

Responsible Care: History & Development

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Abstract

This analysis offers insight into the development and evolution of the principles of Responsible Care with the intention of providing readers in chemistry-related industries and academia with the insight and the means to promote and implement RC principles in their own work, related to their particular set of circumstances.

We first focus on the key elements of Responsible Care developed by the Canadian Chemical Producers' Association. This follows with an illustration of the need to develop a set of elements for self-examination to be used by chemically-associated readers, whether in industry or academia, to assess their own needs and Responsible Care's applicability.

While Responsible Care was first developed in Canada, it has expanded to the United States and over 50 other countries through their national chemical associations. Further development has taken place under the guardianship of the International Council of Chemical Associations (ICCA). The Responsible Care Global Charter has been signed by the Chief Executive Officers of over 90 major multinational companies. Ongoing development is enriched by the exchange of international experience and adaptation to meet evolving concerns and differing cultures. It is hoped that other national associations will add to the findings in this report by describing their own experiences of development and providing a sound base for the adoption of RC in other regions and in other chemically-related groups worldwide (ICCA, 2006).

Keywords: Responsible Care, Corporate Social Responsibility, Supply Chain Management, Product Stewardship, Environmental Management

Acknowledgements: This research was made possible by the International Union of Pure and Applied Chemists. We particularly thank Bernard West and Brian Wastle for their review and comments on earlier drafts of this manuscript.

Word Count: 7 400

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INTRODUCTION

RESPONSIBLE CARE represents a commitment on the part of the chemical industry to contribute to the betterment of society while minimizing any adverse environmental impacts and societal consequences. It is a culture that focuses on doing the right thing and demonstrating its commitment to public verification.

Responsible Care Project

While the Responsible Care initiative is well known in the chemical industry, it is less well understood within the academic and other technical communities. The International Union of Pure and Applied Chemists (IUPAC) Committee on Chemistry and Industry (COCI) has now approved an initiative to create a framework project (West et. al, 2007) focused on the responsible application of chemistry at all stages, from research, through industrial production, to the ultimate use and disposal of the products. Responsible Care (RC) will form the basis for understanding what responsibilities chemists have in using, handling, and producing chemicals. The implementation of this initiative will be comprised of a linked series of projects, and this paper represents the first stage of implementation.

The goal of the RC Project is to build knowledge and capacity about the basis, methodology, and goals of Responsible Care and targets the following audiences:

- Junior leaders in academic, business and government organizations in developing countries,
- Chemistry associations in developing countries,
- Supply chain contacts in developing countries and their suppliers in the developed countries,
- Various groups in developed countries that will benefit from this knowledge, including: universities and government research establishments.

An important goal of this broadening process is to provide feedback to the implementers of Responsible Care in order to assist in the continuous improvement of the initiative. The results of this initiative are meant to increase the awareness and the

application of the Responsible Care ethic in institutions related to chemistry worldwide, resulting in safer and more sustainable ways of designing, developing, and using chemical products.

KEY PRINCIPLES UNDERPINNING RESPONSIBLE CARE

The basic principles of Responsible Care in Canada grew out of intensifying concerns that the chemical industry was risking the loss of its public license to produce (CCPA, 2005a). Over the past 30 years, pressures to regulate the chemical industry have increased, exacerbated at times by major incidents resulting in severe health and environmental impacts. The most salient example is that of the Union Carbide plant in Bhopal India, which exploded due to failing safety systems in a storage facility in 1984 and resulted in thousands of casualties (ENDS, 2005). The leaders of the Canadian chemical industry have encountered a series of crossroads since this time. They could have chosen a path that would have led to engaging regulators in case-by-case challenges that would have diminished the industry's capabilities to develop its economic potential; however, original RC leaders understood that the problem was much more complex and required a more progressive solution (Belanger, 2005).

In accordance with the findings of public opinion polls, industry leaders recognized that the public's concern is one of trust (Schmitt, 2002; Moffet et. al, 2004). The industry leaders chose a path that is anchored in gaining the trust of the affected communities and society in general. Trust has become the key driver of RC, which cannot be imposed, but rather requires the application of three fundamental principles, forming the cornerstones of Responsible Care:

Doing the right thing

Traditionally, the industry had responded to the laws and regulations in existence, and reacted defensively to the introduction of new regulation (ENDS, 2005; Moffet et. al., 2004). However, trust requires a commitment to "do the right thing", regardless of legal obligation. In fact, visibly doing the right thing is an essential step in building trust and contributing to a company's social license to operate (Dudok van Heel, 2001; Heath et. al, 2002). "Doing the right thing" radically changed the industry focus from regulatory

compliance to being ethically-driven, including being an advocate for regulation to drive continuous improvement. This focus on corporate social responsibility in a complex world with a multiplicity of stakeholders requires that companies engage in meaningful dialogue with interested parties, namely, peers in other companies, individuals representing plant communities, and government representatives, incorporating the following principles (Covello, 2005):

- Active listening to truly understand the underlying sources of concerns,
- Accurate presentation of the risks involved in operations and products and the steps taken to minimize them,
- A visible effort to integrate inputs from interested parties into planning and implementation processes,
- A broad consensus that the benefits provided by the company outweigh the risk.

