



RESPONSIBLE CARE[®] Verification Report

Chemtrade Logistics Inc.

July 25 - 26, 2013



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 Chemtrade Logistics Inc. (Chemtrade). The verification was undertaken on July 16 to 18 and July 25 & 26, 2013 and included team visits to Toronto, ON Headquarters, Niagara Falls Terminal and the Montreal PQ elemental sulfur production facility. The verification team also conducted a phone interview with company personnel at the facility in Prince George, B.C. This was the fifth Responsible Care verification completed for Chemtrade. The last verification was completed in February 2010.

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 in conjunction with a RC14001 certification audit of the headquarters in Toronto.

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: 23 August 2013

Gerry Whitcombe
Verification Team Leader

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

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Summary of Verification Team Observations

Findings Requiring Action

1. There is a finding requiring action that the Prince George and Niagara Falls sites need to complete an assessment of their level of implementation of PSM, and where they have not met corporate objectives in this area (enhanced), have written plans for achieving this.
2. There is a finding requiring action to ensure that health and safety information provided at each site to contractors (and including visitors) address all significant hazards.
3. There is a Finding Requiring Action that the company needs to significantly strengthen its commitment to the Responsible Care Principle of being accountable and responsive to the public, especially local communities. The company should review procedures for this area to ensure they are comprehensive (AC125-136) and ensure implementation at its sites meets procedural requirements
4. It is a finding requiring action that the corporate audits and review system needs to be able to identify deficiencies related to the Accountability Code.

Works in Progress

1. A work in progress is a new corporate medical surveillance program that is being introduced later this year.
2. The evaluation of nearby external hazards to determine possible impacts on the Montreal facility is a work in progress.
3. The company's roll-out of its Business Continuity implementation plan is a work in progress.
4. The company's development and implementation of corporate policies/standards for Research and Development is a work in progress.
5. The company plan to get back on track with customer assessments is a work in progress.
6. The implementation of Responsible Care requirements within RC14001 is a work in progress. There is much overlap between RC14001 expectations and those of CIAC Responsible Care, and the vast majority of Canadian requirements are being addressed. However, In consideration of the lead-in discussion we encourage the company to formally include those items identified in the company's gap analysis into section 5.3 of RC14001 - CHE-ESH-RC-001.
7. Company activity to facilitate both the Verification Process and the RC14001 certification process is a work in progress and has the potential for providing significant guidance to all companies endeavouring to accomplish the same task.
8. The company has initiated a significant "Sustainability Excellence" pilot project at the Toledo site and the team views this activity as a work in progress related to establishing management systems supporting the Resource Conservation and Emission and Waste Reduction area of the Operations Code.

Improvement Opportunities

1. There is an improvement opportunity to develop a process to ensure customers have a carrier approval process.
2. There is an improvement opportunity to work with CIAC membership in the Rail Committee of the National TransCAER Committee to: 1) work through the issue of short haul carrier assessments (and to act on any recommendations) and 2) work through the issue related to

obtaining detailed information from rail carriers related to carrier incidents involving company products.

3. There is an improvement opportunity that CHE-ESH-PSM-010 be modified so that guidelines for the analysis of off-site consequences incorporate the latest and most credible criteria resulting in up-to-date and consistent outcomes regardless of the facility to which the analysis is applied.
4. There is an improvement opportunity for corporate to develop company targets related to emissions from its operations and collect emissions data from its facilities in order to monitor its achievement of those targets.
5. There is an improvement opportunity to conduct a gap analysis of the Stewardship Code using the CIAC's 2012 Responsible Care Stewardship Guide and develop plans to address gaps.
6. It is an improvement opportunity to have a system that ensures that management at every site is aware of and understands changes that have been made to management systems and corporate requirements.
7. There is an improvement opportunity for the company to manage all code elements on Promotion of Responsible Care by Name as a focus area with goals, targets and timelines. Examples of specific actions where improvements could be made are signage at facilities and inclusion of Responsible Care in contracts with suppliers, customers and contractors.
8. There is an improvement opportunity to provide guidance to facilities on management expectations for implementation of corporate standards in areas such as (for instance) analysis of worst case scenarios and implementation expectations for ESH-RC-004 (Responsible Care Communications).
9. There is an improvement opportunity to include regularly required reviews on the action list for those responsible for the reviews.

Successful Practices

1. The automatic linking of critical emission monitors to the emergency alarm in Montreal is a successful practice.
2. The company's IMS incident tracking system is a successful practice.
3. A company successful practice is the oversight and direction provided by the Board of Directors and its standing committee on Responsible Care.
4. The company's intranet based document management system is a successful practice.
5. The company's intranet based training system, Chemtrade University, is a successful practice.

