Denis, Alexandra ENV:EX

From: Paterson, Kellie ENV:EX
Sent: Wednesday, March 12, 2014 11:12 AM
To: Gilmour, Lori ENV:EX; Lee, Bonnie ENV:EX
Subject: Answer: DM Request: Land Based Spill response

Yes, definitely. Bonnie can you please send a meeting invite.

Thanks.

Kellie Paterson
Environmental Emergencies and Land Remediation Branch
Environmental Protection Division
Ministry of Environment
Tel: 250-387-9971

From: Gilmour, Lori ENV:EX
Sent: March-12-14 11:08 AM
To: Paterson, Kellie ENV:EX
Cc: Standen, Jim ENV:EX; Hofweber, Jim E ENV:EX
Subject: QUESTION: DM Request: Land Based Spill response

Hi Kellie,
Please let me know if Jim H is available to attend this call with Wes. Jim S is available. See details below.
Thanks,
Brett for Lori

From: Lee, Bonnie ENV:EX
Sent: Wednesday, March 12, 2014 9:29 AM
To: Gilmour, Lori ENV:EX
Subject: DM Request: Land Based Spill response

Morning Kellie (sorry if it's not Kellie today ☺):

Wes has a phone meeting on Friday with the Canadian Energy Pipeline Association regarding land based spill response (see below for more detail). This is in addition to the meeting he has with Brenda Kenny the following week.

Can you let me know if Jim Standen or Jim Hofweber are available to participate in this call with him? The call is scheduled for 10:30-11:30am March 14.

Thanks,
Bonnie

Bonnie Lee | Senior Executive Assistant | Deputy Minister's Office | Ministry of Environment | Phone 250.387.5429

From: Amanda Affonso [mailto:aaffonso@cepa.com]
Sent: Monday, March 3, 2014 3:59 PM
To: Shoemaker, Wes ENV:EX
Cc: Lee, Bonnie ENV:EX; Philippe Reicher; Katie Shaw

Subject: URGENT Meeting Request
Importance: High

Dear Mr. Shoemaker,

The Canadian Energy Pipeline Association (CEPA) would like to request an urgent phone meeting this week regarding the Land Based Spill Response with myself and our Vice-President of External Relations, Philippe Reicher. As you may know, CEPA has been engaged in this initiative since the release of the first intentions paper and an active participant as an advisory committee member, a member of the governance and funding discussions and participated in all three working groups. With the announcement of the upcoming release of the second intentions paper there are some pressing issues that CEPA needs to speak with you about as soon as possible.

CEPA represents Canada's transmission pipeline companies who operate more than 115,000 kilometers of pipeline in Canada. CEPA's mission is to enhance the operating excellence, business environment and recognized responsibility of the Canadian energy transmission pipeline industry through leadership, and credible engagement between member companies, government, the public and stakeholders. The province's Land Based Spill Response initiative affects many of our companies and it is critical at this juncture that we speak with you directly about some specific elements of the proposed regime and process.

Katie Shaw, our colleague in Victoria, will be contacting your office in follow up to this request. We hope that we are able to speak with you shortly.

Regards,

Amanda Affonso
Director, Regulatory & Financial

Canadian Energy Pipeline Association
Suite 200, 505 – 3rd St. SW
Calgary, Alberta T2P 3E6

Phone 403.221.8756
Cell 403.585.6933
Fax 403.221.8760

aaffonso@cepa.com
aboutpipelines.com

Stakeholder comments

Monday, May 26, 2014
12:00 PM

Subject	**Stakeholder comments**
From	Poss, Angie ENV:EX
To	Hofweber, Jim E ENV:EX; Knox, Graham G ENV:EX; Vander Steen, Benjamin ENV:EX; Denis, Alexandra ENV:EX
Sent	Wednesday, February 26, 2014 11:20 AM

Hi team,

I had an interesting conversation today with one of the major industry stakeholders. Here's a summary of their current position on the components we are proposing for the second intentions paper.

While the association is supportive of the principles being advanced but has concerns about the mechanisms for delivering on those principles.

PRO – The association is supportive in principle and sees the PRO as consistent with their sector's strengths in preparedness, appropriate capacity and timely implementation. They see opportunities for efficiencies and a more collaborative approach. The preferred funding scheme is based on performance, where members with poor performance records pay higher premiums than those with low spill rates and sound response performance records.

Contingency Fund – Concerns about a large contingency fund echo those we've heard from other stakeholders: potential for duplication with federal funds, availability of other financial assurance mechanisms for addressing the cost of large spills, perception of good actors paying for less responsible or less solvent companies. Emphasis on the ability of large, well-capitalized companies to adequately fund spill response and comply with the Ministry's cost recovery mechanisms. The association is more receptive to a smaller fund in the tens of thousands of dollars to offset funds in the immediate aftermath of a spill, however is not convinced this is necessary based on the following concerns: perception that government can address short-term cash flow issues through an internal government allocation of emergency funds, or by extending government's credit to cover the costs; and, concern about responsible companies paying for bad actors. When discussing local government and First Nations concerns about the costs they incur in responding to spills, the association expressed that this is to a certain degree asking industry to cover the cost of local governments doing business – that first responders and local emergency officials are doing their job in responding to spills and those costs should be covered through taxation if necessary.

Expanded Program Capacity – the association perceives this as industry funding of government administration and is not supportive.

Compensation for loss of use – While supportive of formula-based options for quantifying damage and determining restoration, the industry perceives loss of use compensation as punitive and questions the ability to fairly implement this element.

BC Pulp and Paper Environmental Forum Overview of Proposed Spill Preparedness Policy

Introduction

The BC Pulp and Paper Environmental Forum (BCPPEF) is an industry co-operative made up of representatives of all the pulp and paper mills located in BC. As a group, the BCPPEF works to ensure that forest and related provincial policy is created and implemented in a way that fosters growth and increased competitiveness for our sector and for the Province as a whole. We are committed to our industry and believe that it will be a significant contributor to the provincial economy for years to come.

The following overview is provided to the BC Ministry of Environment on behalf of the BCPPEF to provide summary of existing requirements. It is our intention that this document supports the exclusion of our sector during the changes made to the BC Spill Preparedness Policy.

As an industrial sector, pulp and paper mills in BC are strictly regulated and have many existing requirements both federally and provincially to ensure that facilities are prepared and trained to respond to spills to the environment. All facilities have spill response plans, equipment to aid in the response and facility storage containment requirements. BC pulp and paper mills in this province audit and test their spill response plans regularly. The majority of the BC pulp and paper mills carry out third party auditing for ISO Environmental and Safety Management standards, environmental management systems, insurance needs and other corporate requirements.

Pulp mills undergo inspections from the Ministry of Environment and the Environment Canada with respect to their documentation for spill preparedness and response.

Chemical pulp mills use large quantities of chemicals in the process to pulp wood. Most of these chemicals are brought into the mill via rail, truck, freighter or barge. Other chemicals are generated and recycled on site. Standards require these chemicals, whose natures vary from highly acidic to highly alkaline, to be stored in tanks that are placed within berms capable of retaining 110% to 150% of the largest tank within the berm. Further, tanks and pipeline infrastructure are subjected to integrity inspections, such as pressure and vessel inspection programs.

Minor losses of chemicals that occur on mill sites are generally collected and contained within the onsite sewer systems and are either reclaimed or treated on site. Some pulp and paper mills have additional spill containment prior to their treatment systems. Treatment systems ensure regulatory requirements for water quality are met.

There are costs associated with maintaining the existing spill containment, control standards and ongoing environmental monitoring (that is, effluent, air and groundwater) at the BC pulp and paper mills. Additional cost to fund a new coordinated spill response centre is a burden most mills may not be able to accommodate. It is recommended that the Ministry of Environment reconsider this overlap in spill response requirements as it applies to the Pulp and Paper Sector, given that there will be no perceived additional environmental benefit.

BC Pulp and Paper Environmental Forum Overview of Proposed Spill Preparedness Policy

Spill Response Plans and Training

All BC pulp mills have a spill response plan as mandated by various federal and provincial legislative requirements. All plans contain, as a minimum, a list of chemicals, quantities on site, spill equipment available for emergencies and emergency phone numbers for responding personnel, chemical suppliers' emergency information as well as other resources. Not all plans are identical; differences with respect to what is included within the mill-specific plans often reflect access to emergency equipment, considerations of geographical limitations and waterways as well as mill-specific chemicals.

Training requirements are either specified in the spill plan or are incorporated into other portions of the mill's training curriculum. All mills maintain a record of training, which is often subject to auditing.

Emergency Response Teams (ERT) or Hazmat teams are made up of mill employees that provide coverage across all shifts. ERT are trained for hazardous chemical and fire response, rescue and other emergencies either through internal training or by organizations such as the BC Justice Institute and BC Hazmat Management Ltd. The majority of the mills have these trained individuals that are familiar with the nature, location and quantity of chemicals on the pulp mill site. Furthermore, their training extends to the interaction of chemicals and risk assessments for safe response.

Testing of Plans

Requirements of the *Environmental Emergencies Regulation* include the annual testing of spill response plans. Plans are tested through mock exercises, tabletop exercises and full mill evacuation drills which include high hazard chemical scenarios. Gaps within the current plans are addressed through these types of exercises, which are conducted annually or, in some mills, quarterly.

Mutual Aid and Contractor Agreements

Mutual aid agreements include, at most facilities, municipal emergency responders, fire departments, other industrial operations, private contractors and cooperatives. Integrated training is conducted in order for the responding mutual aid to understand the nature and quantities of the chemicals onsite.

Some coastal mills bring in chemicals and fuels directly to the mill via the barge or freighter and this activity is subject to the legislative requirements of the federal *Canada Shipping Act, 2001*, including the requirement to belong to an environmental response organization. Several mills participate in the Western Canada Marine Response Cooperation, whose mandate is to ensure a state of preparedness is in place and to mitigate the impact in the event of an oil spill.

The Canadian Transport Emergency Centre (Canutec), is operated by the Transportation of Dangerous Goods (TDG) Directorate of Transport Canada. Among other mandates, Canutec is available to assist with emergencies, such as spills that occur in the transportation of chemicals via rail or truck carriers.

Some BC mills and mill suppliers utilize the services of Chemtrec for emergency incidents involving the transportation of hazardous materials or other dangerous goods.

Emergency numbers for mutual aid and contracted services are included in pulp mill spill response plans.

Internal and External Auditing

In addition to mills scrutinizing and continuously improving their spill responses and associated plans on an annual basis through onsite exercises and training, the majority of the mills will have plans audited by a third party as per ISO 14000 and 18000 standards and other due diligence auditing criteria and internal environmental management systems required as part of corporate compliance auditing.

Provisions within the EER include annual reviews of spill response plans.

Corporate insurers require the facility to have extensive emergency response and disaster minimization plans. Not only do these plans have to cover off regulatory requirements, but they include additional emergencies, such as flooding events. Health and safety standards also require compliance with OSHA, 29CFR1910 for management of chemicals, fire prevention and protection.

Existing and Other Regulatory Requirements

All mills are required to report spills to the province under the BC *Environmental Management Act* (EMA) and the Spill Reporting Regulations as well as the federal *Fisheries Act* and the *Pulp and Paper Effluent Regulation* (PPER) and the *Canadian Environmental Protection Act* (CEPA) and the *Environmental Emergencies Regulation* (EER). The requirements to maintain a spill plan of a specified standard is included in federal regulations such as the PPER as well as discharge permits under EMA.

Other criteria that require facilities to report spills and/or maintain updated spill plans include:

- Both the provincial *Transport of Dangerous Goods Act* and the federal *Transportation of Dangerous Goods* Act include requirements for reporting if spills of dangerous goods.
- *Canadian Shipping Act* includes regulations that protect navigable water against spills.
- EMA's *Hazardous Waste Regulation* – emergency procedures as they apply to storage and containment are specified in this regulation.
- WorkSafe BC: BC Safety Authority requires facilities to maintain emergency procedures for incidents involving nuclear devices, elevating equipment and electrical shocks.
- *BC Fire Marshal Act*, BC Fire Safety Plan, *BC Fire Code* all require the planning for emergencies.
- Federal PCB regulations require emergency procedures and fire protection in the operation of a PCB storage site. Although most BC mills are not subject to this regulation, emergency procedures are in place for handling PCB waste.

Spills to the Environment

BC Pulp and Paper Environmental Forum Overview of Proposed Spill Preparedness Policy

Reportable spills have occurred at most mills over the last 10 years. Significant spills to the receiving environment at pulp mills are rare, but they have occurred over the past 10 years. There has been no associated environmental damage from any spills.

Other Considerations

Regulations are in place that require follow-up on reportable spills to the environment. Near misses, that is, spills that are contained and treated internally, undergo review as part of each mill's environmental management systems and continuous improvement efforts.

Notifications and communications to the public is a requirement of the EER. If the public could be adversely affected by an environmental emergency, measures are taken to notify the community.

The BC Pulp and Paper Sector is already financially burdened with the administrative costs in maintaining and testing existing spill response plans as well as contributes to supplier spill response through the cost of chemicals brought into the mill, mills are financially responsibility for the fate and effect of any spills into the receiving environment.

Funding and Governance of the New Spill Response Regime

For all the reasons mentioned previously, the BC Pulp and Paper Sector should not be subject to the new proposed legislation as its activities are already subject to numerous legislative requirements in this regard. The intent of this review is to provide fulsome comments and as such we provide the following comments regarding funding and governance. As it is still unclear what the funding and governance structure will entail, our comments will reflect this.

Overlap and "double-dipping" needs to be avoided. If the Transportation Sector has to pay a levy on the material they transport, this cost will be passed on to the customer – the Pulp and Paper Sector. If the Pulp and Paper Sector is required to pay a levy on material stored on site, this material has already been the subject of the Transportation sector levy. All chemicals stored at pulp mills have arrived onsite by some means of regulated transportation.

Conclusion

The BC Pulp and Paper sector is already extensively regulated with respect to spill preparedness, response and clean up, reporting and ongoing monitoring and have well established spill response programs in place. As such, exclusion of the BC Pulp and Paper sector during the changes to the BC Spill Preparedness Policy currently under consideration does not pose additional risk to the environment or the public.

Submitted by the BC Pulp and Paper Environmental Forum

BC Pulp and Paper Environmental Forum Overview of Proposed Spill Preparedness Policy

January 10, 2014

The BC Pulp and Paper Environmental Forum is made up of all pulp and paper mills in British Columbia:
Canfor Corp
Canfor Pulp LP
Cariboo Pulp and Paper
Catalyst Paper
Domtar
Howe Sound Pulp and Paper Corp
Harmac Pacific
Kruger Products LP
Skookumchuck Pulp Inc
Zellstoff Celgar LP
Neucel Specialty Cellulose
Quesnel River Pulp Company
Mackenzie Pulp Mill Corporation
COFI

RE: January meeting with Forest Sector re: spill response?

Friday, May 23, 2014
3:36 PM

Subject	**RE: January meeting with Forest Sector re: spill response?**
From	Mauch, Anne
To	Vander Steen, Benjamin ENV:EX
Cc	Poss, Angie ENV:EX; White, Ted T ENV:EX
Sent	Monday, January 13, 2014 11:30 AM
Attachments	 Position Paper re S...

Hi Ben and Angie. Here's the Pulp and Paper Environmental Forum document on land based spill response for tomorrow's meeting. See you then. Anne

From: Vander Steen, Benjamin ENV:EX [mailto:Benjamin.VanderSteen@gov.bc.ca]
Sent: January-09-14 2:39 PM
To: Mauch, Anne
Cc: Poss, Angie ENV:EX; White, Ted T ENV:EX
Subject: RE: January meeting with Forest Sector re: spill response?

Much appreciated, thank you kindly Anne.

From: Mauch, Anne [mailto:Mauch@cofi.org]
Sent: Thursday, January 9, 2014 2:38 PM
To: Vander Steen, Benjamin ENV:EX
Cc: Poss, Angie ENV:EX; White, Ted T ENV:EX
Subject: RE: January meeting with Forest Sector re: spill response?

If we have a document ready, we will share. We're not quite there yet. I'll let you know tomorrow. Anne

From: Vander Steen, Benjamin ENV:EX [mailto:Benjamin.VanderSteen@gov.bc.ca]
Sent: January-08-14 4:28 PM
To: Mauch, Anne
Cc: Poss, Angie ENV:EX; White, Ted T ENV:EX
Subject: RE: January meeting with Forest Sector re: spill response?

Thanks Anne, Happy new year to you as well. The break was welcome, but it's always nice to get back to a bit of a routine.

We will absolutely have call in capability for anyone who wishes to attend that way. For those attending in person, I'll meet you in the lobby prior to the start time.

For the land spill response portion of the agenda –
Are you still planning to have some written comments you want to review with us. If so, any chance we could have them in advance to prepare?

How does this look:
9:00 – Moe Introduce the topic, discuss process;
9:15 – Summarize working groups, advisory groups, funding and governance
9:30 – COFI comments and discussion
10:15 – Next steps and actions

From: Mauch, Anne [mailto:Mauch@cofi.org]

Sent: Wednesday, January 8, 2014 2:34 PM
To: Vander Steen, Benjamin ENV:EX
Cc: Poss, Angie ENV:EX; White, Ted T ENV:EX
Subject: RE: January meeting with Forest Sector re: spill response?

Hi Ben, Angie and Ted and Happy New Year.

So far I've got the following attendees:

In person: Cindy Macdonald, West Fraser, Fiona Mackay, Celgar, Vanessa Benwood, Celgar; Kristin Dangelmaier, Domtar; Graham Kissack, Catalyst; Anne Mauch, COFI

I've also got a bunch hoping to call in if that can be arranged: Brian Gilliland, Weyco Alberta; Darren Guliov, Canfor; Martin Meyer, Carrier Lumber; Eric Beaubien, Cariboo Pulp and Paper; Dave Messier, LP; Brian Stevenson, Skookumchuck Pulp Inc

Anne

Not Responsive

RE: BC's land-based spill response work

Monday, May 26, 2014
11:55 AM

Subject	**RE: BC's land-based spill response work**
From	Vander Steen, Benjamin ENV:EX
To	'Dennis Joseph'
Cc	'Krissy Jacobs'; 'Byron Joseph'
Sent	Wednesday, January 29, 2014 2:32 PM

Thanks for your reply Dennis and thank you for the introduction to your Co-chairs, Krissy and Byron.

My apologies for the delay in response.

I'm typically available any time to discuss our policy with you – let me know a time that works for you over the next week or so and I'll make it happen.

Thank you kindly,

Ben

From: Dennis Joseph [mailto:dennis_joseph@squamish.net]
Sent: Wednesday, January 15, 2014 6:51 PM
To: Vander Steen, Benjamin ENV:EX
Cc: Krissy Jacobs; Byron Joseph
Subject: Re: BC's land-based spill response work

Good evening Benjamin

As a returning member of Squamish Nation Chiefs and Council (December 2013)
I will in a timely manner provide you requested contact
Included in response by way of email introduction are Co-Chairs Krissy Jacobs and Byron Joseph
You mention an opportunity to discuss via telephone what you are doing from your end and look forward to hearing your mandate. And can email you back soon on a mutual available time

Regards
Dennis Joseph

Sent from my iPhone

On Jan 15, 2014, at 1:59 PM, "Vander Steen, Benjamin ENV:EX" <Benjamin.VanderSteen@gov.bc.ca> wrote:

> Good day Mr. Joseph –
>
> I'm hoping to be in touch with a representative from the Squamish First Nation regarding the BC Ministry of Environment's plans for enhanced land-based spill preparedness and response. Your name is included as our primary contact.
>
> I work on the Ministry's project team for this file, and we're currently reaching out to share what we are currently doing and see how you may wish to provide input into the process (or simply continue to receive updates as the process unfolds).

Please let me know a time that would work for you to discuss this by phone.

Kind regards,

Ben Vander Steen
Senior Policy Advisor, Strategic Policy Branch
Ministry of Environment | Government of British Columbia
Landline: 250 387-3929 | Mobile: 250 812-9341
benjamin.vandersteen@gov.bc.ca

=

This mail was scanned by PineApp Mail-SeCure System.

RAC Response to BC MOE LBSPERP

Friday, May 23, 2014
3:35 PM

Subject	**RAC Response to BC MOE LBSPERP**
From	Mike Lowenger
To	Hofweber, Jim E ENV:EX; Vander Steen, Benjamin ENV:EX; Poss, Angie ENV:EX
Cc	Michael Gullo
Sent	Monday, January 20, 2014 9:46 AM

Jim, Ben and Angie: Please note that we have prepared a draft summary position paper on the proposed BC MOE Spill prevention and ER program which we trust you will integrate into your planned 2nd Intentions Paper. We expect to send it to you later this week. Sorry for the delay, but we had many railway stakeholders to consult with.

Best / Mike

Mike Lowenger P. Eng.
Vice-President
Operations and Regulatory Affairs

Direct: +1 613 564 8088
Mobile: +1 613 294 1341
Email: mikel@railcan.ca

Railway Association of Canada
Voice: +1 613 567 8591
Web: http://www.railcan.ca

.....

Railway Association of Canada

RE: BC's land-based spill preparedness and response policy work

Monday, May 26, 2014
11:50 AM

Subject	**RE: BC's land-based spill preparedness and response policy work**
From	Vander Steen, Benjamin ENV:EX
To	'Tom Swann'
Sent	Thursday, January 23, 2014 3:06 PM

Thanks for the update Tom. Glad your meeting went well and I will certainly keep in touch.

Cheers,
Ben

From: Tom Swann [mailto:Tom.Swann@natureconservancy.ca]
Sent: Thursday, January 16, 2014 4:47 PM
To: Vander Steen, Benjamin ENV:EX
Subject: RE: BC's land-based spill preparedness and response policy work

Hi Ben,

Just finished a very productive meeting with Jennifer Psyllakis, Alec Dale and Jocelyn Campbell at MoE. Not Responsive

Not Responsive

Not Responsive It would seem that there is a potential role for NCC in this work and our specific interest would be achieving large scale and permanent conservation outcomes.

Based on the ideas you and I spoke of yesterday there is some obvious crossover with the policy work you are doing.

Thanks for reaching out and please keep in touch.

Best regards,

Tom

T.K. Swann, AACI, P.App., RI(BC)
Associate Regional Vice President BC Region
Director of Land Securement

tom.swann@natureconservancy.ca
Cell: 778-838-4435

Nature Conservancy of Canada
1310 - 409 Granville Street
Vancouver, BC V6C 1T2
Office - 604-331-0722

Main BC Office
200 - 825 Broughton Street
Victoria, BC V8W 1E5
Office - 250-479-3191
Direct - 250-413-8014

Website: http://www.natureconservancy.ca

From: Vander Steen, Benjamin ENV:EX [mailto:Benjamin.VanderSteen@gov.bc.ca]
Sent: January-15-14 1:06 PM
To: Tom Swann
Subject: RE: BC's land-based spill preparedness and response policy work

Hi Tom,

I just tried your voice mail. When might be a good time to have a brief phone conversation this week?

Cheers, Ben

Ben Vander Steen
Senior Policy Advisor, Strategic Policy Branch
Ministry of Environment | Government of British Columbia
Landline: 250 387-3929 | Mobile: 250 812-9341
benjamin.vandersteen@gov.bc.ca

From: Tom Swann [mailto:Tom.Swann@natureconservancy.ca]
Sent: Friday, January 3, 2014 11:43 AM
To: Vander Steen, Benjamin ENV:EX
Subject: RE: BC's land-based spill preparedness and response policy work

Hello,

I will be back in the office Jan. 6th and would be available for a call then.

Regards,

Tom

T.K. Swann, AACI, P.App., RI(BC)
Associate Regional Vice President BC Region
Director of Land Securement

tom.swann@natureconservancy.ca

Cell: 778-838-4435

Nature Conservancy of Canada
1310 - 409 Granville Street
Vancouver, BC V6C 1T2
Office - 604-331-0722

Website: http://www.natureconservancy.ca

From: Vander Steen, Benjamin ENV:EX [mailto:Benjamin.VanderSteen@gov.bc.ca]
Sent: January-03-14 9:31 AM
To: Tom Swann
Subject: RE: BC's land-based spill preparedness and response policy work

Good day Mr. Swann, are you available for a chat sometime in the near future? Cheers, Ben

From: Vander Steen, Benjamin ENV:EX
Sent: Thursday, November 28, 2013 1:37 PM
To: 'tom.swann@natureconservancy.ca'
Subject: BC's land-based spill preparedness and response policy work

Good day Mr. Swann,

I am contacting you on behalf of BC Ministry of Environment in regards to our BC land-based spill preparedness and response policy work.

As you may know the BC Ministry of Environment is currently undergoing a review of its policy for land-based spill preparedness and response in order to make recommendations on how to improve it. We're currently in the midst of efforts to reach out to potential stakeholders who have not been involved thus far, but from which we'd be very pleased to hear input.

I attempted to telephone you, but was unable to reach you. If possible, can you please give me a call at the mobile number below before 3:00 PM today, otherwise is there a time we could connect early next week so I can provide you with an update?

Kind regards,

_____

Ben Vander Steen
Senior Policy Advisor, Strategic Policy Branch
Ministry of Environment | Government of British Columbia
Landline: 250 387-3929 | Mobile: 250 812-9341
benjamin.vandersteen@gov.bc.ca

FW: BC MOE Spills Initiative - RAC Position

Monday, May 26, 2014
11:50 AM

Subject	**FW: BC MOE Spills Initiative - RAC Position**
From	Vander Steen, Benjamin ENV:EX
To	c.rankin@telus.com
Sent	Saturday, January 25, 2014 10:20 AM
Attachments	 image001  image002  Response to BC MOE L...

I haven't reviewed in detail yet, but you may want to read to get a flavour of how rail views our work thus far...

_____
From: Mike Lowenger [MikeL@railcan.ca]
Sent: January 24, 2014 6:32 PM
To: Hofweber, Jim E ENV:EX; Vander Steen, Benjamin ENV:EX; Poss, Angie ENV:EX
Cc: Chris Bunce; Jim_Kozey@cpr.ca; Kevin Houle; Normand Pellerin; Jean Ouellette; Lee Nelson (lee.nelson@cn.ca); Singh Biln; Michael Bourque; Gérald Gauthier; Michael Gullo; Robert Taylor (robert_taylor@cpr.ca); David.Miller@cn.ca; Glen Wilson; 'michael.farkouh@cn.ca'
Subject: BC MOE Spills Initiative - RAC Position

Jim, Ben and Angie: Please find attached a summary of our views and positions on the 2013 consultations on the BC MOE Spill Prevention and Emergency Response initiative. These comments come from an extensive core of RAC member railways and reflect on the work done to date by the MOE, the various working groups, the symposium, the Advisory Group and other information sharing sessions. We hope that our views will be fully considered and appropriately integrated into the upcoming 2nd Intentions paper.

We look forward to further dialogue with you on these issues.

Best / Mike

Mike Lowenger P. Eng.
Vice-President
Operations and Regulatory Affairs

Direct: +1 613 564 8088
Mobile: +1 613 294 1341
Email: mikel@railcan.ca<mailto:mikel@railcan.ca>

Railway Association of Canada
Voice: +1 613 567 8591
Web: http://www.railcan.ca<http://www.railcan.ca/>

.....

[cid:image002.jpg@01CF1947.34D5E840]

From: Chris Bunce [mailto:Chris_Bunce@cpr.ca]
Sent: January-24-14 6:45 PM
To: Michael Gullo
Cc: Mike Lowenger
Subject: RE: BC MOE - FINAL DRAFT

Michael

Michael
Thanks for soliciting BNSF input. It definitely adds to our voice. Overall the comments are very helpful but I have included some suggested changes and comments on the BNSF input.

1. The GRP would have to worked with the Government not the PRO for the reasons I have identified in my comment.

2. I strongly recommend not using "strongly". The use of adjectives in this way is not advised in formal documents.

The CEPA did agree to share their submission with us and I suggest we do likewise with them. I will re-contact them next week. Can you resend me the truckers comments. I have miss placed them.

Thanks

Chris Bunce | 403 801-5162
Canadian Pacific

From: Michael Gullo [mailto:MichaelG@railcan.ca]
Sent: Friday, January 24, 2014 11:19 AM
To: Chris Bunce
Cc: Mike Lowenger
Subject: FW: BC MOE - FINAL DRAFT
Importance: High

Chris – hope all is well. Quick question: did CEPA agree to share their submission with us? We haven't seen anything from the other groups who sit on the Advisory Committee, aside from trucking.

We're reconsidering whether to share the submission with the broader group. The dialogue on the federal insurance regime is maturing and the Minister has released a discussion paper to a select audience. We may want to keep are position close to us for now. In this case, we would submit to BC MOE staff only.

MG

From: Michael Gullo
Sent: January-23-14 5:09 PM
To: chris_bunce@cpr.ca<mailto:chris_bunce@cpr.ca>; normand.pellerin@cn.ca<mailto:normand.pellerin@cn.ca>; Kevin Houle (Kevin_Houle@cpr.ca<mailto:Kevin_Houle@cpr.ca>); Lee.Nelson@cn.ca<mailto:Lee.Nelson@cn.ca>; jean.ouellette@cn.ca<mailto:jean.ouellette@cn.ca>; Jim_Kozey@cpr.ca<mailto:Jim_Kozey@cpr.ca>
Cc: Mike Lowenger; Robert Taylor; david.miller@cn.ca<mailto:david.miller@cn.ca>
Subject: BC MOE - FINAL DRAFT
Importance: High

Colleagues,

Attached is the final draft letter for your review. We've addressed the majority of comments provided to us by BNSF, but not all of them. Attached is a marked up version of the letter that illustrates changes in the respective draft.

As discussed, we will file with Jim and Co. tomorrow and will cc the respective members of the Advisory Committee and the Funding and Governance Committee.

Thanks again for your contributions and let me know if there's anything else.

Regards,

Michael Gullo
Director, Policy, Economic and Environmental Affairs

Direct: +1 613 564 8103
Email: mgullo@railcan.ca<mailto:mgullo@railcan.ca>

Railway Association of Canada
Voice: +1 613 567 8591
Web: http://www.railcan.ca

[cid:image001.jpg@01CF1923.3D8E00E0]

Railway Association of Canada | Association des chemins de fer du Canada

January 24, 2014

Jim Hofweber
Executive Director
Environmental Emergency Branch
PO Box 9342 Stn Prov Govt
Victoria, BC, V8W 9M1
Jim.hofweber@gov.bc.ca

RE: Response to the proposed Land Based Spill Preparedness and Emergency Response Plan for British Columbia

Dear Mr. Hofweber,

The Railway Association of Canada (RAC) and its members operating in British Columbia (BC) continue to support the Ministry of Environment's efforts to strengthen the province's emergency preparedness and response regime. Rail safety is a major priority for the rail industry and we are committed to identifying new approaches and opportunities to enhance rail safety in Canada.

Canada's rail safety regime has benefits from a strong partnership between railways and all levels of government, one that includes a robust series of programs and outreach initiatives to ensure that communities are well-informed and prepared to react quickly in the event of an incident[1]. Under this modern and enviable safety regime, Canadian railways and their regulators have been collaboratively delivering industry-leading safety performance for many years: the Canadian Pacific Railway and CN are consistently the safest Class 1 freight railways in North America; approximately 99.997 per cent of all dangerous goods shipments are incident-free; and in 2012 there were fewer than 2 accidents per million train miles in Canada.

Railways operating in BC have invested a considerable amount of time and energy to review the province's Land Based Spill Preparedness and Emergency Response regime and would like to put forward a series of comments to the Ministry before it releases its second Intentions Paper in 2014.