Placing Responsible Care within an ethical framework represents a radical departure from what could have been a simple environmental risk management process. RC, operating as an ethical mandate, allows it to be embedded into all aspects of the corporate culture, separating it from a standard environmental management system which is usually concerned with issues of quality or meeting environmental standards (Willard, 2005). As an ethic it requires a radical change in corporate culture, requiring the CEO to enlist buy-in from all employees and to take account of their environmental performance in an integrated and balanced manner with their economic performance (Reisch, 2000).

Being open and responsive to public concerns

In the past, the industry had presumed that chemical issues were too complex to be understood by the general public. It believed that the industry knew best how to handle products and processes safely, and that the public should just trust the industry (Moffet et. al, 2004). However, trust must be earned and secretiveness leads to the perception that externally imposed rules are needed. Openness is the basis of accountability (Peters, Covello & McCallum, 1997). The public is the final arbiter as to whether responsible management initiatives are truly protecting the environment. In addition to the public, industry requires that responsible management principles are universally

adhered to and companies need to ensure that their efforts can stand up to external scrutiny.

Responding to public concerns through an ethical approach requires sensitivity to the changing nature of concerns over time. Responsible Care has been successful in this, as evidenced by its evolution to include verification, community advisory panels and the sustainable principles of green chemistry. The most recent revision of the ethic includes preventive and green engineering principles (CCPA, 2008a). To maintain public trust, the industry must engage in ongoing and visible responsiveness to what is currently of public and scientific concern. In the early 1980s, the issues dominating the public agenda were closely related to plant operations or movement of chemicals. Since then, concerns have broadened to focus on product stewardship, including the use of the chemicals, and are currently dominated by concerns relating to sustainability and climate change (McDonough et. al, 2003; Hawken, 1999).

Caring about products from cradle to grave to cradle again

Canadian chemical industry leaders recognize that caring about products and their potential impact on people and the environment should not stop at the plant gate (CCPA, 2008a, 2000). While customers have responsibilities associated with use and disposal, chemical companies' ethics must drive them to advise and help those customers in proper handling. It may require withholding products from customers who fail to practice due diligence in appropriate handling and consumer use; a reflection of true product stewardship (CCPA, 2000). This is an important consideration, since as far as the public is concerned, all chemical producers and distributors are vulnerable to being negatively perceived as the weakest link in the supply chain, regardless of whether or not the industry has control over the products at a particular moment in time (ENDS, 2005; Moffet et. al, 2004)

Comprehensiveness also allows the chemical industry to proactively approach and deal with public concerns in the most cost-effective manner with fewer duplications and a better time horizon. In this way, the industry becomes a credible and positive player in the search for solutions, one that should be listened to and trusted. This helps change the perception of the industry as being a problem creator to becoming a problem solver.

HISTORY OF RESPONSIBLE CARE

Prior to the creation of RC in 1985, the Canadian Chemical Producer's Association (CCPA) celebrated its role in Canadian society in 1973 by releasing a pamphlet entitled "Canada's Invisible Industry" (CCPA, 1973):

"The Canadian industrial chemical industry is the invisible industry –the fulcrum of Canada's inverted economic pyramid....it is no beggar...it seeks no preferential treatment to the detriment of other Canadian industries, it only seeks the opportunity to serve Canadian interests as the foundation upon which all our other industries must build...."

In 1979, the association commissioned a study to assess the public standing of the industry. The report (CCPA, 1979) found that, while invisibility had some advantages, it precluded the building of community support for the industry. Soon after, the industry faced a major train derailment in which a rail car explosion, due to a faulty wheel bearing, caused the release of styrene, toluene, propane, caustic soda, and chlorine into areas surrounding Mississauga (Allen, Havey, & Dickie, 1980). This and other safety and environmental issues (such as the Bhopal disaster) began to accumulate domestically and internationally. The industry quickly became visible for all the wrong reasons.

In 1983, CCPA members were asked to voluntarily sign a statement of guiding principles of industry behaviour. These principles stated, in part, that companies would:

- ensure their operations did not present an unacceptable level of risk to employees, customers, the public or the environment;
- provide relevant information on the hazards of chemicals to customers and the public;
- be responsive and sensitive to legitimate community concerns; and
- proactively communicate to stakeholders a commitment to continuous improvement in environment, health and safety performance.

(Laughton, Kierstead & Moran, 1994).

In 1983, the Canadian federal government commissioned a study to determine the future direction of the Canadian chemical industry and the role of the government in

regulating the industry. The study committee consisted of 12 chemical industry leaders and the leader of the major trade union. Initially it sought to demonstrate how crucial the chemical industry was to Canada's economy. However, the study also caused some of the participating CEOs on the project to question whether the general public perceived the industry as integral to this economy as well, or saw it as creating more problems than it was worth. This reflection renewed emphasis on the concept of responsible management of chemicals and a draft statement of guiding principles that had been developed five years earlier (CCPA, 1978). At the time of the draft, legal counsel expressed concerns that such a statement could lead to increased liabilities; however, eventually the draft statement was reviewed and approved by the Board of Directors of the CCPA.

