

# Chapter 6

## Responsible Care: A Case Study of a Voluntary Environmental Initiative

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### Introduction

When Dow Canada measured public opinion as a function of distance from its facilities in the early 1980s, the results were instructive. Within six kilometres of the plants, people held specific opinions about Dow that were different from their opinions about the industry as a whole. But beyond six kilometres, peoples' image of Dow was shaped by their image of the industry. As then Dow President David Buzzelli observed, the exemplary behaviour of Dow's plants was practically irrelevant; Dow was being judged by the behaviour of the industry as a whole.<sup>1</sup> At that time, this behaviour was coming under increasing public criticism as a result of a series of highly publicized accidents in Europe, Asia and North America. Dow and several of its fellow members of the Canadian Chemical Producers' Association (CCPA)<sup>2</sup> therefore realized that they had to take collective action both to prevent the occurrence of such an incident in Canada and to restore and maintain the industry's public image.<sup>3</sup> It was this realization that gave birth to Responsible Care.

On one level, Responsible Care is a collective name that applies to a statement of policy, guiding principles, a national advisory panel, a chemical referral centre (since replaced by a Web site), a verification process, and six codes of practice with 152 individual elements covering i) Community Awareness and Emergency Response (CAER), ii) research and development, iii) manufacturing, iv) transportation, v) distribution and vi) hazardous waste management. (Appendix A summarizes the codes.) As such, Responsible Care is an elaborate environmental management system.

At another level, Responsible Care is a statement of "moral obligations," "an ethic, an attitude, a method of thinking" regarding the responsible management of

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1. Cited in A. J. Green, *Assessing Organizational Culture: Do the Values and Assumptions of Canadian Chemical Companies Reflect Those Espoused by 'Responsible Care,'* submitted to the Department of Chemical Engineering, Massachusetts Institute of Technology, in partial fulfilment of the requirements of the degree of Master of Science in technology and policy, August 11, 1995, p. 18.

2. The Canadian Chemical Producers' Association (CCPA), established in 1962, represents the Canadian manufacturers of a broad range of petrochemicals, inorganic chemicals, polymers, and other organic and specialty chemicals. In 1994, its 63 member companies accounted for more than 90 percent of the chemical manufacturing capacity in Canada. CCPA members operate more than 200 manufacturing and distribution facilities and employ some 30,000 people. See the CCPA website at <[www.ccpa.ca](http://www.ccpa.ca)>.

3. As Jean Bélanger, President of the CCPA, observed, "If a paint company or a plating company does something wrong the headlines the next day will scream that chemicals have been wrongly handled and so we will all be tarred by the same brush." See J. Bélanger, *Responsible Care: Developing a Promise*, presentation to the First International Workshop on Responsible Care, European Chemical Industry Council, Rotterdam, 1991.

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chemicals and chemical products.<sup>4</sup> Responsible Care is therefore much more than a set of operational procedures to protect the people and the environment; it can be said to represent an attempt at making a fundamental change in corporate culture.

Introduced in the mid-1980s, Responsible Care is now recognized as probably the leading sectoral voluntary environmental program in the world. By 2000, the chemical industries in 45 countries have adopted versions of Responsible Care programs.<sup>5</sup> Other industry sectors have based similar programs on Responsible Care (e.g. electricity, pulp and paper). In 1990 the United Nations Environment Programme granted CCPA President Jean Bélanger a Global 500 award to recognize the significant environmental benefits that have flowed from the program. And, in 1993, the Province of Ontario honoured the CCPA with the Lieutenant Governor's Conservation Award.

This chapter describes the program, explains why it was initiated and evaluates the impacts it has had. The chapter also seeks to extrapolate lessons about the design and use of voluntary measures from an examination of the context within which the program was introduced and operates, the process by which it was developed, and the actual design features of the program.

## **The Evolution of Responsible Care**

“Responsible Care is absolutely essential to the survival of our industry.”  
Pierre Choquette, President, Plastics Division, NOVA<sup>6</sup>

Until the 1970s, the chemical industry, both in Canada and internationally, lived largely out of the limelight, believing that few members of the public understood or cared about its operations.<sup>7</sup> In 1977, the explosion of a chemical factory in Seveso, Italy, marked the first of several high-profile and extensively reported accidents that rapidly undermined public confidence in the industry and led to demands for stricter government regulation. In the words of the CCPA President, “we went from being an ‘invisible industry’ to one under a microscope. Our employees found themselves being stigmatized simply because they worked in the chemical industry.”<sup>8</sup>

Significantly, opinion polls commissioned by the industry showed that the public did not discriminate among companies, and that the actions of one company could tarnish the industry as a whole. The third largest industry in Canada, the chemical

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4. CCPA, *Responsible Care 1992: A Total Commitment* (Ottawa: CCPA, 1992), p. 1.

5. See International Council of Chemical Associations (ICCA), *Responsible Care Status Report 2000* (ICCA, 2000), available at <[www.cefic.org/activities/hse/rc/icca/report2000/Report2000.pdf](http://www.cefic.org/activities/hse/rc/icca/report2000/Report2000.pdf)>. Not all Responsible Care programs are as rigorous as Canada's. Whereas the programs in Australia and the U.S. are arguably stronger in some respects, Responsible Care is not a condition of membership in many countries' chemical industry associations, and many programs in developing countries do not (yet) have audit/verification elements.

6. P. Choquette, *NOVA Responsible Care Report* (Calgary: NOVA Chemicals Corporation, December 1990).

7. C. Limoges and L. Davignon, *L'initiative gestion responsable de l'association canadienne des fabricants de produits chimiques* (Montréal: Centre interuniversitaire de recherche sur la science et la technologie, UQAM, June 15, 1995).

8. J. Bélanger, *Being Responsible Partners in Canadian Society*, presentation to the Air and Waste Management Association Environmental Government Affairs Seminar, Ottawa, 1990, p. 5.

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industry has close to 70 companies, some very large but also a number of medium-sized producers. Large companies such as Dow Canada realized that only a concerted approach would restore public confidence in the industry.<sup>9</sup> Given that the CCPA represented (and continues to represent) almost all chemical manufacturers in Canada, it was the logical body to coordinate the required action. Concerned about its eroded credibility, not just with the public but also with government decision makers, the CCPA therefore developed a *Statement of Policy on Responsible Care* in 1979.

At the time, the Statement of Policy was no more than a one-page statement of good intentions; it was neither binding on CCPA membership nor backed up by operational codes of practice, as it would become later. In 1983, after the extent of the chemical contamination at Love Canal became better appreciated, a dozen members of the CCPA agreed to sign the Statement; this was their first public commitment to the principles underlying it.<sup>10</sup> This commitment encouraged the CCPA to ask the senior executives of all its members to sign the Statement.

Although compliance with the Statement remained voluntary and was not yet a condition of membership in the Association, several CCPA members balked at committing themselves publicly to such a code of ethics, in part because of concerns raised by their lawyers about the potential legal liability of doing so; they were afraid that a judge might use it as a standard in determining due diligence in the event of an accident.<sup>11</sup>

Various concerns were also raised about possible conflicts with the federal *Competition Act*.<sup>12</sup> The CCPA has twice requested opinions from the Competition Bureau, which administers the Act, about Responsible Care. In both cases, the opinion provided was favourable.

In 1984, a public opinion poll revealing wide public distrust of the industry<sup>13</sup> and the Bhopal disaster in India tipped the balance in favour of more forceful action. That year, the CCPA made a commitment to the *Statement of Policy on Responsible Care* a condition of membership in the association. In addition, the CCPA asked its member companies to conduct safety audits of their facilities and the handling of their products.

The CCPA hoped that voluntary action would forestall restrictive government regulation. Canadian chemical company leaders were concerned about the proliferation of regulations in the United States and the renewed interest in Canada in tightening

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9. Green (footnote 1).

10. Limoges and Davignon (footnote 7).

11. See section on the impacts of Responsible Care in this chapter, below, and in Kernaghan Webb and Andrew Morrison, "The Law and Voluntary Codes: Examining the 'Tangled Web'," Chapter 5, above.

12. Some European jurisdictions have undertaken significant reviews of the potential competition law issues raised by voluntary and negotiated environmental measures. See, e.g., E. M. Basse, "Environmental Contracts: An Example of the Interplay Between Environmental Law and Competition Law," in E. M. Basse, ed., *Environmental Law: From International Law to National Law* (Copenhagen: GadJura, 1997).

13. In mid-1987, a survey of the members of the U.S. Chemical Manufacturers Association revealed that "everyone's number-one or number-two problem [was] the negative public perception of the industry."

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regulatory controls,<sup>14</sup> particularly in a climate of public mistrust. As the CCPA President acknowledged in a speech, “Couple mistrust with a growing public belief that environmental laws and regulations are too lax and you can see that an industry like ours could suddenly find itself the target of harsh and perhaps unmanageable restrictions.”<sup>15</sup> CCPA members decided that collective action was required to avoid a similar fate in Canada.