The comments below are summarized into four thematic groupings: Spill Preparedness and Prevention; Environmental and Natural Resources Recovery; Spill Response Standards; and Environmental Emergency Program Funding and Governance.

[1] Appendix A includes the RAC's response to the first discussion paper and its presentation from the symposium held on March 26th, 2013.

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99 rue Bank, bureau 901, Ottawa, ON Canada K1P 6B9
T 613 567 8591 TÉLÉC 613 567 6726 www.railcan.ca/fr

Spill Preparedness and Prevention

Canadian railways own, operate, and maintain their railway network, including the railway right of way where the vast majority of main-track incidents occur. Our contribution to the province's tax base is substantial with over $95 million paid in provincial fuel, property, and other taxes in 2012, with additional contributions flowing to the province from the federal fuel excise tax on locomotive diesel fuel. Also, as outlined in our initial submission and discussed at great length at the symposium held in March 2013, and at Working Group and Advisory Committee meetings, railways have a long and credible history of working directly with the first responder community to strengthen emergency preparedness and response efforts through TRANSCAER® and other industry and corporate initiatives[2]. The federal Minister of Transport's recent release of Protective Direction 32 is another step forward to enhancing the emergency preparedness and response capacity of communities across Canada[3].

With this in mind, Canadian railways are supportive of the government's efforts to enhance spill preparedness capacity and coordination within BC by developing a value-added, self-sustaining and industry-driven Preparedness and Response Organization (PRO) group similar to the Western Canada Marine Response Corporation. In the event that there is a demonstrable risk to the public, railways will continue to work with and support the efforts of Emergency Management British Columbia (EMBC). We do not support a Ministry-led or directed initiative.

Under this framework, the creation of a new Strategic Oversight Body (SOR) is not required. Incident response, including the management of resources to address incidents, should continue to remain firmly with railways and not with the PRO or other entity. A voluntary subscription and self-sustaining model that is commensurate to a carrier's level of risk and the programs and initiatives it has in place to address risk would need to be negotiated between the parties subscribing to the PRO.

Railways also support the Ministry's proposal to develop a series of Geographic Response Plans (GRP) that reflect input from local communities, First Nations and relevant stakeholders. The railways have already compiled GRPs for some areas and are willing to provide the Ministry with the relevant data to ensure that there is commonality and mutual understanding of industrial operations and response capacities throughout the province. Data requirements would need to be developed by industry stakeholders and the Ministry. However, the following elements need to be embraced before moving forward:

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[2] In 2013 the RAC, in cooperation with 11 railways, delivered 113 TRANSCAER® events with more than 2,000 participants across Canada. Railways also deliver TRANSCAER® events without RAC support.

[3] Protective Direction 32 was issued on November 20th, 2013. Available at: http://www.tc.gc.ca/eng/mediaroom/backgrounders-protective-direction-no32-7428.html

- New GRPs should be prioritized and assets allocated based on an agreed-upon formula of exposure and risk;
- GRPs need to be practical and drive value to emergency response efforts, therefore a reasonable standard for these plans needs to be established and mutually-agreed terms between the Ministry and the railways need to be negotiated;
- GRPs need to recognize that railways maintain the authority to control their right of way, including the ability to restrict access to property and maintain safety and security protocols at all times; and
- Community engagement efforts should focus on collecting accurate and useful data for emergency response planning and not resource allocation, response capacity, or funding for local response activities.

We are also supportive of Ministry efforts to formalize requirements to confirm that carriers have the capacity and capability to respond to Tier II spills[4]. The Ministry should assess whether a carrier has: identified qualified contractors; provided staff with the appropriate credentials for completing remediation activities; and the sufficient capacity to respond to incidents (e.g. equipment in proximity to railway infrastructure). At this time, it is expected that the Minister of the Environment (or a representative on their behalf) would certify that a railway has fulfilled provincial requirements.

In principle, railways support the development of a guideline or similar resource that outlines: the general conditions for implementing non-conventional response techniques; advanced permitting for specific methodologies or remediation techniques; and the type and level of subject matter expertise required to assist with remediation efforts.

And lastly, railways report their incident data directly to a suite of federal organizations such as the Transportation Safety Board (TSB) and the Canadian Transport Emergency Centre. Collectively this data provides an exceptional level of detail for determining what has happened in BC. Introducing an additional reporting requirement to the Ministry will create an unnecessary and redundant administrative burden on railways and would add little value to enhancing preparedness or remediation activities.

Environmental and Natural Resources Recovery

Ministry efforts to clarify the parameters for remediation, restoration, and recovery activities could be a step forward in comparison to the current approach which is largely ad hoc. However, we strongly encourage the Ministry to recognize that there is a need to develop separate different requirements for spills involving hydrocarbons and spills involving other dangerous

[4] As per www.ipieca.org/system/files/publications/TieredResponse.pdf

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goods. In comparison to most dangerous goods carried by rail, hydrocarbons behave differently when interacting with the environment. Therefore, a unique series of parameters should be developed to clarify remediation, restoration, and recovery goals for this commodity.

The railways reaffirm their commitment to work with the Ministry to identify the best approach for determining remediation and restoration efforts, either through a generic formulaic model for spill incidents or an Environmental Damages Assessment model.

Regardless of the approach, remediation efforts should be driven by the potential risk that a spill poses to the environment and its valued ecosystem components, including Native and non-Native communities. Railways will continue to compensate for financial loss as a result of a spill, but they are opposed to any requirement to compensate for loss of use and or enjoyment.

Spill Response Standards

The railways are supportive of the Ministry's intentions to develop a guideline to clarify spill response standards. However, railways express their concern that federal and provincial requirements may differ, therefore we strongly encourage the Ministry to refer to Transport Canada's requirements for Emergency Response Assistance Plans so that there is alignment and consistency across the country.

Similarly, railways support the government's intentions to formalize the Incident Command System approach for Tier II spills through regulation (or guidance) as well as its intentions to identify qualifications and competencies for spill responders. We recommend the Ministry to adopt internationally recognized and best practices standards (e.g. National Fire Protection Association Standards) rather than develop standards that are unique to BC.

Introducing a schedule for reporting and data-sharing over the course of the remediation project, including a requirement to submit a project close out report, is also supported. Similarly, introducing a voluntary debrief process could add value providing that it is based on confidentiality, and the sharing of information and best practices, and not a politicized forum for determining liability or fault.

Although we respect the Ministry's desire to better understand how a responsible party will implement spill response and monitoring work within a specified timeframe, we are opposed to a regulatory requirement that presents a "one size fits all" approach to addressing this issue. As an alternative, we encourage the Ministry to consider developing or adopting a planning standard that is based on reasonableness and is cognizant of BC's vast geography, terrain, population density and inclement weather conditions.

Similarly railways are opposed to the government's intentions to have a government or external organization address inquiries related to loss by individuals, companies or wildlife.

However, developing a reporting system to communicate relevant information to the public would be a positive step forward and the railways are willing to work with the Ministry to determine in what situation this will be a function of the Ministry, the railway or the PRO.

Environmental Emergency Program Funding and Governance

As previously discussed, railways operating in BC pay a considerable sum of taxes and that the government also receives revenue through the federal excise tax on locomotive fuel. Furthermore, the existing regulatory framework and risk mitigation programs implemented by railways ensure that the risk associated with moving dangerous goods in BC by rail is minimal.

With this in mind, railways do not support the government's proposal to receive additional funding for the Environment Emergency Program or for a government-led PRO. Rather, funding to increase the Environment Emergency Program's level of involvement should come from government revenue with industry stakeholders working together to strengthen the existing public and private preparedness and response organizations.

At this time, the railway industry is not convinced that a contingency fund for quickly allocating monies to implement spill response and recovery actions is required. Canadian railways continue to be responsible corporate citizens, utilizing their relationships with local first responders, municipalities (including First Nations), contractors and government agencies to ensure that spills are addressed as soon as possible and that affected areas are restored to their previous condition. As previously mentioned, the railways support the government's efforts to develop a coordinated inter-industry self-sustaining PRO program based on a voluntary registration fee or model that considers a sector's risks and the programs and strategies it has in place to mitigate them.

It is important to note that the insurance regime for dangerous goods movements in Canada is currently under review by the federal government. In the 2013 Speech from the Throne, the Governor General stated that railway companies must be able to bear the cost of their actions, and that his government would require shippers and railways to carry additional insurance so they are held accountable[5]. The Minister of Transport is expected to lead this review and initiate a process that addresses risks and liabilities posed by the movement of dangerous goods in the imminent future. Furthermore, the Canadian Transportation Agency is in the process of completing a review to determine the adequacy of railway third-party liability insurance.

Railways firmly believe that the development of any funding regime to support emergency response needs to be national in scope, and inclusive of relevant stakeholders, including shippers

[5] The 2013 Speech From the Throne is available at: http://speech.gc.ca/

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T 613 567 8591 TÉLÉC 613 567 6726 www.railcan.ca/fr

and carriers. It must also recognize that a coordinated regulatory framework is required to effectively address the risk and liability associated with moving dangerous goods in Canada. Transportation law, taxation, safety standards, environmental protection, and municipal planning are only some of the key elements to be reviewed to ensure that a comprehensive solution is put forward.

Conclusion

Railways operating in British Columbia are supportive of the Ministry's efforts to improve the coordinated response to land based spills, and collectively the Working Groups have identified several means of achieving this outcome. These include: increased coordination of emergency response capacity and the development of Geographic Response Plans for locations along transportation corridors, especially in corridors with multiple modes of transportation.

The railways do not support developing organizations and or funding regimes that increase the provincial government's involvement in spill preparedness and response. Industry has developed a strong reputation and record of addressing environmental incidents and mitigating losses incurred by the public.

We look forward to working with you on this initiative over the course of this year.

Please do not hesitate to contact me if you have any immediate questions or comments.

Regards,

Mike Lowenger, P. Eng.
Vice-President Operations and Regulatory Affairs
Railway Association of Canada

FW: WCMRC Overview for Intentions Paper

Thursday, May 22, 2014
1:35 PM

Subject	**FW: WCMRC Overview for Intentions Paper**
From	Vander Steen, Benjamin ENV:EX
To	'Colin Rankin'
Cc	Day, Kristin ENV:EX; Knox, Graham G ENV:EX
Sent	Friday, January 31, 2014 9:49 AM
Attachments	 WCMRC Text Box

Hi Colin, use this text box!
Thanks Kristin – looks like your work passed WCMRC's test ☺

From: Knox, Graham G ENV:EX
Sent: Friday, January 31, 2014 9:48 AM
To: Vander Steen, Benjamin ENV:EX
Subject: FW: WCMRC Overview for Intentions Paper

Here is the reviewed text box and some bonus insight into industry thinking on the PRO!

Thanks,

Graham

From: Kevin Gardner [mailto:keving@wcmrc.com]
Sent: Friday, January 31, 2014 9:45 AM
To: Knox, Graham G ENV:EX
Cc: Kevin Gardner
Subject: FW: WCMRC Overview for Intentions Paper

Graham – minor changes but looks fine please feel free to use.

Good luck with the next steps. We have been consulting with the pipeline companies, railways and trucking association over the past few months. You can expect a paper from them shortly outlining their position and willingness to work with the government to ensure environmental protection. At this time it is my understanding that they are not looking at forming a formal co-op response (like WCMRC to co ordinate resources/response) but instead have a steering committee manage interface between businesses and a pool of resources.

If we can be of any further assistance please feel free to call.

Thanks

Kevin

Kevin J Gardner
President / General Manager
Western Canada Marine Response Corporation
www.wcmrc.com
Keving@wcmrc.com
604 294 6001 ext 204

From: Knox, Graham G ENV:EX [mailto:Graham.Knox@gov.bc.ca]
Sent: Thursday, January 30, 2014 5:00 PM
To: Kevin Gardner
Cc: Vander Steen, Benjamin ENV:EX

Subject: WCMRC Overview for Intentions Paper

Hi Kevin,

We are in the process of finalizing our next Intentions Paper as part of the review of our land based spill regime. Staff developed the attached text box providing an overview of WCMRC that were planning to include as an example of an existing Preparedness and Response Organization (as we are process this concept for the land base). We wanted to ensure we have captured everything correctly and ensure you had no concerns with this content. I would appreciate it if you get back to me with any concerns or required changes you may have?

Thank you,

Graham Knox
Director, Environmental Emergency Program
BC Ministry of Environment
P.O. Box 9342, Stn Prov Govt
Victoria, BC V8W 9M1
Phone: (250) 356-8383
Fax: (250) 953-3856
Email: Graham.Knox@gov.bc.ca
Website: http://www.env.gov.bc.ca/eemp

BC's land-based spill response work-UPDATE

Monday, May 26, 2014
11:48 AM

Subject	**BC's land-based spill response work-UPDATE**
From	Vander Steen, Benjamin ENV:EX
To	'wwss@telus.net'
Sent	Wednesday, January 15, 2014 1:45 PM

Good day –

I'm hoping to be in touch with a representative from the Watershed Watch Salmon Society regarding the BC Ministry of Environment's plans for enhanced land-based spill preparedness and response.

I work on the Ministry's project team for this file, and we're currently reaching out to the Environmental non-governmental organization community to engage them on what we're doing and see how we can help them provide input.

Please let me know a time that would work for you to discuss this by phone.

Kind regards,

_____

Ben Vander Steen
Senior Policy Advisor, Strategic Policy Branch
Ministry of Environment | Government of British Columbia
Landline: 250 387-3929 | Mobile: 250 812-9341
benjamin.vandersteen@gov.bc.ca

March 18/19 meetings

Thursday, May 22, 2014
4:27 PM

Subject	**March 18/19 meetings**
From	Denis, Alexandra ENV:EX
To	Poss, Angie ENV:EX
Sent	Wednesday, February 26, 2014 3:03 PM

Hi Angie,

Some details on our March 18/19 meetings:

March 18th
2:00-4:00pm: Tsleil-Waututh Nation

March 19th:

Morning:
10am-12pm: BC Assembly of First Nations, First Nations Summit (UBCIC is yet to commit). Some names Colin Braker at the summit mentioned would be in attendance –
Don Baive (Spell-check!!)
Maureen Grant
Courtney Daws, Director of Operations, BC Assembly First Nations
Howard Grant, Executive Director, First Nations Summit
Stacey Fox

Afternoon:
2:00-4:00pm: Georgia Strait Alliance (and other potential ENGO groups).

My plan is to confirm names of those who will be in attendance when we decide what sort of agenda/presentation we would like to do with each meeting.

Let me know if you have any questions.

Alex Denis
Aboriginal Intern | Land-Based Spill Preparedness and Response
Environmental Protection Division | Ministry of Environment
P: 250 356-0334
Alexandra.Denis@gov.bc.ca

RE: Meeting summary notes - Dec 16 Conference call

Monday, May 26, 2014
11:47 AM

Subject	**RE: Meeting summary notes - Dec 16 Conference call**
From	Vander Steen, Benjamin ENV:EX
To	Denis, Alexandra ENV:EX; Hofweber, Jim E ENV:EX; Knox, Graham G ENV:EX; Murray, Kyle ENV:EX; Poss, Angie ENV:EX
Sent	Thursday, January 9, 2014 2:29 PM

My view – good response by NEB/NRCan… hopefully we get the same detail from others. With responses like that it really does show that the difference we're looking for is greater prescription in what's required, because the NEB material is quite vague.

From: Denis, Alexandra ENV:EX
Sent: Thursday, January 9, 2014 1:36 PM
To: Hofweber, Jim E ENV:EX; Knox, Graham G ENV:EX; Vander Steen, Benjamin ENV:EX; Murray, Kyle ENV:EX; Poss, Angie ENV:EX
Subject: RE: Meeting summary notes - Dec 16 Conference call

Hi all,

As these responses come in, I can correlate them into our master copy.

Alex

From: Hofweber, Jim E ENV:EX
Sent: Thursday, January 9, 2014 12:18 PM
To: Knox, Graham G ENV:EX; Vander Steen, Benjamin ENV:EX; Denis, Alexandra ENV:EX; Murray, Kyle ENV:EX
Subject: Fw: Meeting summary notes - Dec 16 Conference call

From: Hawley, Stephen [mailto:Stephen.Hawley@NRCan-RNCan.gc.ca]
Sent: Thursday, January 09, 2014 11:48 AM Pacific Standard Time
To: Poss, Angie ENV:EX; Hofweber, Jim E ENV:EX; 'Amar Bokhari' <Amar.Bokhari@gov.ab.ca>; Burzek, Mike C OGC:IN; Ollenberger, Lance J OGC:IN; Hanna, Abla <Abla.Hanna@NRCan-RNCan.gc.ca>; Eldridge, David A: TC <david.eldridge@tc.gc.ca>; Mattu, Gevan: EC <Gevan.Mattu@ec.gc.ca>; Babstock, Peter: TC <peter.babstock@tc.gc.ca>; Crook, Carolyn: TC <carolyn.crook@tc.gc.ca>; Gardiner, Tim <Timothy.Gardiner@NRCan-RNCan.gc.ca>
Subject: RE: Meeting summary notes - Dec 16 Conference call

Hi everyone,

Happy New Year! Please find NEB / NRCan input attached.

Thanks,

Stephen

Stephen Hawley
NRCan / RNCan
(613) 947-0307

Land-bases Spill Response Feedback

Friday, May 23, 2014
3:37 PM

Subject	**Land-bases Spill Response Feedback**
From	Maria Stanborough
To	Poss, Angie ENV:EX; Vander Steen, Benjamin ENV:EX
Sent	Monday, January 6, 2014 1:27 PM

Hi Angie and Ben,

UBCM membership has supported resolutions related to spill response with specific concern for:

- an industry-funded contingency fund to address spills response in a timely manner
- response plans for high-risk areas
- a collaborative approach to spill response
- a regional planning authority to oversee spill response
- wildlife system and ecosystem restoration funded by industry

Given the direction that industry has provided you with, we feel that a stronger support for these issues from a local government perspective is warranted.

UBCM's Environment Committee is meeting on January 23rd and will discuss the terms of a letter of support for these, and potentially other aspects of a land-based spill response. If supported by the Committee, a letter will be submitted to the MoE regarding local government concerns and interests. We would hope this letter would inform the creation of your 2nd Intentions Paper.

Please let me know if this timing works with your office and how we can best present our members' concerns to you.

Best regards,
Maria

Maria Stanborough MCIP, RPP
Senior Policy Analyst
Union of BC Municipalities
mstanborough@ubcm.ca
604.270.8226 ext.113

Fw: Spill IP vis a vis LNG

Monday, May 26, 2014
12:04 PM

Subject	**Fw: Spill IP vis a vis LNG**
From	Hofweber, Jim E ENV:EX
To	Knox, Graham G ENV:EX; Poss, Angie ENV:EX; Vander Steen, Benjamin ENV:EX
Sent	Wednesday, March 12, 2014 12:07 PM

From: Hofweber, Jim E ENV:EX
Sent: Wednesday, March 12, 2014 09:11 AM Pacific Standard Time
To: Mihlar, Fazil MNGD:EX; Standen, Jim ENV:EX
Subject: RE: Spill IP vis a vis LNG

Thanks Fazil. I think we are in good shape with a pass for natural gas with our wording selected below in my email. As far as defining a toxicity threshold to evaluate other candidate materials, that will take work and consultation later on. I suspect most GTL products would not make the grade on both toxicity and persistence. The persistence test is basically about "no recovery necessary". As far as taking the spill contingency fund off the table for discussion in the intentions paper, there is no way to justify that with stakeholders at this time. Even those who might oppose it need the opportunity to comment on why and what might serve in its place. This is my take on it anyway. Jim S, any thoughts?

From: Mihlar, Fazil MNGD:EX
Sent: Tuesday, March 11, 2014 6:04 PM
To: Hofweber, Jim E ENV:EX; Standen, Jim ENV:EX
Subject: RE: Spill IP vis a vis LNG

Gentlemen: A question: Will GTL products and value added chemical products like methanol, ethanol or urea still come under the definition of "high toxicity?" or could we just go with the definition of Petroleum under Petroleum Act? Could we define petroleum as "crude petroleum that are or can be recovered from oil sand or oil shale ."

I am not having much luck with coming up with any other language that will clearly protect the natural gas sector and the value added activities that the government is contemplating. Would you both be amenable to holding off on the contingency fund in this intentions paper? I ask again because of what the feds are coming down with on marine, rail and pipelines on absolute liability and minimum financial capacity. If we talk about how we will work to have the right "triggers" so that we can access fed/firm $ easily in the event of a spill, would that work for you?

Let me think through this overnight; will get back to you tomor. Have a good evening ... Fazil

From: Hofweber, Jim E ENV:EX
Sent: Tuesday, March 11, 2014 2:55 PM
To: Mihlar, Fazil MNGD:EX; Standen, Jim ENV:EX
Subject: Spill IP vis a vis LNG
Importance: High

I believe we have a solution to our challenge (thanks to Graham). We are doing a redraft to suggest that contributing to the spill contingency fund and membership in the response organization would only be required for ***materials that are of high toxicity and persistence***. This takes NG off the table for these elements (and possibly coal – need some work on coal). Other general requirements around response and reporting that would cover all sectors would not change anything for NG pipelines or compressor facilities. As an aside, this would look better to Alberta (it makes sense) and doesn't look like we are favoring our players over theirs.

Thoughts?

Jim Hofweber
Executive Director
Environmental Emergencies and Land Remediation Branch
Environmental Protection Division
Ministry of Environment
Tel: 250-387-9971

Denis, Alexandra ENV:EX

From: Lee, Bonnie ENV:EX
Sent: Wednesday, March 5, 2014 2:57 PM
To: 'geoff.morrison@capp.ca'
Cc: Lee, Bonnie ENV:EX; Gilmour, Lori ENV:EX
Subject: Response: Do you have time for a short call?

Hi Geoff
I can schedule a meeting from 4:15 on March 14? Jim Standen will join you and Wes for this meeting.
If this works for you I will set up a conference call.

Please advise.

Thank you

Coleen for
Bonnie Lee | Senior Executive Assistant | Deputy Minister's Office | Ministry of Environment | Phone 250.387.5429

From: Shoemaker, Wes ENV:EX
Sent: Wednesday, March 5, 2014 10:23 AM
To: Lee, Bonnie ENV:EX; Jackson, Vickie ENV:EX; Standen, Jim ENV:EX
Subject: Fwd: Do you have time for a short call?

Coleen/Vickie,

Can you arrange a 1 hour meeting with Jim, Jeff and I for Friday March 14 when I am back?

Wes

W.H. (Wes) Shoemaker, MBA
Deputy Minister
Ministry of Environment
5th Floor, 2975 Jutland Road
Victoria, BC
Tel: 250.387.5429 | Fax: 250.387.6003
E-mail: wes.shoemaker@gov.bc.ca

Sent from my iPhone

Begin forwarded message:

> **From:** "Morrison, Geoff" <geoff.morrison@capp.ca>
> **Date:** March 4, 2014 at 6:51:28 PM PST
> **To:** "Shoemaker, Wes ENV:EX" <Wes.Shoemaker@gov.bc.ca>
> **Subject: Do you have time for a short call?**

Hi Wes

Do you have 5 minutes this week to talk about Land Based Spill Preparedness and Response.

Geoff

Geoff Morrison | Manager, British Columbia Operations
(Victoria) 778.410.5040 | (Calgary) 403.776.1409 | www.capp.ca

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Canada's Oil and Natural Gas Producers

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RE: Summary of Consultation Comments Posted: Land Based Spill Preparedness & Response

Monday, May 26, 2014
11:47 AM

Subject	**RE: Summary of Consultation Comments Posted: Land Based Spill Preparedness & Response**
From	Vander Steen, Benjamin ENV:EX
To	'Hibbard, John'; Poss, Angie ENV:EX
Cc	Knox, Graham G ENV:EX
Sent	Thursday, January 9, 2014 9:08 AM

I've cc'd Graham, and here is his PH#: 250 356-8383

From: Hibbard, John [mailto:jhibbard@tervita.com]
Sent: Thursday, January 9, 2014 9:07 AM
To: Vander Steen, Benjamin ENV:EX; Poss, Angie ENV:EX
Subject: RE: Summary of Consultation Comments Posted: Land Based Spill Preparedness & Response

Excellent Ben!

I will put Graham down and provide you with more information on what is needed in a couple weeks. I will most likely set up a conference call with Graham, Shawn, Patrick and Brent to discuss with everyone at the same time what would be the best approach for the panel.

In terms of information tables, we have a room with booths, but they are $1,250 each (for "Bronze" sponsorship). Let me know if the MOE would be interested in hosting one as we still have availability.

JH

John Hibbard, M.A.
Sales Manager - Pacific & Atlantic Region
Environmental Services
D: (604) 214-7080 C: (604) 315-2664

From: Vander Steen, Benjamin ENV:EX [mailto:Benjamin.VanderSteen@gov.bc.ca]
Sent: Thursday, January 09, 2014 8:57 AM
To: Hibbard, John; Poss, Angie ENV:EX
Subject: RE: Summary of Consultation Comments Posted: Land Based Spill Preparedness & Response

John, we've got the go ahead to plan to have at least one member of our team go. It would likely be Graham Knox, Manager of the Environmental Emergency Program, and could be one other depending what's involved + availability. So, as I have indicated below, please keep us in the loop and let us know what types of things we need to prepare (e.g., powerpoint?). Does this conference include any information tables?

Cheers,
Ben

From: Hibbard, John [mailto:jhibbard@tervita.com]
Sent: Wednesday, January 8, 2014 4:02 PM

To: Vander Steen, Benjamin ENV:EX; Poss, Angie ENV:EX
Subject: RE: Summary of Consultation Comments Posted: Land Based Spill Preparedness & Response

Thank you Ben,

I will add you to the event updates, and we look forward to hearing back.

JH

John Hibbard, M.A.
Sales Manager - Pacific & Atlantic Region
Environmental Services
D: (604) 214-7080 C: (604) 315-2664

From: Vander Steen, Benjamin ENV:EX [mailto:Benjamin.VanderSteen@gov.bc.ca]
Sent: Wednesday, January 08, 2014 3:54 PM
To: Hibbard, John; Poss, Angie ENV:EX
Subject: RE: Summary of Consultation Comments Posted: Land Based Spill Preparedness & Response

Thanks for your message John. We will discuss internally and certainly get back to you before the 20th, likely early next week. Please do add us to any email distribution lists you have regarding the conference.

Cheers,
Ben

From: Hibbard, John [mailto:jhibbard@tervita.com]
Sent: Wednesday, January 8, 2014 3:42 PM
To: Vander Steen, Benjamin ENV:EX; Poss, Angie ENV:EX
Subject: RE: Summary of Consultation Comments Posted: Land Based Spill Preparedness & Response

Good afternoon Ben & Angie,

Our Conference Committee is going to be meeting on the 20th of this month (January, 2014) to start pulling together all of the speaking applications we have received thus far. As indicated below I would really like to have the Ministry attend and be on a panel with a couple of our members to talk about the process of this land based spill preparedness updates. The panel would potentially talk about how things currently are, where we would like to be, and how we would currently be able to respond to certain scenarios where there is an environmental impact.

Lance indicated that the Ministry may be interested in being involved at the conference, and I am wondering if I could get an update on your office's thoughts on that and being part of a panel.

Could you let me know if you can make any sort of commitment before the 20th of this month?

Thank you,

JH

John Hibbard, M.A.
Sales Manager - Pacific & Atlantic Region
Environmental Services
D: (604) 214-7080 C: (604) 315-2664

RE: BC's land-based spill preparedness and response policy work

Monday, May 26, 2014
11:47 AM

Subject	**RE: BC's land-based spill preparedness and response policy work**
From	Vander Steen, Benjamin ENV:EX
To	'sarah@sierraclub.bc.ca'
Sent	Friday, January 3, 2014 9:31 AM

Good day Sarah, Are you available for a chat sometime in the near future? See my message below. Cheers, Ben

Not Responsive

Denis, Alexandra ENV:EX

From: Knox, Graham G ENV:EX
Sent: Friday, January 31, 2014 9:48 AM
To: Vander Steen, Benjamin ENV:EX
Subject: FW: WCMRC Overview for Intentions Paper
Attachments: WCMRC Text Box.docx

Here is the reviewed text box and some bonus insight into industry thinking on the PRO!

Thanks,

Graham

From: Kevin Gardner [mailto:keving@wcmrc.com]
Sent: Friday, January 31, 2014 9:45 AM
To: Knox, Graham G ENV:EX
Cc: Kevin Gardner
Subject: FW: WCMRC Overview for Intentions Paper

Graham – minor changes but looks fine please feel free to use.

Good luck with the next steps. We have been consulting with the pipeline companies, railways and trucking association over the past few months. You can expect a paper from them shortly outlining their position and willingness to work with the government to ensure environmental protection. At this time it is my understanding that they are not looking at forming a formal co-op response (like WCMRC to co ordinate resources/response) but instead have a steering committee manage interface between businesses and a pool of resources.

If we can be of any further assistance please feel free to call.

Thanks

Kevin

Kevin J Gardner
President / General Manager
Western Canada Marine Response Corporation
www.wcmrc.com
Keving@wcmrc.com
604 294 6001 ext 204

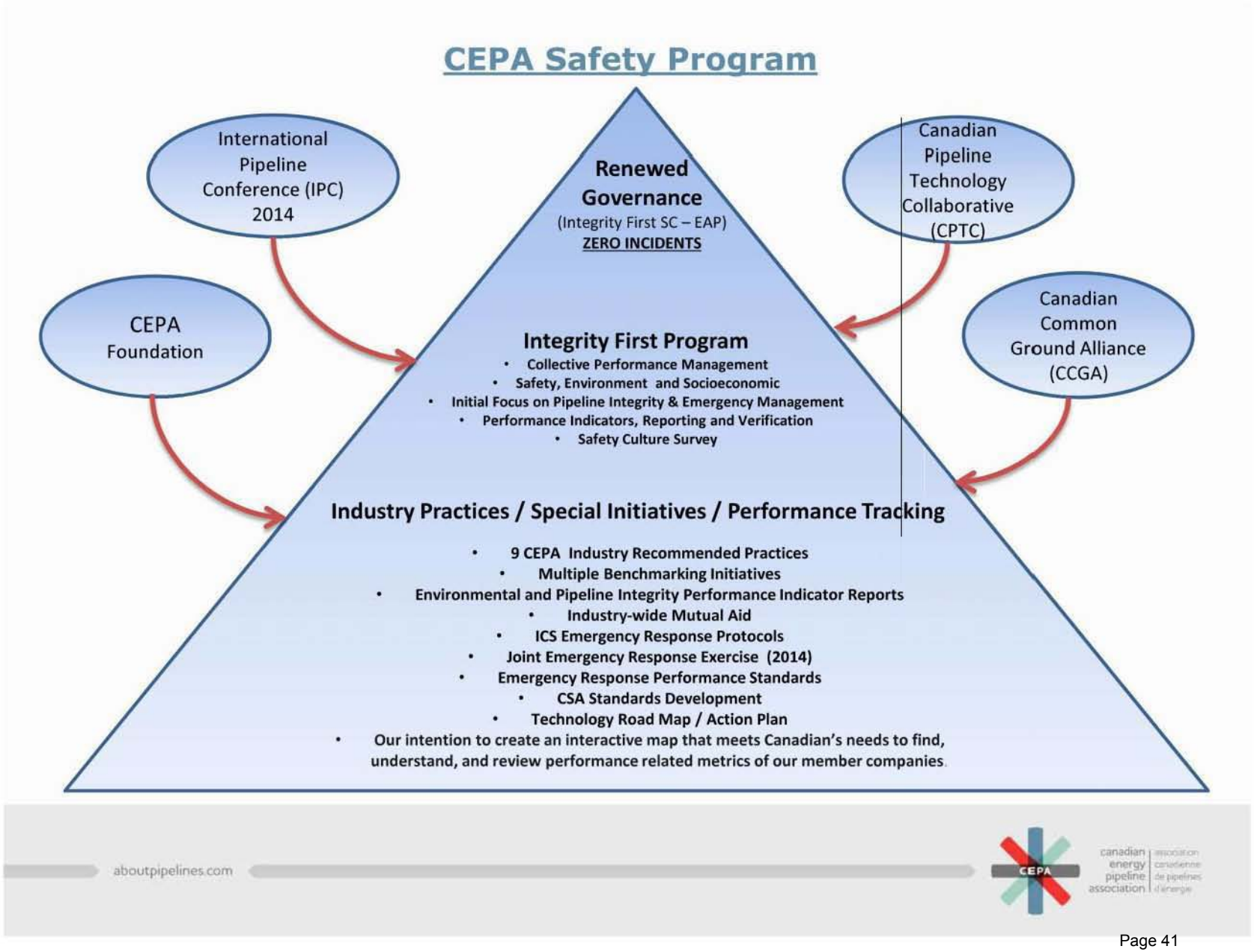
From: Knox, Graham G ENV:EX [mailto:Graham.Knox@gov.bc.ca]
Sent: Thursday, January 30, 2014 5:00 PM
To: Kevin Gardner
Cc: Vander Steen, Benjamin ENV:EX
Subject: WCMRC Overview for Intentions Paper

Hi Kevin,

We are in the process of finalizing our next Intentions Paper as part of the review of our land based spill regime. Staff developed the attached text box providing an overview of WCMRC that were planning to include as an example of an existing Preparedness and Response Organization (as we are process this concept for the land base). We wanted to ensure we have captured everything correctly and ensure you had no concerns with this content. I would appreciate it if you get back to me with any concerns or required changes you may have?

