

Chemistry Industry Association of Canada

## National Advisory Panel

October 18, 2011 – Ottawa

### HEADLINE MINUTES

#### **1. Introductions**

New members joining the Panel at this meeting include: Nadine Gudz, InterfaceFLOR, Toronto; Alex von Knobloch, CAMTAC Manufacturing, Guelph; Errol Mendes, Faculty of Law, University of Ottawa. Anouk Bertner of Natural Step Canada is a visitor. (p. 3)

#### **2. CIAC Water Use Metrics**

Dave Schwass talks about developing a CIAC water use performance indicator. Panel feels CIAC on right track in seeking to measure water use performance, but emphasize importance measuring impact as well as use. (p. 4)

#### **3. CIAC Position on Shale Gas**

Panel comments on CIAC's Shale Gas Position Statement. There are calls for chemical industry to commit to an evaluation of upstream business partners based on Responsible Care principles, and to compare the sustainability of shale gas to other feedstocks. The uncertainties of shale gas should be flagged and caution should be included in the statement, Panel says. There are also calls for the statement to position shale gas as a transition fuel. (p. 5)

#### **4. Corporate Sustainability at Stepan**

Frank Pacholec talks about sustainability at Stepan Company. Panel appreciates his presentation. They suggest that Stepan develop a more specific description of sustainability and its relation to business strategy. It is also suggested that company look at the handling of its molecules downstream by markets and customers. (p. 7)

#### **5. Nexen Shale Gas Overview**

Peter Chernik presents detailed description of Nexen's shale gas development in Horn River area in Northeast BC. Panel members express concern about long-term effects of the Horn River development. One member, however, describes Horn River basin

as best case scenario for drilling and Nexen's stakeholder process as one of the best. But, if Nexen is best in class, Panel says, it brings special responsibility to lay down benchmarks for environmental standards. (p. 9)

## **6. Responsible Care Expectations for Business Partners**

Mark Lesky talks about activities in Marcellus Shale Basin and Nova Chemicals' role in encouraging responsible development. He describes Nova's strategy for meeting this tough challenge, and emphasizes need for better regulation. Panel calls for risk assessment of shale gas production operations, though limits of such assessment are noted. Water use flagged as a hot-button issue. (p. 11)

## **7. CIAC Update**

Bob Masterson presents CIAC update, noting that Association will be addressing three issues in the 2012–2015 triennial: investment, sustainability and biochemistry. (p. 13)

## Next Meeting

Date and Venue to be Determined

Chemistry Industry Association of Canada  
**National Advisory Panel**  
October 18, 2011 – Ottawa

**National Advisory Panel:**

Nadine Gudz  
Cindy Jardine  
Alex von Knobloch  
Debra Krukowski  
Brenda Lorenz  
Pat McLean  
Errol Mendes  
Ken Ogilvie  
Ron Ormson  
Robin Orr  
Keith Purves  
Edwin Tam  
Bruce Walker

**Regrets:**

Richard Janda  
Gail Krantzberg

**CIAC:**

Bill Brazeau (Stepan)  
Peter Chernik (Nexen)  
Martina Hudoba (Stepan)  
Norm Huebel  
Gilles Laurin  
Mark Lesky (Nova)  
Bob Masterson  
Brian McAusland (Nexen)  
Frank Pacholec (Stepan)  
Dave Schwass (Nova)

**Guests**

Anouk Bertner

**PDA:**

Francis Gillis  
John Vincett

## Agenda Item 1: Introductions

Participants around the table introduced themselves. New Panel members included:

- Nadine Gudz, Director of Sustainability Strategy at InterfaceFLOR in Toronto. Interface is the well-known carpeting manufacturer and supplier that has made important breakthroughs in sustainability.
- Alex von Knobloch, a project engineer at Camtac Manufacturing, part of Linamar Corporation, an automobile parts manufacturer. Alex was a member of the Bluewater Community Advisory Panel in Sarnia.
- Errol Mendes, a professor in the Faculty of Law at the University of Ottawa. He has been a prominent commentator on social and political issues for many years and has a strong interest in corporate social responsibility.

Anouk Bertner is Manager, Emerging Leaders, at Natural Step Canada. Anouk was a guest at this Panel meeting, with a view to possible involvement in the Panel by a representative of Natural Step Canada .