Recognizing that the *Statement of Policy on Responsible Care* needed to be backed up to be credible, the CCPA commissioned internal task forces to identify possible courses of action. One of the most important recommendations of this exercise was to adopt a “cradle to grave” approach. The need to control chemical substances from “cradle to grave” had been one of the main recommendations of the “Niagara process,” the multistakeholder group established by the federal government to recommend improvements to the *Environmental Contaminants Act*. The CCPA accepted this approach and decided to develop a detailed code of practice for every step in a chemical’s life cycle. It established six specialized task forces, comprised of representatives of member companies who were experts in the area, to translate the principles in the Statement of Policy into operational terms. These task forces presented draft codes to a National Advisory Panel (NAP). Run by a professional facilitator, the NAP was comprised of 12 (unpaid) external experts and environmental and labour advocates. After an average of six or seven iterations of each draft code, the NAP and the CCPA Board of Directors agreed to appoint one NAP member to revise each of the codes to ensure consistency. This process resulted in the six codes of practice.

Responsible Care has evolved significantly since its inception. The NAP continues to provide ongoing advice on the program’s development and implementation. In 1991, the CCPA added the collection and publication of emissions and waste data to the program, and made it mandatory in 1993. Members began reporting on greenhouse gas emissions in 1992 on a voluntary basis, and by 1999 the chemical companies responsible for 90 percent of the sector’s CO<sub>2</sub> emissions had registered with the Voluntary Climate Change Challenge and Registry (VCR).<sup>16</sup> The CCPA now reports this data together with information on transportation and employee health and safety annually. In addition, Responsible Care emphasizes the central importance of community consultations, requiring each member company to engage in ongoing community advisory processes. Finally, in 1993, the program required members to conduct internal audits of compliance with the codes of practice and, in 1994, introduced a system of external verification of performance (discussed below). At present, all CCPA members, except for the newest members, have completed or initiated external evaluations.

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14. In the early 1980s, the Canadian government had begun its review of the *Environmental Contaminants Act* and launched a high-profile public consultation process to remedy its weaknesses. Public concern about the threat chemical substances posed both to human health and the environment, fuelled by the industry’s perceived poor environmental record, would lead the government to strengthen its control over toxic substances in the new *Canadian Environmental Protection Act*.

15. Bélanger (footnote 8), p. 12.

16. For information on the VCR, see <[www.vcr-mvr.ca](http://www.vcr-mvr.ca)>.

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Responsible Care's evolution may not yet be over if its philosophy of "continuous improvement" continues to inspire the CCPA. According to NAP, the CCPA must continue its consideration of:<sup>17</sup>

- Round Two verifications ("re-verification");
- company management succession to prevent interruption in Responsible Care;
- an orientation primer for community advisory panels;
- support for scientific literacy through the education system;
- research on effects on communities of emission mixtures;
- protecting the environment through product stewardship;
- net collective reduction in emissions towards the goal of zero;
- research into safe alternatives to toxics, with displaced worker support;
- work on endocrine modulator research and mitigation; and
- education on industry impact and ethics in engineering schools.

## **The Impacts of Responsible Care**

The main objectives of Responsible Care were to regain public trust and forestall or influence future regulatory developments by improving the environmental performance of the industry as a whole and by improving community relations. In this section we evaluate the degree to which the program has achieved these objectives by reviewing its impacts on environmental performance and workplace health and safety, financial costs and benefits, corporate culture, public policy, and the public image of the chemical industry.

### **Environmental and Workplace Health and Safety Impacts**

CCPA members have steadily improved their environmental and workplace health and safety records over the past decade. Their records indicate a steady decline in workplace injuries and a marked reduction in the frequency and severity of transportation incidents. Members have also reduced their emissions of various pollutants significantly over the past decade. By 1999, CCPA member companies had achieved a 63 percent reduction in their total emissions of substances (excluding CO<sub>2</sub>) compared to 1992.<sup>18</sup> This included cuts in emissions of:

- 74 percent in heavy metals (to water);
- close to 100 percent in sulphuric acid to water; 31 percent in sulphuric acid to air;
- 94 percent in chlorofluorocarbons;
- 43 percent in volatile organic compounds;
- 50 percent in stratospheric ozone depleting chemicals; and
- 72 percent in known carcinogens.

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17. CCPA, *Responsible Care: The Picture is Getting Brighter* (Ottawa: CCPA, 1999).

18. CCPA, "1999 Emissions Inventory and Five-Year Projections," *Reducing Emissions 8: A Responsible Care Initiative* (Ottawa: CCPA, 1999).

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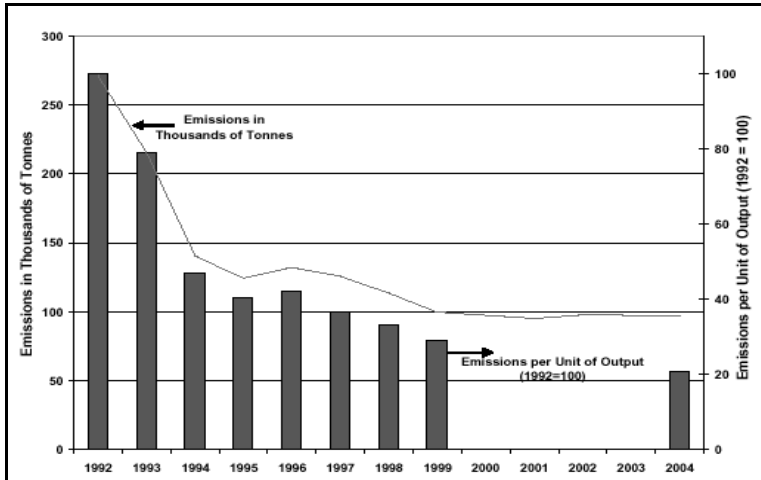


Figure 1: Product Output vs. Emissions from CCPA Member Operations

From: CCPA, "1999 Emissions Inventory and Five-Year Projections," *Reducing Emissions 8: A Responsible Care Initiative* (Ottawa: CCPA, 1999).

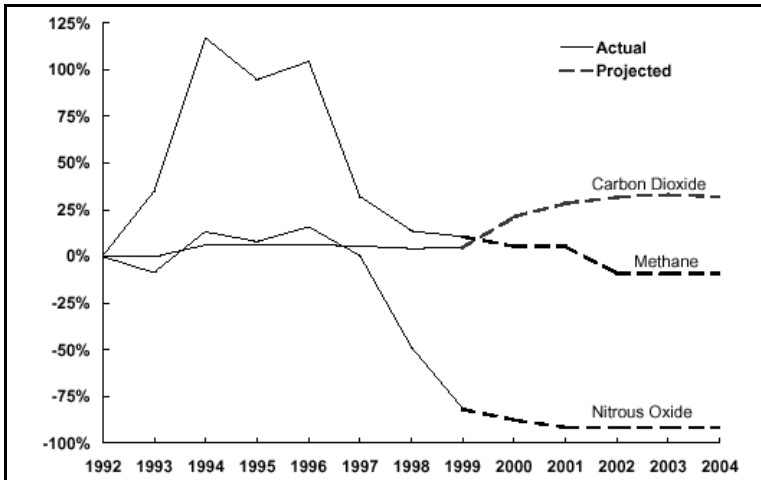


Figure 2: Emissions and Projections of Total Carbon Dioxide, Methane, Nitrous Oxide from CCPA Member Operations

From: CCPA, "1999 Emissions Inventory and Five-Year Projections," *Reducing Emissions 8: A Responsible Care Initiative* (Ottawa: CCPA, 1999).

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These cuts have been made at the same time the industry has grown in output, and thus cannot be attributed to economic slowdowns. These reductions are the result of several factors, including mandated government reporting requirements (embodied in National Pollutant Release Inventory or NPRI), government-sponsored voluntary programs (the Accelerated Reduction/Elimination of Toxics Program, or ARET), and legislated targets (e.g. for CFCs) and cannot therefore be attributed entirely to Responsible Care.<sup>19</sup> Both CCPA members and third parties<sup>20</sup> agree, however, that Responsible Care has played an important role in ensuring that these emissions cuts have been made by all members, rather than by a few industry leaders.

### **Financial and Economic Impacts**

Like most initiatives related to environmental change, Responsible Care requires action with a long-term perspective. As such, participation inevitably conflicts with the myriad pressures facing companies to forego long-term environmental investments in favour of short-term profit. Such pressures come from financial institutions, markets and investors, which typically have focussed on short-term considerations with little understanding or appreciation for the long-term potential for environmental investments. Individual managers too are often evaluated largely on the basis of short-term performance.

The disincentives to participate in the type of collective action contemplated by Responsible Care are particularly acute among small companies.<sup>21</sup> The CCPA currently represents 70 chemical manufacturers. While its membership includes both giants such as Dow and a limited number of small, specialized producers, most members are medium-sized firms, ranging from 150 to 500 employees. The CCPA does not include many of the smaller “specialty chemical manufacturers,” most of whom belong to a parallel industry association. Nor does it represent the hundreds of (typically medium and small) companies that blend chemicals in the process of manufacturing items such as carpets.

While the image of the industry as a whole may be a critical factor for large multinational firms, corporate image may not be as significant a concern for smaller firms more concerned about short-term economic performance. In addition, small companies often have less knowledge about new “green” technologies, and typically have fewer resources and less money available to invest in change that has little prospect of short-term payback.

The implementation of Responsible Care represents a considerable investment by the Canadian chemical industry. In addition to the work involved in the development of the detailed codes of practice, the CCPA has held training workshops for its members on each of the codes, published newsletters, prepared user guides, set up a chemical referral centre, developed compliance and reporting protocols, established a national

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19. For information on NPRI, see <[www.ec.gc.ca/pdb/npri/npri\\_home\\_e.cfm](http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm)>. For information on ARET, see <[www.ec.gc.ca/nopp/aret/en/index.cfm](http://www.ec.gc.ca/nopp/aret/en/index.cfm)>.