The committee's report was published in February 1984 and signed by all project members. It affirmed that the industry was a key and responsible industry and published for the first time the Statement of Guiding Principles, citing the Transportation Emergency Assistance Program as a tangible example of the CCPA's commitment to implementing RC. The report stated that formal acceptance of the Guiding Principles by all members of the CCPA would be actively sought.

Months later in 1984, the cataclysmic Bhopal disaster occurred and a special CCPA Board meeting convened immediately after the incident in December 1984. Although 96% of member companies had signed on to the inaugural version of Responsible Care, doing so was not mandatory. At the meeting, a motion to make it mandatory was approved unanimously. All companies were then urged to review their current safety practices to identify potential weaknesses and report their findings. At a special meeting in January 1985 members agreed that the industry would only be as good as its weakest link; any company taking its responsibilities lightly would negate efforts of the whole industry. Responsible Care was born.

This series of meetings illustrates the important evolution that took place in the minds of Canadian chemical industry leaders. They recognized a need to develop trust with the public. To meet that need, a committee was formed to develop a common Safety Assessment Process. A second committee was tasked with developing a set of codes governing responsible management across the life cycle of chemical products (Belanger, personal observation). Today, this is an accepted concept within the industry (CCPA, 2000), but in 1985 it was revolutionary. It involved concepts such as refusing to produce a product if one was uncertain it would be handled with due diligence, informing plant

neighbours about the dangers associated with the processes inside the plant gates and the precautions taken to mitigate those (CCPA, 2005a). Each Board member also agreed to visit three non-Board member CEO's to secure their commitment to RC and offer help in implementation.

In the early stages of RC Code development, founding members pointed out that legal requirements offered a blueprint for minimum action, and turned the focus of RC to employ an ethical mandate that aimed to meet or exceed regulation, which was considered the minimum amount of action required. This became a crucial turning point in the history of Responsible Care. The CEOs on the Board determined what was needed in order to do the right thing and incorporated that philosophy into their mandate. Board members recognized that to meet the goal of developing public trust, they needed to incorporate a verification process into RC (Belanger, personal observation). The result was the first voluntary publication of their quantified performance on individual chemical emissions and 5-year projections of emissions reduction, which formed the basis of the National Emissions Reduction Masterplan, or NERM (CCPA, 2009a). They also chose to publicize the National Advisory Panel's (NAP) annual performance reports, which record member company's emissions reductions and adoption rates of response care philosophies.

BASIC PHILOSOPHY

Building Trust in Canada: An On-going Mission

Responsible Care has developed as an ethically-driven way of life, a culture reflecting a unique vision of member companies' corporate and social responsibilities. It addresses the reality that corporate values must emphasize long term commitments to: community and occupational health and safety, minimizing environmental footprint and promoting the mitigation of environment impacts across the industry. This must be done within a framework that minimizes social impacts and attempts to create positive relationships with all stakeholders.

The first Statement of Commitment to Responsible Care was published in February 1984 by the CCPA stating:

“The Canadian chemical industry is committed to taking every practical precaution to ensure that products do not present an unacceptable level of risk to its employees, customers, the public or the environment.”

It further outlined a set of guiding principles:

- Ensure that its operations do not present an unacceptable level of risk to employees, customers, the public and the environment.
- Provide relevant information on the hazards of chemicals to its customers, urging them to use and dispose of products in a safe manner, and make such information available to the public on request.
- Make Responsible Care an early and integral part of the planning process leading to new products, processes or plants.
- Increase the emphasis on the understanding of existing products and their uses and ensure that a high level of understanding of new products and their potential hazards is achieved prior to and throughout commercial development.
- Comply with all legal requirements which affect its operations and products.
- Be responsive and sensitive to legitimate community concerns.
- Work actively with and assist governments and selected organizations to foster and encourage equitable and attainable standards.

In 2003, the CCPA reviewed its commitment and revised the Statement of Commitment (CCPA, 2003): “We are committed to do the right thing and be seen to do the right thing. We are guided towards environmental, societal, and economic sustainability by the following principles:

- We are stewards of our products and services during their life cycles in order to protect people and the environment.
- We are accountable to the public, who have the right to understand the risks and benefits of what we do and to have their input heard.
- We respect all people.
- We work together to improve continuously,
- We work for effective laws and standards, and will meet or exceed them in letter and spirit.
- We inspire others to commit themselves to the principles of Responsible Care”.

In 2007, the CCPA again reviewed its ongoing initiative and concluded that public concern about sustainability principles had increased and there was now an expectation that the private sector would reduce its impact on the environment as it developed economically (see CCPA, 2008a; and CCPA National Advisory Panel, 2009). Taking a proactive posture, the CCPA looked to improving people's lives and the environment while striving to do no harm. The result of this extensive consultation between the CCPA, board members, the advisory panel and industry leaders was a restatement of the Responsible Care commitment as follows (CCPA, 2008c):

The Responsible Care® Ethic & Principles for Sustainability state that: 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.