## Agenda Item 2: CIAC Water Use Metrics

Dave Schwass, Chair of the industry National Environment Quality Committee (NEQC), talked about the CIAC water use performance indicator (Appendix 1). He discussed current CIAC water use reporting, regulatory water use reporting in Canada and water use metrics in other jurisdictions, in particular American Chemistry Council (ACC) activities. He also discussed recent NEQC activities and next steps in water use reporting.

Dave noted that water use is an important issue for municipalities and that there are areas of the country where allocations for water use exceed available supplies. It is in the public interest to know the fraction of the flow that industries are using.

### **Panel Comment**

Panel members generally found the distinction between consumptive and non-consumptive uses of water to be helpful. For the former, the quantity was seen to be an issue and for the latter, the quality of the returned “borrowed” water was considered important. There were comments about setting benchmarks for the relative efficiency in managing these water uses, referencing global best practices.

It was agreed that reporting on water consumption as well as sources and impact were all important. A Panel member added that companies must look at comparative impact when moving to new water usage. Another member commented that it is particularly important to recognize impact on the basis of watersheds.

A Panelist noted that companies are taking water from open sources; what is the financial incentive to use that water responsibly? Bob Masterson noted that Responsible Care says companies must do the right thing. Stakeholders can go to companies and ask direct questions about water usage.

A member asked how CIAC is going to use the information on water usage. Dave said that, like all data, this NERM data would have to be managed as part of verifications or information to a plant’s community advisory panel.

It was pointed out that, under Responsible Care, there needs to be continual improvement in water usage. Therefore, the ability to measure performance in water usage is important.

### **Summary**

John Vincett said that the Panel feels CIAC is on the right track in seeking to measure water use performance, but emphasized that it is important to measure impact as well as use. The heat gradient, also, is not insignificant. Industry should ensure that measures are meaningful. Numbers that are comparable within the chemical industry or with other industries are needed. Communication with the community is also important.

## Agenda Item 3: CIAC Position on Shale Gas

Panel members commented on CIAC's Shale Gas Position Statement (Appendix 2).

John Vincett tabled an email from Panel member Richard Janda commenting on two topics: shale gas and alleged chemical pollution being faced by the Aamjiwnaang First Nation near Sarnia (Appendix 3).

A Panelist remarked that, even though shale gas is relatively new, Responsible Care principles are clear. There was a call for the chemical industry to commit to an evaluation of upstream business partners based on Responsible Care principles, and to compare the sustainability of shale gas to other feedstocks. "The more you can think the sustainability issues through and identify areas that can be improved, the better sense you'll have of where the shale gas issue is going," a Panel member said. The member added that the chemical industry should be fairly transparent about the judgment calls being made.

Bob Masterson noted that, historically, chemical manufacturing has been based on oil feedstock. The chemical industry didn't pay a lot of attention to the sustainability of that feedstock, seeing that it was the oil industry's responsibility. However, the chemical industry feels it should be more involved in the debate around shale gas.

Mark Lesky noted how important shale gas developments are for the U.S. and Canada, and that the shale gas train "has already left the station. Our job is to do everything in our power to do it right and have no irreversible impact. The challenge is: how can we manage that effectively?"

You meet that challenge by following the Responsible Care book, a Panel member said.

### **An Interim Statement?**

At least some Panel members felt strongly that shale gas only makes sense as a transition fuel to a clean future, and that the position statement should reflect this. As one member remarked, a fossil fuel by definition is not sustainable and this should be recognized in the statement.

There was a suggestion that the statement was too early. "Shouldn't you get community advisory panel input first?" a member asked.

A member observed that the economic benefits of shale gas are overwhelming, and so society is taking environmental risks to capture that benefit. The CIAC position should therefore be an interim statement, a living document. Because there are unanswered questions, CIAC "needs a dynamic statement and be ready to review it."

### **Bullet Points**

The Panel also had specific questions and comments on bullet points in the Shale Gas Position Statement.

There were remarks that there were weasel statements in the bulleted points, with one member commenting that “there is enough wiggle room to drive a train through.” It was also remarked that putting issues into silos prevents understanding of the topic as a whole.