20. Including, for example, various federal and provincial government officials and environmental advocates interviewed for this chapter.

21. As a recent study observed, for example, costs represent a disincentive to small chemical companies to belong to the CCPA. See Limoges and Davignon (footnote 7).

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advisory committee and organized regional “leadership groups” to allow member companies to share information and apply peer pressure on industry laggards. To pay for these collective investments, the CCPA significantly increased its membership dues shortly after introducing Responsible Care. On top of this collective effort, individual companies have had to train staff, collect information, develop “written policies, standards and procedures” for each of the six codes, set up reporting systems, make necessary process changes, engage in community consultations and monitor compliance.<sup>22</sup>

Notwithstanding this investment, according to Brian Wastle, CCPA Vice President for Responsible Care as of 1998, only one company had ever left the CCPA over concerns about the cost of compliance.<sup>23</sup> What financial benefits have offset these costs?

There are two schools of thought dominating the debate over the impact of these sorts of costs. Some argue that the costs of continuous environmental improvement are investments in competitiveness.<sup>24</sup> Others argue that once the low-hanging fruit (e.g. energy retrofit investments with short payback times) have been picked, these types of investments will become increasingly expensive. When evaluated against all other opportunities, such investments may only be justifiable from a social perspective — not from an individual firm’s perspective — and may therefore require government intervention to ensure that they are made.<sup>25</sup>

Sorting out the precise financial impact of Responsible Care on the Canadian chemical industry is very difficult. Proponents identify a wide range of possible benefits. Most participants have reduced their workers’ compensation, waste management, clean up and disposal costs. During the mid-1980s, for example, pollution prevention research spending was reported to yield returns of 150 percent on investment for Dow Chemical.<sup>26</sup> Some proponents argue that Responsible Care helps companies reduce the costs of product research and development by helping them avoid costly investments in environmentally inappropriate products. Most participants have improved their ability to respond to emergencies, due both to improved systems and improved community relations, which enables them to avoid protracted disputes based on distrust. Some members also credit their Responsible Care certification status with helping ensure faster permitting, and with a renewed ability to obtain financing and insurance at reasonable rates. At least one company has reported that its participation in Responsible Care has led its banks to reduce their lending rates because they were satisfied that the company

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22. CCPA (footnote 4).

23. According to Wastle, only two members have left the Association over Responsible Care. The CCPA asked one to leave because it was not implementing the public outreach requirements. Another left over a philosophical disagreement about Responsible Care advertising.

24. See, e.g., M. Porter and C. van der Linde, “Green and Competitive: Ending the Stalemate,” *Harvard Business Review* 73:5 (September–October 1995), pp. 120–123.

25. See, e.g., C. Stevens, ed., *Environmental Policies and Industrial Competitiveness* (Paris: Organisation for Economic Co-operation and Development, 1993); N. Walley and B. Whitehead, “It’s Not Easy Being Green,” *Harvard Business Review* 72:3 (May–June 1994), pp. 46–52; A. Jaffe, S. Peterson, P. Portney and R. Stavins, *Environmental Regulation and International Competitiveness: What Does the Evidence Tell Us?* Discussion Paper 94-08 (Washington: Resources for the Future, 1994).

26. K. Loos and S. Stricoff, “Responsible Leadership,” *Chemical Week*, July 5–12, 1995, p. 112.



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represented a lower risk. Many participants also believe that they have reduced their potential legal liability.

Economists such as Michael Porter argue that many of the elements of Responsible Care are consistent with Total Quality Management. They argue that, particularly for small companies, the information that participants have developed and shared as a result of Responsible Care has helped companies learn, plan and manage in a more systematic manner. The resulting improvements can range from significant savings in inputs and waste disposal costs to more intangible benefits such as strengthened communications between plant and corporate offices.<sup>27</sup> Some speculate that this management system orientation has also helped the sector adapt to the ISO 9000 and 14000 standards more easily than some other sectors.

While implementation of the program inevitably entails costs, some in the industry prefer to characterize Responsible Care's stewardship approach as expanding the nature of the services the industry offers. In the words of one U.S. industry official:

how much new business did you get because you did a good job at a customer's site? How many lawsuits did you avoid because you kept a customer from misusing a product? Or how much did you save on environmental cleanup because of safer handling or disposal? Those are things that are very difficult to measure, but they are services that a company might not have provided 10 years ago.<sup>28</sup>

The degree to which the chemical industry will continue to realize these benefits in an era of increasing international trade is unclear. Some proponents argue that trade pressures enhance the salience of the program because it helps the Canadian chemical industry differentiate itself from foreign competitors, helping attract investment in new plants in Canada, for example. On the other hand, the competitiveness pressures are sharper today, leading to restructuring, downsizing and potentially less focus on environmental issues. In the mid-1990s, for example, it was reported that environmental managers in the chemical industry were in a less influential position than they had been five years previously.<sup>29</sup> The pressure to demonstrate a short-term return on environmental investments may therefore grow.

International trade dynamics are also generating more generic environmental management certification programs. The European Union, for instance, has established the Eco-Management and Auditing Scheme (EMAS 14001), which applies to firms operating in member countries.<sup>30</sup> Furthermore, many transnationals have focussed on obtaining ISO 14001 certification. Neither of these standards is as comprehensive as

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27. See J. Nash and J. Ehrenfeld, "Code Green: Business Adopts Voluntary Environmental Standards," *Environment* 38:1 (January-February 1996), pp. 16-45.

28. Cited in S. J. Aynsworth and A. M. Thayer, "Chemical Manufacturers Welcome Challenge of Product Stewardship," *Chemical and Engineering News*, October 17, 1994, p. 10.

29. R. Begley, "Advocacy Conflict With Deregulatory Congress," *Chemical Week*, July 5-12, 1995, p. 40.

30. See discussion of EMAS in Kernaghan Webb and David Clarke, "Voluntary Codes in the United States, the European Union and Developing Countries: A Preliminary Survey," Chapter 13, below.

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Responsible Care. If these schemes become the accepted standard for international commerce, will the Canadian chemical industry continue to be willing to enforce their own, more comprehensive standard as well?<sup>31</sup>

### **Impacts on Corporate Culture**

“Responsible Care ... is our culture and, above all, it is not a program. Programs have beginnings and ends — Responsible Care must be our ongoing way of life.”  
Jean Bélanger<sup>32</sup>

The philosophy embodied even in the earliest versions of Responsible Care amounted to a new attitude towards environmental protection and worker safety. It called on the industry to reject its traditional stance of doing the minimum required by law, maintaining a low profile and downplaying public concerns. Instead, it exhorted the industry to seek out and address public concerns and lead the policy process. Such a transition had to overcome not only immediate concerns about cost and risk but also deep-seated inertia. In short, Responsible Care ideally entails changing corporate culture. To what extent has this occurred?

Some anecdotal evidence suggests that the initiative has helped change organizational culture to a certain extent. On the basis of several interviews with three CCPA member companies, for example, Green argued that Responsible Care has helped promote cultural change in the Canadian chemical industry.<sup>33</sup> He cites numerous examples of changed beliefs and attitudes directly attributable to Responsible Care: investments made in increased safety, recognition of the value of consulting neighbouring communities despite the difficulties in doing so, adjustments in compensation approaches to remove conflicts with Responsible Care objectives, slower, more rigorous decision making, greater emphasis on pollution prevention, acceptance for responsibility over products after they leave the plant, and grudging acceptance of loss of sales to customers who did not meet Responsible Care standards.<sup>34</sup>

Responsible Care may have also helped enhance employee pride and satisfaction. As proponents of Total Quality Management (and its corollary, Total Environmental Quality Management) emphasize, these developments can enhance productivity as well as helping to create a cadre of ambassadors to the community. Green quoted one company executive as saying, “It’s morally good. It’s righteous. It’s great. It

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31. The U.S. Chemical Manufacturers Association has started to explore the possibility of combining an evaluation of Responsible Care compliance with an ISO 14001 audit. To date, however, the CCPA has been reluctant to link the two initiatives.

32. Bélanger, (footnote 3).

33. Green (footnote 1).

34. In a review of Responsible Care in the U.S., Nash and Howard reach similar conclusions, observing that “Responsible Care, as a coordinated effort by the whole industry, provided a legitimate framework that enabled them to make changes that might not otherwise have been high priority.” (J. Nash and J. Howard, *The U.S. Responsible Care Initiative: The Dynamics of Shaping Firm Practices and Values*, presented to the Fourth International Research Conference on the Greening of Industry Network, Massachusetts Institute of Technology, Cambridge, Mass., November 12–14, 1995, p. 26.

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was a lot of fun working on it. ... Responsible Care breeds happier people.”<sup>35</sup> Finally, the strong emphasis on public outreach in Responsible Care may also have helped foster a more consumer-oriented attitude in what was traditionally a very inward-oriented industry.

Cultural change, however, is a long-term process. A 1995 survey by the U.S. Chemical Manufacturers Association showed that, seven years into its version of the program,<sup>36</sup> fully 35 percent of the industry’s employees did not know what Responsible Care was.<sup>37</sup> David Powell, a University of Toronto academic and consultant who has been extensively involved in Responsible Care since its inception similarly observes that although the Canadian industry has changed considerably, many companies still have difficulty understanding the need for ongoing public dialogue — a concept that was antithetical to the pre-Responsible Care industry, and whose implementation remains a challenge for many traditionally trained engineers and business managers.