Thank you,

Graham Knox
Director, Environmental Emergency Program
BC Ministry of Environment
P.O. Box 9342, Stn Prov Govt
Victoria, BC V8W 9M1
Phone: (250) 356-8383
Fax: (250) 953-3856
Email: Graham.Knox@gov.bc.ca
Website: http://www.env.gov.bc.ca/eemp


CEPA Safety Program
International Pipeline Conference (IPC) 2014
Canadian Pipeline Technology Collaborative (CPTC)
CEPA Foundation
Canadian Common Ground Alliance (CCGA)
Renewed Governance
(Integrity First SC – EAP)
ZERO INCIDENTS
Integrity First Program
• Collective Performance Management
• Safety, Environment and Socioeconomic
• Initial Focus on Pipeline Integrity & Emergency Management
• Performance Indicators, Reporting and Verification
• Safety Culture Survey
Industry Practices / Special Initiatives / Performance Tracking
• 9 CEPA Industry Recommended Practices
• Multiple Benchmarking Initiatives
• Environmental and Pipeline Integrity Performance Indicator Reports
• Industry-wide Mutual Aid
• ICS Emergency Response Protocols
• Joint Emergency Response Exercise (2014)
• Emergency Response Performance Standards
• CSA Standards Development
• Technology Road Map / Action Plan
• Our intention to create an interactive map that meets Canadian's needs to find, understand, and review performance related metrics of our member companies.
aboutpipelines.com
CEPA
canadian energy pipeline association

Alberta Pipeline Safety Review

Prepared by:

For the ERCB

RFP Number ERCB-12-FSOB-PSR-001

December 7, 2012

Document History

Version	Summary of Changes	Document Status	Date
1	Prepared by Theo Abels, Group 10 Engineering Ltd.	Issued for Initial Review (outline)	Oct 22, 2012
2	Prepared by Theo Abels, Group 10 Engineering Ltd.	Issued for 2nd Review	Nov 23, 2012
3	Prepared by Theo Abels Group 10 Engineering Ltd	Issued for Final Review	Dec 03, 2012
4	Prepared by Theo Abels Group 10 Engineering Ltd	Issued for Distribution	Dec 07, 2012

Disclaimer: This report was prepared based on a combination of factual documented research information and personal knowledge, experience and opinion gleaned from interviews. All reasonable effort has been taken to ensure the correctness and accuracy of the contents of this report however; Group 10 Engineering does not warrant the accuracy of such personal knowledge, experience and opinion, nor the results of any further interpretation of the information in this report.

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1. Executive Summary

Recent pipeline-related incidents, combined with international focus on pipeline regulation and public safety, have resulted in increased questions about how and whether ERCB regulated pipelines in Alberta are safely operated by industry and effectively regulated by the ERCB. The purpose of this Pipeline Safety Review is to review and assess the available information and to provide comment and guidance on answers.

The approach taken to achieve this was by assessing the current ERCB regulatory requirements and framework; then comparing them to those of similar jurisdictions and regulators firstly within Canada, and then to regulatory approaches beyond Canada's borders.

The specified main subject areas are as follow:

- Public safety and response to pipeline incidents
- Pipeline integrity management
- Safety of pipelines near water bodies

The comparison of the ERCB regulatory requirements was undertaken against the requirements of the British Columbia – Oil and Gas Commission (B.C. OGC), the Saskatchewan Ministry of the Economy (Engineering Services Branch), the National Energy Board (NEB), Alberta Government (Alberta Environment and Sustainable Resources Development (ESRD)), Canadian standards (CSA), the U.S. pipeline regulatory requirements specifically the Pipeline and Hazardous Materials Safety Administration (PHMSA, national regulator); as well as Alaska and Texas as local jurisdictions. There was also a broad review of the regulatory environments in the UK, Netherlands, France, Brazil and Australia.

The review was also extended to assessing available industry best practices and how they contribute to pipeline safety. The industry organizations included the Canadian Energy Pipeline Association (CEPA), the Canadian Association of Petroleum Producers (CAPP), the Interstate Natural Gas Association of America (INGAA), the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA – Australia), the Conservation of Clean Air and Water in Europe (CONCAWE) and the UK Onshore Pipeline Operators' Association (UKOPA).

Pipeline licensees were also canvased for their input to the question: Are pipelines in Alberta safely operated and effectively regulated? They contributed substantial knowledge and value to the review process (section 4.6). Sixteen owners were randomly selected based on criteria such as operating under multi-jurisdictions, as well as industry sector (upstream and transmission) and product transported (gas and liquids).

The outcomes of the overall review can be summarized as follows:

1. Alberta (the ERCB) provides the most thorough overall regulatory regime of all the assessed Canadian jurisdictions. This is evident from the comparisons of the regulations, acts, directives, etc. as recorded in Appendix B and summarized in Table 1.

   This is most likely due to the fact that Alberta has a very mature (well established) pipeline industry and the largest number of pipelines; and the ERCB, as a regulator, has evolved over time to regulate and manage the industry as appropriate. The other provincial jurisdictions have comparatively fewer pipelines under their authority and a younger pipeline industry with the growth realistically only occurring since 2000. An example of this is the fact the since the 1970's all regulated oil and gas pipelines in Alberta have been identified, mapped and

licensed; whereas in some Canadian and U.S. jurisdictions portions (i.e. upstream gathering sections) of the pipelines still do not require registration or licensing.

2. The requirements regarding the regulation of pipelines, specifically with regard to integrity management and safety near water bodies, are not harmonized or consistent across Canadian jurisdictions. This was evident from the analysis of the regulation of each jurisdiction and stated by the pipeline licensees. The tendency is for the licensees to perform to the dominant regulators' requirements; which, in most instances was the ERCB with supplemental requirements from the other jurisdictions included and addressed. This did; however, still lead to some inconsistency in the application and compliance assessment of the regulation in some areas.

3. The presentation and comparison of pipeline leak or failure statistics for Alberta with other Canadian and international jurisdictions is not possible, as each jurisdiction has unique requirements as to which incidents, and what detail is reported. Alberta appears to demonstrate the most mature and complete approach to incident reporting and statistical comparison.

   The incident statistics, as collected and presented by the ERCB, are constantly evolving to include additional detail and as such need to be carefully reviewed and well understood when comparing one year to the next.

4. A common and harmonizing point to all Canadian regulators is the adoption of the Canadian Standards Association document *CSA Z662*, Oil and Gas Pipeline Systems, as the standard that is in force. This does provide consistency with respect to design and construction, and somewhat to operations and maintenance, integrity management and risk management. Each jurisdiction does however, have requirements in their respective acts and regulations that are over and above those required by *CSA Z662*.

5. Safety of pipelines near water bodies appears to be an area without clear definition or consistent regulatory direction, as licensees must conform to the requirements of multiple regulators. The prescriptive requirement in Alberta to identify a river crossing calls for a 1:1 000 000 map to be used *(Directive 056)*, which may be generally acceptable for gas pipelines but could be inadequate for liquids pipelines. It was noted that licensees meet the ERCB requirements for the minimum annual surface inspection of river crossings. Most additionally identify river crossings and water bodies in their risk assessment process with more detail than required by regulation. The risk assessment typically identifies these as higher risk areas, and lead to specific integrity management and inspection requirements. It was additionally noted that, in some cases, the emergency response procedures used higher resolution maps and water body identification protocols than the integrity management process.

6. Assessment of the regulatory requirements for "Public safety and response to pipeline incidents" and the preparedness of the regulators (including the ERCB) and licensees determined an overall consistency in competence, understanding and preparedness for an incident. Emergency preparedness in the oil and gas industry extends beyond just pipelines (includes exploration, wells and facilities) and as such the industry has recognized the need for strong emergency response and crisis management competency and preparedness, often having groups or departments dedicated to these functions.

7. All licensees in Alberta comply with the requirements of ERCB *Directive 071*, which is presently, also referenced by the B.C. OGC (*OGC-OD-C&E-2700, ref 71*). As emergency response planning is applied corporately to more than just pipelines, there is a general approach amongst the licensees to use the Incident Command System (ICS) as the guide for their corporate ERP.

8. When a major industrial incident occurs, such as the Piper Alpha platform fire, Texas City refinery explosion or the Macondo well blow out, the industry learns from the ensuing investigations which are made public and beneficially shared; thereby allowing others to improve stakeholder and environmental safety through improved design and response capabilities. It was apparent there is still opportunity for improving shared learning within the pipeline operational and integrity management realms, which would contribute to the safety of pipelines in Alberta, and improve knowledge on response requirements plus overall public safety.

The assessment of the various regulatory, operational and jurisdictional environments has highlighted that no single right answer exists on how to best ensure pipeline safety. There are many varying pipeline environments and each has its own unique requirements with respect to life cycle management (design, construction, operation (including maintenance and integrity management) and decommissioning).

The United Kingdom, Norway, Netherlands and Australia have adopted what is commonly referred to as the safety case approach to risk management, which recognizes that the pipeline owner/operator has the best knowledge on how to design, operate and manage their own assets (pipelines) and business. As such, duty of care is recognized as the responsibility of the owner/operator. This approach is very much a performance and management system based approach to risk management and one that includes asset risk management right from the concept stage through the life cycle.

The Canadian jurisdictions and the U.S. national regulator apply a hybrid approach to regulatory requirements, namely prescriptive in certain aspects (such as enforcing the requirements of CSA Z662) and performance or goal based in other aspects. A notable difference between this and the above (safety case approach) is that in the Canadian and U.S. scenario, risk management is only applied in the operational phase, whereas the safety case approach is used right from the concept and design phase of the asset's life cycle.

It is apparent that there is a strong tendency toward the use of a performance or goal based risk management systems worldwide, somewhat in an attempt to relieve the regulatory responsibility with the approach that the person or organization that creates the risk should manage the risk and be responsible for the consequences. This approach is sensible in many ways, but will also require a mature operational and regulatory environment to succeed, as well as specific competencies to support regulatory oversight.

To quote the Alaska Risk Assessment of Oil and Gas Infrastructure report by CYCLA Corporation (November 2010) (Appendix C, Ref 124), "Strengthen Regulatory Oversight by Evolution not Revolution." The evolution is already occurring toward performance based and management system based risk management.

The Canadian regulators are also evolving toward this approach, and being mindful of industry in its goal of remaining competitive in business, considerations should be given to a progressive (tiered) regulatory approach. This could be in the form of semi-prescriptive or prescriptive regulation similar to what the ERCB presently has place. However, there would be additional regulation such that the ERCB could audit (assess) and certify licensees as firstly having the

necessary management systems in place, and secondly having the competence, to pursue a substantially performance or goal based risk management approach.

This would be a novel approach to pipeline integrity management and regulatory management in Alberta. It would require careful determination of both the competency and the regulatory compliance verification requirements. This would place a responsibility on both the regulators and licensees for some time to get the competencies in place; but, given that this approach is used successfully in Alberta in the pressure equipment environment, learning could be shared to support an effective transition to this risk based integrity management approach.

This tiered approach would accommodate the smaller licensees with fewer resources by having defined prescriptive criteria for them to operate within, while allowing the larger licensees to operate more effectively and efficiently operate under performance-based regulation.

2. Recommendations

There are some key differences between upstream producers and pipeline transmission companies which result in a significant difference in the number of failures between the two. For example, there is a real difference between the type of products managed by producers (provincially regulated by the ERCB) and the transmission companies (typically federally regulated by the NEB). Production lines usually range from 2" to 12" diameter with an average length of 1.6 km (per the ERCB *Report 2007-A* titled *Pipeline Performance in Alberta, 1990-2005*, 80 per cent of ERCB licensed pipeline length is 6" and smaller (Appendix C, Ref 31)). They generally contain raw product (oil emulsion, raw gas – with produced water, produced water brine, solids and wax contaminated product, etc.) and have low intermittent velocities. Transmission pipelines on the other hand typically range from 12" to 42" diameter with a much greater length, operate continuously and contain sales quality product of oil or gas.

In Alberta, production pipelines are unique in that they are the only component of oil and gas production systems, from formation to sales valve, where there are no specified minimum frequencies and requirements for inspection, or testing to confirm their integrity (there are frequency requirements to inspect for potential hazards, such as slope movement or erosion at river crossings; as well as regulated requirements to assess the need for, or effectiveness of, internal and external corrosion mitigation procedures; but, not directly to assess the condition of the pipeline itself). Well bores, tanks and on lease pressure equipment and piping are all respectively regulated to a prescribed inspection requirement and frequency. Tanks and pressure equipment also have prescribed competencies for the inspectors.

The listed recommendations are based on key learnings from the review, and are presented below without priority or guidance on timeline for consideration or potential implementation;

Public Safety and Response to Pipeline Incidents:

Emergency response and planning was assessed consistently as adequate but could be further enhanced by consideration of the following:

1. Regulators and licensees could jointly develop a stakeholder education/awareness program on the consequences of right-of-way encroachment and how to react in the event of an emergency.
2. The Call Before You Dig (Alberta 1 Call) membership requirement is legislated as compulsory in Alberta for pipeline licensees; but this is not the case nationally. Consideration should be given to instituting this as a Canada wide program. Not only would this benefit other jurisdictions where it is not a requirement, but it would also ensure that new Albertans are consistently aware of these requirements.
3. ERCB staff should consider increased participation in stakeholder hosted emergency response exercises, as these present an opportunity to share knowledge as well as provide an opportunity to the regulatory staff to informally review ERP documents and processes (It is noted that the ERCB participates in many ERP exercises, but when it comes to pipeline specific exercises, licensees indicated there was opportunity for more attendance).

Pipeline Integrity Management:

1. Institute the risk ranking of all pipelines based on standardized methodology to be developed by Canadian regulators and stakeholders. (*Must be standardized so that all stakeholders are using the same basis for comparison and have a common level of understanding and definition of risk.)*

2. Integrity Management Programs for all companies under the ERCBs jurisdiction should be audited on a routine basis for compliance with respect to adequacy, implementation and effectiveness. Given the number of licensees in Alberta, this is potentially a near impossible task for the ERCB to achieve on its own. Consideration should be given to accepting self or third party audits from licensees; complemented by random and risk assessed requirements for ERCB led audits (which could vary in intensity or focus as required).
3. Set minimum requirements for comprehensive inspection and testing programs for pipelines to establish the current condition of pipelines in assessed high-risk areas as identified in recommendation 1 above. *(Leak detection, depth of cover, inline inspection, direct assessment and right of way surveillance. Used with recommendation 5 below, this will allow licensees with solid performance records to meet these requirements on a risk managed and performance based approach.)*
4. Work with appropriate education or industry institutions to develop certification programs for individuals (operators, construction and integrity inspectors and supervisors) in the areas of pipeline safety, including construction, operation, inspection and integrity management.
5. Where appropriate the ERCB should consider using performance-based regulation for those licensees whose performance warrants such an approach (this approach is used by the pressure equipment regulator in Alberta and is the trend among major regulators such as PHMSA and in the EU). This process should be evolutionary with compliance audits providing the necessary confidence for the transition to a performance-based system.
6. ERCB should be staffed appropriately to manage and enforce regulations (whether prescriptive or performance based) to ensure pipeline safety and integrity.
7. ERCB should work collaboratively with stakeholders to set clear goals and objectives to focus and manage the reduction of pipeline failures to a level as low as reasonably practicable (ALARP).
8. Record retention and transfer requirements, specifically during takeovers, mergers, acquisitions and sales, should be clearly defined in the regulation.
9. The ERCB should work with other regulators to harmonize regulatory requirements and support a consistent regulatory basis for stakeholders (for example the recently stated key performance indicators required by the National Energy Board could be considered for adoption by the ERCB). The use of a standard such as *CSA Z662* is a valuable tool in promoting harmonization.
10. Third party encroachment and pipeline interference is still a major concern to licensees. Additional education of industries and the public as to the risks and regulatory requirements of working near pipelines could be promoted. Some licensees stated the setback requirements are inadequate for class 4 areas (where there is presently municipal development, or a high future potential for municipal development).

Safety of Pipelines Near Water Bodies:

1. Definition should be provided on what constitutes a water body. More clarity with regard to expectations for design, inspection, mitigation and monitoring at water bodies could be provided (in an ERCB directive or in *CSA Z662*).
2. The ERCB should require an inventory be kept by licensees of all pipeline water crossings and water bodies to a 1:50 000 map scale as a minimum, (this provides a more stringent level of identification of water crossings and water bodies, and more refined input for risk ranking). An example of this taken from interviews is Company "A" who had 2200 crossings on a 1:1 000 000 mapping scale; but at a 1:50 000 scale it identified 16 000 crossings.
3. The ERCB should require that all integrity management programs contain a process for identifying and mitigating the risk associated with high consequence areas, including for the safety of pipelines near water bodies.

4. ERCB should require depth of cover determinations on a scheduled basis on all critical and high-risk water crossings. Recommendations 1 and 3 in Pipeline Integrity Management, if implemented, will guide this recommendation.

3. Background

The Energy Resources Conservation Board (ERCB) is an independent, quasi-judicial administrative tribunal established under the *Energy Resources Conservation Act*. The ERCB reports to the Government of Alberta through the Minister of Energy. The ERCBs mission is to ensure that the discovery, development, and delivery of Alberta's energy resources take place in a manner that is fair, responsible, and in the public interest.

The ERCB is Alberta's primary energy regulator. The ERCB regulates the public safety, environmental protection, orderly development, and resource conservation of Alberta's energy resources: oil, natural gas, oil sands, coal and pipelines.

3.1. Canadian Pipeline Industry Oversight

Pipelines are widely considered as being the safest and most economic means of delivering hydrocarbons overland in large quantities. However, notwithstanding its safety record, there is a place for objective, external physical oversight of the pipeline licensees obligations and performance, provided by regulatory bodies such as the ERCB. To Canada's favor, both federal and provincial pipeline regulators adopt, for the most part, the requirements of the *Canadian Standards Association Pipeline Standard, CSA Z662,(Appendix C, Ref 171))*, thus giving the standard the force of law. When a CSA standard is insufficient or unclear, provincial/federal regulators will go beyond it, issuing specific directives and on occasion, advisory notes and guidance following a formal hierarchy. The ERCB uses the following hierarchy:

- Pipeline Act
- Regulation (including standards)
- Directives
- Manuals and bulletins

It is important to understand that a CSA standard is a consensus document; created using a balanced interest committee structure and in the case of *Z662*, is best regarded as being a minimum standard (Clause 1.4, *CSA Z662-11* refers). Thus, while the use of the term "standard" signifies and encourages a common approach among regulatory jurisdictions, it is important to realize that the pipeline industry within Canada in general, and Alberta in particular, is highly diverse. The ERCB, for example, licenses pipeline companies of widely varying size and product complexity ranging from multi-nationals to very small enterprises. Clearly the physical extent of pipelines and the means by which these disparate enterprises ensure their technical oversight is also diverse. Some licensees have sizeable departments devoted to managing pipeline integrity, while others depend upon contracted service providers. The ability to manage risk to public safety and environmental protection varies widely across the licensees.

In summary, a "one size fits all" approach to the provision of regulatory oversight is impractical. Instead Canadian pipeline regulators tend to use an equitable tailored "fit-for-purpose" approach that meets the overall needs of their jurisdictions. This allows the regulators to focus oversight in areas where risk is, or is perceived to be, higher.

3.2. The Regulatory Responsibility

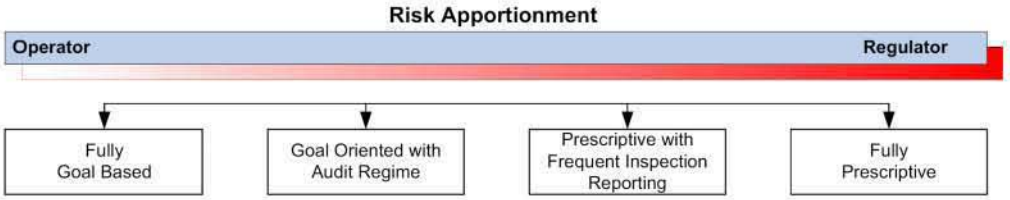
Figure 1 illustrates the spectrum of regulatory oversight; ranging from the fully prescriptive to a goal based or outcomes based approach. The prescriptive approach provides detailed instructions on what is to be done and how it is to be done. The underlying belief is that by following rigorous protocols, a good outcome will result. This contrasts with the goal based approach which sets out specific desired measurable outcomes, e.g. "pipelines are safe and perceived to be safe" with limited guidance to stakeholders as to how such outcomes are to be achieved. The underlying assumption is

that pipeline licensees know more about their pipeline system and its attributes than the responsible regulator.

Goal oriented approaches lie somewhere between the prescriptive and the goal based regimes. The exact determination depends upon the amount of direction and guidance provided by the regulator.

Recently in North America and elsewhere (and in many sectors of the economy), there has been a demand to reduce the regulatory responsibility. This insistence proposes that government oversight should be minimized and companies given increased freedom to operate; in the belief that their self-interest is sufficient to prudently constrain their actions. The extreme counterview is that government knows best and that strict adherence to rules will provide the required prescription for stability and success. History has shown that neither of these views is sustainable, whether it is the near collapse of the U.S. financial system, or the adherence to procedures that culminated in 165 deaths on the Piper Alpha platform in the North Sea (Appendix C, Ref 218). Rather, some middle ground appears to make sense – a mix of prescription, company innovation and regulatory oversight in the form of inspections and audits.

Figure 1: Spectrum of Regulation



In the UK sector of the North Sea and for onshore pipelines in Australia, this approach has taken the form of the development of the so called Safety Case, which requires a high degree of judgment from the operator and the regulator to establish sufficiency or fitness for purpose.

The requirements for federally regulated pipeline companies in Canada to have a pipeline integrity management program (PIM) has been in existence since 1999 Onshore Pipeline Regulations (Appendix C, Ref 19) with a similar, though phased-in, requirement on federally regulated gas, and then liquids, pipelines in the United States starting in 2000 (Appendix C, Ref 141, 142).

The need for **all** pipeline companies operating in Canada to have a PIM program became mandatory with its inclusion in the 2003 version of *CSA Z662*. Guidance on the elements of such programs may be found in *Annex N of Z662* as well as *API 1160 (*Appendix C, *Ref 115)* for liquids pipelines and the supplement *American Society of Mechanical Engineers (ASME) B31.8S (*Appendix C, *Ref 116)* for gas pipelines.

From a regulatory perspective, it is insufficient that companies have merely developed a PIM program; rather they must also demonstrate its implementation and effectiveness. Gaps in any of these three facets would constitute non-compliance. How compliance is determined varies widely across the various jurisdictions in Canada. For example, in British Columbia the licensee makes a form of self-declaration/audit; while in Alberta, regular field inspections are the norm. Federally regulated companies are subjected to inspections and detailed audits, albeit on an infrequent basis. (IPC2012-90046 paper titled *Trends on Integrity Management Programs (IMP) and Management Systems (MS) Audit and Incident Findings* authored by members of the NEB and B.C. OGC, provides additional current information into audits and the results).

3.3. Definitions of Pipeline Risk

This review, at its core, is an examination of pipeline risk as it pertains to pipeline regulation. The Government of Alberta, through the ERCB and in consultation with its stakeholders, defines "risk" as it relates to pipeline integrity using qualitative measures of consequences in four categories (refer to the ERCBs *Compliance Assurance Risk Assessment Matrix*, dated Oct 21, 2005, for details (Appendix C, Ref 37):

- Health and safety
- Environmental impact
- Conservation
- Stakeholder confidence in the regulatory process

Four qualitative measures of likelihood of occurrence are also applied:

- Unlikely (less than once every 20 years)
- Moderate (once every 20 years)
- Likely (once every 3 years)
- Almost certain (once or more per year)

These subjective categories are then combined into a risk assessment map to produce a numeric risk rating, which is used to assign a level of enforcement based on the scores obtained, either high risk (score 5 to 8) or low risk (score 2 to 4).

Risk is a subjective term that depends upon the point of view of the stakeholder and whether such risk is voluntarily, or involuntarily acquired. Members of the public are typically willing to accept only a minor subjective level of risk of pipeline failure, approaching zero. Pipeline licensees tend to use a more quantitative approach to risk, including factors such as probability of failure due to a variety of variables, including:

- pipeline material
- pipeline location and exposure to crossings, such as roads and water bodies
- quality of pipeline construction
- commodity transported
- risk of corrosion
- risk of cracking
- costs of inspection, cleanup, repair and replacement

Different stakeholders have differing views, when it comes to considering pipeline risk. The regulator and the regulated company must keep an unwavering focus on the overarching need to maintain safety and continuity of supply to satisfy the public need. The general public expects a reliable supply of affordable energy delivered by the pipeline industry in a sound environmentally responsible manner. As with all human activity, pipeline transportation has associated risk, which can be described in simple terms as:

Risk = the likelihood of an undesirable event *x* the consequence of that event.

Examples of undesirable events include product release, injury and environmental damage. While these can occur as a result of human error and even negligence, they may also result from natural events such as severe flooding. Either way it is imperative to identify and then mitigate risk to an acceptable level; one which seeks to balance the cost associated with a given risk reduction strategy and the corresponding benefit. Since risk

cannot be entirely eliminated from pipeline transportation, the challenge is to reduce it to as low as is reasonably practicable – a measure known as ALARP. This is a well documented and commonly accepted legal test of striking a balance between multiple stakeholder interests. It is an intrinsic component in the development of pipeline integrity management programs and their subsequent regulatory validation.

3.4. Project Definition and Objectives

Alberta had almost 400 000 kilometers of provincially regulated pipeline at the end of 2010 (Appendix C, Ref 60). The ERCB regulatory approach uses informed risk assessment and management to guide its regulatory and technical pipeline application requirements, approval processes and inspection programs.

Provincial legislation and regulation governing pipeline safety in Alberta incorporate specific requirements covering all aspects of pipeline design, application requirements, construction, operations, maintenance, incident response, discontinuance and abandonment.

The ERCB ensures that stakeholders comply with the requirements of the Pipeline Act, Pipeline Regulation and applicable Canadian Standards Association (CSA) standards through ongoing surveillance, including operational inspections.

The ERCB requires licensees to report all pipeline incidents, not just spills. This includes even minor contact that does not result in pipeline damage or a release. In recent years the number of pipeline incidents per kilometer of installed pipe (see Appendix C, Ref 60) has been steadily declining. When an incident does occur, the ERCB holds licensees responsible for prompt, effective, and efficient response. *ERCB Directive 071: Emergency Preparedness and Response Requirements for the Petroleum Industry* outlines emergency planning and response requirements.

The Government of Alberta asked the ERCB to engage an independent third party to perform an assessment of the ERCBs current regulatory requirements and framework and industry best practices for **existing** ERCB-regulated pipelines related to:

- public safety and response to pipeline incidents
- pipeline integrity management
- safety of pipelines near water bodies

The purpose of the assessment is to determine if the ERCBs current regulatory requirements and industry best practices remain relevant and accurately reflect the risk profile of ERCB-regulated pipelines, and to identify areas for improvement. It will also include an assessment of how the ERCBs pipeline regulatory requirements and framework plus industry best practices for existing pipelines compare to other comparable jurisdictions (including other Canadian pipeline regulators).

4. Analysis of Results

The report was prepared addressing the three subject areas, and when regulations are referred to in general terms, it is typically with reference to pipeline integrity management.

4.1. Regulator General Comparison Information

Statements made in the following summary are based on information gained through interviews and internet searches. The collected information was used to gain an understanding of the size, complexity and number of pipeline licensees; as well as the total length of pipelines within each regulatory jurisdiction.

It is difficult to make a strict comparison of the effectiveness of various regulatory jurisdictions across Canada, North America and even the world since it was immediately apparent that no two are directly comparable in terms of the type of pipelines they regulate. Operational environments, pipe sizes and diversity of product carried vary between jurisdictions making direct comparisons difficult. Despite these factors, one thing in common is the desire for increased, and continuously improving pipeline safety. Comparing performance effectiveness of regulators on the basis of statistics can be misleading as reporting requirements are often different, incomplete or occur over differing time periods. Even normalized data can be difficult to compare, as there can be differences in the definitions used in incident causation classification.

The most recent version of the *Canadian Standard CSA Z662-11*, is adopted by all jurisdictions in Canada as the minimum standard required for pipelines. *CSA Z662* gives a more detailed description of what the provincial act and regulation expect, but are not limited to, thus allowing for additional information to be added via directives and guides specific to each province or jurisdiction where it deems relevant to increased pipeline safety. As stated previously, *CSA Z662* is considered a harmonizing standard for the design and operation of pipelines.

Within Alberta *all* pipeline failures must be reported, making this a unique database since there are no defined criteria relating to size of the spill, area affected or type of fluid released. Rather, if a failure occurs on any portion of a licensed pipeline, that failure is reportable and made mandatory through the Act (*Pipeline Act Part 6 Section 35*). In other countries or regions, such as Europe, the notification of a failure may be voluntary (Appendix C, Ref 205) or it may be specified through regulation, as is the case with the U.S. Federal Pipeline regulator PHMSA (*Title 49* of the *Code of Federal Regulations (CFR), Parts 191,194 &195*).

Pipeline leak statistics, although unique to each jurisdictional area, still provide valuable information for trending purposes. The information can still be used as an internal benchmark as well as helping to set goals and establish performance indicators essential to the goal of continuous improvement.

Alberta Energy Resources Conservation Board (ERCB):

The ERCB currently regulates 886 licensees operating approximately 400 000 km of pipelines within the province of Alberta. These pipelines carry various fluids and vary in length and size. Total lengths of pipeline and general product composition are tabulated below. All pipelines are licensed with spatial data (mapped locations) that are maintained for identification and record purposes. The ERCB follows a commonly adopted regulatory hierarchical system in that there is an act, regulation and directives governing the proper operation of a pipeline. These governing documents not only direct and guide the licensee toward compliance with the regulation, but also allow the regulator the basis for enforcing compliance. Such enforcement can be done through general field inspection,

partial system audits or following failure investigations. The licensee is held accountable for the safe design, operation, maintenance and abandonment of their pipelines.