1. Introduction

1.1 About Responsible Care Verification

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

The Responsible Care® Ethic and Principles for Sustainability

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

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

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

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

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

- Knowledgeable industry experts with experience in Responsible Care;

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

Once completed, the Verification Report is made publicly available through the CIAC website (www.canadianchemistry.ca). Chemtrade 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 Responsible Care staff at CIAC at lvandenberg@canadianchemistry.ca or (613) 237-6215 extension 242.

1.2 About Chemtrade

This is very brief overview of the company and its operations covered by the re-verification.

Chemtrade Logistics was created in July 2001, and is a publicly traded Income fund on the Toronto Stock exchange. The company is a marketer of sulfur-based chemicals either produced or obtained under long-term removal and service agreements with by-product producers such as base metal smelters, oil refineries and industrial manufacturers. It has six major products – sulfuric acid (H₂SO₄), liquid sulfur dioxide (SO₂), sodium hydrosulphite (SHS - Na₂S₂O₄), sodium chlorate (NaClO₄), elemental sulfur (S) and phosphorus pentasulfide (P₂S₅). It also produces zinc oxide (ZnO) at three North American locations.

The company operates in three business segments (Sulphur Products & Performance Chemicals (SPPC), Pulp Chemicals, and International):

- Sulphur Products & Performance Chemicals

- Sulphur Products

The company obtains sulphuric acid, liquid SO₂, and sulphur primarily from base metal smelters and oil refineries (some 40 producers), which produce these products as a result of capturing sulphur-based emissions to meet environmental regulations. They also produce merchant grade sulphuric acid and ultrapure sulphuric acid at their own plants in Beaumont, Texas; Shreveport, Louisiana; Riverton, Wyoming; Tulsa, Oklahoma; and Cairo, Ohio. These products are handled through terminals located in Niagara Falls, Ontario; Cleveland, Ohio; Chicago, Illinois; Kansas City, Kansas; Valleyfield, Quebec and Sauget, Illinois. Intermodal transfer stations are located in Saint John, New Brunswick; Auburn, Maine; Elizabeth, New Jersey; Houston, Texas; Ottumwa, Iowa and Ste. Catherine, Quebec. The chemicals are transported utilizing a fleet of over 1,500 leased railcars.

- Performance Chemicals

Sodium Hydrosulphite – SHS (Na₂S₂O₄)

SHS is used extensively as a bleaching agent in the pulp and paper and textile industries. Its major use in the paper industry is for bleaching mechanical and recycled pulps used primarily in

newsprint production. In the textile industry its primary use is for reducing indigo and vat dyes.

Company owned plants are located in Leeds, South Carolina and Kalama, Washington. Toll operations are located in Trois Rivieres, Quebec (Somavrac) and Charleston, Tennessee (Olin). There are two facilities that perform dissolving and blending services in Thunder Bay, Ontario.

Phosphorous Pentasulphide (P₂S₅)

P₂S₅, is a performance chemical used primarily as a strategic ingredient in the lubricating oil and grease additive markets for the automotive industry. This plant is located in Lawrence, Kansas.

- Pulp Chemicals

Located in Prince George, British Columbia, the plant supplies sodium chlorate (NaClO₄) and crude tall oil (CTO), both of which are chemicals used by the pulp and paper industry. Sodium chlorate is used as a precursor in the production of Chlorine Dioxide (ClO₂) an alternative to chlorine (Cl₂) used to bleach pulp, and CTO is used as a less expensive alternative energy to natural gas.

- International

Based in Zug, Switzerland, Chemtrade Aglobis AG removes, markets and distributes sulphuric acid and liquid sulphur produced by oil refineries, non-ferrous smelters and other industrial facilities in Europe, South America, and the Middle and Far East. In 2005 the company purchased Kemmax (formerly Ruhr Schwefelsäure GmbH) and its subsidiary, Ruhr Transport GmbH in Germany.

Chemtrade Aglobis AG owns storage and distribution facility in Rotterdam, Netherlands and also a fleet of 48 trucks and trailers.

1.3 About This Verification

The verification of Chemtrade Logistics Inc. (Chemtrade) was conducted on July 16 to July 18 and July 25 & 26, 2013 and included team visits to Toronto, ON Headquarters, Niagara Falls Terminal and the Montreal East, PQ facility.

Note: Since the Montreal East facility was acquired from Marsulex less than 3 years ago, the facility is not officially part of this verification, but was included at the request the company in order to gain insights on the integration of ex-Marsulex facilities into the Chemtrade Responsible Care system.