### **Impacts on Government Policy**

One of the main objectives of Responsible Care was to foster a less adversarial relationship with government and to pre-empt or at least influence the content of additional regulation. In this section, we evaluate the degree to which Responsible Care has achieved this objective. We also review a number of the concerns that critics have raised about the relationship of Responsible Care to the policy process, in terms of its influence on the development of new regulations, on the implementation of existing regulations and on the legal status of existing regulatory obligations.

### **Relationship With Existing Regulatory Obligations**

One of the most significant impacts of Responsible Care is that it may have helped increase the standard of care to which the chemical industry is subject with respect to *existing* regulatory obligations. Most public welfare legislation in Canada — including most environmental regulations — establishes strict liability offences. Once the Crown has proved the *actus reus*, strict liability offences reverse the onus onto the defendant to avoid liability by demonstrating due diligence.<sup>38</sup> Canadian courts have emphasized that due diligence requires a management system, with such elements as regular audits, clear assignment of responsibilities, training, instruction and supervision

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35. Green (footnote 1), p. 150.

36. Each participating country has its own version of Responsible Care.

37. L. Ember, “Responsible Care: Chemical Makers Still Counting on it to Improve Image,” *Chemical and Engineering News*, May 29, 1995, pp. 10–18.

38. See the landmark Supreme Court of Canada case, *R. v. Sault Ste. Marie* (1978), 40 CCC (2d) 353.

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of employees, information systems and effective lines of communication.<sup>39</sup> One of the leading factors relied on by the courts in defining what constitutes a reasonable management system is the prevailing industry norm.<sup>40</sup> Thus, it is widely expected that chemical companies will increasingly be held to a Responsible Care-like standard.

That said, it is interesting to note that on January 25, 1996, the Alberta Provincial Court issued an order under the Alberta *Environmental Protection and Enhancement Act* endorsing a settlement agreement that included, in addition to a \$100,000 fine, the obligation to become ISO 14001 certified by June 30, 1998.<sup>41</sup> Prospec Chemicals had made an application to join the CCPA at the time of the judgment, but was not yet certified under Responsible Care. The fact that the International Organization for Standardization (ISO) and not Responsible Care certification was chosen raised issues with respect to whether ISO 14001 would supplant Responsible Care as the industry norm in the eyes of regulators and the judiciary. As no similar cases have arisen since the Prospec agreement, it is difficult to determine the significance of the case.

In any event, it is also conceivable that Responsible Care could influence the standard of care owed by a participant to a third party. Civil suits of negligence and nuisance are based on tests of reasonable behaviour. If Responsible Care ratchets up the standard of care reasonably expected of a chemical manufacturer, it may also indirectly influence the standard of care owed by that business to its neighbours.

While Responsible Care may therefore have an indirect positive impact on regulatory and common law standards of care, the program also presents a related challenge with respect to the administration of those laws. To what extent should resource strapped government enforcement officials use membership in Responsible Care as the basis for placing a CCPA company low on their list of inspection priorities? Is it valid to assume that a Responsible Care company will always comply with environmental regulations?

The empirical evidence does not support the assumption that companies certified under Responsible Care will necessarily always be in compliance. The federal and provincial governments have prosecuted various CCPA members for environmental violations over the last five years. Indeed, Tioxide, a (then) CCPA and Responsible Care member, received the largest penalty ever imposed under federal environmental legislation in a widely publicized 1995 case. Moreover, Responsible Care membership is not contingent on 100 percent compliance. Companies can become members of the program upon making a commitment to comply with the program. They then have three years to fulfill the obligations, after which time they are subject to evaluation. Even once

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39. The courts continue to elaborate the precise elements of due diligence as it relates to environmental management. See, e.g., *R. v. Bata Industries* (1992), 7 CELR (New Series) 245 (Ont. Ct. Prov. Div.); *R. v. Crown Zellerbach Properties Ltd.* (1988), 49 DLR (4th) 161 (S.C.C.); *R. v. Toronto Electric Commissioners* (1991), 6 CELR (New Series) 301 (Ont. Ct. Gen. Div.); *R. v. Courtaulds Fibres Canada* (1992), 9 CELR (New Series) 304 (Ont. Ct. Gen. Div.). More generally, see the discussion of the environmental due diligence jurisprudence in J. Swaigen, "Negligence, Reverse Onuses and Environmental Offences: Some Practical Considerations," *Journal of Environmental Law and Practice* 2 (1992), p. 149; E. Hughes, "The Reasonable Care Defenses," *Journal of Environmental Law and Practice* 2 (1992), p. 214.

40. See *R. v. Consumer's Distributing Co. Ltd.* (1980), 57 CCC (2d) 317 (Ont. C.A.); *R. v. Dupont* (unreported, January 23, 1986, Ont. Dist. Ct.); *R. v. Hodgson* (1985), 4 F.P.R. 251 (N.S. Prov. Ct.).

41. *R. v. Prospec Chemicals* (1996), 19 CELR (NS) 178 (Alta. Prov. Ct.).

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certified, however, a company will not automatically be decertified upon violating a law. The CCPA's policy is that a violation raises a "red flag" and that individual incidents and patterns of behaviour will be dealt with on their own merits.

Responsible Care officials acknowledge that this issue creates a dilemma. Failure to expel a violator could undermine the credibility of the program, one of the main objectives of which is to enhance the industry's credibility. On the other hand, some violations may be minor in nature. Moreover, expulsion from CCPA means that member companies lose their leverage to improve the performance of a fellow chemical company, whose performance will inevitably affect the entire industry's reputation.

Even its strongest proponents do not argue that participation in Responsible Care is a guarantee of compliance. Instead, proponents argue, Responsible Care certification means that companies will more likely *want* to be in compliance. Thus, they say, a Responsible Care company will less likely be systematically non-compliant, and will more likely be willing to take remedial measures without a threat of prosecution if it inadvertently falls out of compliance. In short, it is argued, government enforcement officials should treat Responsible Care companies differently from other companies by emphasizing a compliance-promotion approach versus a stricter enforcement approach.

Most environmental advocates take strong exception to this assertion, arguing that examples such as Tioxide illustrate that officials must continue to exercise enforcement discretion on a case-by-case basis. Critics further warn that reliance on a non-governmental program to establish enforcement priorities may be the start of a slippery slope to deregulation.

### **Relationship With the Policy Development Process: Cooperation and Influence**

One of Responsible Care's explicit objectives was to build up industry credibility with government decision makers so as to pre-empt stricter government control of the industry. The precise degree to which Responsible Care has influenced policy outcomes is hard to discern. Some specific linkages may be possible. The fact that the CCPA developed and implemented its own reporting process in the early 1990s, for example, may have helped influence the form of the federal National Pollutant Release Inventory scheme, which is less intrusive than the U.S. Toxics Reduction Inventory model (both in terms of the total number of substances reported and in terms of intracompany transfers of listed substances, for example). It is also possible that Responsible Care's high profile may have increased the government's comfort with voluntary measures generally, thereby helping foster support for the proliferation of recent government-sponsored initiatives. Finally, CCPA officials credit Responsible Care with the government's increased willingness to consider voluntary commitments in lieu of regulations for specific issues such as benzene emissions from chemical manufacturers.

More generally, most observers and participants agree that the chemical industry now enjoys a much more cooperative and influential role with government policy makers than before it initiated the program. Opinion is divided, however, as to whether these new dynamics are desirable. The CCPA has argued for almost a decade that an important benefit of the initiative has been that the Association now has the "confidence that it can

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speak externally regarding the responsible nature of its membership.”<sup>42</sup> Both industry and government officials agree that the program has helped increase the level of trust between the government and the industry. Some point to the recent Memoranda of Understanding between the chemical industry, the federal government and various provincial governments as evidence of a new partnership.<sup>43</sup> To a certain extent, however, this development simply reflects a recent trend towards a more transparent and inclusive regulatory development process that has applied also to other sectors that do not have the equivalent of a Responsible Care program.

Reflecting on this trend, critics within the environmental and labour community argue that one of the potentially most dangerous aspects of government involvement in voluntary initiatives is the increased potential for capture. They argue that government involvement may amount to tacit approval of certain policies, and may effectively amount to promises not to regulate in other cases. They point to the prominent role CCPA officials and member companies played in lobbying against some of the changes the federal government had proposed for strengthening its authority in the *Canadian Environmental Protection Act* during the process of revising the Act in the late 1980s. The CCPA has long argued that voluntary programs “need to be backed up by a government willing to actually regulate.”<sup>44</sup> However, over the past decade, it has increasingly used the Responsible Care program as a rationale for government not to regulate its members. To a number of critics, the extended lobbying exercise concerning the new Act illustrated the tremendous influence the program has developed, when it could be used to lobby not against regulation, but against an enabling statute so as to reduce the likelihood and potential significance of regulations in the future. At a minimum, these concerns point to the need for strong accountability mechanisms and public involvement in voluntary measures.