The latest version of the *Canadian Standard Z662* is regularly referenced in the Alberta regulation as a minimum requirement. In addition the provincial directives and guides give provisions where necessary for increased pipeline safety. The following data was provided by the ERCB:

Product	Pipeline Length (km)
Oil Effluent	59 326
Crude Oil	19 698
Salt Water	23 793
Natural Gas	235 996
Sour Gas	22 098
Other	34 605
Total	395 516

British Columbia Oil and Gas Commission (B.C. OGC):

The B.C. OGC currently regulates 120 licensees operating approximately 39 000 km of pipeline within the province of British Columbia. Similar to Alberta these are composed of multiple flow lines, gathering lines, and sales or transmission lines conveying various products. All regulated pipelines are contained within Provincial boundaries. Listed below is the approximate length of pipelines in British Columbia. The following data was provided by the B.C. OGC:

Product	Pipeline Length (km)
Crude Oil	2 412
Salt Water	2 977
Natural Gas	19 159
Sour Gas	11 910
Other	2 565
Total	39 023

Saskatchewan Ministry of the Economy (formerly Ministry of Energy and Resources (MER)):

The Saskatchewan Ministry of the Economy currently regulates 25 licensees operating approximately 23 000 km of pipelines consisting of mainly sales or transmission pipelines within the province of Saskatchewan. They estimate approximately 68 000 pipelines are unlicensed flow lines that are not currently regulated. Similar to Alberta, the minimum standard for design, operation and maintenance follows the most recent version of *CSA Z662*. The 2011 Provincial Auditor of Saskatchewan Report Chapter 5 "Regulating Pipelines" (Appendix C, Ref 94) identified areas of improvement for which actions have since been taken. The following data was provided by the Ministry of the Economy:

Product	Pipeline Length (km)
Crude Oil	4 168
Salt Water	143
Natural Gas	16 907
Sour Gas	704
Other	1 124
Total	23 046

National Energy Board of Canada (NEB):

The National Energy Board currently regulates 99 licensees operating large diameter pipelines of approximately 70 000 km across Canada. Typically they are transmission pipelines (large diameter) crossing provincial or national boundaries. The following data was provided by the NEB:

Product	Pipeline Length (km)
Crude Oil	15 218
Salt Water	21
Natural Gas	51 260
Sour Gas	2 334
Other	1 381
Total	70 214

U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA):

The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration regulates approximately 3000 companies. Not all companies are upstream oil and gas producers; some are related to distribution utilities, falling under the PHMSA regulation. Approximately 798 000 km of onshore and offshore hazardous liquid, gas transmission and gathering pipelines are regulated under PHMSAs authority. (http://primis.phmsa.dot.gov/comm/PipelineBasics.htm)

Product	Pipeline Length (km)
Hazardous Liquid	281 575
Gas Gathering & Transmission	516 489
Total	798 064

Alaska Office of Pipeline Safety (OPS):

Onshore and offshore hazardous liquid, gas transmission and gathering pipelines are all regulated through the OPS. The lengths of pipelines regulated are listed below. (http://primis.phmsa.dot.gov/comm/reports/safety/AK_detail1.html)

Product	Pipeline Length (km)
Hazardous Liquid	1 820
Gas Transmission	1 025
Gas Gathering	105
Total	2 940

Texas Office of Pipeline Safety (OPS) interstate pipelines (through certification/delegation by PHMSA The Texas Railroad Commission (RRC) also regulates intrastate pipelines):

To give an understanding of the Texas regulatory regime, two tables are attached. The first relates to the type and length of licensed pipelines and the second to the jurisdictional responsibility.
(http://primis.phmsa.dot.gov/comm/reports/safety/TX_detail1.html).

Product	Pipeline Length (km)
Hazardous Liquid	88 529
Gas Transmission	102 429
Gas Gathering	11 181
Total	202 139

Regulatory Jurisdiction of Facilities Under the Pipeline Safety Act (Federal and State Jurisdiction)

The table below (Appendix C, Ref 146) shows the United States (DOT, RRC) breakdown of regulatory jurisdiction between the federal Department of Transportation (DOT/PHMSA) and the Texas Rail Road Commission (RCC). When comparing the Interstate grouping of the DOT responsibilities in the U.S. to that of the NEB of Canada, all gathering lines, whether rural or urban, are regulated in Canada if they cross a provincial border.

When comparing the RRC of Texas to that of the ERCB in Alberta it should be noted that sour pipelines in Texas are identified as containing 100ppm or higher. Offshore and natural gas distribution pipelines are regulated by the Texas RRC, where rural gathering lines are not. In Alberta, all pipelines within the borders of Alberta are regulated, either provincially by the ERCB or federally by the NEB (excluding utility pipelines).

	Natural Gas	Hazardous Liquids	Crude Oil	Sour Gas
Interstate				
Transmission	DOT	DOT	DOT	Not Regulated
Urban Gathering	DOT	DOT	DOT	Not Regulated
Rural Gathering	Not Regulated	N/A	Not Regulated	Not Regulated
Offshore(OCS)	DOT/BOEM	DOT/BOEM	DOT/BOEM	Not Regulated
Intrastate				
Transmission	RRC	RRC	RRC	RRC
State Offshore	RRC	RRC	RRC	RRC
Urban Gathering	RRC	RRC	RRC	RRC
Rural Gathering	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Lease/Flow Lines (bay & offshore)	RRC	RRC	RRC	RRC
Distribution	RRC	N/A	N/A	N/A
Master Meter System	RRC	N/A	N/A	N/A

(DOT – Department of Transportation, BOEM – Bureau of Ocean Energy Management, RRC – Railroad Commission of Texas , N/A – Not applicable)

4.2. Public Safety and Response to Pipeline Incidents

The following summary outlines how Alberta manages emergency preparedness and response, specifically with respect to ERCB regulated pipelines. Summaries are also provided for British Columbia, Saskatchewan and for federally regulated pipelines.

The comparison is based on interpretations of the pertinent acts, regulations, directives, plans, standards, requirements, frameworks, programs, protocols and strategies.

Emergency preparedness and response is a shared effort between the federal government, provincial/territorial governments, local authorities, non-government organizations and the private sector.

This consistent formula of governance and interaction, pertaining to public safety and response to pipeline incidents in Canada, allows the appropriate provincial authority to enact measures, either by assisting or leading in an emergency, or escalating it to a federal level whenever it is necessary to protect public safety or the environment. This is accomplished by engaging departments/agencies, and ensuring expertise and other resources are available to communicate, control and contain any level of emergency that arises.

Across Canada there appears to be a consistent and comprehensive approach when it comes to public safety and response to pipeline incidents. In addition, the widespread adoption of the Incident Command System ((ICS) Appendix C, Ref 173) has proven valuable not only across Canada, but also throughout North America and other areas worldwide (ICS was initially developed by the US Coast Guard). The ICS system implements uniformly, a set of personnel, policies, procedures, facilities and equipment requirements that have been integrated into a common organizational structure designed to improve emergency response operations of all types and complexities.

With the adoption of the ICS into overall emergency management systems, the identification of hazards and the preparedness and maintenance of emergency response plans (ERPs) with respect to those specific identified hazards, are tied together. A comparison of public safety and response to pipeline incidents may be found in tabular form in Appendix B1 of this report.

It will be apparent that there are a number of similar requirements among the various jurisdictions.

4.3. Pipeline Integrity Management

The following summarizes how pipeline integrity is managed, specifically with respect to ERCB regulated pipelines.

Pipeline integrity is the primary responsibility of a licensee or pipeline licensee and requires them to take a system-wide integrated approach to keeping their pipeline in a sound operating condition. By using risk mitigation activities, a licensee can ensure system operability and safety is achieved for the life of the pipeline.

The *Canadian Standard CSA Z662* contains provisions for addressing system integrity, with the *2003 S1-05* edition introducing *Annex N*: "Guidelines for pipeline system integrity management programs". This non-mandatory annex is enforced as mandatory in the ERCB *Directive 077* in Alberta. Similarly, BC has enforced it as mandatory, but it has not been adopted by the NEB, while the Saskatchewan regulations are silent on the matter.

The comparisons of the jurisdictions did not highlight any obvious deficiencies in Alberta on the subject of pipeline integrity; however, the regulator and licensee interviews did identify areas that have improvement opportunities.

4.4. Safety of Pipelines Near Water Bodies

The ERCB regulates activities at, or close to water bodies with some general, but few specific requirements on how the interaction of pipelines with water bodies are to be managed by the pipeline licensees. Pipelines with a major potential for failure at, or near a water body warrant special consideration as part of the company's risk assessment process (identified as high risk). However, the criteria for implementing mitigation inspection or monitoring activities to manage the risk is not clearly defined by the ERCB, rather it is determined largely by the pipeline licensees in their pipeline integrity management program. The following paragraphs outline the gaps found in the Alberta regulation, as well as those observed when comparing these to other regulations.

With respect to water bodies, there are areas in the Alberta pipeline regulation that are well defined as well as those that lack clarity or definition. The following paragraphs will outline both at a high level.

In the area of pipeline inspection, the Alberta regulation does not require specific integrity inspection practices to take place at water bodies. As part of the risk assessment process, the pipeline licensee determines the type and frequency of the physical condition (integrity) assessments of the pipeline.

ERCB *Directive 066* clearly states that a pipeline spill into water, if not immediately contained, is subject to high-risk enforcement.

Alberta and B.C. have very similar requirements for pipelines at or near water bodies. Because both jurisdictions have adopted *CSA Z662*, both adhere to the requirements of this standard and are therefore closely aligned. The Alberta regulation has more prescriptive requirements with respect to minimums of at least an annual inspection of the right-of-way where a pipeline crosses water (more frequently in certain cases depending on product in the pipeline and location).

Overall, the National Energy Board's regulatory requirements are similar to the regulation set out by the province of Alberta.

The federal Navigable Water Protection Act allows the Minister to impose any terms and conditions on the construction, maintenance, operation, safety and removal of the pipeline at a water body. This level of authority is not established in the Alberta regulation.

One key difference between the Alberta regulation and that found in the PHMSA regulation in the U.S. is that water bodies are clearly defined as high consequence areas by PHMSA. This includes navigable waterways, drainage systems or small streams that could flow to a high consequence area, farm tile fields, and roadway ditches that could carry spillage into a waterway. The Alberta regulation does not go as far as to define streams, ditches, etc. that may flow into another water body as being high consequence. In all other comparable areas, the Alberta and federal U.S. requirements are equivalent.

Australia has a more clearly defined regulation than the province of Alberta for pipelines at water bodies. The Australian regulation stipulates that pipeline owners must carry out inspections to identify actual or potential problems at water bodies. The Alberta regulation is more risk based and other than the prescribed right-of-way surface inspections, additional inspections may occur at a water body if the licensee deems this necessary. Additionally, the Australian regulation stipulates that if inspections at underwater crossings reveal a threat to the integrity of the pipeline, immediate action must be taken. The Alberta regulation does not contain such a statement.

The UK has very little specific regulation with respect to pipelines at water bodies, as they are typically managed through risk profiling. Where they do exist, they are found to be equivalent to Alberta.

To summarize, the Province of Alberta has in place strong regulation for pipelines and overall is well advanced when compared to other jurisdictions in the area of safety near water bodies. There are a few key areas where other jurisdictions are more prescriptive or provide more clarity than Alberta as outlined above. The Australian regulation was found to provide the most relevant comparison to Alberta, and it has developed a simple, but well-defined regulation that clearly outlines the expectation of pipeline operators and their approach to pipeline integrity management at water bodies. Alberta's risk assessment approach gives pipeline licensees the ability to determine their own level of risk tolerance as determined by their corporate risk profile. However, there could be benefit in enhancing the regulation to incorporate more clarity and definition with regard to expectations for design, inspection, mitigation and monitoring at water bodies in Alberta.

4.5. Effectiveness Evaluations of Pipeline Regulatory Documents

The pipeline safety review was not performed with the intention of declaring whether one regulatory environment is better than, equivalent to, or worse than any other selected regulatory environments for the three specified topics. The task was to compare (clause by clause) acts, regulations, best practices, etc., across jurisdictions and to summarize the differences. These comparisons ultimately led to an assessment of "effectiveness" in accordance with the criteria outlined in Figure 2.

The process followed is described in Section 5 Methodology. The information recorded in Appendix B was reviewed, compared and summarized up to the information presented in Table 1; which presents a very high level visual guide of comparative effectiveness of the assessed regulatory jurisdictions. As Table 1 is based on Appendix B, it has not taken account of any information gathered in any of the regulator or licensee interviews. The U.S. DOT comparison results suggest that the DOT regulatory provisions are more comprehensive than those of Alberta. The DOT regulatory provisions are assessed as more prescriptive than the Alberta regulatory provisions (and other Canadian jurisdictions). As stated in Table 1, Note 1, the Alberta regulatory provisions, as summarized, do not include the adopted requirements of *CSA Z662*, which has allowed the DOT regulatory provisions to appear as having more provisions.

The results of the comparisons are presented Table 1.

Figure 2: Criteria Affecting Regulation Effectiveness

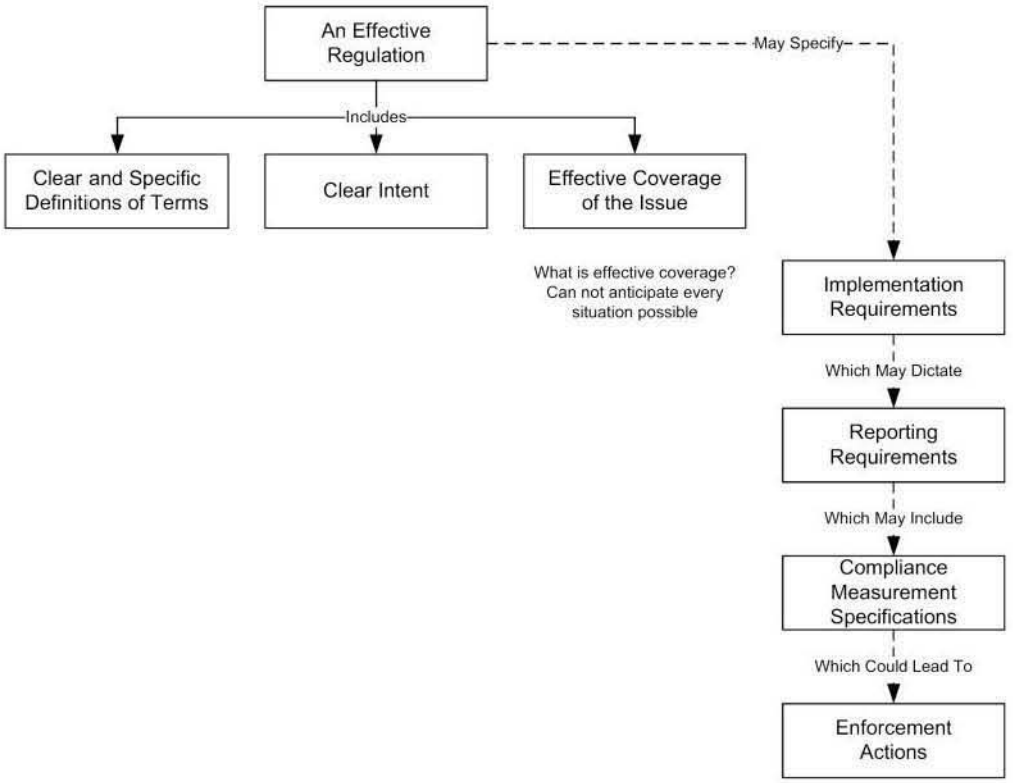


Table 1: Assessment and Comparison of Regulatory Provisions

Category	Subcategory	Ranking					
		Alberta	British Columbia	Saskatchewan	Canada (NEB)	Other	
						US (DOT)	Australia
Pipeline Integrity Management[1]	Legal / Technical Requirements	++	++	+	++	++	
	PIM Program Management	++	+	+	++	++	
	Damage Management	++	+	+	++	+++	
	Abandonment	+++	+	+	++	++	
Public Safety and Response to Pipeline Incidents	Program Requirements	++	++	+	+++		
	Compliance / Assurance	++	++	++	+++		
	Enforcement[2]	+	++	+	+++[3]	+++	
Safety of Pipelines Near Water Bodies	Definition	+++	++	0	++	++	0
	Inspection / Operation	++	+	0	0	+++	+++
	Risk	++	0	0	+	+++	++

Symbol	Description
0	No provision in place
+	Basic Provision
++	Several Provisions
+++	Many Provisions

1. *As all jurisdictions require CSA Z662 to be followed for pipeline operation, provisions made in that document are not included in the ranking of this table. Rather, ranking is based on the provisions in the documents provided by the individual jurisdictions.*
2. *Enforcement rating is based on the level of fines imposed at regulatory jurisdiction for oil and gas, other government divisions may also enforce but those are not being compared. It is noted that the ERCB does not fine licensees. Enforcement is applied by shutting in facilities until the reason for enforcement is corrected (this effectively applies a time based punitive measure).*
3. *NEB of Canada recently revised their enforcement penalty*

4.6. Industry Interviews

To enhance the value of the Pipeline Safety Review it was decided to interview a number of pipeline licensees; using a prepared script so feedback could be compared and practically summarized. The intent of the interviews was not to measure compliance, but rather to assess the practical ability to comply with the regulation and also determine where there may be instances or related opportunities for continuous improvement in the areas of: emergency response, pipeline integrity management and safety of pipelines near water bodies.

Given the number of companies that are pipeline licensees in Alberta, a representative sample was selected for interviews. The basis for selection was to have a mix of upstream, midstream and downstream (transmission); a mix of gas vs. liquids transporters and a blend of multi-jurisdictional and multi-national pipeline licensees. Within these criteria, interviewees included juniors through major multi-nationals.

Interview questions and summarized responses are presented in Table 2. The willingness of pipeline licensees to participate in interviews was excellent, and all licensees interviewed strongly support the need for continuous improvement in all aspects of pipeline safety.

Key points noted from the interviews are summarized as follows:

Emergency Response

- Emergency response programs (ERP) are typically universal and on the whole, meet the requirements of both the ERCB Directive 71 and the Incident Command System (ICS).
- Companies have a corporate ERP, typically supported by area and/or product specific ERPs.
- Companies that transport hydrocarbon liquids are typically more aware of the environmental consequences of a leak (compared to a gas leak) and have a higher awareness of how to react to pipeline leaks. This includes increased training for staff and (for the larger companies) having their own spill response equipment in addition to that available through their Western Canadian Spill Services (WCSS) co-op membership.
- Smaller companies are more likely to have relationships with environmental consultants/contractors to assist them in the event of a spill.
- All companies are aware of the regulatory requirements for leak detection, but the hydrocarbon liquids transporter have superior knowledge and capabilities with regard to leak detection methodologies (they will use computational pipeline monitoring, mass balance and supervisory control and data acquisition (SCADA), as well as surveillance); whereas gas transporters are more likely to be dependent on surveillance only (the other methods are typically less suited to gas operations).

Pipeline Integrity Management

- All the interviewed licensees have integrity management programs along with emergency response plans and understand the management systems approach.
- The size of the company plays an obvious part in the ability to have internal resources for the three subject areas. Smaller companies depend more on consultants; whereas, larger companies tend to have better in-house knowledge and best practices, though often support the process with the use of consultants.
- The tendency is to have one integrity management program, based on the dominant regulation (typically ERCB), occasionally supplemented by requirements from the NEB and/or Pipeline Hazardous Materials Safety Administration (PHMSA). In some instances companies with multiple regulators will maintain a single program with a default to the most demanding of the jurisdictional requirements.

- In isolated cases a company may still have integrity management programs, which are jurisdiction specific (including the U.S.).
- The ERCB appears to perform fewer audits than the NEB and B.C. OGC; but, seems to do more field inspections.
- The acts and regulations along with *CSA Z662*, Oil and Gas Pipeline Systems are typically the basis for the integrity management programs.
- The smaller companies more prevalently use industry best practices; whereas the larger companies tend to have their own internal best practices and/or expertise.
- Pipelines are typically abandoned in place, cleaned and made safe as per regulatory requirements.
- The ERCB requires notification of discontinuation or abandonment; whereas the NEB requires an application to discontinue or abandon a pipeline, confirming some inconsistency across regulators on the issue of abandonment.
- With respect to pipeline records (design, construction, operating, integrity and location), deficiencies are most prevalent with upstream companies, and definitely related to the age of the pipeline (older pipelines (pre 1990) have few or no records). A contributing factor to the reduction of available records is associated with historical ownership transfer.
- The majority of Alberta's pipelines being under one jurisdiction was stated as beneficial.
- Records in Alberta are typically more complete than in other jurisdictions.

Water Bodies

- There is no clear regulatory definition on water bodies and river/creek crossings.
- There is no regulator who clearly directs the identification of water bodies and river crossings.
- The minimum requirement is typically stated to be determination of water bodies/crossings off a 1:1 000 000 map.
- Industry uses 1:1 000 000, 1:250 000, and 1:50 000 maps, and in many cases supplement the map identification approach with ground patrol verification.
- Liquids transporters typically have more comprehensive water body/crossing identification criteria when compared to gas transporters.
- Pipeline integrity at river crossings is typically managed as an identified hazard during the risk assessment process.
- The number of pipeline water body inspections that identify concerns cannot be accurately stated; but, the predominant deficiencies are exposure or reduced soil cover due to surface ground erosion over time, or due to high flow events (predominantly the case for upstream and older pipelines).

Suggested Opportunities for Improvement

Based on the feedback collected from the interviews, key opportunities for improvement are summarized below:

Emergency Response:

- Consistency of ERP requirements and regulations across jurisdictions.
- Stakeholder education on the consequences of ground disturbance and ROW encroachment, as well as identifying pipeline right-of-ways, is commonly cited as an opportunity for improvement.

Clarity on which government agency (local/provincial/federal) has jurisdiction/lead in the event of an emergency, as well as co-ordination of communication from stakeholders, regulators and government to the public during an incident response.

Pipeline Integrity Management:

- Mandating records transfer.
- Harmonization of regulations and consistency to measuring compliance across jurisdictions.
- Third party ROW encroachment or pipeline interference is consistently referenced as still being a significant concern.
- The improved and prompt sharing of lessons learned is commonly cited as an opportunity for improvement (within and across jurisdictions and stakeholders).

Water Bodies

- Water body definition consistency/harmonization amongst the regulators.

A review of all the responses that were collected during the standard interviews is presented in Table 2.

Table 2: Collection of Stakeholder Interview Responses

Emergency Response	
Question	**Answer**
1. *Do you have an Emergency Response Plan? Has it been reviewed for effectiveness and compliance with code and regulatory requirements, when and by whom?*	• All companies have ERPs. • Typically there is a corporate or global ERP manual supported by area and/or product specific ERP manuals. • Some companies have a third level booklet/guide that is very area specific and carried by staff. • Most companies use the Incident Command System (ICS) process in some format. • All companies perform exercises, both field based and table top. • Table top ERP exercises are performed at least annually, typically multiple times. The larger companies with many fields/areas are in some cases doing in excess of 50 exercises a year. • Field ERP exercises are performed less frequently, from once per year rotating through fields/areas to once per area per year. • In most cases head office (Calgary) participates in the exercises. • Regulators are invited to exercises, and there is a mixed degree of attendance. • Similarly, local first responders are typically advised of, and invited to the field exercises. Again, there is a mixed degree of attendance. • The Western Canadian Spill Services (WCSS) Co-op performs regular exercises and most member companies will participate.
2. *What portions of the Act, regulations, directives and standards along with industry best practices were used as the*	• *Directive 071* is the predominantly referenced document. • ICS. • *CSA Z731, Z1600* and the future *Z246.2*. • *OPR-99*, B.C. OGC Emergency Response Requirements,

Emergency Response	
Question	**Answer**
basis for the evaluation of compliance of the Emergency Response Plans?	Canadian Environmental Protection Act (CEPA) documents. • Multi nationals use DOT/PHMSA documents, U.S. Coast Guard PREP, NIMS, CFR codes. • Majors may have internal best practices.
3. *Are you a member of a "spill co-op", or if not what is your corporate Emergency Response Plan?*	• All companies that transport liquids are members of a spill co-op (WCSS for Alberta). • Some companies consider themselves gas only and are not members of a spill co-op in Alberta. • The larger liquids focused transporters typically have their own spill response equipment and trained licensees (including ICS training in many cases). This may include spill response teams in some cases. • The smaller companies typically have relationships with environmental remediation contractors/consultants. • Larger companies typically have relationships with construction contractors for capital projects, and can redeploy equipment for a spill response fairly rapidly. • Formal and informal mutual aid agreements are typical throughout the industry. • There is typically a corporate environmental group involvement in the above.
4. *With reference to leak detection, do you have a formal approach to leak detection, and do you consider it to exceed the requirements of the Alberta regulation?*	• All companies are meeting and exceeding the regulatory (and *CSA Z662*) requirements in Alberta. • The predominantly liquid transporters have protocols and procedures in place for leak detection. • The predominantly liquid transporters use computational pipeline monitoring (CPM) systems, mass flow balance systems, supervisory control and data acquisition (SCADA) and visual surveillance. • The predominantly gas transporters rely extensively on right of way (ROW) surveillance. • Aerial and ground patrols are performed at least as required by the regulation, and in most cases more often. • Aerial patrols often include infrared (IR) and/or gas detection technologies. • Typically the frequency and type of leak detection surveillance is determined by risk analysis.
5. *Are there any obvious opportunities for the regulation to improve public safety and the response to pipeline incidents/leaks?*	The companies were all unique in their opinions on where there may be opportunity for improvement. Their suggestions are listed below: • Forming of a national one-call system. • Stakeholder education on ground disturbance consequences and identifying where pipelines are. • Consistency is desirable across jurisdictions with respect to ERPs. • As low as reasonably practicable (ALARP) approach is considered desirable. • Involving environmental department in pipeline risk assessments.

Emergency Response	
Question	**Answer**
	• There would be benefits to clarity on which government agency (local/provincial/federal) has jurisdiction/lead in the event of an emergency. • Co-ordination of communication from stakeholders, regulators and government to the public would be beneficial. • Setback requirements are inadequate in some cases (based on consequence). • ROW enforcement and the consequence to violators is non-existent. A caution on this is that it is preferable to have a third party strike reported rather than hidden. • Formalise the use of ICS for consistency. • Improve stakeholder understanding of the existing regulation/process with respect to emergency response (education). • Manage regulation such that budgets are not applied to low risk pipelines at the expense of reduced management and mitigation on higher risk pipelines. • Fines could be directed toward spill co-ops to improve the ability to respond effectively. • Get guidance from regulators on the minimum expectation for a response. • Ensure appropriate spill response is available to all licensees regardless of company size.

Pipeline Integrity Management	
Question	**Answer**
1. *Do you have a corporate Integrity Management Program, and has it been reviewed for compliance with code and regulatory requirements, when and by whom?*	• The answer to the question 'Do you have an Integrity Management Program?' was consistently yes; typically with a program that is typically a corporate one supported with specific area or asset programs where necessary. • Most IMPs are written to comply with the dominant jurisdiction (most often ERCB); but, with other jurisdictions taken into account. On a single occasion, the dominant jurisdiction was the Netherlands who is presumed to have better IMP requirements/regulation. • Some companies create separate IMPs for Canada vs U.S. (or other Canadian jurisdictions); however, for the most part they are relatively similar so it simply means slight revisions for each jurisdiction. • All IMPs have typically had jurisdictional, external and internal audits and reviews performed on them. • The NEB and the B.C. OGC appear to have a more formal audit protocol; however, the ERCB appears to perform more field or area inspections. • There does not appear to be any consistent regulator audit process or pattern. • Typically, all companies interviewed have a stated internal audit/review process, and most also have an external

Pipeline Integrity Management	
Question	**Answer**
	audit/review process (for multinationals this could be a company based external audit team).
2. *What portions of the Act, regulation, directives and standards along with industry best practices were used as the basis for the evaluation of compliance for the Integrity Management Programs?*	• All companies referenced *CSA Z662* and *Annex N* as the main guiding regulatory documents. • The relevant jurisdictional acts and regulations were referenced where pipelines were in the jurisdiction. • Directives, bulletins and information letters were routinely referenced. • Companies with a presence in the U.S. reference ASME and CFR codes and regulation. • Companies are all aware of industry best practices, but only around half of the companies appear to actively use them. • The majors tend to have internal best practices that predominate. • The juniors are more likely to reference and use industry best practices.
3. *Does the company have a philosophy for the abandonment of pipelines?*	• Typically discontinuation is favoured over abandonment. • All Companies have a decision process that is followed prior to discontinuation or abandonment. • Typically pipelines are discontinued/abandoned in place. • All companies have procedures and/or checklists that meet and/or exceed the minimum regulatory requirements. • Pipelines are generally cleaned prior to discontinuation/abandonment, and purged (generally with nitrogen). • One company leak tests the pipelines before discontinuation/abandonment. • The majors are more likely to have a group that manages discontinuation/ abandonment (of pipelines, wells and facilities) and these same companies typically have a budget for this activity. • The transmission pipeline companies tend to risk assess the decision to abandon in place or remove, and will remove if required. Often the removal of a pipeline is considered to have a more significant effect on the environment and public than leaving a line in place.
4. *Records are routinely stated as 'inadequate' in the pipeline industry. Please answer the following questions with one of the following responses: poor, reasonable, good, and complete.* a) *What is the status of design/construction records?* b) *What is the status of pipeline location records?* c) *What is the status of pipeline operational / integrity records?*	The answers that follow were received from a mix of transmission, midstream and upstream companies. a) Half the respondents indicated 'good', while half stated 'good' for newer lines down to 'poor' for old lines. b) Approximately 84 per cent responded 'good' and 'complete'. The remainder had some 'good' and some 'poor', dependant on area. c) Approximately 75 per cent responded 'good' to 'complete', 25 per cent mixed from 'poor' (age and area driven) to 'good'. d) Approximately 40 per cent stated 'good' to 'complete', 15 per cent 'reasonable', 25 per cent 'poor', and the rest of the responses were mixed, dependant on age, location and size of previous owner.

Pipeline Integrity Management	
Question	**Answer**
d) *When pipelines are acquired, are records (as above) supplied with the pipeline?* e) *When pipelines are sold, are records formally transferred to the new owner?*	e) Approximately 75 per cent responded 'good' to 'complete'. The remainder are mixed dependant on availability of the records to transfer. General comments: • Transmission and NEB regulated pipelines have better records. • Upstream companies have more challenges on records. • Upstream and midstream typically have poor records on older pipe. • The records appear to improve significantly for newer (post 2000) pipelines. • All respondents request records when acquiring pipelines and have mixed results from 'complete' records from larger companies and newer pipelines, to 'poor' records from smaller companies and older pipelines. • On occasion records are received but are incomplete. • All respondents transfer existing records with dispositions. • Comments were made that the records in Alberta are generally better compared to other jurisdictions.
5. *Are there any obvious opportunities for the regulation to improve the integrity management of pipelines in general or specific terms?*	• Unauthorised ground disturbance/third party damage is still identified as a concern. It was suggested there should be penalties for these events; but, some also discouraged this, as the preference is to have people/contractors advise when these events happen rather than hide the event for fear of retribution. • The opportunity exists for clarification on Engineering Assessment (EA). There is a perception of inconsistency on the requirements in an EA within, and across regulators. • Sharing of knowledge and information between regulators and stakeholders could be improved. • Sharing of incident statistics with stakeholders could improve (with more definition and clarity, and quicker). • Setting standard key performance indicators (KPIs) for leading and lagging indicators could be beneficial. • Harmonization and consistency of regulations across jurisdictions could be beneficial. Similarly, consistency within and across jurisdictions would be beneficial with respect to measuring compliance. • Regulators could lead stakeholder improvement technical studies, as is done by the Pipeline Hazardous Materials Safety Administration (PHMSA), or promote the development of certain technologies that are beneficial to pipeline Integrity. • Regulation mandating the transfer of existing pipeline records at the time of ownership change would be beneficial. • Guidance on what is required in a Risk Assessment could be beneficial. • The current map submission requirements on application are basic, more detailed mapping (construction and survey maps) are available and would improve the quality of the ERCB records on pipeline location going forward. • The management of setbacks in developed areas could be

Pipeline Integrity Management	
Question	**Answer**
	improved (create sterile zones on ROW's near towns and cities). • Sour service definition, per the regulation and codes, could be simplified.