In addition, the CPPA added the following to its logo: "Responsible Care: Our commitment to sustainability."

Integrating the Social Dimension

RC's goal of developing public trust necessitated a focus on addressing environmental and health concerns. In 1983 the United Nations appointed an international commission to examine the state of the environment globally, and to propose strategies for improvement. This commission, chaired by Norwegian Prime Minister Gro Harlem Brundtland, culminated in the publication of a report, "Our Common Future" (Brundtland Commission, 1987) focused on the interrelationships between the economy and the environment. The report underlined the crucial role played by the social dimension in achieving this precarious balance.

The social dimension was, therefore, never far from the surface of Responsible Care thinking. While a causal relationship between the chemical industry and its environmental impacts could be drawn, the social dimension and its effects on society presented a challenge to the entire industry and possibly all agents of economic society, in the larger context of corporate social responsibility. In cooperation with a number of other Canadian industry associations, the CCPA (1994) concluded that social responsibility had to be examined on two levels: (1) a societal level where all stakeholders must reach consensus on their ever-evolving needs and the allocation of resources to each stakeholder in meeting them; this can include consideration of poverty, third world development, human rights and many others and (2) a sectoral or company perspective where industry must preserve and grow its natural and human capital.

In 1994, the CCPA published "A primer on Responsible Care and Sustainable Development" in which it tried to describe both the cohesion of these two concepts and areas where the scope of sustainable development extended beyond Responsible Care. A review of sustainable development principles was conducted while integrating organizations such as the International Chamber of Commerce Business Charter for Sustainable Development, the Canadian National Round Table on the Environment and the Economy and the Economy Objectives for Sustainable Development, Agenda 21, of the United Nations Conference on Environment and Development (CCPA, 1994). It chose 18 sectoral themes common to many of these organizations and, in its primer provided an attempt to describe visually their relationship with Responsible Care. There is a high degree of congruence between the themes of sustainable development and those of Responsible Care as related to the economic-environmental interface.

However, certain social elements are truly societal in nature and beyond the scope of direct company actions.

As elements of social concerns were identified by the public through the Community Advisory Panels (CAPs), they were integrated into each company's responsibility portfolio. Community concerns have varied greatly from company to company, because of their operations, resulting in a diversity of social integration by individual companies. While Responsible Care had initially focused on Environmental Health and Safety (EH&S) concerns, it was often the more social issues at the local plant level that had to be addressed first.

Transition at the International Level: Global Expansion

In 1988 the CCPA presented its Responsible Care concept to representatives of the US Chemical Manufacturers Association (now the American Chemistry Council) and it was adopted by that association. Soon after, an effort was initiated to bring together all national chemical associations, with the intention of establishing Responsible Care worldwide. This led to the formation of the International Council of Chemical Associations (ICCA) and the formation of the ICCA Responsible Care Leadership Group which exercises guardianship over Responsible Care globally and connects with other international institutions such as the United Nations Environment Program (UNEP) (ICCA, 2006).

In 2004, a study, including an external stakeholder survey (SustainAbility, 2004) conducted by the International Council of Chemical Associations into RC development and implementation at the global level, led to the adoption of a set of Global Responsible Care Core Principles within a Responsible Care Global Charter as follows (ICCA, 2006): "The Global Responsible Care Core principles commit companies and national associations to work together to:

- Continuously improve the environmental, health and safety knowledge and performance of our technologies, processes and products over their life cycles so as to avoid harm to people and the environment.
- Use resources efficiently and minimize waste.
- Report openly on performance, achievements and shortcomings.

- Listen, engage and work with people to understand and address their concerns and expectations.
- Cooperate with governments and organizations in the development and implementation of effective regulations and standards, and to meet or go beyond them.
- Provide help and advice to foster the responsible management of chemicals by all those who manage and use them along the product chain”
- Additionally, every national Responsible Care program must include eight fundamental features:
 - A formal commitment by each company to a set of guiding principles, signed, in most cases, by the Chief Executive Officer.
 - A series of codes, guidance notes and checklists to help companies fulfill their commitment.
 - The development of indicators against which improvements in performance can be measured.
 - Open communication on health, safety and environmental matters with interested parties, both inside and outside the industry.
 - Opportunities for companies to share views and exchange experiences on implementing Responsible Care.
 - Consideration of how best to encourage all member companies to commit themselves to, and participate in, Responsible Care.
 - A title and logo which clearly identify national programs as being consistent with, and part of, the Responsible Care concept.
 - Procedures for verifying that member companies have implemented the measurable or practical elements of Responsible Care.”