### **Impacts on the Industry’s Public Image**

The CCPA describes the benefits of Responsible Care as follows:<sup>45</sup>

Collectively, [member companies] succeed in their goal of self-regulation and public confidence in the industry. Individually, each member increases its standing in the community in which it operates and with those with whom it does business. It experiences increased employee satisfaction and morale. Member companies and their people can be justly proud of their efforts and commitments. It makes them leaders.

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42. CCPA (footnote 4).

43. During the last five years, the governments of Canada, Ontario and British Columbia have all signed memoranda of understanding with the CCPA focussing on the mutual promotion of pollution prevention.

44. Gordon Lloyd, Vice President CCPA, cited in A. Duffy, “Industry Told its ‘Free Ride’ on Pollution About to End,” *Ottawa Citizen*, March 20, 1999.

45. CCPA, *How to Communicate and Promote Responsible Care* (Ottawa: CCPA, undated).

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The chemical industry was one of the first and remains one of the only major Canadian sectors to have opened itself up to extensive public scrutiny through annual environmental reports, the creation of public advisory committees and third-party verification of its performance. It has invested heavily in improving its public image: it has run national advertising campaigns and encouraged its member companies to place ads in local newspapers; it has developed and cosponsored a course for environmental journalists with the University of Western Ontario; it has developed a week-long course for teachers on environmental and chemical issues (Knowledge of the Environment by Youth); it has developed communications material and tips for its member companies; and, of course, it encourages member companies to reach out to their communities and keep them informed of their activities.

There is widespread agreement that Responsible Care has improved community-level public relations. Green cited company officials saying that community members on their compliance verification teams had been “blown away” by their experience.<sup>46</sup> Scott Munro, General Manager of the Lambton Industrial Society in Sarnia, similarly observed that “we have seen and measured significant improvements to the environment, but the biggest change is the openness in providing information.”<sup>47</sup>

Although these efforts have increased the industry’s transparency, and arguably have helped improve its environmental performance, they have not yielded the expected dividends in improved public perception. Although Responsible Care may have helped arrest the precipitous decline in trust that marked the early to mid-1980s, CCPA polls continue to reveal low overall levels of public confidence in the industry. A survey completed in 1999 indicates that although the public believes the chemical industry provides valuable products, creates employment, and contributes to positive economic growth, it “does no better than a fair job when it comes to minimizing risks to health and the environment, considering the future effects of chemicals, and assuming responsibility for their activities.”<sup>48</sup> Addressing this mistrust remains one of the major challenges facing the program.

One of the reasons for this failure may be found in the attitude of environmental and labour advocates, who appear to be divided in opinion about Responsible Care. Some acknowledge the significant changes carried out by the chemical industry since the inception of Responsible Care, pointing to features of the program such as the emphasis on public involvement and reporting as models for voluntary measures in other sectors. Some critics argue that Responsible Care has not prompted much change, however. A union leader at Dow Canada, for example, argued in 1995 that Responsible Care had brought no great change to the company’s operations, just an evolution in the understanding of worker safety and health.<sup>49</sup>

More commonly, however, as noted in the previous section the criticism levelled against Responsible Care is not that the program has been ineffective, but that its very success is now being used inappropriately as a shield against further government

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46. Green (footnote 1).

47. G. Morris, “Why Canada?” *Chemical Week*, July 5–12, 1995, p. 68.

48. Earncliffe Research and Communications, *Results of Key Audience Research*, conducted for the Canadian Chemical Producers’ Association, 1999.

49. Loos and Stricoff (footnote 26).

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regulatory intervention. Paul Muldoon, of the Canadian Environmental Law Association, argues that these problems almost inevitably arise when governments become involved in voluntary measures — as they have with the CCPA pursuant to the federal and provincial memoranda of understanding signed in 1995. Similarly, David Bennett of the Canadian Labour Congress argues that the use of Responsible Care as a lobbying device against further regulation is engendering cynicism among third parties about the program's objectives.

This problem may be exacerbated in the case of Responsible Care by the high-profile role played by the CCPA both in administering the program and in handling the industry's government-relations interests. A number of critics argue that the CCPA has adopted contradictory roles by using the success of Responsible Care as the basis for adopting an increasingly anti-regulatory lobbying stance.<sup>50</sup>

### **Influence on Other Sectors' Approaches to Environmental Programs**

The Responsible Care program has stimulated other sectors to develop their own environmental management programs. In addition to the CCPA, the Mining Association of Canada, the Canadian Petroleum Products Institute, the Canadian Electricity Association, the Steel Association, the Vinyl Council, the Canadian Association of Petroleum Producers and the Forest Products Association of Canada and many other smaller industry associations all have or are developing active environmental management programs. While each of these programs differs in various ways from Responsible Care, each is at least in part based on Responsible Care, which is now a standard reference point for any discussions about new sectoral environmental management initiatives in Canada.

### **Explaining Responsible Care's Impacts**

The CCPA understood early that Responsible Care had to have two significant dimensions in order to succeed: doing the right things, and, equally important, being seen to be doing the right things. From its inception, the designers of Responsible Care understood that achieving these twin goals would require a commitment to collective action and mutual help. How successfully has Responsible Care overcome these challenges? And why? This section suggests that it is important to understand the different roles played by a) the social, economic and political context in which the program was designed, b) the process by which it was developed, and c) the actual design of the program itself.

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50. This problem is not confined to Canada. In 1993, for example, a senior official of the U.S. Environmental Protection Agency's Office of Pollution Prevention and Toxics noted that "One of the problems I think the Responsible Care program suffers from is its connection with CMA [the Chemical Manufacturers Association], because CMA plays many roles for the industry. And one of the things CMA does on behalf of the industry is attack regulations. ... It appears sometimes that the positions CMA is taking in public policy debates are not consistent with Responsible Care." See R. Begley, "Will the Real Chemical Industry Please Stand Up," *Chemical Week*, July 7-14, 1993, p. 18.



## **The Role Played by Contextual Factors**

The conditions facing the Canadian chemical industry in the 1980s — loss of public trust and growing pressure for stricter government regulation — were no different than those in most other industrial countries. Indeed, the major events that had eroded this trust — Seveso, Love Canal, Bhopal — had all happened outside Canada’s borders, although a few lesser incidents (e.g. the Mississauga train derailment, the St. Clair toxic “blob,” the PCB fire in St. Basile-le-Grand) and growing scientific concern over the effects of persistent, bio-accumulative toxic chemicals on wildlife and humans, particularly around the Great Lakes, contributed to the changing public mood. Yet, it was in Canada that Responsible Care was born. Why?

And why the chemical industry? No other sector had — or has since — put in place as rigorous an environmental management approach. Yet other sectors (e.g. oil) also pose significant environmental risks, and have been the subject of intense public scrutiny. Although the environmental practices of many industries have improved in the past decade, no sector has set collective standards as rigorous as those established by the CCPA. Common sense suggests that industry is more likely to undertake voluntary action when it sells directly to the consuming public. What explains the development of such a strong initiative from the chemical industry, which does not sell to the public?

The answer lies in an understanding of the development of environmental policies in the 1980s, and of the particular circumstances of the Canadian chemical industry at that time. As Roy observes,<sup>51</sup> the pressure for responsible action facing North American industries had expanded during that period to encompass employees, consumers, and spouses and children of executives, each of whom plays an important role in shaping the “culture” within which businesses make pollution-related decisions. In responding to such wide-ranging demands, industry began to search “both inward and outward for answers of what society expects of them.”<sup>52</sup>

These pressures were accentuated for the chemical industry in the early 1980s. Because it is highly capital intensive, the chemical industry places a premium on regulatory certainty and good employee relations in order to ensure adequate investment levels. In the wake of Seveso and Bhopal the industry faced a rapidly growing loss of public confidence. While it was not concerned about direct consumer boycotts, it was very concerned that public mistrust could lead to a decline in interest in working in the industry, and in increased demand for new regulations.

In Canada, these concerns took on particular significance given the federal government’s announced intention to reform the *Environmental Contaminants Act* and the renewed interest in environmental reform expressed by many of the provinces in the mid-1980s. At the same time, a number of distinctive features of the Canadian chemical industry allowed it to respond to these pressures in a positive way. The Canadian

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51. M. Roy, “Pollution Prevention, Organizational Culture and Social Learning,” *Environmental Law* 22:1 (1992), pp. 189–252.

52. A. J. Hoffman, *The Environmental Transformation of American Industry: An Institutional Account of Organizational Evolution in the Chemical and Petroleum Industries (1960–1993)*, PhD dissertation, submitted to the Department of Civil and Environmental Engineering, and the Sloan School of Management, Massachusetts Institute of Technology, February 1995.

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industry was relatively small compared to that of the U.S., for example. And although it largely consisted of foreign-owned branch plants, it operated relatively autonomously. The industry had also recently enjoyed positive experiences in a couple of high-profile multistakeholder processes, which may have suggested to some of the participants that there existed a possibility of a new, more proactive and participatory approach to the policy process, as opposed to the industry's traditional defensive approach.<sup>53</sup>

The single most important factor, however, appears to have been the role of specific leaders. A number of CEOs of the largest Canadian chemical companies were instrumental in developing the new vision and pushing their peers to accept it. They were supported by the CCPA's President, Jean Bélanger, who had been appointed in 1979. A former civil servant, he was sensitive to the industry's need to re-establish its credibility in order to influence government policy, and he understood the growing importance of working collaboratively with external partners.