Bullet points commented on:

- *Calls on Canadian governments at all levels to work cooperatively with stakeholders in Canada and the U.S. to promote science-based shale gas development and delivery policies, standards, and regulations which protect human health and the environment.*

A Panel member asked who is included in “stakeholders.” Obviously the public, including children would be included, the member remarked. Bob noted that stakeholders are defined in the glossary of the CIAC document on Responsible Care Commitments (the Blue Book): “Any individual, group or organization that will have a significant impact on or will be significantly impacted by the quality of the product or service [and/or how the product was made] that an organization provides. [CIAC Management Systems Guide]”

A member felt that a stronger statement is needed to ensure stronger and consistent standards across the country. Bob noted that in the U.S. industry prefers regulation to be at the state level, though most companies agree that the federal government should lead the process. One Panel member asked if current regulations were sufficient and whether the question of toxicity had been adequately addressed. A Panelist remarked that some aspects of shale gas regulation would benefit from federal leadership.

Health care in Canada was suggested as a possible model for shale gas regulation. It was remarked, however, that there would be some constitutional problems with the federal government dealing with this environmental issue. “Health care is quite different” (from the perspective of legal structure), a Panel member remarked, “as there the feds just provide money.”

Regarding a “science-based” approach, it was remarked that we are not sure that the science is that far along, so proceeding with caution is called for. And it was noted that “evidence based” is the term used in medicine. It was also remarked that “risk is just a prediction.”

- *Supports the public disclosure of information regarding fracturing fluids additives used in the development of shale gas; as part of this disclosure process proprietary information needs must also be considered.*

A member asked what are the current or planned regulations regarding public disclosure. Mark Lesky said that there are regulations, but they are not as specific as many would like. But there are disclosure rules.

A Panelist suggested that the reference to proprietary information be deleted.

- *Expects its member-companies to promote awareness of Responsible Care principles and goals to their upstream business partners involved in shale gas development and delivery to encourage them to commit to, and publicly report on, similar performance goals and continuous improvement in their own operations.*

The statement should say that member companies will cease business operations with those who don't live up to responsible performance goals, a Panelist said.

## **Summary**

John Vincett summarized the main points of the discussion:

- People need to understand how fracking fits or does not fit with Responsible Care.
- They need to understand how it fits with sustainability, which is not addressed in the position statement.
- The statement does not capture that shale gas is really an energy rather than a chemicals issue.
- The uncertainties of shale gas should be flagged and caution should be included in the statement.

Bob heard that the statement should include the notion that shale gas is a transition fuel. He also heard a call to terminate business relations with organizations that do not live up to responsible standards.

## **Agenda Item 4: Corporate Sustainability at Stepan**

Frank Pacholec talked about sustainability at Stepan Company (Appendix 4). Frank is Vice President R&D and Corporate Sustainability Officer.

Stepan is a manufacturer of surfactants, polymers and specialty products with \$1.4 billion in net sales. It is a member of the ACC's Responsible Care as well as CIAC's Responsible Care. It has a number of sites in North and South America, the UK, Europe, China, the Philippines and Singapore.

The Sustainability Program was formally started in 2010 and will be fully in place by the fourth quarter of 2012. Frank discussed four aspects of the program:

- Economic progress
- Commitment to addressing customers' impact
- Reducing Stepan's impact
- People – community outreach; learning and development; safety; wellness

He described how sustainability goals drive innovation at Stepan.

He also talked about specific sustainability activities in Canada.

The Panel appreciated Frank's overview of sustainability at Stepan.

Frank, and Martina Hudoba, responded to Panel questions:

- *How do you as a company respond to a giant like Wal-Mart?*  
Frank: What retailers in general want affects what we offer.
- *I note that Responsible Care is not visible on your website. This makes me wonder what kind of value you give to that program.*  
Frank: Responsible Care is fundamental to the way we do business. We may have an opportunity to make it visible on the website.
- *What form does your community outreach take?*  
Martina: We have a community advisory panel and other outreach processes, among them fire department tours of our site and outreach to cottagers.
- *Can people access information about local communities through your website? If people can't get information, they get afraid.*  
Martina: The website has local flags, and information is also available through community open houses and other local activities.
- *Do you consider dispersion, persistence and bioaccumulation in your life cycle analysis?*  
Frank: we continue to look at opportunities to improve the system, although we are early in the process at this time.
- *Are you imputing the price of carbon to your business? And, if so, how does that affect your business decisions?*  
Frank: We really haven't taken that approach.

There was a suggestion that Stepan should develop a more specific description of sustainability and its relation to business strategy. As well, it was suggested that company look at the handling of its molecules downstream by markets and customers.

