effluent management and reduction as a model program and have used JBLC as an example for other companies annual reporting obligations that generate process effluent. This achievement is consistent with the Responsible Care Ethics and Principles for Sustainability number one, two and eight.

The verification team observed a genuine commitment by JBLC to resource conservation. The company has initiated numerous capital projects and has optimized its processes to reduce its water use, energy consumption, air emissions and waste generation. A good example of this concern is the installation of the real time online Energy Balance Monitoring System on their Digital Control System (refer to section 2.1.5). The verification team believes this is a good example of the guiding principles number three and four. With respect to the company's approach to its human resources and support for employees, the team found evidence of unique successful practice. This practice, known as the "Spirit Process" is a confidential questionnaire survey started by the CEO that is conducted every two years. JBLC's management uses information from the survey to enhance company performance by engaging employees in trying to look out for their morale and perspective on work. The survey is detailed and can be broken down by plant site and departments. It is then used by management to enhance communication; reinforce positive trends; promote employee engagement (e.g. ethics and bench marking); and, to establish corrective action plans if required.

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 Findings Requiring Action 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.

COMPANY RESPONSE TO VERIFICATION TEAM REPORT

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

The recent verification process brought excellent value to the JBLC organization and our internal Responsible Care Team Members (Coordinators), including Senior Management of the facility. Given the quicker turnaround of the Verification Report from the Verification Team, we feel we have increased motivation and momentum to address the findings within the report, all in spirit of striving for continuous improvement in all of the facilities operations.

JBLC 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 the 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 and Work in Progress 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.

Ryan Waines
Environmental Manager & Responsible Care Coordinator
Jungbunzlauer Canada Inc.
May 8th, 2017

INTERVIEW LISTS**A: Company Personnel**

Name	Position	Location
Sharon Grant	VP Finances and Administration	Port Colborne
Lee Dimascio	VP of Operations	Port Colborne
Ryan Waines	Environmental Manager	Port Colborne
Chirag Shah	Purification Manager	Port Colborne
Elaine Carpenter	Human Resource Coordinator	Port Colborne
Julia Rodriguez	Logistics Manager	Port Colborne

B: External Stakeholders

Name	Company / Organization	Position	Location
Tom Cartwright	City of Port Colborne	Fire Chief and member of the CAP	Port Colborne
Bea Kenny	City of Port Colborne	City Councilor and member of the CAP	Port Colborne
Gary Bruno	Port Colborne citizen	CAP member and verification team member	Port Colborne



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