Water Bodies	
Question	**Answer**
1. *What definition do you use to identify water bodies from applicable regulation, directives and standards?*	• All licensees consider ERCB *Directive 056* to be the minimum regulatory requirement guiding the identification of water body crossings in Alberta. • Companies that have natural gas feel the 1;1 000 000 Map criteria to identify river crossings is adequate (a gas leak is typically of lower consequence). • Companies with liquid pipelines typically use 1:250 000 or 1:50 000 maps to identify water bodies, and typically add ground based surveys to identify additional drainage risks. • Most companies have internal environmental departments and they typically have maps with higher than 1:1 000 000 resolution. • ERP maps are typically higher than 1:1 000 000 resolution. • Some companies have river crossings identified and monitored by their Geotechnical departments. • Some companies define their crossings and water bodies to Alberta Environment (AENV) and Environment and Sustainable Resource Development (ESRD) requirements (Appendix C, Ref 35 & 36). • On new pipelines, some companies identify crossings and water bodies off the construction alignment and survey maps.
2. *What portions of the Act, regulation, directives and standards along with industry best practices were used as the basis for identifying and establishing the number of pipelines crossing water bodies?*	• Alberta Pipeline Act, Regulation, *Directive 056, Directive 066, CSA Z662*, Alberta Environment and Sustainable Resources Act/Regulations//Codes of Practice. • There is no one clear document (regulatory or best practice) that directs pipeline licensees on how to identify water bodies. • A pipeline licensee will run risk assessments to identify water body crossings per company best practices.
3. *What is considered required by the regulation regarding the inspection' of river crossings?*	• The *Alberta Pipeline Regulation (43(1))* sets an annual requirement for the surface inspection of a pipeline that crosses water. • Companies typically extend the requirements to include depth of cover on pipelines. • Companies will typically inspect (in addition to the annual requirement) following high flow events. • Some companies consider the pipeline regulation requirements to be specifically for a surface inspection, and monitor pipeline integrity based on the risk assessment of the pipeline at the water crossing.

Water Bodies	
Question	**Answer**
	• Some companies perform integrity assessments as part of the annual water crossing inspection. • Some companies perform underwater inspections. • The minimum requirement to perform ROW surveillance and water crossing inspections was stated as always achieved, and in most cases exceeded. ROW surveillance flights in some cases are performed up to weekly.
4. *What percentage of Identified crossings, have been evaluated for compliance of patrol and annual inspection as required by the Act, regulation, directives and standards?*	• Consistently stated that all identified crossings have been evaluated for compliance.
5. *What percent of water body crossing inspections find concerns, and which are the most prevalent issues.*	• The per cent of water crossings that find concerns varies tremendously depending on the companies. From none to few and in one case potentially up to 10 per cent. • The predominant concern is reduced depth of cover (typically older pipelines). • Exposed pipelines, riverbank movement, missing signage were also noted as concerns.
6. *Are there any obvious opportunities for the regulation to improve the safety of pipelines at water bodies and crossings?*	• Clarity on the regulation and definition on what inspections are required and at what frequency would be beneficial. • Clarity on the regulation and inspection requirements for non-metallic pipelines would be beneficial. • Water body definition consistency/harmonization amongst the regulators (and stakeholders). • Pipeline licensees should have an inventory of water crossings, including location, pipeline, production details and incident response guidance. • Increase risk based inspection approach at crossings.

4.7. Regulator Interviews:

Interviews were conducted with members of the ERCB, B.C. OGC and the Saskatchewan Ministry of the Economy (Engineering Services Branch). The NEB provided their feedback through a written response to a prepared set of questions. The information gleaned from these interviews was typically consistent within and across the regulators and has been summarized below.

The following table reveals the number of licensees managed by each regulator (supplied by respective regulators, November, 2012).

Regulatory Jurisdiction	Number of Licensees
Alberta (ERCB)	886
British Columbia (OGC)	120
Saskatchewan (MER)	25
Canada (NEB)	99

Public Safety and Response to Pipeline Incidents

All of the regulators responded that they felt the systems and procedures in place for reacting to pipeline incidents are well established and adequate. There are currently revisions to the existing directives being prepared in both Alberta and BC, where improvements from past reviews, exercises and incidents were noted. The regulators commented that the addition of a requirement to follow the Incident Command System (ICS) in the pending revisions will contribute to improving current requirements and enhance public safety. Spill Co-ops have been set up across Alberta, BC and Saskatchewan; which provide a consistent and available resource of trained personnel and equipment for oil and gas industry emergency support.

All licensees transporting liquids are members of a spill co-op, all of whom require mandatory involvement in exercises. All required ERCB staff are trained to ICS requirements, and at least one person at all nine ERCB field offices, plus personnel within the central Calgary office, are trained responders (per formal advanced training provided by the Alberta Emergency Management Agency). This ensures that the ERCB is able to assist industry and synchronize with other government regulatory bodies to make sure emergencies are managed and that effective communications are maintained.

Pipeline Integrity Management

On the topic of pipeline integrity management it was noted that a *one size fits all* approach to regulation is not the best approach as industry has different needs and capabilities based on the licensee's competency and maturity level. It was noted that from the ERCB field inspectors' perspective, there is a necessity for simple prescriptive regulation in some cases; whereas the ERCB staff in Calgary were more supportive of a goal based approach. The NEB has had more experience of administering a performance-based approach than other regulators. Across all Canadian regulatory jurisdictions it is a common consensus that pipeline integrity management regulation is adequate, and that the onus is on the licensee to ensure their pipelines comply with existing regulation and are operated safely.

A next step, which has been identified by regulator staff, to improve overall pipeline integrity is checking the adequacy and effectiveness of a licensee's mandated integrity management program (IMP). Inspections, audits and maintaining records of the history of pipeline incidents is seen as areas for improvement in the application of integrity management programs and possible benchmarks for improvement.

Pipeline records transfer was also highlighted as an area for improvement. While there have been improvements in record keeping in recent years by licensees constructing new pipelines, there is a general understanding that records retention and transfer during the processes of acquisition and divestiture could be improved, thus allowing for more thorough integrity management.

In discussions with ERCB personnel, the issue of future resourcing to keep up with the expanding industry and changing technologies was a common concern. This is with reference both to technical competency, as well as number of resources available to perform regulatory oversight (this applies to all three subject areas of the review).

Safety of Pipelines near Water Bodies

The key point raised by interviewed regulators on the safety of pipelines near water bodies is a lack of consistency for the actual definition of a water body by a licensee. The definitions of water bodies, and the interpretation of the inspection requirements, varies dependent on the competency and maturity of the licensee. How licensees manage the safety of pipelines near water bodies will differ upon their understanding or interpretation of available definitions.

Risk

The interviews confirmed that all regulators understand that risk management is an integral part of their function; whether it is applied to design, inspection, audits, changes to regulation or emergency response and crisis management. The public, licensees and regulators experience exposure to risk every day; however, each has a different risk appetite and risk tolerance. The creation of a consistent framework that sets out requirements for risk definition and management will assist in building alignment amongst all parties on *acceptable* risk. If this risk framework is prepared collaboratively between regulators and government bodies (e.g. the ERCB and Alberta Environment), and possibly industry and the public through appropriate representation, the opportunity for an early consensus will improve. The ERCB has identified the need for the development of a corporate (ERCB) wide risk management system as a strategic objective, and have set a goal to achieve this.

5. Methodology

5.1. Method of Approach

5.1.1. Phase 1: Information Gathering and High-level Review

The pipeline safety review project was performed by a team of subject matter experts with diverse backgrounds, including engineers, academia, retired regulators and industry pipeline specialists; as well as technical staff still intimately involved with the pipeline integrity industry in Alberta and further afield.

The project leadership team and subject matter experts first defined the sources of document reference material and then the tasks required to procure the relevant materials for more detailed review. Ultimately, **twelve** jurisdictions were assessed and compared to an appropriate degree in the review (see Table 3).

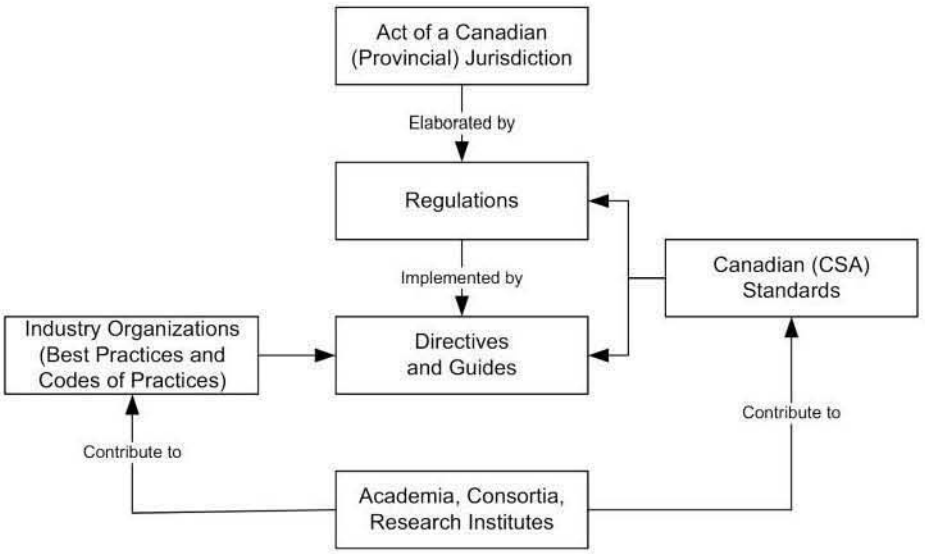
For U.S. jurisdictions, the federal regulator (DOT/PHMSA) and two representative states were included, reflecting the spectrum of U.S. regulation. A limited analysis of international jurisdictions — primarily UK/Europe and Australia — was included only at a high level. While not included as separate jurisdictions, pipeline and energy industry organizations were included to the extent that their best practices influence the Canadian regulatory environment for pipelines.

Table 3: Jurisdictions and other Information Sources Included in Review

Jurisdiction (Count)	Review Encompassed
Alberta (1)	Acts, Regulations, Directives, Guides
	Directly-referenced Canadian Standards Association (CSA) Codes
Canadian Provincial (2)	B.C., Saskatchewan, (offshore pipelines were not included because Alberta has none)
Canadian Federal (1)	NEB-Pipelines that cross a provincial or international boundary
U.S. Sample of States (2)	Texas: pipelines in operation the longest time
	Alaska: pipelines most stringently-regulated U.S. state
International (6)	United Kingdom, Netherlands, France, Norway, Brazil and Australia. High-level review only
Industry Organizations (6)	Reviewed principally for best practices; for example, CEPA, CAPP, INGAA, NOPSEMA, CONCAWE, UKOPA

A top-down approach to organize documents for inclusion; see Figure 3 for an idealized Canadian document organization.

Figure 3: Hierarchical Approach to Document Inclusion in Review



As relevant documents were gathered, they were further grouped into the three key subject areas listed in Section 3.4 specified by the ERCB as the focus of the analysis, noting any pertinent relationships between the areas.

The ERCB reference material was categorized, summarized and tabulated first, and was then cross-referenced to the remaining reference materials from other jurisdictions and stakeholders.

Information was also collected via interviews conducted with selected stakeholder representatives. Personnel interviewed included representatives of:

- the ERCB
- representatives of other regulators and jurisdictions (Canadian, North American and international)
- industry organizations
- pipeline licensees

Where possible, standardized interview scripts for the respective parties to be interviewed were prepared, to guide the interview process and provide consistency to the data collected. Each script was intended to assess an organization's understanding of the existing local regulation (and others if they are multi-jurisdictional) and best practices, and to determine if there are any obvious opportunities for improvement.

6. Appendices

Appendix A: Abbreviations Used

ACRONYM	DESCRIPTION
ABSA	Alberta Boilers Safety Association
ACoP	Approved Code of Practice
AEMA	Alberta Emergency Management Agency
AENV	Alberta Environment
AEW	Alberta Environment and Water
AGA	American Gas Association
AHS	Alberta Health Services
AHW	Alberta Health and Wellness
ALARP	As Low As Reasonably Practicable
APC	Alaska Pipeline Commission
API	American Petroleum Institute
APUC	Alaska Public Utilities Commission
ARD	Agriculture and Rural Development
AS	Australian Standard
ASERT	Alberta Environment Support Emergency Response Team (with AEW)
ASME	American Society of Mechanical Engineers
ASSIST	Alberta Security and Strategic Intelligence Support Team
AT	Alberta Transportation
B.C. OGC	British Columbia Oil and Gas Commission
BOEM	Bureau of Ocean Energy Management
BSi	British Standards
C-FER	Technologies – Centre for Frontier Engineering Research
CAPP	Canadian Association of Petroleum Producers
CAR	Community and Aboriginal Relation Group (ERCB)
CDJ	Canada Department of Justice
CEPA	Canadian Energy Pipeline Association
	Canadian Environmental Protection Act
CEAA	Canadian Environmental Assessment Act
CFR	Code of Federal Regulations (United States)
CGA	Canadian Gas Association
CI	Critical Infrastructure
CIC	Alberta Transportation Coordination and Information Centre

ACRONYM	DESCRIPTION
CMO	Consequence Management Officer
COGOA	Canada Oil and Gas Operations Act
COMAH	Control of Major Accident Hazards Regulations
CONCAWE	Conservation of Clean Air and Water in Europe
COPR	Common Operating Picture Report (for ministers)
CPEC	Canadian Pipeline Environment Committee
CPUC	California Public Utilities Commission
CSA	Canadian Standards Association
DFO	Department of Fisheries and Oceans Canada
DOT	Department of Transportation (United States)
DRP	Disaster Recovery Program
EC	Environment Canada
ECO	Emergency Operations Centre
EI	Employment and Immigration
EOC	Emergency Operations Centre
EPA	Environmental Protection Agency (United States)
EPWG	Emergency Planning Working Group
ERCB	Energy Resources Conservation Board
ERG	Emergency Response Group (with ERCB)
ERP	Emergency Response Plan
ESRD	Ministry of Environment and Sustainable Resources Development
EU	European Union
EUB	Energy Utilities Board
FNHIB-HC	First Nations and Inuit Health Branch - Health Canada
GoA	Government of Alberta
H_2S	Hydrogen Sulphide
HADD	Harmful Alteration, Disruption or Destruction
HSE	Health Safety and Executive (United Kingdom)
IB	Information Bulletin
ICS	Incident Command System
ID	Interim Directive
IG-26	ERCB Internal Guide 26 - Incident Response and Reporting Protocol
INGAA	Interstate Natural Gas Association of America
IRR	Incident Response Report

ACRONYM	DESCRIPTION
KPI	Key Performance Indicators
MA	Municipal Affairs
MBCA	Migratory Birds Convention Act
MEP	Municipal Emergency Plan
MERSK	Ministry of energy Resources of Saskatchewan
MOEON	Ministry of Energy Ontario
MOU	Memorandum of Understanding
NACE	National Association of Corrosion Engineers
NEB	National Energy Board
NEBA	National Energy Board Act
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority (Australia)
NTA	Netherlands Technical Agreement
NWPA	Navigable Waters Protection Act
OC	Oil Commission
OEB	Ontario Energy Board
OECD	Organization for Economic Co-operation and Development
OH&S	Occupational Health & Safety
OSFM	Office of the State Fire Marshal
OSHA	Occupational Safety and Health Administration
PAB	Public Affairs Bureau
PAPA	Pipeline Association for Public Awareness
PAS	Publicly Available Specification
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIA	Post Incident Assessment
PIISP	Petroleum Industry Incident Support Plan
POC	Provincial Operations Centre (formerly known as the GEOC)
PoE	Pathways of Effects
PPSA	Pigging Products and Services Association
PRCI	Pipeline Research Council International
PSC	Public Safety Canada
REOC	Regional Emergency Operations Centre
RRC	Railroad Commission of Texas
RSA	Revised Statutes of Alberta
RSBC	Revised Statutes of British Columbia

ACRONYM	DESCRIPTION
RSC	Revised Statutes of Canada
RSS	Revised Statutes of Saskatchewan
RSO	Revised Statutes of Ontario
SA	Service Alberta
SARA	Species at Risk Act
SBC	Statutes of British Columbia
SC	Statutes of Canada
SIESO	Society of Industrial Emergency Services Officers
SITREP	Situation Report
SME	Subject Matter Expert
SO	Statutes of Ontario
SoIGPS	Alberta Solicitor General and Public Security
SOR	Statutory Orders and Regulations
SPOG	Sundre Petroleum Operations Group (mutual aid group)
SRD	Sustainable Resource Development
SS	Statutes of Saskatchewan
ST	Statistic Report
TC	Transport Canada
TSB	Transportation Safety Board of Canada
TSSA	Technical Standards and Safety Authority (Ontario)
UK	United Kingdom
UKOPA	United Kingdom Onshore Pipeline Operators' Association
U.S.	United States
USC	United States Code
USCG	United States Coast Guard
WCSS	Western Canadian Spill Services Ltd.

Appendix B: Compilation and Summary of Actual Clause Text for Acts, Regulations, and Directives and Guidelines by Jurisdiction

Appendix B for the Alberta Pipeline Safety Review is comprehensive and extensive. In order to provide easy reference for the reader, the table below is provided to guide the selection of information for comparison. By lining up the jurisdiction of choice next to Alberta, all rows will line up for comparison. If a table shows a shaded cell it means that there is no comparable act, regulation, directive, etc.

For the Canadian jurisdictions, comparisons were made of the information in Appendix B. For the U.S. and international regulatory bodies, the review was at a higher-level and comparisons were only made where obvious and relevant.

It is important to note that all comparisons in this review are made with Alberta as the constant. *It is recommended that the Alberta tab is opened first, and that the other jurisdiction tabs are opened in comparison to Alberta. Comparing non-Alberta jurisdictions to each other in this appendix may in some cases provide inadequate information.*

Public Safety & Response to Pipeline Incidents				
	Alberta	BC	Sask	NEB
	1ERP 1AB	1ERP 2BC	1ERP 3SK	1ERP 4NEB

Pipeline Integrity Management								
	Alberta	BC	Sask	CSA	NEB	U.S. DOT	Alaska	Australia
Abandonment	2-1PIM 1AB	2-1PIM 2BC	2-1PIM 3SK	2-1PIM 4CSA	2-1PIM 5NEB	2-1PIM 6DOT	2-1PIM 7ALASKA	2-1PIM 8AUS
Board Inspection and Legal	2-2PIM 1AB	2-2PIM 2BC	2-2PIM 3SK	2-2PIM 4CSA	2-2PIM 5NEB	2-2PIM 6DOT	2-2PIM 7ALASKA	2-2PIM 8AUS
Leaks, Damage, Records	2-3PIM 1AB	2-3PIM 2BC	2-3PIM 3SK	2-3PIM 4CSA	2-3PIM 5NEB	2-3PIM 6DOT	2-3PIM 7ALASKA	2-3PIM 8AUS
Ground Disturbance	2-4PIM 1AB	2-4PIM 2BC	2-4PIM 3SK	2-4PIM 4CSA	2-4PIM 5NEB	2-4PIM 6DOT	2-4PIM 7ALASKA	2-4PIM 8AUS
Operation-Change-Monitor	2-5PIM 1AB	2-5PIM 2BC	2-5PIM 3SK	2-5PIM 4CSA	2-5PIM 5NEB	2-5PIM 6DOT	2-5PIM 7ALASKA	2-5PIM 8AUS
PIM and Corrosion	2-6PIM 1AB	2-6PIM 2BC	2-6PIM 3SK	2-6PIM 4CSA	2-6PIM 5NEB	2-6PIM 6DOT	2-6PIM 7ALASKA	2-6PIM 8AUS

Safety of Pipelines near Water Bodies							
	Alberta	BC	Standards	CSA	U.S. DOT	Australia	UK
	3All Water 1AB	3All Water 2BC	3All Water 3Standards	3All Water 4Cda	3All Water 5US	3All Water 6Aus	3All Water 7UK

Appendix B1: Public Safety and Response to Pipeline Incidents

Refer to attached document: ApdxB1-Public Safety and Response to Pipeline Incidents.pdf

Appendix B2: Pipeline Integrity Management

Refer to attached document: ApdxB2-PIM Comparison Table.pdf

Appendix B3: Safety of Pipelines near Water Bodies

Refer to attached document: ApdxB3-All Water Comparison Table.pdf

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[20] USC – United States Code

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[27] EPWG – Emergency Planning Working Group
[28] NTA – Netherlands Technical Agreement
[29] PAS – Publicly Available Specification
[30] UK – United Kingdom
[31] COMAH – Control of Major Accident Hazards Regulations

FOR REVIEW: UBCM Response

Friday, May 23, 2014
3:32 PM

Subject	**FOR REVIEW: UBCM Response**
From	Day, Kristin ENV:EX
To	Poss, Angie ENV:EX
Sent	Friday, January 24, 2014 1:42 PM
Attachments	 Letter_UBCM_Jan2013

Kristin Day | Emergency Planning Analyst
Environmental Emergency Program | Environmental Protection Division
Ministry of Environment

Phone: 250-953-3407
3rd Floor, 2975 Jutland Road | Victoria, BC | V8T 5J9

EMAIL RESPONSE

Reference: 200168

Sharon Gaetz, Chair
Environment Committee, UBCM
c/o Maria Stanborough, Senior Policy Analyst
Email: mstanborough@ubcm.ca

Dear Ms. Gaetz:

Thank you for your email of January 13, 2014, restating UBCM's position regarding the enhanced industry funded Land Based Spill Preparedness and Response project currently underway in British Columbia. On behalf of the Ministry, I would like to thank UBCM for providing input on the first Policy Intentions Paper and your participation in the Advisory Committee. Your continued support and engagement as we develop BC's spill preparedness and response policy is very much appreciated.

We recognize the unique challenges faced by local governments and understand your particular concerns, especially in ensuring a collaborative approach to spill prevention, preparedness and response as well as effective and efficient rules for restoration of the environment following a spill. BC's communities face direct risks and costs as a result of a spill incident, as we work toward a new world class spill preparedness and response program we are aware of how local governments are impacted by spills and their critical role in first response. We are working hard to ensure that new regulations are effective and practical in addressing these unique challenges.

We share local governments concerns about the importance of establishing a provincial spill response contingency fund. Our goal remains to ensure that funding for immediate and appropriate response to spill events can be guaranteed and accessed in a timely and efficient manner in keeping with the polluter-pay principle. We are committed to continuing to work with industry representatives towards this goal.

Like UBCM, the Ministry of Environment sees real benefit in having Geographic Response Plans (GRPs) available to all responsible parties and responders. Understanding the need for risk based requirements, we are mindful of addressing the conditions and capacity specific to BCs diverse communities. While we continue to consult on the broader elements of spill preparedness and response, GRPs are one area where we can all agree to move sooner. We are working with industry representatives and spill response experts to discuss how we can collaboratively get started on these plans in the near future.

We look forward to your detailed comments on the second Policy Intentions Paper later this year.

Thank you again for taking the time to write.

Sincerely,

Mary Polak
Minister

Denis, Alexandra ENV:EX

From: Knox, Graham G ENV:EX
Sent: Friday, March 21, 2014 8:21 AM
To: Hofweber, Jim E ENV:EX
Subject: CEPA's IP request

Hi Jim,

I wanted to provide some feedback on CEPA's request for changes to the Intentions Paper in regards to both the proposed spill response and recovery contingency fund and compensation for loss of public use during and post spills.

s.13

Thanks,

Graham Knox
Director, Environmental Emergency Program
BC Ministry of Environment
(250) 356-8383

NAME	ORGANIZATION
Acheson, Kathy	Government of Alberta
Affonso, Amanda	CEPA
Ahearn, Brian	Canadian Fuels Association
Arcand, Wayne	Kinder Morgan
Babstock, Peter	Transport Canada
Bak, Andrew	Tsawwassen First Nation
Bak, Andrew	Tsawwassen First Nation
Barton, Shawn	BC Environmental Industry Association
Beltrano, Linda	MNGD
Beuk, Gary	Canadian Association of Petroleum Producers
Bird, Jim	Canadian Association of Chemical Distributors
Bokhari, Amar	Government of Alberta
Boulanger, Alain	Shell
Buffin, Andrew	Government of Alberta
Bunce, Chris	Railway Association of Canada
Bundred, Martin	Government of Alberta
Burzek, Mike	OGC
Carby, Shawn	Ministry of Health
Chiang, Marylyn	UBCM
Chung, William	Transport Canada
Clarke, Shell	Canadian Fuels Association
Crook, Carolyn	Transport Canada
Dalmer, Denise	BCBC
Danks, Anthony	MoE
Devenis, Peter	Canadian Association of Petroleum Producers
Donnelly, Bryan	Canadian Association of Petroleum Producers
Eldridge, David	TC
Feyrer, Laura	MoE
Flynn, Tyson	Government of Alberta
Fuoco, Joe	Canadian Fuels Association
Gardiner, Timothy	NRCAN
Hanna, Abla	NRCAN
Harmon, Harmon	Ministry of Transportation and Infrastructure
Hawley, Stephen	NRCAN
Henderson, Michael	Transport Canada
Hibbard, Jim	BC Environmental Industry Association
Higgins, Andrew	CNRL
Houle, Kevin	Railway Association of Canada
Jahelka, Bill	CAPP
Jasper, Mark	Canadian Emergency Response Contractors' Alliance
Johnson, Ken	BC Trucking Association
Kittle, Doug	Chemistry Industry Association of Canada
Klear, Krishna	MNGD
Klimko, Olga	MNGD
Kluckner, Paul	Environment Canada

Knight, Patrick	BC Environmental Industry Association
Konovsky, John	Tsleil-Waututh Nation
Lamarche, Philippe	Suncor
Lee, Jason	Treaty 8 Tribal Council
Lowenger, Mike	Railway Association of Canada
MacFarlane, Mike	MoE
MacKay, Fiona	BC Pulp and Paper Environmental forum
Mattu, Gevan	Environment Canada
Mauch, Anne	COFI
McDonald, Sandy	BC Trucking Association
McHugh, Owen	Canadian Energy Pipeline Association
McLeod, Trevor	Government of Alberta
Michielsen, Adrian	Canadian Association of Petroleum Producers
Mihlar, Fazil	MNGD
Moir, Kate	Environment Canada
Mullin, Malcolm	Government of Alberta
Neilson, Gary	Alberta Energy Regulator
Nelson, Lee	Railway Association of Canada
Noseworthy, Dave	Alberta Energy Regulator
O`Rourke, Dan	CEPA
Ollenberger, Lance	Oil and Gas Commission
Olson, Brent	BC Environmental Industry Association
Ord, Kris	MoE
O'Rourke, Dan	Canadian Energy Pipeline Association
Ouellette, Jean	Railway Association of Canada
Paquin, Lisa	MoE
Paulson, Ken	OGC
Pellerin, Normand	CN
Raymond, Chris	Environment Canada
Reicher, Philippe	CEPA
Ross, Ellis Chief	Haisla First Nation
Ross, Paul	Environment Canada
Saad, Ziad	CEPA
Saha, Sagarika	MoE
Sarrazin, Randal	Chemistry Industry Association of Canada
Skowronski, John	CFA
Stanborough, Maria	UBCM
Vanroosmalen, Miriam	Canadian Coast Guard
West, Karen	Canadian Association of Petroleum Producers
Wilhelmson, Christianne	Georgia Strait Alliance
Williams, Blake	CFA
Wong, Sara	Government of Alberta
Wouter, Garry	Coastal First Nations Group
Wright, Stephen	Environment Canada
Yako, Louise	BC Trucking Association
Young, Lorna	Chemistry Industry Association of Canada
Zajdlik, David	Canadian Fuels Association

EMAIL

Kathy.Acheson@gov.ab.ca
aaffonso@cepa.com
brianahearn@canadianfuels.ca
wayne_arcand@kindermorgan.com
peter.babstock@tc.gc.ca
abak@tsawwassenfirstnation.com
abak@tsawwassenfirstnation.com
sbarton@tervita.com
Linda.Beltrano@gov.bc.ca
gary.a.beuk@esso.ca
jim.bird@univarcanada.com
Amar.Bokhari@gov.ab.ca
Alain.Boulanger@shell.com
Andrew.Buffin@gov.ab.ca
Chris_Bunce@cpr.ca
Martin.Bundred@gov.ab.ca
Mike.Burzek@bcogc.ca
Shawn.Carby@gov.bc.ca
mchiang@ubcm.ca
William.Chung@tc.gc.ca
shell.clarke@huskyenergy.com
carolyn.crook@tc.gc.ca
denise.dalmer@bcbc.com
Anthony.danks@gov.bc.ca
pdevenis@talisman-energy.com
bryan.donnelly@capp.ca
David.Eldridge@tc.gc.ca
Laura.Feyrer@gov.bc.ca
Tyson.Flynn@gov.ab.ca
joe.fuoco@chevron.com
Timothy.Gardiner@NRCan-RNCan.gc.ca
Abla.Hanna@NRCan-RNCan.gc.ca
Linda.Harmon@gov.bc.ca
Stephen.Hawley@NRCan-RNCan.gc.ca
michael.henderson@tc.gc.ca
jhibbard@tervita.com
Andrew.Higgins@cnrl.com
Kevin_Houle@cpr.ca
wjahelka@suncor.com
mjasper@qmlp.ca
kjohnson@kjtrucking.com
dandg@shaw.ca
Krishna.Klear@gov.bc.ca
Olga.Klimko@gov.bc.ca
paul.kluckner@ec.gc.ca

pknight@qmlp.ca
jkonovsky@twnation.ca
plamarche@suncor.com
jlee@treaty8.bc.ca
MikeL@railcan.ca
Mike.Macfarlane@gov.bc.ca
fionam@celgar.com
gevan.mattu@ec.gc.ca
Mauch@cofi.org
sandy@alchemistspecialtycarriers.com
owen.mchugh@enbridge.com
Trevor.Mcleod@gov.ab.ca
adrian.p.michielsen@esso.ca
Fazil.Mihlar@gov.bc.ca
kate.moir@ec.gc.ca
Malcolm.Mullin@gov.ab.ca
Gary.Neilson@aer.ca
lee.nelson@cn.ca
Dave.Noseworthy@aer.ca
Dan_O'Rourke@kindermorgan.com
lance.ollenberger@bcogc.ca
bolson@keystoneenvironmental.ca
Kris.Ord@gov.bc.ca
Dan_O'Rourke@kindermorgan.com
jean.ouellette@cn.ca
Lisa.Paquin@gov.bc.ca
Ken.Paulson@bcogc.ca
normand.pellerin@cn.ca
Chris.Raymond@ec.gc.ca
preicher@cepa.com
crystal.smith@haisla.ca
Paul.Ross@ec.gc.ca
zsaad@cepa.com
Sagarika.Saha@gov.bc.ca
rsarrazin@chemtradelogistics.com
johnskowronski@canadianfuels.ca
mstanborough@ubcm.ca
miriam.vanroosmalen@dfo-mpo.gc.ca
kwest@talisman-energy.com
christianne@georgiastrait.org
blake.williams@huskyenergy.com
Sara.Wong@gov.ab.ca
gwouters@coastalfirstnations.ca
Steven.Wright@ec.gc.ca
louisey@bctrucking.com
lyoung@canadianchemistry.ca
david.zajdlik@parkland.ca

FW: 2nd Intention Paper

Monday, May 26, 2014
12:05 PM

Subject	**FW: 2nd Intention Paper**
From	Hofweber, Jim E ENV:EX
To	Knox, Graham G ENV:EX; Poss, Angie ENV:EX; Vander Steen, Benjamin ENV:EX
Sent	Friday, March 14, 2014 9:49 AM
Attachments	 BC Review - CEPA Com...  Prov_Federa l_regulato...