The verification team also conducted a phone interview with company personnel at the sodium chlorate facility in Prince George, B.C. 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 was the fifth Responsible Care verification completed for Chemtrade. The last verification was completed in February, 2010.

The verification team was comprised of the following individuals.

Name	Affiliation	Representing
Gerry Whitcombe	CIAC Verifier	Industry (team leader)
Marcel Emond	CIAC Verifier	Industry
Phil Byer	CIAC Verifier	Public-At-Large
Jim Orrell	Comité de concertation	Montreal East community
Bill Stewart (by phone)	FMC CAP	Prince George community
Peter Collee	Niagara Falls CAER	Niagara Falls community

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

During the verification of Chemtrade, the verification team looked for evidence that the company was addressing 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 during the verification, the team placed an emphasis on conducting a more in-depth examination of certain company aspects identified by the company or the team. These were related to:

- Process Safety Management
- Emergency Management
- Transportation and Physical Distribution
- Maintenance
- Occupational Health and Safety
- Accountability Code: Operating Site Communities

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

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

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

2.1 Team Observations Concerning Operations Code

2.1.1 Design and Construction of Facilities and Equipment

The company has and implements appropriate procedures and standards to the design and construction of facilities and equipment. The company meets Responsible Care implementation expectations for this area.

However, one area of concern relates to Accountability Code, AC131 that requires the company to provide information to the community about plans to modify operations or facilities and seek and respond to community feedback. Although the corporate Responsible Care Communications procedure, section 5.2.2, requires this, it had not been done when significant increases in loadings were planned for the Niagara Falls facility. This is part of a broader issues related to the Accountability Code and is discussed later in this report.

2.1.2 Operations Activities

In consideration of the four areas discussed below the company fully meets Responsible Care implementation expectations for Operations Activities.

a. General Considerations

The company is generally well served by certifications under ISO9001 and RC14001. These standards require regular assessment of significant aspects and impacts which ultimately affect procedural controls.

b. Laboratory Practice

Lab procedures are routinely reviewed as are audits of physical lab assets.

c. Transportation and Physical Distribution

This area is well covered by standards and procedures and the company has been recognized frequently by their rail carrier for their excellent performance in preparing the loaded railcars for transportation. Carrier selection processes are in place, assessments are done routinely and performance monitoring is conducted with the carriers. Customers can pick up their own shipments and are responsible for ensuring suitable carriers are selected. The team would suggest the following as an improvement.

- There is an improvement opportunity to develop a process to ensure customers have a carrier approval process.

The team did not have the opportunity to thoroughly investigate the company's management systems with respect to short haul rail carriers. We do, however, want to remind the company that Responsible Care code implementation expectations for this area include:

- For directly contracted short haul carriers a thorough assessment and follow up process(similar to the management system for motor carriers)
- For short haul carriers contracted by Class 1 carriers:
 - A management system to:

- understand which short haul carriers are being used
- determine if and when assessments have been conducted
- determine how the short haul railway responded
- guide the company in responding to these assessments.

The CIAC has recognized the importance of being able to interact with these carriers and has established a focus area for the Rail Committee of the National TransCAER committee. The team encourages the company to participate.

In a related topic, companies usually do not receive detailed information from their principal rail carriers relating to rail incidents which involve company products. Since many companies internally investigate these incidents (many to root cause) the lack of information impedes the process.

These two observations support the following opportunity:

- There is an improvement opportunity to work with CIAC membership in the Rail Committee of the National TransCAER Committee to:
 1. work through the issue of short haul carrier assessments (and to act on any recommendations) and
 2. work through the issue related to obtaining detailed information from rail carriers related to carrier incidents involving company products.

d. Maintenance

The company has extensive maintenance procedures governed generally by process safety requirements. There are preventative maintenance plans in place which are reported on monthly to management. Equipment checks are done on a periodic basis (daily, weekly and monthly) depending on the criticality of the equipment. Hoses are replaced either after three years or one year depending on service and are inspected regularly. Tanks are inspected on a five year basis.

2.1.3 Safety and Security

In respect of the six sub-sections presented below the company sufficiently meets Responsible Care implementation expectations for Safety and Security. There are some significant issues identified related to Emergency Management that are presented in that section.

a. Occupational Health and Safety

This area is handled very well by the company as is demonstrated by the company's injury rate performance for employees and contractors.

The company has been meeting its commitment to report injury data to the Association (CIAC) as well as leading indicator data, which is a new requirement of the CIAC.

The company has recently introduced a behavioural based safety (BBS) program which is evolving as it gains acceptance by employees.