Each of these factors helps explain why the Canadian chemical industry took action in the mid-80s. The important fact, however, is that the Canadian industry acted before other countries, and developed a program that has become a model for the chemical industry worldwide, and for other sectors. In the face of continued worries about the competitive disadvantages of unilateral environmental action — particularly in Canada, where the policy debate is dominated by a fear of getting too far ahead of the U.S. — the history of Responsible Care is an important reminder of the potential merits of environmental leadership.

### **How Has the Process by Which Responsible Care was Developed and Continues to be Delivered Influenced its Impact?**

#### **An Incremental Process**

The development of Responsible Care typifies the difficult balance that must be achieved by voluntary measures. If standards are set too high initially, industry may be reluctant to participate. Almost all commentators interviewed for this study agreed that peer pressure and culture change require time to evolve. Yet if standards are not rigorous and transparent, the public may criticize the initiative for being ineffective.

Proponents of Responsible Care emphasize that the incremental nature of its development contributed significantly to its effectiveness. Internal buy-in and the effective use of peer pressure to minimize laggards have been enhanced by the gradual development of the program and by the fact that the participants have designed each aspect themselves. In order to continue to be effective, and in order to overcome the continuing distrust described above, however, many commentators recognize that Responsible Care must now confront the challenges associated with going the next step to ensuring the independent evaluation of clear performance. In short, in order to ensure its ongoing effectiveness, it must commit its members to continuous improvement.

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53. And as compared to the more confrontational U.S. approach or the more corporatist approach relied on in Europe.

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### **Resources**

The CCPA has dedicated considerable resources to support Responsible Care. Two people work full time on the program, aided by a part-time consultant, in addition to the support provided by the President and the Vice President for Government Relations. To ensure that it had sufficient resources to implement the program, the CCPA doubled its membership fees. As described above, each member also designates at least one Responsible Care coordinator as well as paying for the costs of the compliance verification at its plants and providing various technical and management resources to support the program.

### **Peer Pressure and Mutual Assistance**

Responsible Care had to overcome resistance to participation both from those worried about the costs and from members reluctant to place all their environmental activities under the Responsible Care umbrella. Some worried that participation in a collective program would undermine the market benefits that they were or could receive by proceeding unilaterally. Finally, even if they were willing to participate themselves, many companies may have been reluctant to participate due to a concern that others might not. In short, the program faced a mutual assurance problem — in order to ensure success, it had to ensure each member that all others would contribute their fair share and not “free ride.”<sup>54</sup>

The program makes very effective use of peer pressure and internal accountability to overcome these challenges. The CCPA uses peer pressure effectively to create an atmosphere of mutual accountability and to encourage laggards to improve their performance. Among the main vehicles for the delivery of Responsible Care are the six Regional Leadership Groups, comprised of the chief executive officers from each member company. These groups meet quarterly to “compare notes on their progress, or lack thereof, and their difficulties, and offer each other help in approaches or expertise.”<sup>55</sup> Beyond providing a forum for trading advice and reporting on progress, the groups demonstrate the personal commitment of the chief executive officers and prove to be an effective means of applying peer pressure. According to Brian Wastle, “The

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54. These challenges can be understood in one of two ways. The traditional explanation is that rational, self-interested firms will tend to free ride — to try to obtain the benefit of improved industry reputation without making the individual investments necessary to participate themselves. See, e.g., M. Olson, *The Logic of Collective Action* (Cambridge, Mass.: Harvard University Press, 1965). An alternative explanation is that the basic obstacle to effective self-regulation is an “assurance” problem: “the group member (i.e. the firm) does not withhold its contribution to a public good [e.g. a cleaner environment] based on a rational calculation of costs and benefits involved ... but rather does so because it is unable to obtain necessary assurance that other firms will contribute their fair share.” See I. Maitland, “The Limits of Business Self-Regulation,” *California Management Review* 27:3 (1985), pp. 132–147, p. 134. From the first perspective, to be effective, Responsible Care must prevent firms from free riding. From the second perspective, collective action could be assured if Responsible Care could provide firms with the necessary assurance that others will contribute their fair share.

55. Bélanger (footnote 3), p. 4.

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consequences of a chief executive having to stand up in front of his peers and say, ‘We didn’t make it’ are severe enough that only once has a member withdrawn not meeting even the minimum standards.’<sup>56</sup>

One of Responsible Care’s most important innovations is that it fostered the transfer of technical know-how among chemical companies in reducing their emissions of certain toxic substances. In particular, large companies helped smaller ones in establishing the necessary control systems to reduce emissions, notwithstanding initial unease about the implications for competition. Through this sharing of information and management approaches, the program achieved both greater gains than if each company had worked on its own and a higher level of participation by companies by overcoming concerns that Responsible Care would be too difficult or would cost too much.

The CCPA has been instrumental in promoting this collective action among its members by i) acting as a catalyst in maintaining the commitment of the industry’s chief executive officers, ii) providing a mechanism for mutual assistance, and iii) coordinating joint action (e.g. the evaluation of motor carriers’ practices under the transportation code).<sup>57</sup> The CCPA also produces extensive publications and fosters ongoing informal exchanges of technical and management advice among company personnel and Responsible Care coordinators.

### **What Design Features of Responsible Care Strengthened/Weakened its Impact?**

#### **Responsible Care is a Condition of Membership in the CCPA**

One of the most important factors behind the program’s impact appears to be the fact that Responsible Care certification is a prerequisite for membership in the CCPA. The chief executive officer of each CCPA member company must commit formally, as a condition of membership in the Association, to the *Statement of Responsible Care and Guiding Principles*. Companies that do not perform their activities in accordance with the program are required to cease them or leave the Association.

This requirement is an important source of motivation. Membership provides a variety of important benefits, ranging from the extensive information provided by the Association to the informal networking that occurs among the member companies. And because Responsible Care now effectively defines the standard of care expected of the chemical industry, former members would have a hard time justifying to a court that they had decided to leave the CCPA because they did not want to adopt Responsible Care. In short, membership may send important signals to government officials, to the courts, and to suppliers and customers about the environmental quality of a company’s operations.

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56. G. Morris, “Third Party Verification Keeps Initiative Fresh,” *Chemical Week*, July 5–12, 1995, p. 66.

57. See Bélanger (footnote 3).

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### **Reporting**

The proponents of Responsible Care have long recognized that effective measurement, monitoring and public reporting of performance are required in order to maintain its credibility. This raises a number of difficult issues. What should such a system measure and report, for example? At a minimum, companies should obviously track toxic emissions. Ideally, however, reports should also address other dimensions of a company's environmental performance. For example, reports should allow third parties (other companies, government officials and the public) to verify that emission reductions have not come about at the expense of the creation of some new risk, or simply because of an economic slowdown. More fundamentally, in the opinion of some, reports should allow readers to compare firms' overall environmental performance, rather than just track changes in specific substances. As the U.S. Chemical Manufacturers Association Vice President, Jon Holtzman, observed, emissions-based reports "are important to get the [Responsible Care] process in place, but they're not a company-by-company comparison."<sup>58</sup> Finally, in order to maximize public trust, any system of reporting ought to be independently verifiable.

While the chemical industries in other countries are also trying to address these challenges,<sup>59</sup> public reporting under Responsible Care is occurring at an increasing number of different levels in Canada. The Transportation Incident Measurement program provides annual measures of transportation-related incidents. The CCPA aggregates workplace health and safety information under the 1982 Safety, Health and Accident Reporting Experience initiative, which collects statistics on accidents that cause employee injuries. CCPA member companies also report to the Association on their implementation of the management systems they have put in place for Responsible Care's six codes. Similarly, emissions reporting is also a condition of membership in the CCPA. In 1999, 69 members with 160 facilities reported on the releases of 599 substances. These included the 254 substances on Environment Canada's National Pollution Release Inventory (NPRI) and the 117 on the Accelerated Reduction/Elimination of Toxics (ARET) list. The remaining substances tracked by member companies are those that have been identified by the CCPA or individual companies as being emissions of concern from either a human health or an environmental perspective.

The CCPA has published annual *Reducing Emissions* reports since 1992. The reports provide aggregated information on member company emissions of chemical substances to air, water and land. These reports differ significantly from the NPRI data in

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58. Quoted in N. Gunningham, "Environment, Self-Regulation, and the Chemical Industry: Assessing Responsible Care," *Law & Policy* 17:1 (1995), pp. 57-109, p. 71.

59. The U.S. relies heavily on the Toxics Release Inventory. The French group *Rhône Poulenc* has developed an environmental index that can be applied in every plant, and allows reports to be combined to produce a measure of the environmental performance of each company. The U.K. Chemical Industries Association and France's *Union des Industries Chimiques* have adopted this index as an environmental performance indicator. Similarly, the Australian Chemical Industry Council is developing a set of performance indicators ranging from emissions reductions to local community consultation panels. These indicators are designed to be closely related to the codes in the Australian version of Responsible Care, and to take into account both compliance with the processes set out in the codes and performance in relation to output and quality of operation. (See Gunningham, *ibid.*, p. 72.)

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that they also contain projected emissions for a five year period. The 1999 report, for example, predicted that CCPA members will achieve a 79 percent reduction in aggregate emissions in 2004, compared to 1992 levels. Since 1994, the CCPA has also published Responsible Care annual reports. These include the reports of Responsible Care's National Advisory Panel (NAP).