From: Amanda Affonso [mailto:aaffonso@cepa.com]
Sent: Friday, March 14, 2014 9:45 AM
To: Philippe Reicher; Hofweber, Jim E ENV:EX
Cc: Ziad Saad
Subject: RE: 2nd Intention Paper

Good morning Jim,

CEPA has had the opportunity to review the "Comparison of existing regulatory requirements across several provincial and federal regulators" document as noted below in Philippe's email. Our review of the documents reflect the pipeline perspective and focus on two questions:

- From an NEB pipeline perspective are there any items our federally regulated pipes not doing as suggested with the Blue font that BC would like to propose?
- From a BC OGC pipeline perspective are there any items our provincially regulated pipes not doing as suggested with the Blue font that BC would like to propose?

We wanted to share this in advance of our meeting next week as there is a lot of information to review.

If you have any questions feel free to contact me or we can discuss at our meeting next week.

Regards,

Amanda Affonso
Director, Regulatory & Financial

Canadian Energy Pipeline Association
Suite 200, 505–3rd St. SW
Calgary, Alberta T2P 3E6

Phone 403.221.8756
Cell 403.585.6933
Fax 403.221.8760

aaffonso@cepa.com
aboutpipelines.com

From: Philippe Reicher
Sent: Thursday, March 13, 2014 12:31 PM
To: Hofweber, Jim E ENV:EX (Jim.Hofweber@gov.bc.ca)
Cc: Amanda Affonso
Subject: 2nd Intention Paper
Importance: High

Hello Jim

Thank you for the discussion this morning. We will take you on the offer that you can make yourself available for a meeting in Calgary next week. What about Tuesday from 11 to 1 PM (lunch will be provided)? It will allow us to go over the paper with our comments, present to you the analysis we have conducted of existing regulatory requirements across several provincial and federal regulators.

Please advise if the proposed time is convenient to you.

Regards,

Philippe Reicher, MEDes
Vice President, External Relations

Canadian Energy Pipeline Association
Suite 200, 505–3rd St. SW
Calgary, Alberta T2P 3E6

Phone 403.221.8778
Cell 403.863.2453
Fax 403.221.8760

preicher@cepa.com
aboutpipelines.com

Evaluation of the proposed Requirements for BC's Spill Preparedness and Response.

Main Findings:

From a pipeline perspective, based on the review of the information provided in the *Comparison of Existing and Proposed Requirements for BC's Spill Preparedness and Response across Regulators*, it can be concluded that NEB regulatory framework and BC OGC regulatory framework have in place effective methods to deal with pipeline spills and emergency response, or an effective provincial regulatory framework will be in place once the OGC Emergency Management Regulation is implemented.

The Alberta Pipeline Safety Review assessed the regulatory requirements for "public safety and response to pipeline incidents" and the preparedness of the regulators and the licensees. It determined an overall consistency in competence, understanding and preparedness for an incident.

Addressing the first question:

"From an NEB pipeline perspective are there any items our federally regulated pipes not doing as suggested with the Blue font that BC would like to propose?"

In general, most of the proposed requirements are already addressed by the NEB requirements and the proposal does not represent an additional requirement for pipelines, however, there is one area for additional coordination of methodology. Most pipeline companies conduct environmental sensitivity classifications and risk assessments. However, the Alberta Pipeline Safety Review recommends the implementation of risk ranking of all pipelines based on standardized methodology to be developed by Canadian regulators and stakeholders. This recommendation was focused on integrity management, but would also address risk ranking of all hazards. The NEB should work with other regulators to develop and implement such a standardized risk ranking methodology.

The NEB does not prescribe spill response standards, however, the CSA Z662 Standard requires evidence of a leak to be investigated promptly and the CEPA-member companies are committed to a quick response to all incidents. Specific time standards for site response depend on accessibility to the spill site.

In general, once the incident is reported to the NEB, the NEB will work with the pipeline company to ensure all the appropriate actions take place corresponding to the location of the incident and the severity of the incident. Therefore, the ongoing spill response action report, spill response closure report, incident response debriefs, process for implementing environmental and natural resource recovery, environmental sampling/monitoring strategies, agency and public information communication strategies, spill modeling, injured wildlife reporting, wildlife management, waste management, clean up assessments, and environmental damage assessments will be addressed by the pipeline company in consultation with the regulator and affected stakeholders.

The NEB has detailed requirements for Emergency Management Program, and Emergency Response Plans which include requirements for continuous improvement, geographic response plans, base maps, local area engagement, frequency and scope of training/exercises, training and exercise records, regular updating of the plans, standard elements to be addressed in an emergency response plan or geographic response plan, protection strategies to protect resources/infrastructure and evacuation procedure. Use of Incident Command Structure (ICS) protocol is consistent with CEPA Integrity First Program and the CEPA Mutual Emergency Assistant Program. The OGC and Alberta Energy Regulator (AER) require the use of ISC. It is very likely that most of the NEB regulated companies within BC use ICS.

Almost all pipeline in Alberta use the Western Canadian Spill Services (WCSS). It is likely that NEB regulated pipelines in NE BC also use the WCSS. WCSS helps to ensure qualified, trained and experienced response to incidents. This addresses the proposed requirements for certifications of response organization, responder training certification, spill response equipment and caches, staging strategies, staff resource/capacity to respond, general response tactics, and spill response communication technology. In areas outside of WCSS boundaries, the pipeline companies comply with existing regulatory requirements.

The NEB is working on the Financial Viability and Financial Responsibility Guidelines. The guidelines should formalize spill contingency funding, cost recovery for impacts of a spill and damage claim process. CEPA-member companies take responsibility for all phases of emergency response, remediation, and reclamation in the event of an incident and will continue to do so, regardless of regulation.

The model for funding of the NEB is well established and does not need supplemental funding for incidents.

Addressing the second question:

"From a BC OGC pipeline perspective are there any items our provincial regulated pipelines not doing as suggested with the Blue font that BC would like to propose?"

In general, once the OGC emergency management regulation is implemented, the OGC requirements and approach will be similar to that of the NEB. Most of the proposed requirements are already addressed by the OGC requirements or the proposed OGC Emergency Management Regulation and the proposal as suggested in the Blue font does not represent an additional requirement for OGC pipelines.

Similar to the NEB requirements, most OGC pipeline companies conduct environmental sensitivity classifications and risk assessments. As presented in the discussion of the NEB requirements, the Alberta Pipeline Safety Review recommends the implementation of risk ranking of all pipelines based on standardized methodology to be developed by Canadian regulators and stakeholders. This recommendation was focused on integrity management, but would also address risk ranking of all hazards. The OGC should work with other regulators to develop and implement such a standardized risk ranking methodology.

Similarly to NEB, the OGC does not prescribe spill response standards, however, the CSA Z662 Standard requires evidence of a leak to be investigated promptly and the CEPA-member companies are

committed to a quick response to all incidents. Specific time standards for site response depend on accessibility to the spill site.

As discussed under the first question, the NEB is working on the Financial Viability and Financial Responsibility Guidelines. The guidelines should formalize spill contingency funding, cost recovery for impacts of a spill and damage claim process. CEPA-member companies take responsibility for all phases of emergency response, remediation, and reclamation in the event of an incident and will continue to do so, regardless of regulation. If this is addressed by the OGC, the OGC should ensure that its financial viability and financial responsibility guidelines are compatible with the results of the NEB effort.

The model for funding of the OGC and other regulatory agencies is well established and does not need supplemental funding for incidents.

Criteria used in the evaluation:

The Alberta Pipeline Safety Review, completed on December 7, 2012, considered various jurisdictions and sixteen pipeline companies selected to have a good representations from companies that operate under multiple jurisdictions, operate upstream or transmission pipelines, and transport gas or liquids. One of the main overall outcomes from the review was to find that there is tendency for the licensees to preform to the dominant regulators' requirements, which, in most instances was the ERCB with supplemental requirements from the other jurisdictions included and addressed. The relevant excerpts are below. Therefore the BC proposals were evaluated as follows:

1. Assume compliance with requirements of the respective regulatory jurisdictions as listed in the table.
2. The Alberta Pipeline Safety Review concluded that as a minimum companies follow ERCB requirements (dominant regulators' requirements), therefore, companies operating under NEB and BC jurisdictions will follow the ERCB requirements as a minimum, supplemented by the requirements in the specific jurisdiction.
3. It is assumed that "The OGC Regulatory Standard (pending implementation of OGC's emergency management regulation)" will be implemented and complied with in the near future.

Give the above criteria, the specific comments on current the practices of the NEB pipelines (red font) and the BC OGC pipelines (green font) are added to the BC Regulatory Standard column. Sometimes red font is used to comment on both jurisdiction at the same time. The blue font used at the bottom of the comments provides an overall response to the proposed requirements.

Alberta Pipeline Safety Review, related excerpts

(http://www.energy.alberta.ca/Org/pdfs/PSRfinalReportNoApp.pdf)

Executive Summary

"The review was also extended to assessing available industry best practices and how they contribute to pipeline safety. The industry organizations included the Canadian Energy Pipeline Association (CEPA), the Canadian Association of Petroleum Producers (CAPP), the Interstate Natural Gas Association of America (INGAA), the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA – Australia), the Conservation of Clean Air and Water in Europe (CONCAWE) and the UK Onshore Pipeline Operators' Association (UKOPA).

Pipeline licensees were also canvased for their input to the question: Are pipelines in Alberta safely operated and effectively regulated? They contributed substantial knowledge and value to the review process (section 4.6). Sixteen owners were randomly selected based on criteria such as operating under multi-jurisdictions, as well as industry sector (upstream and transmission) and product transported (gas and liquids)." (Page 4)

Outcomes of the overall review

"2. The requirements regarding the regulation of pipelines, specifically with regard to integrity management and safety near water bodies, are not harmonized or consistent across Canadian jurisdictions. This was evident from the analysis of the regulations of each jurisdiction and stated by the pipeline licensees. The tendency is for the licensees to perform to the dominant regulators' requirements; which, in most instances was the ERCB with supplemental requirements from the other jurisdictions included and addressed. This did; however, still lead to some inconsistency in the application and compliance assessment of the regulations in some areas." (Page 5)

"6. Assessment of the regulatory requirements for "Public safety and response to pipeline incidents" and the preparedness of the regulators (including the ERCB) and licensees determined an overall consistency in competence, understanding and preparedness for an incident. Emergency preparedness in the oil and gas industry extends beyond just pipelines (includes exploration, wells and facilities) and as such the industry has recognized the need for strong emergency response and crisis management competency and preparedness, often having groups or departments dedicated to these functions." (Page 5)

"7. All licensees in Alberta comply with the requirements of ERCB Directive 071, which is presently under consideration for reference by the B.C. OGC. As emergency response planning is applied corporately to more than just pipelines, there is a general approach amongst the licensees to use the Incident Command System (ICS) as the guide for their corporate ERP." (Page 6)

Background

"Some licensees have sizeable departments devoted to managing pipeline integrity, while others depend upon contracted service providers. The ability to manage risk to public safety and environmental protection varies widely across the industry." (Page 11)

"In summary, a "one size fits all" approach to the provision of regulatory oversight is impractical. Instead Canadian pipeline regulators tend to use an equitable tailored "fit-for-purpose" approach that meets the overall needs of their jurisdictions." (Page 11)

4.2 Public Safety and Response to Pipeline Incidents

"Across Canada there appears to be a consistent and comprehensive approach when it comes to public safety and response to pipeline incidents. In addition, the widespread adoption of the Incident Command System (ICS) has proven valuable not only across Canada, but also throughout North America and other areas worldwide." (Page 20)

"It will be apparent that there are a number of similar requirements among the various jurisdictions." (Page 20)

Note: This document serves as a starting point to illustrate the regulatory standards that exist within agencies across Canada and could potentially be missing information or details. If column is left blank, the agency does not have a requirement for the corresponding standard.

BC Regulatory Standard *Presently exists= Black Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard** (pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
Spill reporting	NEB regulated companies must immediately inform the NEB when a spill takes place. Under the *Onshore Pipeline Regulations* (OPR), only liquid releases larger than 1.5 m3 must be reported.	Yes – OGC Regulated companies must classify emergencies according to the standards in the Emergency Management Regulation (EMR) and then must implement their response plans, notify the commission as soon as circumstances permit, and take such actions as necessary to respond adequately and effectively to the emergency.	Yes	Operators must notify the AER of an incident immediately, and the operator must notify the landowner of any release that occurs off-lease, migrates off-lease or occurs on an easement or right-of-way.	**Yes**. Fisheries Act – ***Duty to notify — deleterious substance** (Section 38)* *(5) If there occurs a deposit of a deleterious substance in water frequented by fish that is not authorized under this Act, or if there is a serious and imminent danger of such an occurrence, and detriment to fish habitat or fish or to the use by humans of fish results or may reasonably be expected to result from the occurrence, then every person shall without delay notify an inspector, a fishery officer or an authority prescribed by the regulations if the person at any material time* *(a) owns or has the charge, management or control of* *(i) the deleterious substance, or* *(ii) the work, undertaking or activity that resulted in the deposit or the danger of the deposit; or* *(b) causes or contributes to the occurrence or the danger of the occurrence.* ***Duty to take corrective measures*** *(6) Any person described in paragraph (4)(a) or (b) or (5)(a) or (b) shall, as soon as feasible, take all reasonable measures consistent with*

BC Regulatory Standard *Presently exists= Black Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
					public safety and with the conservation and protection of fish and fish habitat to prevent the occurrence or to counteract, mitigate or remedy any adverse effects that result from the occurrence or might reasonably be expected to result from it. ***Specific Regulations under the Fisheries Act that require Spill Reporting***: • *Pulp and Paper Effluent Regulations(written report follow up required)* • Metal Mining Effluent Regulations (written follow-up report also required) • *Wastewater System Effluent Regulations* Also the Fisheries Act has the *Deposit Out of Normal Course of Events Regulations* (DONCE regulations) however they do not set the triggers to notify EC. They solely provide the regulated community and the public with the name and telephone number of the 24-hour authorities operating for the respective province or territory to which notifications are to be made, enabling them to receive notifications on behalf of EC. YES - Canadian Environmental Protection Act (CEPA), 1999

BC Regulatory Standard *Presently exists= Black Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
					(CEPA Section 201: (1) Subject to any regulations made under subsection 200(1) or any interim orders made under section 200.1, if there occurs an environmental emergency in respect of a substance on a list established under the regulations or interim orders, any person described in subsection (2) shall, as soon as possible in the circumstances,(a) ***notify*** *an enforcement officer or any other person designated by regulation or interim order and provide a written report on the environmental emergency to the enforcement officer or other person; (b)* ***take all reasonable emergency measures*** *consistent with the protection of the environment and public safety (i) to prevent the environmental emergency, or (ii) to repair, reduce or mitigate any negative effects on the environment or human life or health that result from the environmental emergency or that may reasonably be expected to result from it;)* ***Specific Regulations under CEPA, 1999 that require spill reporting:*** • *Chromium Electroplating, Chromium Anodizing and Reverse Etching Regulations*

BC Regulatory Standard *Presently exists= Black* *Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
					• *Environmental Emergency Regulations (written report follow up required)* • *PCB Regulations* • *Vinyl Chloride Release Regulations, 1992* • *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (federal house only)* • *Federal Halocarbon Regulations, 2003 (federal house only)* Also CEPA, 1999 has the Release and Environmental Emergency Notification Regulations (known as the notification regulations) however they do not set the triggers to notify EC. They solely provide the regulated community and the public with the name and telephone number of the 24-hour authorities operating for the respective province or territory to which notifications are to be made, enabling them to receive notifications on behalf of EC.
s.13 Once an incident is reported to the NEB, the NEB determines the appropriate ongoing reporting requirements. Effective process	The NEB requires that spills be cleaned up and remediated in accordance with the NEB Remediation Process Guide. The NEB will appoint an Environmental Specialist to act as a liaison with the responsible party and stakeholders throughout the remediation project including the Initial Clean-up Plan,	Yes – OGC regulated companies are required to report as above, and in addition, the OGC maintains the positions of Emergency Officer and Emergency	Follow up report required within 30 days	Emergency response plans detail the process and timelines for responding to incidents and follow-up investigations and reporting. AER publishes an	

BC Regulatory Standard *Presently exists= Black* *Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
for NEB pipelines is in place. Once an incident is reported to the OGC, the OGC determines the appropriate ongoing reporting requirements. Effective process for OGC pipelines is in place. s.13	Remedial Action Plan and the Remediation Closure Report. The Remediation Action Plan and the Closure Report are both approved by the Board. The Remediation Action Plan is approved prior to implementation	Operations Center Director who maintain regular contact with the operator for the duration of an incident. Standardized Incident report forms are provided on the OGC website and submission of these forms is mandatory. Under the EMR, following completion of a response activity, an evaluation of the response is also required as well as an update to the relevant Emergency Response Plan. Remediation plans are usually subject to review and approval by the Commission, however this is not a regulated requirement.		annual compliance report for all AER compliance categories. All incident reports are also published. AER is considering making licensees' compliance summaries available on their website. AER also gathers information on efficiency of and effectiveness of spill planning.	
s.13 Once an incident is reported to the NEB, the NEB determines the appropriate spill response closure report requirements. Effective process for NEB pipelines is in place. Once an incident is reported to the OGC, the OGC determines the appropriate spill response closure report requirements.	In addition to the above, the NEB coordinates post-incident follow-up meetings with the company to further evaluate and enforce compliance and to share knowledge obtained during the emergency.	Yes – Permit Holders who are the subject of an incident are required to submit a Post Incident Report for all level 2 or 3 incidents, as well as all pipeline incidents.	Yes	Emergency response plans detail the process and timelines for responding to incidents and follow-up investigations. The AER conducts post-incident investigations for serious incidents (e.g. reporting, cause determination, best practices, lessons learned).	**Yes** (with respect to a substance set out in Column 1 of Schedule 1 of the Environmental Emergency Regulations) a written report is required as soon as possible in the circumstances after an incident involving an E2 substance (E2R outlines specific information that is required in the written report). (*Section 9 (g), (h), (i): a description of the circumstances and of the cause of the release, if known, and of the measures taken to mitigate*

BC Regulatory Standard *Presently exists= Black Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
Effective process for OGC pipelines is in place. s.13					*any negative effects on the environment or on human life or health; (h) the identification of all persons and agencies that were notified as a result of the release; and (i) all measures taken or planned to be taken to prevent similar releases.)* **Yes** ***Fisheries Act*** ***Report*** *(Section 38 (7))* (7) As soon as feasible after the occurrence or after learning of the danger of the occurrence, the person shall provide an inspector, fishery officer or an authority prescribed by the regulations with a written report on the occurrence or danger of the occurrence. ***Specific Regulations under the Fisheries Act that require Spill Reporting written report follow up:*** • *Metal Mining Effluent Regulations (written follow-up report also required)* • *Pulp and Paper Effluent Regulations(written report follow up required)*
s.13	The OPR requires a company to have an Emergency Management Program. The NEB expects	Yes – as outlined above, the EMR requires an		Yes (see above)	

BC Regulatory Standard *Presently exists= Black* *Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
s.13 Once an incident is reported to the NEB, the NEB determines the appropriate spill response debrief requirements. Effective process for NEB pipelines is in place. Once an incident is reported to the OGC, the OGC determines the appropriate spill response closure report requirements. Effective process for OGC pipelines is in place.	companies to conduct incident debriefings when the emergency phase has been stood down. For larger scale incidents, the NEB would participate in the company's debriefing meeting.	"Evaluation of Response to Emergencies" report to be submitted following completion of the response to an incident. The Evaluation must be maintained on file by the permit holder until the subject of the permit under which operations occur is either cancelled or declared spent by the Commission.			
s.13 Reporting of near misses would typically be done by the NEB regulated companies. Reporting of near misses would typically be done by the OGC regulated companies s.13	In accordance with the OPR, NEB regulated companies are required to report: • the death of or serious injury to a person; • a significant adverse effect on the environment; • an unintended fire or explosion; • an unintended or uncontained release of LVP hydrocarbons in excess of 1.5 m^3; • an unintended or uncontrolled release of gas or HVP hydrocarbons and the operation of a pipeline beyond its design limits as determined under CSA Z662 or CSA Z276 or any operating limits imposed by the Board. • Section 6 of the OPR requires NEB regulated companies to identify all hazards and potential hazards and to establish and implement a process for the internal reporting of hazards, potential hazards, incidents and	Under the EMR, all incidents are required to be reported, however near misses are not identified as an incident. The Commission seeks reporting of near misses as part of the damage prevention program. The Commission is currently testing an electronic incident submission protocol, which will make incident reporting much more seamless.		Releases or even potential to release must be reported	

BC Regulatory Standard *Presently exists= Black Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
	near-misses and to take preventative and corrective actions.				
Spill Cost Recovery (provides agency to recover their costs from the RP related to responding to a spill)	The NEB requires[1] a company to anticipate, prevent, manage and mitigate potentially dangerous conditions associated with their pipelines. For example, the Board has broad authority to order a company to take physical measures in relation to a serious incident (e.g. remediation). The NEB Act provides the Board with the authority to impose financial requirements on applicants as a condition of any approval. The general aim of these financial conditions is to help ensure that there will be sufficient funds available to draw upon to cover the costs and damages of a serious pipeline incident (for example, a major spill).	Yes – Under Section 50 of the OGAA, the Commission has the ability to take over an incident from the responsible party, and allows for cost recovery.		Each licensee is required to pay the full cost of environmental cleanup and remediation	**Yes** ***(CEPA*** *Section 203: Her Majesty in right of Canada may recover the costs and expenses of and incidental to taking any measures under subsection 201(4) from (a) any person referred to in paragraph 201(2)(a); and (b) any person referred to in paragraph 201(2)(b) to the extent of their negligence or willful conduct in causing or contributing to the environmental emergency.)* **Yes (Fisheries Act)** 42 (2) *All the costs and expenses referred to in subsection (1) are recoverable by Her Majesty in right of Canada or a province with costs in proceedings brought or taken therefore in the name of Her Majesty in any such right in any court of competent jurisdiction.* ***71.1*** *(1) Where a person is convicted of an offence under this Act, the court may, in addition to any punishment imposed, order the person to pay the Minister an amount of money as compensation for any costs incurred in the seizure, storage or disposition of any fish or other thing seized*

[1] There is no authority in the NEB Act for the Board to directly order a company to pay the costs or damages associated with a serious incident and unlike COGOA, the NEB Act does not impose any amount of "absolute liability" on pipeline companies for spills or other types of incidents. However, the Board does have broad authority to require a company to take physical measures in relation to a serious incident, which will, by necessity, require the company to pay the costs of those measures.

BC Regulatory Standard *Presently exists= Black* *Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
					under this Act by means of or in relation to which the offence was committed. *79.2 Where a person is convicted of an offence under this Act, in addition to any punishment imposed, the court may, having regard to the nature of the offence and the circumstances surrounding its commission, make an order containing any one or more of the following prohibitions, directions or requirements:….* *(d) directing the person to pay the Minister an amount of money as compensation, in whole or in part, for the cost of any remedial or preventive action taken by or caused to be taken on behalf of the Minister as a result of the commission of the offence;*
s.13 The NEB and the OGC have requirements for emergency management programs. The Alberta Pipeline Safety Review concluded that "industry has recognized the need for strong emergency response and crisis management competency and preparedness, often having groups or departments dedicated to these functions." s.13	The NEB requires regulated companies to have an emergency management program that anticipates, prevents, manages and mitigates conditions during an emergency that could adversely affect property, the environment, or safety of workers or the public. An emergency management program must include: • the identification and analysis of potential hazards; • the evaluation and management of risks	Yes – the EMR requires development of an overarching Emergency Response Program, as well as site or activity specific Emergency Response Plans, for all OGC Regulated companies. Standards are defined in the Manual accompanying the regulation.		The AER requires all companies develop emergency response plans. This includes identifying the detailed roles and responsibilities of all responders and how the company will work with appropriate local and provincial government agencies.	**Yes.** (facilities subject to the Environmental Emergency Regulations) *(Section 4: (1) Subject to section 7, a person required to submit a notice to the Minister under subsection 3(1) must prepare an environmental emergency plan with respect to the substance referred to in that subsections)* *NOTE: this standard can be interpreted in a few ways; if specifically referring to an ISO system then NO; if broader then YES as the E2R Plan is company, site and substance specific*

BC Regulatory Standard *Presently exists= Black Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
	associated with all hazards; • an up-to-date emergency procedures manual that is filed with the NEB; • liaising with agencies that may be involved in an emergency situation; • taking all reasonable steps to inform all persons who may be associated with an emergency response activity on the pipeline of the practices and procedures to be followed; • having a continuing education program for the police, fire departments, medical facilities, other appropriate organizations and agencies and the public residing adjacent to the pipeline to inform them of the location of the pipeline, potential emergency situations and the safety procedures to be followed in case of an emergency; • procedures for the safe control or shutdown of the pipeline system in the event of an emergency; • sufficient response equipment; • training to instruct employees on the emergency procedures and emergency equipment; and • a verifiable capability to respond to an emergency demonstrated through				

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	emergency response exercises.				
s.13 In addition to the specific requirements by the NEB and the OGC, the CSA Standard Z662 requires all pipeline operating companies to have a safety and loss management system. An important component is Continual Improvement. The above applies to NEB and OGC regulated pipelines. s.13	The OPR requires that an NEB regulated company has a management system and protection programs in place containing processes for identifying hazards, managing risks, training and managing workers, communicating, managing records and documentation, monitoring and evaluating progress, and continually improving performance. Processes and procedures, and related products, are reviewed on a regular basis and part of continual improvement. In addition, Section 6.5(1)(x) of the OPR requires a company to establish and implement a process for conducting an annual management review of the management system and each program referred to section 55 of the OPR and for ensuring continual improvement in meeting the company's obligations under section 6. The NEB will audit a regulated company's management system. The audit will include the results of the company's internal annual management review of its own processes and the corrective actions implemented as a result of these internal reviews. The NEB is taking concrete actions to improve safety performance and prevent incidents by: • increasing oversight and scrutiny, including audits,	Yes – as part of the evaluation of Integrity Management Programs and Damage Prevention Programs, Continuous Improvement and Management of Change initiatives are subject to review and evaluation by the Commission.		In an effort to continually improve spill response, Spill Co-ops are involved in research and development projects that look at land reclamation and oil spill cleanup	Yes (facilities subject to the Environmental Emergency Regulations): Facilities are required to annually update and test their E2 Plans and keep records of the annual updates for a period of 5 years. *(Section 6: (1) The person referred to in subsection 5(1) must update and test the environmental emergency plan at least once each calendar year to ensure that it continues to meet the requirements of subsections 4(2) and (3).)*

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	inspections, and stronger messaging and requirements for regulated companies on safety; • implementing legislated management system requirements that facilitate a stronger safety culture within regulated companies; • promoting a strong safety culture through the June 2013 NEB safety forum; and • using other enforcement tools as required (e.g., pressure reductions, monetary penalties In 2012 the NEB received an additional $13.5 million to double the number of audits and increase inspections from 100 to 150. In the 2012/2013 fiscal, the Board completed six audits, and over 180 inspections.				
s.13 The NEB requires specific emergency response plans. The OGC requires specific emergency response plans. s.13	Under the OPR, the NEB requires regulated companies to develop, regularly review and update as required, an emergency procedures manual and submit these manuals to the NEB. Companies are also required to liaise with agencies that may be involved in an emergency response and consult with them in developing and updating the emergency procedures manual. The contents of the emergency procedures manual should include, but are not limited to, the following: • manual distribution list (or on separate file);	Yes – the EMR requires development of an overarching Emergency Response Program, as well as site or activity specific Emergency Response Plans, for all OGC Regulated companies. Standards are defined in the Manual accompanying the regulation.	For specified dangerous goods (ERAP)	The AER requires all companies develop emergency response plans. This includes identifying the detailed roles and responsibilities of all responders and how the company will work with appropriate local and provincial government agencies. AER regulations require all pipeline companies to belong to an oil spill co-op in each geographic area through which their	**Yes** (facilities subject to the Environmental Emergency Regulations) for specified substances above threshold quantities *(Section 4: (1) Subject to section 7, a person required to submit a notice to the Minister under subsection 3(1) must prepare an environmental emergency plan with respect to the substance referred to in that subsections)* Plans are required, however, they do not need to approved. EC has the authority to requests plans be provided to

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s.13	• manual updating procedures and schedule (or on a separate file); • description of initial actions when someone reports an incident; • definitions and levels of emergencies; • corporate and operational chains of command (e.g., organization structures); • management of threat information; • incident management system (e.g., Incident Command System); • spill control procedures and locations of spill control points (if applicable); • debriefing procedure; • internal and external communications; • external communication information, warnings and evacuations (e.g. public relations or media plan); • alternative means of communication; • roles and responsibilities for internal positions involved in a response (including contractors); • roles and responsibilities for agencies that would likely be involved in a response; • environmental or other areas requiring special consideration or protection; • detailed product			pipeline is routed. Oil spill co-ops provide immediate emergency response capabilities in all areas of Alberta through the provision of specialized equipment, infrastructure, and personnel should a release occur.	be reviewed.