In June 2008,(ICCA, 2009) the ICCA Leadership Group unanimously adopted the concept of changing the official global identity of Responsible Care "Responsible Care for Sustainability”

IMPLEMENTATION CHALLENGES IN GAINING COMPANY SUPPORT

In examining the development of Responsible Care in Canada, it is important to define what drove industry CEOs to pursue this approach and the challenges overcome during initial implementation.

Reflection on Drivers

The factors that drove the creation of Responsible Care by the Canadian chemical industry are multiple. At the outset, the initiative came from the need to enhance public trust in order to maintain the industry's license to operate. Over time the industry's CEOs came to appreciate the intrinsic value of moving towards responsible behavior. From this base, a first set of interlaced stakeholder drivers were focused upon.

The Canadian chemical industry strongly believed that Responsible Care was an ethical and cultural approach to the issues and CEO/Board commitment became the cornerstone of success and the driver within individual companies. This helped to cement company-wide commitment developed through implementation activities, review processes and job performance criteria. Employee demand surfaced as a driver when pride in their company's commitment to Responsible Care improved employee morale, performance and recruitment (Willard, 2005; CCPA, 2005b).

Building trust with environmental groups, and NGO/Advocacy Groups through the the National Advisory Panel is also an important driver which has been transparent from the outset and maintained the NAP's independent oversight (CCPA NAP, 2003)

Because the CCPA is mainly focused on manufacturers of industrial chemicals, member companies, rather than the public, were the consumers of the industry. The product stewardship aspect of Responsible Care, or supply chain management, became an adaptation to public consumer/customer demand and the means whereby companies could identify other member's commitment to the RC ethic. This concept is represented in the verification process which ensures that non-compliance by some members does not create problems for all (CCPA, 2008b).

Securing Initial Commitment

The principle that guided the initial commitment to RC was "Evolutionary buy-in". All of the actions required by RC could not be defined at the outset without proper

preparation of CEO's. It was necessary therefore, to allow participants to gain confidence with each step and an understanding for the necessity of taking the next. Securing and maintaining commitment has been an ongoing process. Several crucial actions were taken at the outset, which allowed the process of adoption of RC to move forward.

The CEO's of larger companies identified the threat to their continuing mandate to produce and worried about the threat of an inflexible regulatory regime that did not encourage progress beyond the regulations and stifled industry evolution (Willard, 2005). They came to the conclusion that the economic bottom line could no longer be kept distinct from its environmental responsibility. In turn, they took on the leadership role and responsibility of convincing their peers. Eventually, in 1984 they helped develop the "Statement of Guiding Principles of Responsible Care" The members of the CPPA signed on to the statement and agreed to seek the voluntary commitment of all other CEO members of the CCPA. This work was completed in early January 1984, pre-dating Bhopal by 11 months.

In Responsible Care's early years, public opinion of the industry was negative and much of the public believed that the industry knew of problems inherent in its products, but hid this information from the public (King & Lenox, 2000) . They believed that the industry dealt responsibly with its products during the manufacturing stages but concern increased further into their life-cycle, during transportation, distribution, use and final disposal. Seminars with CEO's and other company employees were held to increase the process of sensitization. In an unprecedented step, the CCPA Board Chair met with editorial Boards of major Canadian newspapers and provided them with the highly critical study results. By presenting the results in a factual, if unflattering, manner, the industry took a crucial first step in establishing credibility with the public (Belanger, personal observation).

The Need for Risk Communication

The importance of appropriate risk communication was emphasized from the inception of RC. Conventional wisdom within the industry argued that public misunderstanding of the industry was a result of the public's inability to comprehend complex science. What the leaders of industry failed to recognize was that public trust had to be earned. The CPPA consulted with experts in the field of risk communication.

One was Prof. Peter Sandman, formerly of Rutgers University who developed the equation “Risk = Hazard + Outrage” (Sandman, 1993). Another was Professor Vincent Covello of Columbia University who instructed industry leaders on conducting public consultation, with a focus on building trust through empathetic listening. These workshops were instrumental in convincing CEO’s of the impact of public opinion and how to influence it (Covello, 2005).

The Business Case for Responsible Care

Early in the process of adoption of RC principles by the Canadian chemical industry some smaller companies expressed concern that Responsible Care could add to their costs and perhaps render them uncompetitive. The leader CEOs reinforced that Responsible Care was not idealistic, but rather a commitment to ethical practice. Leader CEOs offered help in designing systems and even tutoring to member companies, demonstrating the business case for Responsible Care and corporate social responsibility (CCPA, 2005b).

Leaders in the industry began to recognize a new array of opportunities through their responsible efforts, which became economic drivers. The focus on sustainable development issues meant companies could seize new markets through innovation, and gain operational efficiencies and competitive advantages. As a result, this new set of potential advantages became a second wave of drivers for the leading companies in the chemical industry (Willard, 2005; Elkington, 2003).