Members also provide information to the public on a company-by-company basis. An increasing number are issuing environmental reports to their communities and shareholders, outlining their environmental emissions and describing planned remedial and preventive activities. Many CCPA members are registered with the Voluntary Climate Change Challenge and Registry, a voluntary initiative that requires companies to prepare annual and progress reports of greenhouse gas emissions from their respective facilities.

### **Compliance Verification**

When a company joins the CCPA, it commits to implementing fully the 152 elements of the codes of practice within three years. In 1994, the CCPA reported that some 98 percent of the code elements had been implemented by companies that have been members for three years or more. The problem with this assertion, of course, is that it was based on self-reported information and is not easily verifiable. This problem led early critics of the program (including some members of the National Advisory Panel) to push for independent evaluations.

In 1994, the CCPA took steps towards addressing this issue by developing the Responsible Care public-peer verification protocol. Under the protocol, each company must verify its compliance with Responsible Care's codes of practice through an exhaustive and comprehensive review and assessment. The review is completed by a verification team consisting of industry experts, an independent representative from the National Advisory Panel, and a member of the community in which the company operates. The verification process includes a review of the plant's management system, based on interviews with plant officials, suppliers, customers and community residents, as well as document reviews, site visits, and extensive community consultations. With the exception of the newest CCPA members, all companies have completed or at least initiated external evaluations.

The CCPA recently introduced a "re-verification" process that is completed three years after the first external evaluation. Re-verification is now mandatory every three years. The purpose of re-verification is to

re-verify, for credibility with peers and the public and for continuous improvement of the implementation of the Responsible Care ethic and codes across the membership, that each company's management processes, previously verified, are still in place or improved upon, and are producing performance improvement, in areas important to itself and its various stakeholders, that is acceptable to these stakeholders.<sup>60</sup>

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60. CCPA, *Responsible Care Re-verification: A Protocol to Help Us Improve* (Ottawa: CCPA, 1999).

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The re-verification team produces a report describing significant findings, and any areas in need of follow-up by either the team or by the Leadership Group, Community Advisory Panel, annual re-commitment, or next re-verification process. The report also highlights “opportunities for improvement,” “significant improvements,” “extra miles” or observed “best practices” that could be used by others in the industry.

While they are among the most advanced evaluation requirements compared to other countries’ Responsible Care programs, these measures only partially address the need for independent evaluation. The evaluation focusses on the presence of a management system that is committed to continuous improvement. Instead of measuring actual performance, however, the evaluation assesses whether the company has a sound basis for its practices (e.g. conformity with a standard industry practice or an international norm, comparative research, etc.). Some of the criteria relied on by the evaluators is therefore vague and subjective. Nor are these evaluations completely independent: they are not conducted by independently licensed external auditors as a financial audit would be, for example. Many participants and critics therefore argue that moving from the current system to a more objective and independent evaluation process focussed on actual performance represents one of the most important challenges for Responsible Care to overcome in order to improve its credibility with the public.

### **Public Involvement**

There is considerable variation as to the degree of public involvement in the various voluntary environmental initiatives that have emerged in Canada in recent years. Some justify very little involvement on the grounds that outsiders might be too adversarial and would undermine any opportunities for developing programs that foster cultural change over time. Others argue that the public does not have any legitimate role since the action is by definition voluntary. Many involved in voluntary initiatives appear, however, to be moving in the direction of the CCPA, which has long emphasized the importance of public involvement to the success of Responsible Care.

Although the CCPA developed Responsible Care itself, it has sought the input of outside stakeholders from the outset of the initiative. This input is both formal and informal, and occurs at both the national and local levels. Since its establishment in 1986, for example, the National Advisory Panel (NAP) has emerged as an influential yet controversial aspect of Responsible Care. The introduction of external compliance audits and the strengthening of the “right-to-know” provisions of the *Community Awareness and Emergency Response (CAER) Code of Practice* both resulted from recommendations of the NAP, for example. On the other hand, critics charge that the NAP represents an attempt to control public input. There is no mechanism in place to ensure that Responsible Care members address NAP recommendations. And there are few other formal mechanisms for public consultation at the national level. The question therefore arises as to how much public input is required by an initiative that is nominally voluntary and unilateral, but which has the guise of public policy.

Responsible Care also requires participating companies to support local involvement. The *CAER Code of Practice* encourages member companies to establish community advisory committees and to report and communicate directly to the communities of which they are part through a “community dialogue” process. As

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explained in Responsible Care's 1995 annual report, "If a CCPA plant is located near you, or ships chemicals through your community, it's your right to be told about all the risks you're exposed to. It's your right to ask tough questions and to expect clear answers."<sup>61</sup> Many companies have established such advisory committees. Many also report to their communities through open letters, open houses, community meetings and articles in the local press.

## **Future Challenges**

The factors described above explain why the CCPA initiated Responsible Care and why members remain supportive of the program. To remain effective from an environmental perspective and, in particular, in order to enhance public trust, however, the program must also promote continuous improvement, both on the part of individual members and on the part of the program itself. As well as continuing to improve the industry's ability to interact with the public, the main continuous improvement challenges facing Responsible Care involve extending the program both upstream and down (product stewardship), and moving beyond cleanup operations and processes to questioning the environmental legitimacy of certain chemical products. In addition, the future of the initiative will increasingly be influenced by international issues.

## **Stewardship**

The easiest part of Responsible Care — improved in-plant controls — has largely been implemented. The more difficult part — applying stewardship principles once the product leaves the direct control of the manufacturer — remains ahead.<sup>62</sup>

Although it has endorsed the need to extend Responsible Care both up and down stream,<sup>63</sup> CCPA members are currently struggling with the concept of stewardship. In theory, product stewardship has significant potential. In practice, however, its impact depends in part on the companies' ability to overcome practical impediments such as how to reward a salesperson for *not* selling to an inappropriate customer. Although some Responsible Care companies have started to address this issue, it remains an ongoing challenge.

The degree to which the CCPA is able to enforce stewardship principles also depends on the degree to which suppliers and users can be convinced to adopt similar programs of their own accord. When the CCPA developed Responsible Care, few related

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61. CCPA, *Responsible Care Annual Report* (Ottawa: CCPA, 1995).

62. H. Fattah, "Taking Care Outside," *Chemical Weekly*, July 5–12, 1995, p. 53.

63. Responsible Care's *Distribution Code of Practice* requires CCPA member companies to ensure "with due diligence" that their suppliers, distributors and resellers "meet the minimum standards of this code of practice." Although this approach represents a very significant departure from traditional industry codes of practice (see Limoges and Davignon [footnote 7]), the Association justifies it on the premise that any negative news about chemical products will hurt the industry as a whole regardless of whether one of its members is directly involved.



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industries were interested in participating or developing parallel initiatives. Over the past five years, however, some — like the specialty chemical manufacturers — have initiated processes to develop similar programs. This interest is partly due to the increased leverage Responsible Care companies can apply to their suppliers and customers as a result of the international recognition and endorsement of the program. Compliance with the basic elements of the program has become the industry norm around the world. This interest is also partly due to a growing realization that the implementation of a credible voluntary measure may be an effective means to strengthen an industry's negotiating hand in the policy development and review process.

### **From Principles to Targets**

The Canadian version of Responsible Care now lags behind its U.S. counterpart in at least one important respect. In January 1999, the U.S. Chemical Manufacturers Association Board approved enhancements to its version of Responsible Care by:

- adopting an association-wide performance commitment to “make continuous progress toward the vision of no accidents, injuries or harm to the environment”;
- adding a condition of membership requiring each member (and non-chemical “partner company”) to establish its own performance goals and publicly report progress toward those goals; and
- agreeing to determine if individual company performance goals can be harmonized into additional association-wide commitments or goals.

As a result of these decisions, the U.S. program now requires members to:

- establish at least one goal for a performance result;
- make steady performance improvement toward the goal(s);
- publicly communicate the identified performance goal(s) and progress toward meeting the goal(s) at least annually; and
- annually report the established goal(s), progress, and public reporting mechanisms to the Chemical Manufacturers Association.

To date, the CCPA has no equivalent requirement to set and report on beyond compliance targets.

### **From Processes to Products**

To date, Responsible Care has encouraged CCPA members to focus on ensuring that they produce their products in a safe and environmentally appropriate manner. The re-verification process has also focussed on assessing members' progress towards adopting life-cycle stewardship practices. The program has also exercised some influence over the development of new products. It has *not*, however, forced members to ask in a rigorous and systematic manner whether they ought to continue producing existing products. Making this transition from minimizing the environmental impact of ongoing activities to questioning the ongoing use and production of environmentally damaging products and processes represents the next level of environmental management and

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pollution prevention to which Responsible Care and similar voluntary programs must rise. The willingness of the chemical industry to address emerging debates such as those surrounding endocrine hormones and the use of chlorine as a feedstock by various industries will therefore be an important litmus test of the capacity of Responsible Care to continue to engender positive change within the chemical industry.

### **Responding to International Dynamics**

As noted above, the increasing internationalization of the economy may have important implications for the status and form of Responsible Care as a domestic initiative. The emergence of international certification standards such as ISO 14001, for example, may have two important consequences for the program. First, the Prospec Chemicals case raises questions about whether the less comprehensive<sup>64</sup> ISO 14001 will replace Responsible Care as the norm to which government officials and the judiciary hold the industry. Second, some companies may start to question the cost implications of certifying with two similar programs. To the extent that ISO 14001 becomes a dominant international norm, will the Canadian chemical industry continue to be willing to invest in Responsible Care? Presumably, its willingness to continue to do so depends in part on its perceived need to differentiate itself. To date, the chemical sector appears to have perceived a benefit in retaining its own program.