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	information; • internal and external reporting requirements; • up-to-date internal and external contact lists; • lists of persons in the Emergency Planning Zones (or on a separate file); • description and location of response equipment, including information on how to access the response equipment on a 24-hour basis; • up-to-date area maps; • mutual aid agreements (or on a separate file) or a reference to mutual aid agreements in the emergency procedures manual; and • forms and records. The NEB also requires companies to establish and implement a process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment, or emergency situations.				
s.13 The NEB requires assessment of hazards and control measures based on geographic area.	Environmental or other areas requiring special protection are to be outlined in the emergency procedures manual (as mentioned above). The NEB requires regulated companies to have an emergency management program that anticipates, prevents, manages and mitigates conditions during an emergency that could adversely	Emergency Response Plans are developed to take all potential hazards and risks into account, however they are developed based on the activity and the geographic area relative to the specific activity, rather than being based on a geographic area.		AER requires licensees to be members of each spill cooperative through which their pipeline is routed - cooperatives provide specialized response targeted to geographic needs. In certain cases, companies must	GRP planning is not mandated. EC does not regulate communities, just specific facilities with certain compounds in excess of threshold volumes. However - facilities that are subject to the Environmental Emergency Regulations are subject to: *(Section 4: (2) In preparing an*

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Alberta Pipeline Safety Review found that there is an overall consistency in competence, understanding and preparedness for an incident. Therefore, it is likely that the OGC regulated companies deal with hazards on a geographic area basis, however, **further clarity would be helpful.**	affect property, the environment, or safety of workers or the public. The program must include the identification and analysis of potential hazards and the evaluation and management of risks associated with all hazards. Hazards may vary by geographic location of the pipeline. CSA Z662 is adopted in the OPR and requires a company to assess the need as to whether firefighting and other special equipment is necessary. Where such equipment is deemed necessary, the company shall make the equipment available, The assessment should be based on the hazard identification as per the requirements of the OPR under section 6, management system requirements. Placement of equipment should be based on people, property and environmental considerations to minimize response times and reduce potential impacts of incidents. If equipment resides with mutual aid partners, spill co-operatives, government agencies or other organizations, formal agreements should be in place for access to the equipment by company personnel. Companies should have documented procedures and schedules for preventative maintenance of response equipment. These procedures should include regularly scheduled sessions for operational testing and inventory control.			identify an emergency planning zone for the area surrounding a project.	*environmental emergency plan with respect to a substance, the person must consider the following factors: an(c) the characteristics of the place where the substance is located and of the surrounding area that may increase the risk of harm to the environment or of danger to human life or health;)*
s.13	This requirement could be included as a condition attached to the original	Requires identification of values at risk		Yes	

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s.13 The NEB and the OGC regulated pipelines generally use risk ranking methods. s.13	approval of the project.				
The NEB and the OGC regulated pipelines are required to have maps for emergency response.	Area maps are to be included in the emergency procedures manual.	Section 15 of the EMR defines emergency response map requirements.		Yes, part of the ERP.	
s.13 The NEB and the OGC have specific requirements for local area engagement and consultation. s.13	The NEB requires a company to establish and maintain liaison with the agencies that may be involved in an emergency response on the pipeline and consult with them in the development and updating of the emergency procedures manual. A company should, among any other relevant steps: • use the hazard, safety and/or emergency planning	The EMR defines specific and significant information requirements under section 3, "Obligation to Provide Information".		Requirement for companies to involve and consult with landowners and other stakeholders prior to submitting a formal application. This mandatory step ensures that parties have an opportunity for meaningful participation in the	Not specifically, however, facilities that are subject to the Environmental Emergency Regulations are required to submit the name of the local authorities, community or interest groups that have been involved in the E2 Plan's development as per Schedule 4

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s.13	zones calculated as part of the hazard assessment to identify the parties with whom liaison should be established; • have up-to-date contact lists; • have a description of the consultation process including a schedule for contacts, nature of discussions, type of information to be provided and the methods to assess the effectiveness of the consultation process; • include records and documentation of all liaison activities; and • include actions taken based on the results of the feedback received. • the Remediation Process Guide outlines what regulated companies are to do and what documentation is required of them when stakeholders want to become involved in the Remediation Process .			pipeline application process, and to ensure any outstanding concerns are effectively addressed. Companies must demonstrate to the AER that every effort has been made to address outstanding stakeholder concerns. In situations where unresolved issues or conflicts exist, the AER offers mediation through Appropriate Dispute Resolution program. If concerns still remain unresolved, the AER may hold a formal public hearing.	
s.13 In Alberta, most of the NEB and AER regulated pipeline companies use the Western Canadian Spill Services (WCSS). It is likely that most of the pipelines in NE BC also use the	The NEB holds a regulated company responsible for anticipating, preventing, mitigating and managing an incident of any size or duration. A company is required to have a process for developing competency requirements and training programs that provide employees and other persons working with or on behalf of the company with the training that will enable them to perform their duties in a manner that is safe, ensures the	The Commission holds all permit holders accountable and liable for all spill response activities, and as such do not certify third party response organizations.	An emergency response contractor can apply to have an ERAP approved	Exemptions for plan or equipment if operator belongs to an oil spill response organization	**Partially** (facilities subject to the Environmental Emergency Regulations) NOTE: the E2R requires that the level of training is identified, but does not legislate what that level is *Section 4: (3) The environmental emergency plan must include: (d) a list of the individuals who are to carry into*

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WCSS services. s.13	security of the pipeline and protects the environment. A company must also have a process to verify that employees and other persons working with or on behalf of the company are trained and competent and for supervising them to ensure that they perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment. .				*effect the plan in the event of an environmental emergency and a description of their roles and responsibilities;* *(e) the identification of the training required for each* of the individuals listed under paragraph (*d*);)
s.13 Use of ICS protocols is consistent with CEPA Integrity First program and the CEPA Mutual Emergency Assistance Agreement. The Alberta Pipeline Safety Review found the widespread adoption of ICS. OGC requires the use of ICS.	An NEB regulated company is required to have an emergency procedures manual. An incident management system would be included in the emergency procedures manual. (Note: the Incident Command Structure (ICS) is not presently mandated as not all Provinces use it).	Required as part of the Emergency Response Plan. Specifies staffing and forms to be used. Currently hold ICS standards as the desired protocols.		Must use an incident management system (ICS is strongly recommended)	Not specifically, however Emergency response plans are to contain a list of the individuals who are to carry into effect the plan in the event of an environmental emergency and a description of their roles and responsibilities
s.13 The Alberta Pipeline Safety Review determined an overall consistency in competence, understanding and preparedness for an incident. s.13	NEB regulated companies are required to have a training program for employees of the company to instruct them on safety regulations, environmental practices and procedures, procedures for the proper operation of the equipment that an employee could reasonably be expected to use, and on the emergency procedures set out in the emergency procedures manuals. In addition, NEB regulated companies are required to have processes for:	Yes – as per ICS standards.		Yes	

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s.13	• developing competency requirements and training programs that provide employees and persons working with or on behalf of the company with the training that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment; and • verifying that employees and other persons working with or on behalf of the company are trained and competent.				
s.13 The NEB and the OGC regulated pipeline companies conduct exercises according to the regulations. s.13	The NEB does not prescribe the frequency of exercises, however, an NEB regulated company is expected to conduct exercises with sufficient frequency (based on the size of their operations, their hazards and risks, training requirements) to ensure a high level of emergency preparedness, to test the effectiveness of existing and new response procedures and to determine the adequacy of staff training in all aspects of a company's EPR program. The type of exercise should be varied to ensure all aspects of potential emergencies are tested. Companies should also ensure that exercises simulate a wide range of potential geographic and weather conditions and worst-case spill or gas release scenarios. At least one simulated emergency response exercise should be held annually	As part of the Emergency Response Plan, and subject to review. Plans must also be updated at a minimum of annually. The Commission monitors and may participate in exercises.		Requires operators to train emergency response personnel and regularly test their emergency response plans through major 'live' exercises and tabletop simulations. Table tops performed at least annually, if not more	Yes (facilities subject to the Environmental Emergency Regulations) E2 Plans must be exercised annually with all Plan elements being tested over a 5 year period. (*Section 6: (1) The person referred to in subsection 5(1) must update and test the environmental emergency plan at least once each calendar year …)*Those records must be maintained for 5 years and their review would be part of a site inspection.

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	(e.g. table top, site-specific drill). A full-scale exercise involving all agencies identified in a company's liaison programs should be held at least every three years. NEB regulated companies are required to have verifiable capability to respond to an emergency in accordance with their emergency procedures and response plans and demonstrate and document the effectiveness of such procedures and plans. NEB regulated companies are required to have a training program for employees of the company to instruct them on safety regulations, environmental practices and procedures, procedures for the proper operation of the equipment that an employee could reasonably be expected to use, and on the emergency procedures set out in the emergency procedures manuals. As mentioned above, NEB-regulated companies are required to have processes for: • developing competency requirements and training programs that provide employees and persons working with or on behalf of the company with the training that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment; and • verifying that employees and other persons working				

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	with or on behalf of the company are trained and competent.				
s.13 The NEB and the OGC regulated pipeline companies maintain records according to the regulations. s.13	NEB regulated companies are required to have a process for generating, retaining and maintaining records that document the implementation of the management system and the emergency management program and for providing access to those who require them in the course of their duties. In addition to complying with record retention requirements set out in the CSA standards referred to in regulation, companies must also retain an annual report on the training program development that compares the actual training received by employees to the planned training. An NEB regulated company should keep detailed records of emergency response exercises and information and knowledge gained should be documented and reflected in a company's EPR program. These records should be available for examination by the NEB during audits, inspections or other NEB regulatory activities.	Yes – companies are required to adhere to CSA standards in terms of documentation and retention of records. This is subject to periodic review and audit by the Commission.		Requires companies to provide training sessions to ensure that response personnel are competent in emergency response procedures, including: overall plan, roles and responsibilities during an incident, public protection measures used during an emergency, and available communication methods	Yes (facilities subject to the Environmental Emergency Regulations) Training and exercise records are to be kept for inspection (*Section 6: (3) The person must keep with the Plan, a record of the results from the annual updates and tests for a period not less than five years beginning on the day the record is made.*
s.13 The NEB and the OGC regulated pipeline companies regularly update plans according to the regulations.	An NEB regulated company shall develop an emergency procedures manual, review it regularly and update it as required. A company shall submit the emergency procedures manual and any updates that are made to it, to the Board.	Yes (annually), and consultation with potentially affected parties must re-occur when plans are updated.		Yes, plans have to be updated on an annual basis as well as tested.	Yes (facilities subject to the Environmental Emergency Regulations) Plans must be updated annually. Note no requirement to submit Plan unless specifically requested by EC (*Section 6: (1) The person referred to in subsection 5(1) must update and test the environmental emergency plan at least once each calendar*

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					year to ensure that it continues to meet the requirements of subsections 4(2) and (3).)
s.13 The NEB and the OGC prescribe requirements in their regulations.	The scope of remediation must include control measures and contingency plans to mitigate potential adverse effects to adjacent receptors such as humans, water wells, surface water, livestock, vegetation, and wildlife. Companies follow the NEB Remediation Process Guide. Work is underway to implement the ability to recover non-use value damage associated with pipeline incidents in the National Energy Board Act.	Remediation requirements are outlined in regulation.		Alberta ESRD requires pipelines operators to clean up and remediate the site of any spill. This includes repairing the soil and any wildlife impacted by the spill.	
s.13 The NEB is working on Financial Viability and Financial Responsibility Guidelines. CEPA-member companies take responsibility for all phases of emergency response, remediation, and reclamation in the event of an incident and will continue to do so, regardless of regulation.	Certain aspects under consideration by NRCan.	No current contingency funding, however the Commission maintains a Liability Management Rating security deposit for all companies operating BC. This deposit can be accessed in cases of insolvency, etc. In addition, the Commission is investigating a spill-specific contingency fund or deposit.		The Orphan Well Fund Association is an industry funded organizational and spill fund that is used to cover the costs of spill cleanup and remediation should a licensee not have the financial resources to do so at the time of a spill. Fund is governed by the association.	
s.13	Work is underway to implement the ability to recover non-use value damage associated with pipeline incidents in the National Energy Board Act.	No cost recovery for loss of public use currently.		No cost recovery for loss of public use currently.	Yes Section 42 of the Fisheries Act allows Responsible Parties to be sued for damages to the environment.

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s.13 The NEB is working on Financial Viability and Financial Responsibility Guidelines. CEPA-member companies take responsibility for all phases of emergency response, remediation, and reclamation in the event of an incident and will continue to do so, regardless of regulation.					
s.13 Funding of the regulatory agencies is well established.	NEB cost-recovers from industry regulated under the NEB Act.	OGC is an industry funded model, therefore OGC costs are paid by industry. In addition, under Section 50 of OGAA, the Commission is enabled to recover additional costs expended by the Commission.		Both the AER and Orphan Well Fund are entirely industry funded.	
s.13 The NEB and the OGC pipeline requirements are clear. Pipeline companies take responsibility for all phases of emergency response.	These requirements are laid out in the *OPR*	These requirements are laid out in the EMR.		Requirements are laid out in Directive 71	
s.13	The NEB requires regulated companies to have an emergency	Yes – defined in the EMR, based on an	Yes	To mitigate risk AER conducts proactive	Yes (facilities subject to the Environmental Emergency

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s.13 The NEB and the OGC regulated pipelines generally use risk ranking methods.	management program that includes the identification and analysis of potential hazards and the evaluation and management of risks associated with all hazards. The above requirements are address in the OPR in section 6.5 (c), (d), (e), and (f). A regulated company's management systems are audited to verify compliance with this requirement.	"all hazards" concept.		random inspections and uses a system of inspections based on a prioritization model called **'OSI':** **O**-Operator history **S**-Site sensitivity **I**-Inherent risk	Regulations) *(Section 4: (2) In preparing an environmental emergency plan with respect to a substance, the person must consider the following factors:…(d) the potential consequences from an environmental emergency on the environment and on human life or health.)*
s.13 The CSA Z662 Standard requires evidence of leak to be investigated promptly. (Clause 10.3). CEPA-member companies are committed to quick response to all incidents. s.13	The NEB does not prescribe response standards; however, the NEB will oversee and evaluate a company's immediate response during a serious incident on an NEB regulated facility. The NEB will ensure the company's response is appropriate.	Yes – not defined in regulation, but required in Emergency response plans, and subject to Commission review.	ERAP requires a description of the transportation arrangements to bring specialized emergency response personnel and equipment to the site of an emergency	The AER requires the licensee to take immediate steps to stop the source of release and contain and clean up the spill (Pipeline Rules Section 77) the AER does have a series of requirements that must be followed upon a spill being detected: Licensee must immediately orally report to the AER. The industry operator must notify the landowner of any release that occurs off-lease, migrates off-lease or occurs on an easement or right-of-way.	

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				The Field Operations deals with response to leaks and breaks, the internal ERP describes the process and timelines for responding to incidents and follow up investigation.	
s.13 The NEB and the OGC have requirements for spill response equipment. In Alberta most of the NEB and AER regulated pipeline companies use the Western Canadian Spill Services (WCSS). It is likely that most of the pipelines in NE BC also use the WCSS services. s.13	CSA Z662 is adopted in the OPR and requires a company to assess the need as to whether firefighting and other special equipment is necessary. Where such equipment is deemed necessary, the company shall make the equipment available. The assessment should be based on the hazard identification as per the requirements of the OPR under section 6, management system requirements. Placement of equipment should be based on people, property and environmental considerations to minimize response times and reduce potential impacts of incidents. If equipment resides with mutual aid partners, spill co-operatives, government agencies or other organizations, formal agreements should be in place for access to the equipment by company personnel. Companies should have documented procedures and schedules for preventative maintenance of response equipment. These procedures should include regularly scheduled sessions for operational testing and inventory control.	As defined in the EMR, requires "a list and description of the applicant's or permit holder's emergency reponse resources, for deployment in an emergency".	ERAPs require a list of the specialized equipment that can be transported to and used at the site of an emergency.	Cooperatives maintain spill contingency plans and strategically place OSCARS (Oil Spill Containment and Recovery units) that are available to all member companies in the area	Not specifically, however facilities subject to the Environmental Emergency Regulations must specify where their equipment is stored in their plan on a map of their facility.

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	The NEB Act requires companies to periodically test instruments and equipment at pipeline stations to verify their proper and safe operation				
s.13 The Alberta Pipeline Safety Review concluded that "industry as recognized the need for strong emergency response and crisis management competency and preparedness, often having groups or departments dedicated to these functions." Above applies to NEB and OGC regulated pipelines.	Emergency procedures manuals must outline a company's environmental protection strategies	Requires designated spill control points and response strategies		Requires companies to carefully monitor their pipelines through testing and inspections to ensure the integrity of the lines is maintained	Yes (facilities subject to the Environmental Emergency Regulations) *(Section 4 (3) The environmental emergency plan must include: (c) a description of the measures to be used to prevent, prepare for, respond to and recover from any environmental emergency identified under paragraph (b)*
s.13 The NEB and the OGC have requirements for staging strategies. In Alberta, most of the NEB and AER regulated pipeline companies use the Western Canadian Spill Services (WCSS). It is likely that most of the pipelines in NE BC also use the WCSS services.	NEB regulated companies are required to have an emergency procedures manual. The NEB expects a company to include the description and location of response equipment, including information on how to access the equipment on a 24-hr basis in its emergency procedures manual. Placement of equipment should be based on people, property and environmental considerations to minimize response times and reduce potential impacts of incidents.	Required as part of the Emergency Response Plan		Equipment requirements are part of the ERP. Each licensee is allowed to respond to a spill in the way they fill is best.	
s.13	Companies follow the NEB			Pipelines that cross a	

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s.13 Needs for environmental sampling/monitoring depend on the location and severity of the incident; typically, once a regulatory agency is notified of the incident, it determines, in consultation with the licensee and the affected stakeholders, the appropriate environmental sampling/monitoring.	Remediation Process Guide in the event of an incident, and must conduct appropriate cleanup to the satisfaction of the NEB. Regulated companies are expected to complete environmental site assessment(s) for the incident as per the Remediation Process Guide. What will be included in the environmental site investigation is incident dependent.			river, creek or a body of water with a defined bed and bank are subject to a Code of Practice under the *Water Act.* Alberta Fish and Wildlife Management must be contacted about any timing constraints for fish and wildlife resources.	
s.13 The NEB and the OGC have requirements for staff resources. In Alberta, most of the NEB and AER regulated pipeline companies use the Western Canadian Spill Services (WCSS). It is likely that most of the pipelines in NE BC also use the WCSS services. s.13	(NRCan policy work underway) Section 6 of the OPR requires a company to have a documented organizational structure enabling it to determine and communicate the roles and responsibilities and authority of the employees at all levels of the company and demonstrate that the human resources allocated to establishing, implementation and maintaining the management system are sufficient to meet the company's obligation to operate in a manner that ensures the safety and security of people, the pipeline and the protection of property and the environment.	Requires adequate emergency response capacity and/or resources	ERAP requires the number of persons qualified to give, by telephone, technical advice about the dangerous goods; and, the number of persons qualified and available to give advice and assistance at the site of an emergency	AER regulations require all pipeline companies to belong to an oil spill co-op in each geographic area through which their pipeline is routed (provide specialized equipment, infrastructure, and personnel should a release occur)	**Partially** (facilities subject to the Environmental Emergency Regulations) *(Section 4: (3) The environmental emergency plan must include: …(b) the identification of any environmental emergency that can reasonably be expected to occur at the place and that would likely cause harm to the environment or constitute a danger to human life or health, and identification of the harm or danger; (c) a description of the measures to be used to prevent, prepare for, respond to and recover from any environmental emergency identified under paragraph(b); (d) a list of the individuals who are to carry into effect the plan*

BC Regulatory Standard *Presently exists= Black* *Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
					in the event of an environmental emergency and a description of their roles and responsibilities;)
s.13 The NEB has requirements for response tactics /strategies. In Alberta, most of the NEB and AER regulated pipeline companies use the Western Canadian Spill Services (WCSS). It is likely that most of the pipelines in NE BC also use the WCSS services.	The NEB requires a company to anticipate, prevent, manage and mitigate potentially dangerous conditions associated with their pipelines. NEB regulated companies are expected to include response tactics/strategies in the emergency procedures manuals. If required, additional site specific tactics and strategies are typically developed by the company during the emergency phase of an incident.	Yes	Yes	Yes	Yes (facilities subject to the Environmental Emergency Regulations) *(Section 4: (3) The environmental emergency plan must include: … (c) a description of the measures to be used to prevent, prepare for, respond to and recover from any environmental emergency identified under paragraph(b)*
s.13 The NEB and the OGC have requirements for communication technology strategy. s.13	NEB regulated companies must establish and implement a process for the internal and external communication of information relating to safety, security and protection of the environment. Companies must maintain communication facilities for the safe and efficient operation of the pipeline and for emergency situations. If required, additional site specific communication procedures are typically developed by the company during the emergency phase of an incident to address site specific communication needs. The NEB will oversee and evaluate a company's immediate response during a serious incident on an NEB regulated facility. This evaluation includes the development of site	Yes – as outlined in the EMR, this must be defined in an Emergency Response Plan and Program.	Yes	Directive 071 requires communications equipment for the public safety coordinator, rovers, roadblock and air monitoring personnel	

BC Regulatory Standard *Presently exists= Black* *Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
	specific plans to inform the appropriate response.				
s.13 The NEB and the OGC have requirements for communication strategy.	NEB regulated companies must establish and implement a process for the internal and external communication of information relating to safety, security and protection of the environment.	Yes – OGC takes the lead role in coordinating communication with responsible companies. EO Director is in steady communication and will bring in additional communication resources as required.		Yes	Yes (facilities subject to the Environmental Emergency Regulations) *(Section 4: (3) The environmental emergency plan must include: …(g) a description of the measures to be taken by the person referred to in subsection (1) to notify members of the public who may be adversely affected by an environmental emergency and to inform them of those measures and of what to do in the event of an environmental emergency.*
s.13 The NEB and the OGC have requirements for environmental sampling. Details of the environmental sampling depend on the location and severity of the incident; typically, once a regulatory agency is notified of the incident, it determines, in consultation with the licensee and the affected stakeholders, the appropriate environmental sampling. s.13	A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment. The NEB Remediation Process Guide provides questions and expectations related to whether or not a spill has had significant impacts on ecological receptors. Environmental Site Assessments are required as part of a thorough Remedial Action Plan to assess the local site specific conditions. A Board Order can be issued if it is thought necessary to ensure proper sampling and delineation of all aspects of the environment is properly conducted. A company shall develop, implement and maintain a safety management program that anticipates, prevents,	Air monitoring is required as part of the Emergency Response Plan, and soil and water sampling will be ordered based on scenario.		Environmental impact assessments are required for large-scale industrial operations. Operators are required to have plans in place to minimize their effects on wildlife and other biodiversity. ESRD's role is to monitor and verify that industry undertakes their plans effectively. The Government of Alberta has established Ambient Air and Water Quality objectives. These objectives are used to assess compliance	

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	manages and mitigates potentially dangerous conditions and exposure to those conditions during all activities relating to construction, operation, maintenance, abandonment and emergency situations. Additional site specific environmental sampling procedures (e.g. ambient air monitoring) are typically developed by the company during the emergency phase of an incident to address site specific environmental sampling in the emergency planning zone (EPZ). The NEB will oversee and evaluate a company's immediate response during a serious incident on an NEB regulated facility. This evaluation includes the development of site specific plans to inform the appropriate response.			near major industrial sources, including those around the oil sands region. The government holds industry accountable for emissions/spills through regulations and approvals. Environmental Protection Orders may be issued in instances of noncompliance.	
s.13 The NEB has requirements for spill modeling. Details of the spill modeling depend on the location and severity of the incident; typically, once a regulatory agency is notified of the incident, it determines, in consultation with the licensee and the affected stakeholders, the appropriate spill modeling. s.13	A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment. Spill modeling is typically conducted by the company during the emergency phase of an incident to inform the site specific spill response resources, equipment and mitigation measures needed for an appropriate response. The NEB will oversee and evaluate a company's immediate response during a serious incident on an NEB regulated facility. This evaluation includes the development of site specific plans to inform the appropriate response.			Per Directive 071, the licensee is expected to assess the risk its operations pose to the environment and be prepared to provide effective response capability in the event of a spill, particularly into moving water.	
	A company shall develop, implement			Environmental impact	

BC Regulatory Standard *Presently exists= Black* *Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
s.13 The NEB has requirements for injured wildlife management. Details of the injured wildlife management depend on the location and severity of the incident; typically, once a regulatory agency is notified of the incident, it determines, in consultation with the licensee and the affected stakeholders, the appropriate injured wildlife management program.	and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment. A Wildlife Management Plan is typically developed by the company during the emergency phase of an incident. The plan would include mitigation measures to be implemented as they relate to reporting and rehabilitation of injured wildlife. The NEB will oversee and evaluate a company's immediate response during a serious incident on an NEB regulated facility. This evaluation includes the development of site specific plans to inform the appropriate response.			assessments are required for large-scale industrial operations. Operators are required to have plans in place to minimize their effects on wildlife and other biodiversity.	
s.13 The NEB has requirements for wildlife management plan. Details of the wildlife management plan depend on the location and severity of the incident; typically, once a regulatory agency is notified of the incident, it determines, in consultation with the licensee and the affected stakeholders, the appropriate wildlife management plan. s.13	A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment. A Wildlife Management Plan is typically developed by the company during the emergency phase of an incident. The plan would include mitigation measures to be implemented as they relate to wildlife movement, preventing wildlife from being impacted and procedures that address impacted wildlife. The NEB will oversee and evaluate a company's immediate response during a serious incident on an NEB regulated facility. This evaluation includes the development of site specific plans to inform the appropriate response.			Operators are required to have plans in place to minimize their effects on wildlife and other biodiversity.	

BC Regulatory Standard *Presently exists= Black* *Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
s.13 The NEB is working on Financial Viability and Financial Responsibility Guidelines. CEPA-member companies take responsibility for all phases of emergency response, remediation, and reclamation in the event of an incident and will continue to do so, regardless of regulation.	Currently under consideration by NRCan.	Processes required to be included in Emergency Procedures manual		Yes	
s.13 The NEB has requirements for waste management plan. Details of the waste management plan depend on the location and severity of the incident; typically, once a regulatory agency is notified of the incident, it determines, in consultation with the licensee and the affected stakeholders, the appropriate waste management plan. s.13	NEB regulated companies must outline emergency procedures in its emergency management programs and plans. A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment. A Waste Management Plan is typically developed by the company during the emergency phase of an incident. The plan would include procedures to be implemented as they relate to the management, storage and documentation of waste generated during an incident. The NEB will oversee and evaluate a company's immediate response during a serious incident on an NEB regulated facility. This evaluation includes the development of site specific plans to inform the appropriate response.			Yes, part of the ERP and ESRD remediation guidelines.	
Evacuation procedures is one aspect of the overall emergency	NEB regulated companies are required to establish emergency procedures that include safety procedures for personnel at emergency sites.	Includes requirement for reception center	Yes	Yes	

BC Regulatory Standard *Presently exists= Black Proposed = Blue*	***NEB Regulatory Standard***	***OGC Regulatory Standard*** *(pending implementation of OGC's emergency management regulation)*	***Transport Canada Regulatory Standard (non-marine)***	***Alberta Regulatory Standard for pipelines and petroleum industry***	***Environment Canada***
management program. The NEB and OGC have requirements for emergency management programs. The Alberta Pipeline Safety Review concluded that "industry as recognized the need for strong emergency response and crisis management competency and preparedness, often having groups or departments dedicated to these functions."	Companies should also address public safety measures with local authorities to confirm roles and responsibilities and incorporate that in the company's emergency procedures manual.				
s.13 Clean up assessment depends on the location and severity of the incident; typically, once a regulatory agency is notified of the incident, it determines, in consultation with the licensee and the affected stakeholders, the appropriate methods. s.13	NEB regulated companies are required to remediate incidents to the satisfaction of the regulator. A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment. If required, a Shoreline Clean up Assessment Technique is typically established by the company during the emergency phase of an incident and would inform shoreline clean up post emergency phase. The plan would include procedures to be implemented as they relate to maximizing the recovery of spilled product and resources needed to minimize further impacts to the shoreline. The NEB will oversee and evaluate a company's immediate response during a serious incident on an NEB regulated facility. This evaluation includes the development of site specific plans to inform the			Directive 006 requires all licenses to undergo an assessment identifying all potential risks of a spill and the total estimated reclamation cost to reclaim a site. As part of this process, all remediation and surface reclamation issues must be identified and initially evaluated through a phase environmental site assessment	

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	appropriate response.				
s.13 Environmental damage assessment depends on the location and severity of the incident; typically, once a regulatory agency is notified of the incident, it determines, in consultation with the licensee and the affected stakeholders, the appropriate methods. **CEPA-member companies take responsibility for all phases of emergency response, remediation, and reclamation in the event of an incident and will continue to do so, regardless of regulation.** s.13	A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment. The NEB will verify that a regulated company conducts an adequate and appropriate clean-up and remediation of any environmental effects caused by the incident. Contamination is assessed using environmental site assessments. The approval, by the Board, of the regulated companies Remedial Action Plan may stipulate mandatory post remediation assessment work for a certain criteria and potentially for a certain number of years.			Alberta Ministry of Environment and Sustainable Resource Development require pipelines operators to clean up and remediate the site of any spill. This includes repairing the soil and any wildlife impacted by the spill. Under Directive 006, companies are assessed based on all identifiable risks and total estimated reclamation costs including water or land damage. The AER conducts post-incident investigations for serious incidents (e.g. reporting, cause determination, best practices, lessons learned).	

RE: 2nd Intention Paper

Monday, May 26, 2014
12:05 PM

Subject	**RE: 2nd Intention Paper**
From	Vander Steen, Benjamin ENV:EX
To	Hofweber, Jim E ENV:EX; Knox, Graham G ENV:EX; Poss, Angie ENV:EX
Sent	Friday, March 14, 2014 10:13 AM

s.13

Ben

From: Hofweber, Jim E ENV:EX
Sent: Friday, March 14, 2014 9:49 AM
To: Knox, Graham G ENV:EX; Poss, Angie ENV:EX; Vander Steen, Benjamin ENV:EX
Subject: FW: 2nd Intention Paper

From: Amanda Affonso [mailto:aaffonso@cepa.com]
Sent: Friday, March 14, 2014 9:45 AM
To: Philippe Reicher; Hofweber, Jim E ENV:EX
Cc: Ziad Saad
Subject: RE: 2nd Intention Paper

Good morning Jim,

CEPA has had the opportunity to review the "Comparison of existing regulatory requirements across several provincial and federal regulators" document as noted below in Philippe's email. Our review of the documents reflect the pipeline perspective and focus on two questions:

- From an NEB pipeline perspective are there any items our federally regulated pipes not doing as suggested with the Blue font that BC would like to propose?
- From a BC OGC pipeline perspective are there any items our provincially regulated pipes not doing as suggested with the Blue font that BC would like to propose?

We wanted to share this in advance of our meeting next week as there is a lot of information to review.

If you have any questions feel free to contact me or we can discuss at our meeting next week.

Regards,

Amanda Affonso
Director, Regulatory & Financial

Canadian Energy Pipeline Association
Suite 200, 505–3rd St. SW
Calgary, Alberta T2P 3E6

Phone 403.221.8756
Cell 403.585.6933
Fax 403.221.8760

aaffonso@cepa.com
aboutpipelines.com

From: Philippe Reicher
Sent: Thursday, March 13, 2014 12:31 PM
To: Hofweber, Jim E ENV:EX (Jim.Hofweber@gov.bc.ca)
Cc: Amanda Affonso
Subject: 2nd Intention Paper
Importance: High

Hello Jim

Thank you for the discussion this morning. We will take you on the offer that you can make yourself available for a meeting in Calgary next week. What about Tuesday from 11 to 1 PM (lunch will be provided)? It will allow us to go over the paper with our comments, present to you the analysis we have conducted of existing regulatory requirements across several provincial and federal regulators.

Please advise if the proposed time is convenient to you.

Regards,

Philippe Reicher, MEDes
Vice President, External Relations

Canadian Energy Pipeline Association
Suite 200, 505–3rd St. SW
Calgary, Alberta T2P 3E6

Phone 403.221.8778
Cell 403.863.2453
Fax 403.221.8760

preicher@cepa.com
aboutpipelines.com

RE: 2nd Intention Paper

Monday, May 26, 2014
12:05 PM

Subject	**RE: 2nd Intention Paper**
From	Vander Steen, Benjamin ENV:EX
To	Hofweber, Jim E ENV:EX
Sent	Friday, March 14, 2014 10:48 AM

Actually Jim, the answer to your question you just came to see me about is in our table Amanda attached to the email she sent you. What they've done is simply add their comments in to our table. Remember, that table we fact checked with NEB, so it's got the NEB requirements in it already. We can go over it if you have time, but yeah, def best to do with the team.