Corporate Social Responsibility

Finally, it is important to examine social responsibility and its position as a driver. The recognition of social responsibility in capital markets has been a niche element that is still in its gestation period. As a result, many companies have not yet seen this as a driver for stock performance and for access to capital for growth. Demand for socially responsible investing is still in its infancy, but steadily growing. There is a strong belief that this will be a successful investment strategy in the near future and will become a key driver (Tschopp, 2005). At this time, only a few companies are seeing the full potential of this opportunity in providing value for their shareholders. This is evidenced in the various SRI indexes including the Dow Jones Sustainability Index.

These drivers represent a generalization for a broad sector of industry. Various companies within the sector evolved at different rates and responded to the array of drivers with different intensities and timing.

Operational Challenges

RC's focus on ethical concepts, as opposed to the more traditional regulatory compliance approach, has meant that the mindset of many member companies had to be radically challenged and modified during the initial implementation of the concept.

Overcoming a legal mentality

Initial attempts at writing guidelines governing chemical industry practice had been rejected on the advice of legal counsel who advised that subscribing to such guidelines would create undue liabilities. However, the context was such that regulatory pressures were building to a point where CEOs began to worry that the resulting constraints on their operations would essentially withdraw their mandate to produce. The CEOs came to realize that the choice was not between regulations or their absence, but rather among approaches designed to achieve certain defined objectives. If the objectives could be met strictly by industry's own efforts and outcomes were demonstrable, visible and measurable, the resultant market would be cost-efficient and flexible in its management. If the process was to be initiated before the implementation of regulatory constraints, there may be further positive benefits in terms of public recognition. Given that the legal and regulatory context is not static, meeting today's legal commitments did not mean one would meet later demands and remain competitive (CCPA, 2005a, Willard, 2005).

Ethical behaviour has a societal context, upon which trust will be built through external acceptance.

Some companies believe that their singular responsibility is to create economic wealth. This can re-enforce an "us-them" mentality in the rest of society and the concern

that industry cannot be trusted to respect greater social interests (Elkington, 2003). In contrast, the chemical industry set out to enhance recognition of companies' wider social responsibilities to position itself as a part of the solution rather than the problem by balancing economic objectives with social responsibility.

Behind this was the recognition that companies had to accept the concept that "perception is reality". Prof. Peter Sandman's equation of $RISK=HAZARD+OUTRAGE$, (1993) states that hazard reflects scientific aspects of operation, and outrage combines social factors into the equation. Outrage increases when individuals feel controlled by others, or feel that a situation is unfair and morally relevant, or when sources are considered untrustworthy and when processes are considered unresponsive. According to this analysis, the chemical industry must listen, understand, and address public concerns. It must be transparent and responsive to community inquiry in order to gain public trust.

Seeking and acquiring full CEO commitment

Initial reaction to RC in the chemical industry was mixed. Some saw it as just another initiative in a series of environmental management programs to be implemented over the years. Responsibility for its implementation could be assigned to an employee and interest in it would be time-limited. Alternatively, some saw it as new regulations imposed by the industry association (ENDS, 2005). These misapprehensions needed to be addressed if the initiative were to bring about a lasting change in company and industry behaviour. RC had to be embraced by CEO's, who in turn had to signal clearly to employees that RC would form their companies' guiding principles going forward. One method was the implementation of performance evaluations (CCPA, 2005c; CCPA, 2008b) based on the new mentality. The CCPA recognized that changing the culture of the industry required time for absorption so that the strength of its success would come from employees themselves.

Another assumption that had to be overturned was the desire for a prescriptive implementation plan with fixed criteria and endpoints. Instead, RC requires that member companies consult with stakeholders as to what "the right thing to do" would be in their circumstance, and do so in a publicly accessible fashion. Individual CEOs must affirm that his or her company has taken all practical precaution to ensure its products do not present an unacceptable level of risk to its employees, customers, the public, or the

environment. Meeting the codes of RC is a constant, dynamic process without endpoints, and becomes the culture of operation rather than a prescribed program (CCPA, 2005c; CCPA, 2000).

Acceptance of the need for comprehensiveness

Initially there were concerns about the resources required to adhere to RC codes in all areas of operation. However, since it is cultural and not programmatic in nature, RC must pervade all areas of operation. An important part of the evaluation is the measure of RC “embeddness” in the company structure and corporate culture. One of the ways evaluators determine how well an RC company has incorporated the ethic into their mandate is to measure the employee buy-in that exists in the company. This allows the evaluator to gain a better understanding as to how well RC is being implemented in a bottom-up fashion (Reisch, 2003)

Recognizing that the weakest link could defeat the initiative

Each company has a stake in each others’ performance, necessitating cooperation and mutual assistance in implementation of RC codes. Expertise was shared through workshops and one-on-one help between CEO’s. This mutual help concept is what fostered small company adherence to the initiative. For example, RC proved to be very successful for Sulco Chemicals, the small company test-pilot for the implementation of Responsible Care. This helped increase the adoption of RC in smaller organizations across Canada (Chartrand, 2005).

RC codes are a way of demonstrating the care with which companies handle their products. For companies who meet the codes, this may be used in a court of law in a defence of due diligence demonstrating that they have been following accepted industry practice as reviewed by external stakeholders. Those who do not adhere to the codes may leave themselves vulnerable to legal prosecution (CCPA, 2005b).