## Agenda Item 5: Nexen Shale Gas Overview

Peter Chernik presented an overview of Nexen Inc. and a detailed description of the company's shale gas development in Horn River (Appendix 5). His presentation included a brief review of the history of Responsible Care at Nexen, noting that the company's previously owned chemical division adopted the program 20 years ago. After the sale of the chemical division, Nexen retained Responsible Care for the rest of the company.

Nexen is an independent, Canadian-based global energy company headquartered in Calgary. It is positioned for growth in the North Sea, Western Canada, deep-water Gulf of Mexico and offshore West Africa. The company employs approximately 4,200 people worldwide.

Peter's discussion of the shale gas development in the Horn River basin in Northeast BC covered:

- Geography/Demographics
- Fracking
- Water management
- Surface infrastructure
- Environmental studies
- Stakeholder consultation
- Community relations

Peter Chernik and Brian McAusland responded to Panel questions:

- *Has Nexen developed a credible worst case scenario for the Horn River development?*  
Brian: We developed a scenario involving a rupture in an eight-inch pipeline, though we did that assessment beforehand.
- *Where are the fault lines?*  
Peter: We are going to put in monitoring stations to see if fault lines are actually there. This is a new issue.
- *Are there any plans to educate and provide work to native populations?*  
We are trying to get native people engaged.

### **Panel Comment**

Panel members liked the presentation and felt that Nexen is committed to Responsible Care.

Several Panel members expressed concern about the long-term effects of the Horn River development, with at least one member saying that Nexen seemed to be rushing into the project. Other comments included:

- The long-term effects are "still rather frightening."

- “I don’t think we know the long-term effects; wherever you’re getting water from will have high effects.”
- “My heart and stomach dropped because this development is part of our energy future.”

Brian noted that Nexen is involved in other forms of energy, including a wind farm and a solar plant.

Another Panel member had a different perspective. The member described the Horn River basin as a best case scenario for drilling and Nexen’s stakeholder process as one of the best. The issues are not technical, he said, but social: how this development would fit into a national energy strategy, widespread opposition to pipelines and other such broader questions.

The member suggested there is a lot of CO<sub>2</sub> involved that Nexen could make syngas from as a way to turn the development into a very low carbon activity.

A Panelist remarked that, if the Horn River project is the best in class, “I worry about the rest of the companies” involved in that area. He called on Nexen to develop risk assessment for “black swan” events and to work with stakeholders on that assessment.

He also suggested that gas getting cheaper will bring in other industries who “may cut corners.” Therefore, Nexen should have a lot more dialogue with the Canadian Association of Petroleum Products.

Bob Masterson noted that the oil sands project is only now developing guidelines. Peter said that Nexen feels they are much more effective than the oil sands on environmental issues. “We are much smaller than the oil sands,” he said, “and so much easier to manage.”

## **Summary**

John Vincett summarized the Panel’s main points:

- There are concerns around long-term environmental effects.
- If Nexen is best in class, it brings special responsibility to lay down benchmarks for environmental standards.
- The Panel appreciates the great honesty and fervour reflected in the presentation, but wonders how the bigger energy policy issues get addressed.

Peter said that Nexen would welcome Panel members to come up and see the Horn River site.

## Agenda Item 6: Responsible Care Expectations for Business Partners

Mark Lesky talked about Nova Chemicals' growth strategy, the challenges and opportunities of shale gas development, and the company's role in encouraging responsible development (Appendix 6). He noted that there is a whole bunch of social issues in the populous Marcellus Shale Basin (Pennsylvania, Ohio and West Virginia), including the significant royalty payments that have transformed some local economies. This makes it a very different situation from northern BC.

Nova, a founding member of Responsible Care, is primarily an ethylene/polyethylene producer. It has two world-scale complexes in Canada: Sarnia, Ontario and Joffre, Alberta. The company employs 2,450 people. It is a wholly owned subsidiary of the International Petroleum Investment Company of the Emirate of Abu Dhabi.

Mark described how feedstock from wells pumped in Pennsylvania will enable Nova to revamp and expand its Corunna, Ontario, site. Revamping the Corunna ethylene cracker will enable the company to use up to 100 percent natural gas liquid feedstock at the facility. If Nova is successful here, the Sarnia area will be successful.

Mark noted that the ability to process NGL feedstock has environmental benefits when compared to heavier feedstocks.