OH&S training is done based on an employee's training matrix and the team observed that training

records were complete for the Niagara Falls site.

Routine inspections are conducted, the process governed by the CHE-EHS-GE-010 (JSA) and CHE-ESH-GEN-011 (Housekeeping) corporate standards.

There is a contractor selection and control standard in place (CHE-ESH-GEN-100)

The company has an Industrial Hygiene program in place and will conduct a survey this year (the last one was conducted in 2008). It is also implementing a new medical surveillance program.

- A work in progress is a new corporate medical surveillance program that is being introduced later this year.

b. Process Safety Management

The company has chosen to apply U.S.OSHA PSM (Process Safety Management) principles universally, that is, not just for areas handling highly hazardous materials. This is commendable and clearly demonstrates their commitment to a high level of process safety management.

Risk evaluations are frequent and routine driven by process hazardous analysis (PHA's) and hazard and operability (HAZOP) studies.

The company has also chosen to use CIAC's HISAT (Hazardous Installation Self-Assessment Tool) to assess their level of implementation of PSM but some facilities have not used HISAT as required. For example, the HISAT had not been completed for Niagara Falls facility. In addition, although one of Chemtrade's corporate objectives is for all facilities to achieve Enhanced level of HISAT, neither the Prince George nor Niagara Falls sites have written plans with dates for achieving this. The team is of the opinion that this is an area where conformance is required.

- There is a finding requiring action that the Prince George and Niagara Falls sites need to complete an assessment of their level of implementation of PSM, and where they have not met corporate objectives in this area (enhanced), have written plans for achieving this.

c. Emergency Management

Items related to emergency management were extensively reviewed at the corporate headquarters, at the Niagara Falls and Montreal East facilities and during Prince George interviews. The area is well documented and generally well managed. However there were several areas of concern.

It is a Responsible Care requirement that site risks be evaluated on a regular basis. The Chemtrade procedure for Off-site Consequence Analysis, section 6.4, requires that each facility carry out risk assessments that identify the worst case scenarios and that these be reviewed at least every 3 years or whenever changes occur. The team reviewed these at the Prince George, Niagara Falls and Montreal East sites, which resulted in several observations.

The company has a procedure that requires the company to assess both the worst imaginable and worst credible case emergency scenario at each site (Chemtrade Off-Site Consequence Analysis –

CHE-ESH-PSM-010). However, the criteria and consultants used in 2011 to assess the cases in Niagara Falls were different from those used in Montreal in 2013. In both situations the chemicals studied were the same but the assessment outcomes were different.

- There is an improvement opportunity that CHE-ESH-PSM-010 be modified so that guidelines for the analysis of off-site consequences incorporate the latest and most credible criteria resulting in up-to-date and consistent outcomes regardless of the facility to which the analysis is applied.

Two of the Findings Requiring Action (#4 and #5) in the 2010 verification were that the company did not have corporate guidance for identifying and evaluating risk posed by neighbouring operations and all sites identify and evaluating the risk of industrial neighbours and possible nearby events and incorporate significant scenarios into site emergency response plans.

Although Chemtrade Procedure for Off-Site Consequence Analysis (section 5.4 of CHE-ESH-PSM-010) states that Chemtrade will conduct an evaluation of nearby sites to determine possible impacts to its facilities and personnel and will incorporate these scenarios into site emergency response plans, the team observed that the Montreal East facility for example has not addressed this even though it is evident that there is the potential impact of nearby hazards on the facility (OP31). In an industrial environment these hazards can change unpredictably and should an unplanned event occur the outcomes could be significantly better if response to the event has been thought through. The team recognizes that the Montreal facility has an additional year to complete its implementation and presents the following:

- The evaluation of nearby external hazards to determine possible impacts on the Montreal facility is a work in progress.

As part of the team's safety orientation at the Niagara Falls facility, it was presented a plant safety video generally used for visitors and contractors. Although the facility handled SO₂ there was no explicit mention of the material in the video. The immediate issue is to ensure information about SO₂ is presented to contractors at this facility. At a more general level, the corporate management system does not ensure that information and training given to contractors and visitors address all significant risks.

- There is a finding requiring action to ensure that health and safety information provided at each site to contractors (and including visitors) address all significant hazards.

The team observed that the Niagara Falls facility has not communicated to neighbours information about site risks and what to do in the event of an emergency, and at the Prince George facility it had not been done in at least several years. As a result facility management did not know whether immediate neighbours understand what to do in the event of an emergency. This is addressed further in the Accountability Code section of this report.