Overcoming fears of RC as undue competitive burden

The concern voiced most often by company CEO’s was that Responsible Care and other environmental management systems would cost too much money to implement

(Willard, 2005; Hawken, 1999). However, Responsible Care describes what a diligent company must do to ensure that its products do not present an unacceptable level of risk to its employees, customers, the public or the environment. Its codes were designed by industry insiders and the means of a company's compliance to the code is at the discretion of the individual company. Alternative, government-imposed regulations with the attendant negotiations and uncertainties are generally believed to be more costly (Willard, 2005).

Companies report that after reviewing their Responsible Care commitment and management systems with their insurers, rates were reduced. Some companies have reported bankers, worried about environmental liabilities, have responded positively to their Responsible Care commitment, resulting in lower financing rates. There have also been examples of expedited permitting, marketing advantages and lower workers' compensation premiums and costs as a result of RC participation (CCPA, 2005b).

MAINTAINING COMMITMENT TO RESPONSIBLE CARE

Having established the crucial role of public opinion and consultation during the initial phase of RC implementation, attention then turned to the best means by which the industry could address public concerns.

Guiding Principles

This set of principles describe the commitment of the CCPA to Responsible Care. Initial requests to chemical industry CEO's for voluntary adoption of these principles were met with 95% compliance. Subsequently, subscription and adherence to these principles has been made a mandatory component of CCPA membership. Companies are also encouraged to prominently display this signed document within their organization. The commitment to guiding principles governs chemical operations; however, diversified companies are encouraged to implement the principles in their non-chemical operations as well. Today, non-chemical producers, such as chemical transporters and producers are welcomed as Responsible Care Partners with the same compliance requirements as regular members.

Codes of Management Practices

The codes describe in concrete terms the implementation of management practices which ensure products and associated processes and operations are handled safely throughout their life cycle. The codes were developed over three years by a team of functional experts from a cross-section of Canadian chemical companies. It was recognized that each member company would encounter unique challenges in meeting the codes' requirements, and therefore a rigid schedule of compliance was decided against. The Board of Directors of the CCPA advised member companies that they were expected to complete the process within three years of initiation in order to maintain public credibility. Every 6 months, companies report to the CCPA regarding compliance rates. As a final aspect, the six codes cover: research and development, manufacturing, transportation, distribution, hazardous waste management and community awareness and emergency response.

Conformance includes detailing how operations are carried out by associated groups such as suppliers, customers, transporters, or university labs conducting contract research for a company. Following completion of this procedure, the CEO must attest to the CCPA that code requirements have been met. (CCPA, 2000)

Advisory Process

The CCPA secured public input into the RC development process by having a third-party consultant assemble a cross-sectional group of activists, academics, consumers, seniors and youth to follow the development of RC from its inception. The independence of this consultative body and its inclusion of members critical of the Canadian chemical industry were vital to ensure the credibility of the panel. The National Advisory Panel (NAP) continues to meet today with rotating personnel. Its advice has been sought before every important decision being taken by the Board of Directors of the CCPA. For example, each code of practice was submitted to the panel before going to the Board for final approval. Additionally, an unedited message from the National Advisory Panel is included in the annual report of the association on Responsible Care. Beyond the national level, every member company site must have a Community Advisory Process in

place to meet the Community Awareness and Emergency Response code (CCPA, 2000).

CEO Forum

Responsible Care calls for a new mentality embraced by member CEO's and entrenched within each company. The CEO must back his or her commitment by ensuring that performance of individuals will be evaluated along the lines of this new mentality. CEOs are also best placed to convince their colleagues of the merits of compliance with RC. These industry leaders are subdivided into groups of 8 to 15 by region and meet at least 4 times a year to monitor the compliance progress of each member and exert peer pressure to ensure that efforts are constant.

Results Confirmation Process

To counter the argument that RC is simply a public relations tactic, CCPA initiated two important activities. First is third party verification by a four member team comprised of:

- Two experts in the implementation of Responsible Care. These are often people who have retired from the industry after being coordinators themselves.
- One expert in environmental matters. Often these have been professors of environmental science or environmentalists familiar with the development of Responsible Care.
- One representative of the community in which a company operates. This can be anyone with credibility in the community, for example a high school principal, or activist. The role of this individual is to confirm to the community that the process has indeed been a serious one.

The second activity in the results confirmation process is the production by each participant company of an annual report of all air, water and ground emissions, including waste and a five-year forecast. This Reducing Emissions Report is mandatory for all companies and results must be made available to community stakeholders (CCPA,

2009b). The CCPA also provides information to the public on its overall progress in Responsible Care including the unedited message of the National Advisory Panel.

Name Protection

The name “Responsible Care” and its logo have become recognized as one of the most significant assets of the chemical industry, and in recognition of this, are copyright protected. Only companies who are willing to participate in adoption of RC codes and culture are permitted to use these symbols (CCPA, 2005a).