He described influencing partners in the Marcellus Shale Basin as a tough job: "We have a lot to do to raise the standard of drilling by companies that are not the best. It's the second and third tier companies that I worry about. Regulation is needed."

As a Responsible Care company, Nova's strategy is to:

- Select outstanding companies to do business with.
- Require compliance with the law and encourage compliance with Responsible Care principles.
- Include expectations that companies will operate in a manner that ensures safety of people and protection of the environment.
- Establish formal partnership work committees.
- Encourage companies to offer site tours and informal engagement; i.e. to be transparent.

### **Panel Comment**

There was a call for companies to spend money on bringing people together to discuss how to reduce industry's energy footprint.

There was also a call to put money into helping to bring about cultural change.

A Panel member noted that Brian Wastle always counselled trying to bring the bad actors into the responsible fold. She was encouraged that Nova seemed to be thinking the same way.

Mark responded to Panel comments and questions:

- *Some of the wastewater from Marcellus sites is being trucked to municipalities and causing concern as this contaminated water is overloading infrastructure.*  
Mark: Yes. The debate is on how we fund the burden on infrastructure.
- *I get the impression that risk assessment has to be different for Marcellus than for northern BC. Nexen is not taking the unknown, the black swan, into consideration.*  
Mark: Carbon loss through explosion of the pipeline could be a worst case scenario in the Marcellus basin. As well, some people think that, whenever you drill, there's a chance of hydrocarbons getting into the water system. We have to do a better job of worst case scenario development.
- *It's hard to identify a black swan event if you don't know what a swan is. The best data in risk assessment is experiential.*
- *We've had too many one-chance-in-a-million events actually take place. Disillusionment with absolute guarantees has people uneasy. I believe in risk assessment, but we have to be cognizant of its limits.*  
Mark: We need a uniform drilling regulation that will be credible for all stakeholders. Should we therefore stop drilling until we figure that out? No, we should push government and industry to develop credible regulations sooner. We are currently stealing standards from Alberta and Texas, but they are not as good as we can get. We need better regulations.
- *Water is going to be a hot button issue. How is Nova going to position itself for criticism on this issue?*  
Mark: We don't yet have a clear answer on how we're going to deal with water. A Nova open house on November 15 will give us some public input on that question.
- *I would love to see an analysis of the net impact of the Marcellus development on society, including social and economic impacts.*  
Bob Masterson commented that an equally critical eye should be turned to the risks and issues of biochemical processes as opposed to giving a free pass to biochemistry.
- *What has been the public response to Marcellus developments?*  
Mark: There has been a full range of responses in Pennsylvania. Roughly 30 percent are very vocal in their opposition to such development. The moral majority don't know what the truth is, so they are afraid and concerned. There is also a contingent that sees shale gas extraction as a way to dramatically increase local employment and keep their children in Pennsylvania.

Bob asked why the U.S. industry prefers state rather than federal regulation of shale gas development?

Mark said that, for industry, the states are more nimble and more manageable. EPA would take forever to develop regulations, though the Agency does have a role in leadership, guidance and science. EPA is doing long-term studies.

## Agenda Item 7: CIAC Update

Bob Masterson noted that the Association will be addressing three issues in the 2012–2015 triennial:

- Investment
- Sustainability
- Biochemistry

“The Responsible Care blue book tells us where to go,” he said. “It does not tell us how to get there.” The CIAC is going to be working on that, in part by working with Natural Step Canada, which focuses on science-based and practical steps organizations can take to achieve sustainability.

A Panel member raised the First Nations issues in Sarnia discussed in Richard Janda’s email (Appendix 3). John Vincett noted Richard’s proposal for a Panel follow-up of these issues through a presentation on the current status of litigation and findings of the air monitoring program.

A Panel member referred to a Sarnia Observer article indicating that air quality problems in the Sarnia area were mostly due to pollution from the Ohio Valley. Another member noted that this finding was based on levels of ozone and PM 2.5 in the air. (PM refers to particulate matter; PM 2.5 refers to fine particles that are 2.5 micrometers or smaller in diameter.) The information is from 2008, a long time ago. The member added that a health study of the area population would cost hundreds of thousands of dollars. If industry gives money for such a study, it will be seen as tainted.

Bob suggested that the next Panel meeting be held in June in Western Canada. The Panel supported this suggestion. It was agreed that timings and venues would be further discussed.

## Next Meeting

Date and Venue to be Determined