In Montreal the team was shown the system that triggers the emergency alarm without operator intervention. There are 34 emission monitors positioned around the facility that are linked directly to

the alarm. The system alarms on average once per year (day or night) and is deemed to be an excellent test of their emergency response plan.

- The automatic linking of critical emission monitors to the emergency alarm in Montreal is a successful practice.

d. Malicious Intent

The company meets Responsible Care code implementation expectations for this area.

e. Critical Infrastructure/Business Continuity

The company has assessed their corporate headquarters opposite the CIAC guidelines in this area and are implementing a program starting there. Once this is done it will develop a plan for the entire organization based on the learning gained from this first implementation.

- The company's roll-out of its Business Continuity implementation plan is a work in progress.

f. Incident Reporting and Investigation

The company has an excellent computer based tool to document, understand, and investigate incidents and to track action items resulting from investigations (Incident Management System (IMS)). There is an email component of the tool that notifies company personnel of incidents that have occurred and also notifies persons responsible for action items. The company has employees competent in leading root cause investigations.

- The company's IMS incident tracking system is a successful practice.

As noted in section 2.1.2c, there is an improvement opportunity related to obtaining information about rail carrier incidents involving company products.

2.1.4 Environmental Protection

In general the company fully meets Responsible Care implementation expectation for this area.

The company has a general policy to continually improve its environmental performance and has procedures that address reducing its environmental footprint (RM-1-EV-001,002,003,004 and RM-1-HS-005). It does not collect information on emissions from its facilities or set overall corporate targets for its emissions based on explicit criteria such as the hazardous nature and quantities of those emissions.

- There is an improvement opportunity for corporate to develop company targets related to emissions from its operations and collect emissions data from its facilities in order to monitor its achievement of those targets.

a. Emissions and Waste Reduction

The company has a policy to continually reduce waste which for 2013 requires each site to complete one project reducing environmental emissions.

Effluents are regulated as to amounts but the company continually looks for ways to reduce or turn an effluent into a feed stream for another operation.

b. Handling, Treatment and Disposal of Wastes

This area is well covered by corporate standards and the team observed that the company uses approved waste contractors to dispose of or recycle wastes in a safe and environmentally sound manner.

2.1.5 Resource Conservation

Chemtrade uses resources such natural gas and water but has not established the elements of a management system to continually reduce the footprint of its operations with respect to the consumption of these resources. A pilot project is underway in Toledo that relates to the requirements under this code section. As this is related to establishing a management system the pilot project is highlighted as a work in progress in the Plan section of this report.

2.1.6 Promotion of Responsible Care by Name

There are 12 codes related to the promotion of Responsible Care: four in the Operations Code (OP81-84), three in the Stewardship Code (ST100-102) and five in the Accountability Code (AC132, 140, 143, 150 and 152). All of these are covered in this section. The company promotes Responsible Care by name in many ways, including posting and promoting Responsible Care principles; and using the Responsible Care logo on company documents, business cards, and website. It also has an active program of promotion to its employees.

However, the team found that signage at the entrance to both the Prince George and Niagara Falls facilities lacks mention of Responsible Care, and hence does not promote it to neighbours. Signage about Responsible Care at the entrance to all facilities is something that is expected of CIAC members. The company could also promote Responsible Care more broadly to its suppliers, customers and contractors by, for example, including mention of it or obligations to it in its contracts with them. The company could make continual improvement in this area by taking an overall management approach to the 12 related codes.

As in the previous section this is a management system issue and an improvement opportunity is presented in the Plan section of this report.

2.2 Team Observations Concerning Stewardship Code

The company has standards covering those areas of its operations where the Stewardship Code applies. It has begun to develop policies/standards where it believes it might be conducting an activity in the future in order to be well equipped to begin such activity in conformance with the appropriate codes.

At this point in the company's growth the team is of the opinion that the company would benefit from performing a complete assessment of how well it is meeting each of the code elements using the CIAC Stewardship Code guidelines, which provides very useful information and advice on each code.

- There is an improvement opportunity to conduct a gap analysis of the Stewardship Code using the CIAC's 2012 Responsible Care Stewardship Guide and develop plans to address gaps.

2.2.1 Expectations of Companies

a. Research and Development (R&D) Expectations (85-92)

The company is not actively involved in research and development but has recently developed a standard (CHE-PS-006) that is designed to ensure R&D activities are conducted in accordance with code requirements.

- The company's development and implementation of corporate policies/standards for Research and Development is a work in progress.

b. Expectations Beyond R&D (93-114)

The team did not specifically review topics in this area.

2.2.2 Expectations with Respect to Other Parties

The company is well served by standards for ensuring other parties are interacted with in conformance to code requirements.