ROLE OF GOVERNMENT

While Responsible Care is an initiative conceived and implemented by industry, government has indicated it considers RC a valid, credible alternative to moderate regulatory pressures. In 2001, a memorandum of understanding was signed by the ministers of Industry and Environment and the President of the CPPA to meet periodically at the senior officials level, and review progress by the industry in its efforts at emission reduction and to discuss Responsible Care in general (Environment Canada, 2001). The Environment and Industry departments have encouraged other economic sectors to follow the chemical industry’s example and implement initiatives similar to RC. In 1990, Environment Canada nominated Responsible Care to receive the United Nations Environmental Program’s Global 500 Roll of Honour Award for outstanding contribution to environmental improvement. Responsible Care was the first industry sector to receive the award, for what UNEP described as “ outstanding practical achievements in the protection and improvement of the environment.” (UNEP, 1990).

THE FUTURE OF RESPONSIBLE CARE IN CANADA

The American Chemistry Council (ACC) has acknowledged the shortcomings the American Responsible Care system, which differs significantly from the Canadian implementation, specifically in that it did not have a verifiable set of standards to evaluate the performance of firms and their adherence to Responsible Care. Many chemical associations, such as the CCPA, have recognized that insufficient third party

monitoring of a firm's performance has been a major deterrent to the success of Responsible Care. In response to these issues, as of 2007, the ACC requires firms to subscribe to a hybrid Responsible Care/ISO 14001 environmental management system or a revamped Responsible Care Management System (American Chemistry Council, 2007; Schmitt, 2002). The ACC's RC-14001 overlays Responsible Care codes onto ISO 14001 codes and requires that only one evaluation be done for both standards simultaneously. This type of policy is a major step towards legitimizing Responsible Care and ensuring transparent reporting and true accountability in the United States (American Chemistry Council, 2007; ENDS, 2005).

In Canada, verification is already an integral part of the process; however, checklist-based monitoring has not been the direction that the initiative has moved towards, largely because it fails to measure the extent to which the ethic has been integrated into the corporate culture of a firm. Given the Canadian Responsible Care's movement towards the integration of precautionary policies and the use of inherently safer technologies, one possible path for the evolution of the ethic is to require companies to report on standardized indicators such as those outlined in the G3 Sustainability Indicators of the Global Reporting Initiative, which would complement the reporting already required through NERM. Rather than hybridize the verification process, such as was done in the US, the CCPA could explore hybridizing the GRI with NERM, which could establish a more robust reporting standard.

The United Nations developed the GRI in order to ensure that companies which enroll in the program report on all relevant indicators and not just on the ones in which they show positive performance (G3 Sustainability Reporting Guidelines, 2006). According to Tchopp (2005), there are many examples of companies that report on their environmental successes but not on their failures. This can give the public an incomplete picture of the company's social responsibility strategy.

It is important to consider the issue of transparency and standards for companies who embark on environmental management programs and sustainable initiatives. Reporting standards provide investors and consumers with a transparent basis of comparison for various companies. At the same time companies can use standards to gauge their success and properly target necessary improvements which could lead to even greater efficiencies and profitability (G3 Sustainability Reporting Guidelines, 2006).

Reporting standards can also help identify the degree to which a company's sustainable initiatives are holistic and integrated. Positive performance on most

indicators would indicate integrated strategies as opposed to narrowly focused ones. An integrated strategy is proven to yield greater profits and would be a more popular choice for a socially responsible investor (Perrini & Tencati, 2006, p. 298). This type of measurement would align better with the Canadian RC's goal to have the ethic embedded in the corporate culture rather than be more prescriptive and checklist-based as is the case with other environmental management systems.

CONCLUSION

Responsible Care is a dynamic statement of ethical concern, in a continual state of evolution in Canada. It was initiated in the early part of the 1980s as a simple one-page statement of principles touching the singular aspect of environmental responsibility. It has since evolved into a set of codes, verification processes, visible performance measurement and deeper understanding of the principles first stated. There has been one constant; building trust through ethical behavior, listening attentively to the evolving concerns of the public and providing responses that clearly demonstrate concerns have been taken seriously.

Sustainable development principles in the responsible care ethic have become integrated in decision-making processes. The Canadian Chemical Producers' Association, by pursuing a dynamic and evolving Responsible Care, enacts its ongoing commitment to meeting the sustainable development aspirations of Canadian society. In 2007 the CCPA Board reviewed the state of Responsible Care in Canada and determined that they were largely invisible on the issues of sustainability and global warming; issues of major concern to the Canadian public. Once again, the leaders on the Board stepped forward and ensured that these issues would be integrated explicitly within the ethic of Responsible Care in the future.

It has taken leaders amongst industry CEOs on the RC Board, frontline workers who implement the ethic in their daily work and citizens who have provided input and oversight to push the borders of conventional thinking and convince other companies to commit to do the right thing. These leaders realized that the health of the chemical industry was at stake and responded by establishing a transparent, open and responsive chemical industry whose commitment to public safety and consultation is well documented and genuine.

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