The status of voluntary domestic initiatives such as Responsible Care under international trade laws such as the Code of Good Practice of the World Trade Organization's Agreement on Technical Barriers to Trade<sup>65</sup> is also unclear. The Code applies certain rules to the development and use of voluntary measures for domestic policy. There is an unsettled question regarding the extent to which these rules could constrain domestic capacity to implement environmental policy through measures such as eco-labelling, voluntary codes of practice or negotiated agreements.

### **Conclusion**

The Responsible Care program is the most far-reaching voluntary environmental initiative launched by an industry sector in Canada. Its main objectives were to improve the chemical industry's environmental performance, to improve its relationship with government and to foster increased public trust. To date, the program appears to have made considerable progress towards the first two objectives. The Canadian chemical industry has achieved substantial reductions in the emissions of many toxic chemicals, helped regain the confidence of some environmental policy makers after a series of well publicized accidents had eroded it, and, arguably, forestalled tighter, more prescriptive

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64. See CCPA, *A Primer on Responsible Care and ISO 14001* (Ottawa: CCPA, 1995) — a CCPA-sponsored comparison of Responsible Care and ISO 14001, which illustrates the broad range of issues, such as public involvement and reporting, that are not included in the ISO regime.

65. See World Trade Organization, "Code of Good Practice for the Preparation, Adoption and Application of Standards," *Agreement on Technical Barriers to Trade*, Annex 3, Uruguay Round of Trade Agreements (Geneva: World Trade Organization, 1994, available at the WTO Web site: <[www.wto.org/english/docs\\_e/legal\\_e/17-tbt.pdf](http://www.wto.org/english/docs_e/legal_e/17-tbt.pdf)>).

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regulatory controls. Although not all of these changes have resulted solely because of Responsible Care, most evidence suggests that the program has served as an important catalyst and focus for the industry's environmental and government relations efforts over the past decade.

Evaluating the program's impact on public trust is more complicated. While individual companies report improved community relations and while the industry is much more open than it has ever been, polls indicate that it remains low in the public's esteem. One possible test of its overall success is whether it has become once again the "invisible" industry described by CCPA President Jean Bélanger.<sup>66</sup> On this test, Responsible Care scores well. Because it has improved its environmental and workplace safety performance, the industry has avoided much of the public scrutiny that led to the development of the program in the first place. Continued prosecutions of CCPA and non-CCPA chemical companies have aroused skeptics, however. In addition, particularly as the program's ability to influence the ongoing government policy development process has grown, critics have become increasingly vocal in their demands for additional accountability mechanisms such as clear objectives, more openness to public input and a system of independent verification.

What lessons can be drawn from Responsible Care? We have suggested in this chapter that the program's impacts are in part attributable to the way in which it was designed and implemented, and in part the result of the context in which it was developed. Important lessons about design and process that may be transferable to other initiatives include the following:

- the importance of outside input in all phases, including the initial design, implementation and verification;
- the importance of sustained, senior-level leadership;
- the need to commit sufficient resources;
- the value of relying on an incremental process;
- the benefits of well orchestrated peer pressure;
- the need to support individual action with information sharing, and technological and management know-how;
- the need to back up the program's benefits with negative incentives for collective action (e.g. making membership in the CCPA conditional on Responsible Care certification); and
- the requirement for strong internal and external accountability mechanisms, including mandatory public review, involvement and reporting requirements.

The program also owes its impact to the unique situation facing the Canadian chemical industry in the 1980s. It is not often that another sector will face a similar juxtaposition of crises together with the leadership that helped initiate Responsible Care and ensured that it received high-profile support. The question to ask, then, is to what extent can additional design features or supplementary government action substitute for these contextual features to create the requisite drivers for similar voluntary programs in other sectors?

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66. See footnote 8.

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It is also important to distinguish factors that may have supported the development of a voluntary initiative from those factors that stimulate its ongoing improvement over time. In this regard, one of the most difficult questions with respect to Responsible Care — as with most other voluntary environmental initiatives — is how important is a credible threat of regulatory intervention for the initiative's development and ongoing success? There is no question that the threat of regulation served as a major incentive for the development of the program. The more difficult issue is how important an ongoing threat (or lack thereof) has been to the program's evolution and its ability to ensure continuous improvements. Would Responsible Care have changed to the extent it has without any threat of intervention? Would a more credible threat have prompted more significant change, or averted the use of Responsible Care as a lobbying tool to avoid regulatory reform under the *Canadian Environmental Protection Act*?

To a certain extent, Responsible Care has taken on a life of its own. It has become a more demanding code of practice than it was 10 years ago. Through the accountability mechanisms and reporting requirements, the CCPA has established powerful drivers for further improvement of the program. Proponents of Responsible Care as an alternative to future regulations also point to the continued evolution of the program notwithstanding the decline in public pressure for environmental regulations and notwithstanding the decline in governments' capacity to intervene in recent years. They also point to the growing interest in Responsible Care on the part of other industries.

It is difficult to accept the case that there is no role for government in promoting and monitoring voluntary measures, however. It is in the interest of Responsible Care companies to ensure that the entire chemical industry is subject to strong backstop regulation and monitoring, for example. Although the CCPA represents 90 to 95 percent of the chemicals that are manufactured in Canada, it does not represent some small manufacturers, nor does it represent upstream suppliers or downstream users of chemicals, including the specialty manufacturers, which blend products from CCPA-produced chemicals. The CCPA argues that the best way to address this issue is to convince other companies to adopt Responsible Care-style programs. In the absence of such initiatives, however, effective government control over this full spectrum of users and producers is required to address the risk that free riders will undermine the CCPA's efforts to restore the tarnished public image of the chemical industry as a whole. And unless public advocates are satisfied that the government is at least tracking the program's effectiveness on the basis of highly transparent and accessible information, they will remain dissatisfied with the program and mistrustful of any suggestion that it replace regulations.

In our opinion, there is no question that a credible threat of government intervention will often be required to motivate action. Responsible Care was initiated in response to such a threat. Other sectors are now developing similar programs precisely in order to avoid regulatory intervention.

An equally important point is that governments have many other levers they can pull both to induce and to help sustain environmentally beneficial behaviour, including the following:

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- backing up self-enforcement, even if just through the realistic threat of regulatory intervention if voluntary action is not effective;
- ensuring accountability (e.g. through mandatory public-involvement requirements; through reporting initiatives such as Accelerated Reduction/Elimination of Toxics, etc.);
- facilitating information exchange to enable small companies to participate;
- educating consumers (to support demand for green products);
- encouraging financial institutions to fund environmental investments; and
- supportive procurement, research and development, and trade policies.

Finally, regardless of the form of government action to support or monitor voluntary initiatives, the Responsible Care experience suggests that government must coordinate those activities carefully with its ongoing policy administration and development processes. Overt support for a voluntary measure exposes governments to potential defenses of officially induced error and abuse of process.<sup>67</sup> More fundamentally, active participation may expose governments to concerns about capture. Again, then, we return to the overarching importance of developing rigorous and effective accountability mechanisms so that the public can judge the value of the actions undertaken. With its public reporting requirements and its evolving compliance verification mechanism, Responsible Care appears to reflect this lesson more than most similar environmental initiatives. The importance of designing voluntary initiatives to engender public trust is emphasized, however, by the fact that accountability nonetheless remains one of the main issues raised by critics of the program.

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67. As discussed in Chapter 5.

## **Appendix A**

### **Key Elements of the Responsible Care Codes of Practice**

#### **Community Awareness and Emergency Response (CAER)**

The CAER requirements relate to each of the other five codes. This code requires companies to establish a “right to know” program at any site where chemicals are handled. Each company must:

- know and respond sensitively to community concerns;
- advise the community of potential hazards associated with its operations;
- have an emergency plan; and
- integrate the emergency plan with the community emergency response plan.

#### **Research and Development**

This code applies to each stage of development (from initial research to marketing and beyond) of all investigative technical work regarding new technical products, processes, equipment and applications, as well as all new uses for existing products. Members may not sponsor or conduct research unless it complies with the code. Members are also precluded from introducing new products not developed in accordance with the code.

#### **Manufacturing**

This code applies to all aspects of manufacturing and operations — including siting and decommissioning — of both new and existing sites. Members must develop systems covering plant design, construction and operation to protect employees, the community and the environment from any harmful effects of chemical manufacturing.

#### **Transportation**

Members must have an active program to ensure that they transport chemicals and chemical products in a manner that minimizes the risk of accidents and of injury to the persons involved in transportation activities, and to the public and the environment along transportation routes. They must provide to people situated along those routes information concerning any dangers.

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### **Distribution**

This code covers all activities related to the sale of chemicals and chemical products and services as well as the movement of goods that come from suppliers to be resold or to be converted into new products. The code establishes standards and procedures and provides training guidance for the storage and handling of chemicals and chemical products. Members may not buy from suppliers or sell to distributors and customers who do not comply with the code.

### **Hazardous Waste Management**

Members are encouraged to assess best practices, to reduce, reuse, recycle or recover hazardous waste, and to cooperate in remediating contaminated sites.