The team was made aware of an ongoing issue related to the process of customer assessment where it has fallen behind in meeting its goal for conducting the assessments. The company has developed a new plan to deal with the situation which has just been implemented.

- The company plan to get back on track with customer assessments is a work in progress.

Also, as noted in section 2.1.6, the company could also promote Responsible Care and its ethic more actively to those with whom it does business. For example it could, where practical, establish application of the codes as a contractual obligation.

2.3 Team Observations Concerning Accountability Code

2.3.1 Operating Site Communities

The company has a suite of policies/standards/procedures and work practices that completely cover this code area. However, to a large degree, interpretation and implementation is left to the facilities and the team observed significant problems with the outcomes. Some examples are:

- At Niagara Falls there has been no dialogue with local neighbours (other than a local community developer and the CAER group) since 2004.
- At Prince George information about facility risk has not been distributed to potentially affected neighbours (other than contractors and visitors) in at least the past two and a half years.
- At Niagara Falls and possibly Prince George there are no documented site-specific Community Communications processes or written plans for future community dialogue activities that specify information to be distributed, methods, target dates, responsibilities, etc.

- The information brochures for the two facilities contain little information about the risks posed by the facilities and no information about the worst or credible case scenarios.
- Neither the Prince George nor Niagara Falls sites maintain information about the community, e.g. lists of people and organizations, community interests and concerns, etc..
- Information about modification to increase loading volumes at Niagara Falls was not made available to the local community nor was feedback from that community sought.

These observations are not dissimilar to observations made during the previous verification, which resulted in a finding that “each site needs to implement a documented management system for community awareness including risk information.” The fact that this is still a problem is of significant concern to the team, particularly due to the risks that company facilities can pose to their neighbours.

- There is a Finding Requiring Action that the company needs to significantly strengthen its commitment to the Responsible Care Principle of being accountable and responsive to the public, especially local communities. The company should review procedures for this area to ensure they are comprehensive (AC125-136) and ensure implementation at its sites meets procedural requirements

2.3.2 Other Stakeholders

The team did not have an opportunity to fully investigate this area but with respect to section d) Transportation Corridor the company's involvement with TransCAER in the east and west fully meets Responsible Care implementation expectations.

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 Chemtrade's 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 company's overall management system for CIAC (Canadian) Responsible Care is RC14001. The team is of the opinion that this is an excellent system but would suggest the following.

In the United States the American Chemistry Council (ACC) combined the requirements of (U.S.) Responsible Care and the environmental standard ISO 14001 to create a modified standard (RC14001), requiring mandatory third-party auditing. The company is in the process of certifying to this standard on a Corporate and site-by-site basis.

The Management System document (Responsible Care Management System RC14001 - CHE-ESH-RC-001) is a required document under RC14001 that details what the company is doing to satisfy the RC14001 technical specification. In this document the requirement to comply with CIAC Responsible Care is given under the following:

“4.0 Definitions”

“4.7 Other Requirements - Corporate, ESHA, or facility plans, directives, guidance, voluntary agreements, employee initiatives, applicable to the facility's Responsible Care Management system. For example, adherence to Chemistry Industry Association of Canada Responsible Care Codes.”

The management of these items is dictated by section 5.3 (referring to Technical Specification section 4.3.2) and requires an understanding of what applies and assurances that these items are properly integrated into the management system.

Most of the requirements of CIAC Responsible Care are specified elsewhere in the RC14001 specification but there are differences and the team felt that they should be specifically referred to in the 5.3 - Other Requirements section of CHE-ESH-RC-001. The reference could be to another document where these code items are delineated. In this way code areas such as 7. Promotion of Responsible Care by Name and 4v) Critical Infrastructure/Business Continuity could be incorporated into the management system.

- The implementation of Responsible Care requirements within RC14001 is a work in progress. There is much overlap between RC14001 expectations and those of CIAC Responsible Care, and the vast majority of Canadian requirements are being addressed. However, In

consideration of the lead-in discussion we encourage the company to formally include those items identified in the company's gap analysis into section 5.3 of RC14001 - CHE-ESH-RC-001.

In addition:

- Company activity to facilitate both the Verification Process and the US ACC RC14001 certification process is a work in progress and has the potential for providing significant guidance to all companies endeavouring to accomplish the same task.

Chemtrade continually develops and updates its policies, procedures and standards based on issues identified both internally and through audits and verifications such as this one. The corporate office informs sites of such changes through emails. However, during the verification, the team identified cases where new corporate requirements were not known to facility managers who were responsible for meeting those requirements.

- It is an improvement opportunity to have a system that ensures that management at every site is aware of and understands changes that have been made to management systems and corporate requirements.

One of the components of Chemtrade's overall management system is the active involvement of the Board of Directors through its Responsible Care Committee.

- A company successful practice is the oversight and direction provided by the Board of Directors and its standing committee on Responsible Care.

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 Chemtrade's management system, the verification team observed the following:

The team found that the RC14001 provisions for planning largely covered CIAC management system guidelines. One area of difference was the lack of a process to check company performance against CIAC benchmarks. The list includes process safety management, emissions awareness and reporting, risk communications, motor carrier evaluations, waste contractor evaluations, emergency planning with communities, site security and TransCAER outreach (CIAC Management System Guide, p4). The company submits its data appropriately but the team did not observe much in the way of using CIAC collective data or seeking information from others to compare company performance.

With reference to the team's comments under sections 2.1.5 and 2.1.6 (above) the management system is weak in two Operations Code areas (Resource Conservation and Promotion of Responsible Care by Name).

The Resource Conservation codes call for a management system to “reduce the footprint of its operations”. The team is of the opinion that the Plan step in the process is where this requirement should get identified and acted upon. The team notes that reducing the footprint of its operations through resource conservation vs emissions (see section 2.1.4) are related, but not the same.

- The company has initiated a significant “Sustainability Excellence” pilot project at the Toledo site and the team views this activity as a work in progress related to establishing management systems supporting the Resource Conservation and Emission and Waste Reduction area of the Operations Code.

In the second example, the Plan step is the logical location to implement a company strategy to manage all aspects of ‘Promote Responsible Care by Name’ within the organization.

- There is an improvement opportunity for the company to manage all code elements on Promotion of Responsible Care by Name as a focus area with goals, targets and timelines. Examples of specific actions where improvements could be made are signage at facilities and inclusion of Responsible Care in contracts with suppliers, customers and contractors.

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.

In considering the DO Step of Chemtrade's management system, the verification team observed the following:

The company has a strong organizational structure in place to manage its commitment to Responsible Care. Its technical requirements are excellent, well documented and clear. But as discussed in the Emergency Management and Operating Site Community sections where local interpretation and inconsistent implementation have resulted in findings the team is of the opinion that stronger corporate guidance would lead to improved outcomes.

- There is an improvement opportunity to provide guidance to facilities on management expectations for implementation of corporate standards in areas such as (for instance) analysis of worst case scenarios and implementation expectations for ESH-RC-004 (Responsible Care Communications).

Throughout the verification process the team observed the use of the company’s intranet document management system. The structure of the system, the intranet portal through which access was gained, was very good. The structure was clear and documents were available (usually) in only several mouse clicks.

- The company's intranet based document management system is a successful practice.

Also throughout the process, the team was exposed to the company's training system called 'Chemtrade University'. The system is particularly thorough and is linked to employees training matrix to ensure training is available and employees are up to date.

- The company's intranet based training system, Chemtrade University, is 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 Chemtrade's management system, the verification team observed the following:

The internal audit system is soundly based and well intentioned as are the systems for management reviews of all types. However one of the requirements of the Responsible Care Communications procedure (section 5.1.6) at the corporate level is "the effectiveness of the Responsible Care communication program will be evaluated at least annually during the Responsible Care Management Review meetings."

Given that the team found significant deficiencies in this area, as noted in section 2.3.1, and the extent of these deficiencies had not been identified in either the facility audits or the annual management review, it is evident that there are problems in this part of the Check function.

- It is a finding requiring action that the corporate audits and review system needs to be able to identify deficiencies related to the Accountability Code.

The team also found that the "action lists" used by management at each site do not include all regular reviews, e.g. review of worst case scenarios and self-assessments, that are to be carried out, and as such these reviews may not occur.

- There is an improvement opportunity to include regularly required reviews on the action list for those responsible for the reviews.

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 and corrected, etc.

In considering the Act Step of Chemtrade's management system, the verification team observed that the company adequately demonstrated its ability to respond and follow up on a wide variety of required actions. One important area in which this did not occur, as explained earlier, was on the finding in the previous verification report concerning community dialogue; however, the team does not view this as a problem with the overall Act function of the overall management system, but rather with an understanding and appreciation of the Responsible Code Ethic and Principles and the code elements in the Accountability section, as discussed earlier

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 are 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 Chemtrade'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:

Overall, Chemtrade is committed to and practices the ethic and principles for sustainability. Several key examples most applicable to its business are:

- it works for the improvement of people’s lives and the environment, while striving to do no harm. The nature of Chemtrade's business is to take effluent sulphur from the oil refining and mining industries and turn it into useful products. It is a very significant piece of the process that redirects potential environmental pollutants into saleable products. While doing this, it was evident to the team that Chemtrade strives to understand and manage the risks it poses.
- it takes preventative action to protect health and the environment. The company is very strong in its commitment to protect health and the environment and its excellent performance as measured by health, safety and environmental incidents speaks to this end.
- It promotes awareness of Responsible Care, and inspires others to commit to these principles. The company has many initiatives promoting Responsible Care but could make use of corporate guidance to advance this principle. Please refer to the opportunity in Section 3.1 above.
- It engages with its business partners to ensure the stewardship and security of its products, services and raw materials throughout their life-cycles. The company routinely follows up with its customers, rail and motor carrier suppliers on issues related to its products as well as information related to the safe handling of those products. It is often recognized by its rail carriers for excellence in preparing railcars for shipment.
- It works with all stakeholders for public policy and standards that enhance sustainability, acts to advance legal requirements and meets or exceeds their letter and spirit. Although the team did not specifically address this area, we understand that the company is actively involved with and supports CIAC staff in their endeavours in this area. It has a presence on the CIAC board to influence and support policy makers.

- In a limited way it understands and meets expectations for social responsibility. The team observed a good understanding of this principle at corporate headquarters but generally found limited understanding and application at the sites.
- It is not positioned particularly well to innovate for safer products and processes that conserve resources and provide enhanced value. The company is somewhat limited in its ability to conserve raw material resources due to the nature of its business.
- The company is working hard in the area of being accountable and responsive to the public. But as mentioned in Sections 2.1.3c and 2.3.1 there are problems where local interpretation and implementation of corporate standards have resulted in deficiencies in certain code areas. The team presented findings in those two sections and an opportunity in the “Do” part of the Management System section (provision of corporate guidance) which are intended to help make progress in this area.

5. Verification Team Conclusions

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 - summarized below 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 Chemtrade I have reviewed this verification report. The observations and conclusions contained in the report have been discussed with the verification team.

Chemtrade 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.

Mark Davis
President and CEO
CHEMTRADE LOGISTICS INCOME FUND
May 14, 2014

Interview Lists

A: Company Personnel Contacted During Verification Process

Name	Position	Location
LaMont Powell	Director, Responsible Care	Carlisle, SC
Rama Bhaga	Management Systems Coordinator	Toronto, On
David Watson	Sr. Process Engineer	Beaumont, TX
Jim Warren	Director, Management Systems	Carlisle, SC
David Burroughs	Director, EH&S North America	Shreveport, LA
Duane Abbot	Technical Service Manager	Oregon, OH
Leon Pruett	ESH Regional Manager	Riverton, WY
Lane Benford	CRT Manager	Beaumont, TX
Ramesh Atchuthan	Transportation Manager	Toronto, ON
Heather Gosling	Transportation Service Manager, Acid	Toronto, ON
Dave Smith	Technical Service Center Supervisor	Niagara Falls
Carrie Harding	EH&S Project Manager	Carlisle, SC
Renee Mair	Supply Chain Administrator	Toronto, ON
Peter Pontone	Director, Organizational Development	Toronto, ON
Chukie Wijegoonewardane	Corporate Manager, Risk & Treasury	Toronto, ON
Maryann Romano	Vice President	Toronto, ON
Rohit Bhardwaj	Chief Financial Officer	Toronto, ON
Eve-Marie Hamel	Administration support	Montreal, QC
Ian Bouchard	Trade (welder)	Montreal, QC
Jonathan Fortier	Trade (E&I technician)	Montreal, QC
Émilie Levesque	EH&S Coordinator	Montreal, QC
Jean-Philippe Martin	Operator (boardman)	Montreal, QC
Marc Hunziker	Plant Manager	Montreal, AC
Marylene Provost	EHS Supervisor	Montreal, QC / Niagara Falls, ON
Chuck Walls	Regional Manager	Prince George, BC
Jack Patrick	Operations Manager	Prince George, BC
Kevin Grigg	Plant Engineer	Prince George, BC
Dave Smith	Technical Service Center Supervisor	Niagara Falls, ON
Duane Abbott	Technical Service Manager	Niagara Falls, ON
Mark Sirianni	Operator	Niagara Falls, ON
Brandon Alward	Operator	Niagara Falls, ON
Tim Morningstar	Operator	Niagara Falls, ON

B: External Stakeholders Contacted During Verification Process

Name	Company / Organization Position	Representing
Bruce Walker	Comité de concertation	Montreal community
Maruice Vanier	Comité de concertation	Montreal East community
Sébastien Wagner	Comité de concertation	City of Montreal



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