From: Hofweber, Jim E ENV:EX
Sent: Friday, March 14, 2014 9:49 AM
To: Knox, Graham G ENV:EX; Poss, Angie ENV:EX; Vander Steen, Benjamin ENV:EX
Subject: FW: 2nd Intention Paper

From: Amanda Affonso [mailto:aaffonso@cepa.com]
Sent: Friday, March 14, 2014 9:45 AM
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Cc: Ziad Saad
Subject: RE: 2nd Intention Paper

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Canadian Energy Pipeline Association
Suite 200, 505–3rd St. SW
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Phone 403.221.8756
Cell 403.585.6933
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aaffonso@cepa.com
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Cc: Amanda Affonso
Subject: 2nd Intention Paper
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Regards,

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Canadian Energy Pipeline Association
Suite 200, 505–3rd St. SW
Calgary, Alberta T2P 3E6

Phone 403.221.8778
Cell 403.863.2453
Fax 403.221.8760

preicher@cepa.com
aboutpipelines.com

CEPA letter Response bullets

Monday, May 26, 2014
12:04 PM

Subject	**CEPA letter Response bullets**
From	Knox, Graham G ENV:EX
To	Hofweber, Jim E ENV:EX
Cc	Poss, Angie ENV:EX; Vander Steen, Benjamin ENV:EX
Sent	Tuesday, March 11, 2014 4:49 PM
Attachments	 CEPA response

Greetings,

I have drafted some bullets in the attached document for consideration in responding to CEPA or for advising Steve Carr / Wes Shoemaker regarding the points CEPA has raised.

Thanks,

Graham Knox
Director, Environmental Emergency Program
2975 Jutland Rd, Victoria, BC V8T 9M1
Phone: (250) 356-8383
Website: http://www.env.gov.bc.ca/eemp/

Dear Mr. Carr,

Thank you for taking the time to speak with us regarding the Land Based Spill Response initiative and the upcoming release of the second intentions paper. As we discussed on the call, CEPA (the Canadian Energy Pipeline Association) has some pressing concerns regarding the proposed elements of the paper and its release anticipated the first week of April. CEPA has been heavily engaged in this file since the first intentions paper was released; including our President, Brenda Kenny standing beside Minister Lake at the time in support of the initiative, involvement on the Advisory committee for all the governance and funding discussions, and participation in all three working groups and throughout the initial symposium. CEPA supports BC's Five Conditions and remains committed to working collaboratively and transparently with the Ministry of Environment on the land based spill initiative.

At this time, CEPA is challenged to support the upcoming intentions paper due to the following elements:

1. The gap analysis, which was intended to identify the specific standards and regulations that would constitute a "world class regime" according to the MoE, was sent to the Advisory Committee yesterday evening following our call. This is a very important issue. As we mentioned, industry is unable to support any mechanism to address a perceived gap when these "gaps" have not been clearly articulated and industry has had no opportunity to identify how they may already be addressing these gaps. It is also unknown how recommendations can be developed – including funding implications – until this gap analysis is complete. We are pressing for a delay in the intentions paper until such time the gap analysis is completed and validated by industry and other stakeholders. Now that we have the document, we will require time to review and validate the information.

    - The goal of the ministry is to identify the measures necessary to implement and maintain a world leading spill response regime for land based spills. The Ministry has spent the past 18 months working with industry, local governments, federal government agencies, First Nations and other stakeholders to identify world leading elements (including a ministry hosted symposium that brought experts together from around the world) from jurisdictions around the world and address gaps that have been identified through the ministry's experiences in dealing with the 3500 spills reported annually in the province, lessons learned from other major incidents around the world, and through participation in various workshops, conferences and cross-jurisdictional forums the ministry participates in. There has been strong agreement in the *working groups* that the options and measures included in the *Intentions Paper* are not currently in place across all sectors, and that if implemented would improve the regime.
    - The ministry review team has throughout the process of working with the *working groups* and the *advisory committee*, welcomed and encouraged industry to provide any information demonstrating why the measures proposed are either not needed or are already in place in a manner that meets the objectives of the ministry. To date industry has yet to put forward any such materials for the ministry's consideration and review.
    - The *Intentions Paper* in and of itself is intended to provide industry, First Nations, other levels of government, stakeholders and the public the opportunity to review the options developed to implement a world leading regime in British Columbia. The review period (45 – 90 days) for the *IP* is in fact industry's (as well as any other interested party) opportunity

to comment, provide alternative options, suggest modifications to the options, or explain why the measures are not needed to achieve a world leading spill regime. A delay therefore is unwarranted and will only delay the province's ability to make decisions around its conditions for the transport of heavy oil (in particular the condition #3 that lays our a requirement for world leading regime for land based spills).

- At this time the ministry does not believe further assessment or definition of the problem would provide any added value in assessing the required components necessary to establish a world leading spill regime for land based spills.

2. As mentioned, the Canadian Energy Pipeline Association (CEPA), the Rail Association of Canada (RAC), the Western Canada Marine Response Corporation (WCMRC) and the Western Canadian Spill Services Ltd. (WCSS) are currently completing a report that identifies potential enhancements to the current system. We believe this information is a critical element that the BC government should consider when developing its second Intention paper. It is our intention to share this information as soon as possible so it can be used as part of the development of the second intention paper.

    - The submission of this type of information is precisely what the 45 – 90 day comment period is for once the *IP* has been publicly released. It therefore does not warrant a delay in the issuance of the *IP*.
    - The ministry review team is aware of the discussions industry is having with WCMRC (and in fact encouraged industry to meet with WCMRC).
    - Once the comment period for the IP closes the ministry will be reviewing all submissions and evaluating them against the government's objectives of establishing a world leading spill regime.
    - At the outset of this review the ministry clearly stated to concerned First Nations, Local Government, UBCM, and other stakeholders that were unable to participate in the *working groups* and *advisory committee* over the last 18 months that no options would be taken off the table during our consultations with industry. The ministry has continued to honor this commitment and believes it must continue to do so to maintain our credibility and trust with these key stakeholder groups.

3. Oil pipelines in British Columbia are interprovincial pipelines and therefore federally regulated. The federal government will be releasing new regulatory mechanisms, including spill response funding guidelines, in June of 2014. These regulations will impact any contingency fund and regulatory regime requirements set by the BC provincial government. CEPA is concerned that there is not enough collaboration between the Federal and Provincial governments to ensure that the two levels of government complement their respective actions as opposed to potentially duplicate efforts and create unnecessary process and cost burden on our industry. By pushing the BC intentions paper ahead of the new Federal regime will likely create confusion among government, industry and the public. We strongly recommend that the BC government postpone the release of its intentions paper until the

Federal framework is fully revealed so that the two jurisdictions can work together to establish a comprehensive "world-class" regulatory regime and standards.

- The ministry is fully engaged with federal agencies and aware of the types of measures they are currently considering. This engagement and awareness is acknowledged and reflected in the draft IP and the option (example: the province is not seeking to establish a fund as large would be required if the federal government had not communicated to us that they are looking at establishing significant liability requirements) being put forward for a provincial spill response and recovery fund.
- A federal fund or liability requirements may not meet all the needs of the province and therefore the establishment of a federal fund or liability requirements may not be sufficient in and of itself (this point is discussed in the draft IP). Examples include:
    - The federal mechanism may not cover the full range of activities or product types that the province wishes to ensure funding is available for.
    - Assurance of Provincial access is also a critical issue in determining whether the mechanism will meet the province's needs.
    - The federal mechanism may not provide instantaneous access to funds at the time of the spill and therefore would not meet the province's objective of immediate access to funds to ensure response activities proceed in a timely manner.
- Based on the above concerns the ministry cannot fully assess whether or not any potential federal mechanisms will actually meet the province's needs and objectives until the full details are available and actual legislation has been passed. As the details and legislation could be months or years ahead it does not make sense to delay the release of the IP for this reason.
- Note also that not all oil pipelines in B.C. are federally regulated inter-provincial pipelines (example: Pembina pipeline).

4. CEPA was disappointed to see that presentations made by the MoE to communities , ENGOs and First Nations included elements of the intentions paper not shared with the advisory committee. For example, these presentations mentioned that the province is seeking a contingency fund and the development of a NERDA-like framework for environmental recovery in lieu of a spill. Setting these public expectations *prior* to the release of the second intentions paper and without any notification to all the stakeholders who have been involved to date is neither transparent nor collaborative. In addition it sets expectations publicly that have not been properly assessed. CEPA is requesting a fully briefing on all the elements of the intentions paper and their potential financial and operational impacts for the pipeline industry *prior* to the release of the second intentions paper. It is critical that we understand the full scope of recommendations by the province in order to (1) support publicly the intentions paper and (2) identify to our members and industry stakeholder the implications of the proposed regime.

- All presentation, materials and information being shared by the ministry with other stakeholders has been identical to that shared with the advisory committee and has been discussed in great detail in the working groups.

- The concept of both a contingency fund and environmental restoration (commonly referred to as NRDA – natural resource damage assessments) were both included in the first IP released in December of 2012. They have also been the subject of significant discussions at both the working group and advisory committee meetings, all of which have included a number of CEPA representatives.
- The ministry has been very clear that the process would be open and transparent which is why all stakeholders are being provided with opportunities to meet with the ministry and are being kept apprised of the unfolding of the process and the options as they have been developed. All presentations have clearly stated that these are options being developed for public and stakeholder feedback and that ultimately it will be up to government to determine which options will move forward.
- Industry, including CEPA have been fully engaged and informed throughout the process and ministry staff have clearly communicated that we are able to schedule any additional meetings or sessions they require to discuss their concerns or share information.

In summary CEPA would like to see greater transparency from government on its intentions regarding this initiative; including a clearer understanding of how the province is defining "world-class" and in what ways industry is not meeting these standards through the gap analysis. It is also critical that the federal regulations be considered and that public consultations include factual information.

- The ministry is operating with a working definition of world leading that takes the following into consideration:
    - Best practices in place in other jurisdictions are considered and applied as appropriate in B.C.
    - There will be an effective and timely response to all spills regardless of location or sector involved to protect public safety, the environment, economy and social and cultural fabric of the province
    - Provision of timely information to the public and stakeholders when spills occur to ensure they have the information they require concerning public safety and impacts to the environment
    - The environment is restored and loss of public use is compensated for
    - Polluter pay principle is fully implemented and taxpayers are protected from the cost and impact of spills
    - All four pillars of emergency management are addressed in the regime:
        - Prevention, Preparedness, Response and Recovery
    - The components of the regime combine to cumulatively place British Columbia amongst the leading jurisdictions in the world

We greatly appreciated your time on this issue and look forward to working with you and your colleagues towards meeting the five conditions and developing a robust, practical and cost-effective land based spill response regime in the province.

Sincerely,

Philippe Reicher, MEDes

Re: CEPA and the Land-Based Spill Response Initiative

Monday, May 26, 2014
12:03 PM

Subject	**Re: CEPA and the Land-Based Spill Response Initiative**
From	Vander Steen, Benjamin ENV:EX
To	Poss, Angie ENV:EX
Cc	Paterson, Kellie ENV:EX; Knox, Graham G ENV:EX; Hofweber, Jim E ENV:EX
Sent	Monday, March 10, 2014 9:01 AM

Howdy, s.22 but if things are crazy I would be happy to do some work and defer some hours to another time. Let me know

Sent from my iPhone
On Mar 10, 2014, at 8:57 AM, "Poss, Angie ENV:EX" <Angie.Poss@gov.bc.ca> wrote:

> Kellie – can you add this to our meeting agenda for discussion?
> Thanks!
>
> **From:** Hofweber, Jim E ENV:EX
> **Sent:** March-10-14 7:29 AM
> **To:** Knox, Graham G ENV:EX; Poss, Angie ENV:EX; Vander Steen, Benjamin ENV:EX
> **Subject:** Fw: Fwd: CEPA and the Land-Based Spill Response Initiative
>
> Let's draft a response to this for Wes asap.
>
> **From**: Shoemaker, Wes ENV:EX
> **Sent**: Sunday, March 09, 2014 07:33 PM Pacific Standard Time
> **To**: Standen, Jim ENV:EX; Zacharias, Mark ENV:EX; Hofweber, Jim E ENV:EX
> **Subject**: Fwd: CEPA and the Land-Based Spill Response Initiative
>
> Wes
>
> W.H. (Wes) Shoemaker, MBA
> Deputy Minister
> Ministry of Environment
> 5th Floor, 2975 Jutland Road
> Victoria, BC
> Tel: 250.387.5429 | Fax: 250.387.6003
> E-mail: wes.shoemaker@gov.bc.ca
>
> **Please note: This email is intended for the addressee(s) only and may contain legally privileged information. Any unauthorized use, disclosure or reproduction is strictly prohibited. **
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** "Carr, Steve MNGD:EX" <Steve.Carr@gov.bc.ca>
> >
> > **Date:** March 8, 2014 at 2:03:59 AM GMT+7

To: "Shoemaker, Wes ENV:EX" <Wes.Shoemaker@gov.bc.ca>

Cc: "Standen, Jim ENV:EX" <Jim.Standen@gov.bc.ca>, "Mihlar, Fazil MNGD:EX" <Fazil.Mihlar@gov.bc.ca>

Subject: Fwd: CEPA and the Land-Based Spill Response Initiative

FYI

Steve Carr
Deputy Minister Natural Gas Development

Begin forwarded message:

> **From:** Philippe Reicher <preicher@cepa.com>
>
> **Date:** 7 March, 2014 9:44:35 AM PST
>
> **To:** "Carr, Steve MNGD:EX" <Steve.Carr@gov.bc.ca>
>
> **Cc:** Amanda Affonso <aaffonso@cepa.com>
>
> **Subject: CEPA and the Land-Based Spill Response Initiative**
>
> Dear Mr. Carr,
>
> Thank you for taking the time to speak with us regarding the Land Based Spill Response initiative and the upcoming release of the second intentions paper. As we discussed on the call, CEPA (the Canadian Energy Pipeline Association) has some pressing concerns regarding the proposed elements of the paper and its release anticipated the first week of April. CEPA has been heavily engaged in this file since the first intentions paper was released; including our President, Brenda Kenny standing beside Minister Lake at the time in support of the initiative, involvement on the Advisory committee for all the governance and funding discussions, and participation in all three working groups and throughout the initial symposium. CEPA supports BC's Five Conditions and remains committed to working collaboratively and transparently with the Ministry of Environment on the land based spill initiative.
>
> At this time, CEPA is challenged to support the upcoming intentions paper due to the following elements:
>
> 1. The gap analysis, which was intended to identify the specific standards and regulations that would constitute a "world class regime" according to the MoE, was sent to the Advisory Committee yesterday evening following our call. This is a very important issue. As we mentioned, industry is unable to support any mechanism to address a perceived gap when these "gaps" have not been clearly articulated and industry has had no opportunity to identify how they may already be addressing these gaps. It is also unknown how recommendations can be developed – including funding implications – until this gap analysis is complete. We are pressing for a delay in the intentions paper until such time the gap analysis is completed and validated by industry and other stakeholders. Now that we have the document, we will require time to review and validate the information.
> 2. As mentioned, the Canadian Energy Pipeline Association (CEPA), the Rail Association of Canada (RAC), the Western Canada Marine Response Corporation (WCMRC) and the Western Canadian Spill Services Ltd. (WCSS) are currently completing a report that identifies potential enhancements to the current system. We believe this information is a critical element that the BC government should consider when developing its second Intention paper. It is our intention to share this information as soon as possible so it can be used as part of the development of the

second intention paper.

3. Oil pipelines in British Columbia are interprovincial pipelines and therefore federally regulated. The federal government will be releasing new regulatory mechanisms, including spill response funding guidelines, in June of 2014. These regulations will impact any contingency fund and regulatory regime requirements set by the BC provincial government. CEPA is concerned that there is not enough collaboration between the Federal and Provincial governments to ensure that the two levels of government complement their respective actions as opposed to potentially duplicate efforts and create unnecessary process and cost burden on our industry. By pushing the BC intentions paper ahead of the new Federal regime will likely create confusion among government, industry and the public. We strongly recommend that the BC government postpone the release of its intentions paper until the Federal framework is fully revealed so that the two jurisdictions can work together to establish a comprehensive "world-class" regulatory regime and standards.
4. CEPA was disappointed to see that presentations made by the MoE to communities , ENGOs and First Nations included elements of the intentions paper not shared with the advisory committee. For example, these presentations mentioned that the province is seeking a contingency fund and the development of a NERDA-like framework for environmental recovery in lieu of a spill. Setting these public expectations *prior* to the release of the second intentions paper and without any notification to all the stakeholders who have been involved to date is neither transparent nor collaborative. In addition it sets expectations publicly that have not been properly assessed. CEPA is requesting a fully briefing on all the elements of the intentions paper and their potential financial and operational impacts for the pipeline industry *prior* to the release of the second intentions paper. It is critical that we understand the full scope of recommendations by the province in order to (1) support publicly the intentions paper and (2) identify to our members and industry stakeholder the implications of the proposed regime.

In summary CEPA would like to see greater transparency from government on its intentions regarding this initiative; including a clearer understanding of how the province is defining "world-class" and in what ways industry is not meeting these standards through the gap analysis. It is also critical that the federal regulations be considered and that public consultations include factual information.

We greatly appreciated your time on this issue and look forward to working with you and your colleagues towards meeting the five conditions and developing a robust, practical and cost-effective land based spill response regime in the province.

Sincerely,

Philippe Reicher, MEDes
Vice President, External Relations

Canadian Energy Pipeline Association
Suite 200, 505–3rd St. SW
Calgary, Alberta T2P 3E6

Phone 403.221.8778
Cell 403.863.2453
Fax 403.221.8760

preicher@cepa.com
aboutpipelines.com

Denis, Alexandra ENV:EX

From: Paterson, Kellie ENV:EX
Sent: Tuesday, May 6, 2014 3:23 PM
To: XT:Fedoruk, Claudette FLNR:IN
Subject: RE: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

To be safe, I would book for 2.5 hours (1 -3:30pm).

Jim Hofweber and his staff will probably stop along the way into Calgary for a bite to eat before the meeting but I'll let them know that they can go to the meeting room early, if they like.

Can you please send me a CAPP members list.

Thanks, Claudette.

Kellie Paterson
Sr. Administrative Assistant
Environmental Emergencies and Land Remediation Branch
Environmental Protection Division
Ministry of Environment
Tel: 250-387-9971

From: Fedoruk, Claudette [mailto:claudette.fedoruk@capp.ca]
Sent: May-06-14 3:16 PM
To: Paterson, Kellie ENV:EX
Subject: RE: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

HI Kellie,

For how long should I book the meeting? For 2 hours, so 1-3pm?

Location:
CAPP Offices, Main Boardroom
21st floor, 350 7th Ave. SW, Calgary

*Note: The room is empty from 11:30am – 1pm, if they come a bit early.

Cheers,
Claudette

From: Paterson, Kellie ENV:EX [mailto:Kellie.Paterson@gov.bc.ca]
Sent: Tuesday, May 06, 2014 4:08 PM
To: Fedoruk, Claudette
Subject: RE: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

Yes, that will work……1pm on Tuesday, May 27th.

Should they come to:
2100 – 350 7th Ave. SW, Calgary?

Kellie Paterson
Sr. Administrative Assistant
Environmental Emergencies and Land Remediation Branch
Environmental Protection Division
Ministry of Environment
Tel: 250-387-9971

From: Fedoruk, Claudette [mailto:claudette.fedoruk@capp.ca]
Sent: May-06-14 2:53 PM
To: Paterson, Kellie ENV:EX
Subject: RE: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

HI Kellie,

Can we arrange for 1pm, instead of 10am on Tuesday, May 27th?

Claudette

From: Paterson, Kellie ENV:EX [mailto:Kellie.Paterson@gov.bc.ca]
Sent: Tuesday, May 06, 2014 2:48 PM
To: Fedoruk, Claudette
Subject: RE: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

Sorry for the confusion. The 2nd date is Tuesday, May 27.

Kellie Paterson
Sr. Administrative Assistant
Environmental Emergencies and Land Remediation Branch
Environmental Protection Division
Ministry of Environment
Tel: 250-387-9971

From: Fedoruk, Claudette [mailto:claudette.fedoruk@capp.ca]
Sent: May-06-14 1:46 PM
To: Paterson, Kellie ENV:EX
Subject: RE: Second Intentions Paper for Land Based Spill Preparedness & Response in BC
Importance: High

HI Kellie,

Is that second date Tuesday **May 20** or **Friday** May 23?

Cheers,
Claudette

From: Paterson, Kellie ENV:EX [mailto:Kellie.Paterson@gov.bc.ca]
Sent: Tuesday, May 06, 2014 2:44 PM
To: Fedoruk, Claudette

Cc: Paterson, Kellie ENV:EX
Subject: RE: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

The Project Team (Jim Hofweber, Graham Knox and Angie Poss) would be available to come to Calgary on either Friday, May 16 or Tuesday, May 23 for a 10am meeting with CAPP members.

Can you please confirm which date works best for the CAPP members and please advise who would be in attendance.

Thanks.

Kellie Paterson
Sr. Administrative Assistant
Environmental Emergencies and Land Remediation Branch
Environmental Protection Division
Ministry of Environment
Tel: 250-387-9971

From: Fedoruk, Claudette [mailto:claudette.fedoruk@capp.ca]
Sent: April-29-14 1:12 PM
To: Paterson, Kellie ENV:EX
Cc: s.tate@capp.ca
Subject: FW: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

HI Kellie,

We would like to schedule a meeting on the Second Intentions Paper with the MOE and our members for the end of May here in Calgary. Can you please let me know what days/times work for you?

Cheers,
Claudette

From: Poss, Angie ENV:EX [mailto:Angie.Poss@gov.bc.ca]
Sent: Tuesday, April 29, 2014 12:49 PM
To: Morrison, Geoff
Cc: Fedoruk, Claudette; Tate, Shirley; Paterson, Kellie ENV:EX
Subject: RE: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

Hi Geoff,
Happy to oblige. Please work with Kellie to schedule a time to meet.
Best,
Angie

From: Morrison, Geoff [mailto:geoff.morrison@capp.ca]
Sent: April-28-14 4:39 PM
To: Poss, Angie ENV:EX
Cc: XT:Fedoruk, Claudette FLNR:IN; Tate, Shirley
Subject: FW: Second Intentions Paper for Land Based Spill Preparedness & Response in BC

Hi Angie

CAPP would very much like an chance to meet to review the intentions paper and discuss next steps.

Claudette and/or Shirley can you work to identify a mutually workable time?

Geoff

From: Cindy Bertram [mailto:cindybertram@shaw.ca]
Sent: Friday, April 25, 2014 12:51 PM
To: Spill Preparedness & Response BC Consultation
Subject: Second Intentions Paper for Land Based Spill Preparedness & Response in BC (3)

April 25, 2014

Re: **Second Intentions Paper for Land Based Spill Preparedness and Response in BC**

Dear Stakeholder,

The Ministry of Environment (The Ministry) is committed to creating a world leading land based spill preparedness and response regime. As part of this process, the Ministry is presenting our second intentions paper for your review. This second paper has built upon the concepts from the first intentions paper (released fall 2012) and has included over a year of consultation with various industry, First Nations, local government and environmental non-governmental organization representatives. The purpose of this intentions paper is to describe the Ministry's proposed policy direction and seek input on enhancing spill preparedness and response in BC. We invite you to review the proposed intentions and provide comment.

The intentions paper will be available for review on our website. Comments can be submitted by email, letter, or by completing the applicable response form. The consultation period will be open until June 26th, 2014. All submissions will be reviewed for inclusion in a consultation summary report. The Ministry has contracted Cindy Bertram of C. Rankin & Associates to manage the consultation process. If you have any questions regarding the consultation process, check the Ministry website or contact Cindy Bertram by:

Email: cindybertram@shaw.ca
Fax: 250 598-9948

As a key stakeholder we would also like to offer the opportunity to meet with you at your convenience to both review the intentions paper and discuss next steps. Should your organization be interested, please contact Angie Poss (Angie.Poss@gov.bc.ca) at the Ministry to make meeting arrangements.

We sincerely appreciate your time and consideration on this matter. The Ministry looks forward to ongoing dialogue with you as we further develop the model that will ensure BC's preparedness and response capacity is world leading.

Sincerely,
Jim Hofweber
Executive Director
Environmental Emergencies and Land Remediation Branch

Circulated by:
Cindy Bertram

RE: Presentation on land based spill policy paper #2

Monday, May 26, 2014
12:01 PM

Subject	**RE: Presentation on land based spill policy paper #2**
From	Vander Steen, Benjamin ENV:EX
To	'Dorit Mason'
Cc	'Angela Negenman'; Knox, Graham G ENV:EX
Sent	Thursday, March 6, 2014 1:24 PM

Alright, thank you kindly. And, just so you know Maria is unfortunately on holidays next week so will be unable to join us - expect just Graham and I.

Thanks,
Ben

-----Original Message-----
From: Dorit Mason [mailto:dmason@cnv.org]
Sent: Wednesday, March 5, 2014 12:06 PM
To: Vander Steen, Benjamin ENV:EX; Poss, Angie ENV:EX
Cc: Angela Negenman; Knox, Graham G ENV:EX
Subject: RE: Presentation on land based spill policy paper #2

Great. We will have screen and computer for you. Dorit

-----Original Message-----
From: Vander Steen, Benjamin ENV:EX [mailto:Benjamin.VanderSteen@gov.bc.ca]
Sent: Wednesday, March 05, 2014 11:59 AM
To: Dorit Mason; Poss, Angie ENV:EX
Cc: 'Julie Pavey'; 'Michelle Weston'; Angela Negenman; 'Richard Boase'; Knox, Graham G ENV:EX
Subject: RE: Presentation on land based spill policy paper #2

Super, I'll let Maria know she is welcome to join us, and we look forward to seeing you then. We'll have a powerpoint presentation. Do you have a project set-up, and if so shall we send our presentation in advance? If not, we can bring the equipment needed to display our presentation.

Cheers
Ben

_____
Ben Vander Steen
Senior Policy Advisor, Strategic Policy Branch Ministry of Environment | Government of British Columbia
Landline: 250 387-3929 | Mobile: 250 812-9341 benjamin.vandersteen@gov.bc.ca

-----Original Message-----
From: Dorit Mason [mailto:dmason@cnv.org]
Sent: Wednesday, March 5, 2014 11:19 AM
To: Poss, Angie ENV:EX
Cc: 'Julie Pavey'; 'Michelle Weston'; Angela Negenman; 'Richard Boase'; Vander Steen, Benjamin

ENV:EX; Knox, Graham G ENV:EX
Subject: RE: Presentation on land based spill policy paper #2

Thanks Angie for organizing.
Ben, Graham, please let Maria know she is welcome to attend.
See you next week.
Dorit

Dorit Mason, M.Sc., A.B.C.P.
Director
t: 604.969.7001 | e: dmason@cnv.org

North Shore Emergency Management Office
147 East 14th Street (2nd floor), North Vancouver, BC V7L 2N4
Reception: 604.969.7000

~ A Disaster Resilient North Shore ~
Emergency Management for the City and District of North Vancouver and the District of West Vancouver

-----Original Message-----
From: Poss, Angie ENV:EX [mailto:Angie.Poss@gov.bc.ca]
Sent: Wednesday, March 05, 2014 10:42 AM
To: Dorit Mason
Cc: 'Julie Pavey'; 'Michelle Weston'; Angela Negenman; 'Richard Boase'; Vander Steen, Benjamin ENV:EX; Knox, Graham G ENV:EX
Subject: RE: Presentation on land based spill policy paper #2

Hi Dorit,

That sounds good. We will make a presentation on how the spill response regime is evolving and then leave plenty of time for discussion and questions. I won't be there, but am CCing my colleagues Ben and Graham, who will be coming over to speak with you. I'll turn it over to Ben and Graham to work with you on any logistics between now and then.

Maria Stanborough from UBCM, who is on our provincial Advisory Committee, had asked if she could attend the meeting. Please let Ben or Graham know if you have any concerns with that.

Thanks for your interest and feel free to contact myself or Ben or Graham at any point if you have questions, Best, Angie

-----Original Message-----
From: Dorit Mason [mailto:dmason@cnv.org]
Sent: March-04-14 6:30 PM
To: Poss, Angie ENV:EX
Cc: Julie Pavey; Michelle Weston; Angela Negenman; Richard Boase
Subject: Re: Presentation on land based spill policy paper #2

Angie, that sounds great. How about we plan for 1 hour and with questions it will likely evolve into the rest of the time. We will be meeting at the North Shore Emergency Management Office - 2nd floor, 147 east 14th, North Vancouver.
Dorit

On 2014-03-04, at 4:25 PM, "Poss, Angie ENV:EX" <Angie.Poss@gov.bc.ca> wrote:

> Hi Julie,
> March 13 works well for us. Let me know how much time we will have during the meeting - we could easily fill 90 minutes but I'm sure you have other items you need to discuss.
> Best,
> Angie
> _____
> From: Julie Pavey [PaveyJ@dnv.org]
> Sent: Monday, March 03, 2014 7:46 PM
> To: Poss, Angie ENV:EX
> Cc: 'Dorit Mason'; Michelle Weston; 'Angela Negenman'; Richard Boase
> Subject: RE: Presentation on land based spill policy paper #2
>
> Hi Angie,
>
> We are having our next meeting tentatively on March 13th 930-1100 hrs at the North Shore Emergency Operations. Would that date work for you ?
>
> Thanks
>
>
> Julie Pavey, R.P. Bio.
> Section Manager – Environmental Sustainability District of North
> Vancouver
> Phone: 604-990-2445
> Email: PaveyJ@dnv.org<mailto:PaveyJ@dnv.org>
>
>
>
> From: Poss, Angie ENV:EX [mailto:Angie.Poss@gov.bc.ca]
> Sent: Wednesday, February 26, 2014 1:11 PM
> To: Julie Pavey
> Cc: 'Dorit Mason'; Michelle Weston
> Subject: RE: Presentation on land based spill policy paper #2
>
> Hi Julie,
>
> Thanks for getting in touch. I’m happy to meet with you and/or the working group whenever it suits you. Our team is in the Vancouver area in the third week of March and has some time on the morning of March 20, if that works for you. Otherwise, just send me a couple of date options and we’ll go from there. We’re certainly available before March 20 if you prefer.
>
> Best,
> Angie
>
> Angie Poss
> Project Lead, Land Based Spill Preparedness and Response BC Ministry
> of Environment
> O: 250 356-9833
> C: 250 812-0114
>
>
>
> From: Julie Pavey [mailto:PaveyJ@dnv.org]
> Sent: February-26-14 1:04 PM
> To: Poss, Angie ENV:EX
> Cc: 'Dorit Mason'; Michelle Weston

> Subject: Presentation on land based spill policy paper #2
>
> Hi Angie,
>
> We am interested in having a presentation on this item; we are currently working on an updated spill response plan with two other munis and have a working group that meets regularly.
>
> Regards
>
> Julie Pavey, R.P. Bio.
> Section Manager – Environmental Sustainability District of North
> Vancouver
> Phone: 604-990-2445
> Email: PaveyJ@dnv.org<mailto:PaveyJ@dnv.org>
>

RE: Presentation on land based spill policy paper #2

Thursday, May 22, 2014
4:24 PM

Subject	**RE: Presentation on land based spill policy paper #2**
From	Julie Pavey
To	Poss, Angie ENV:EX
Cc	'Dorit Mason'; Michelle Weston; 'Angela Negenman'; Richard Boase
Sent	Monday, March 3, 2014 7:46 PM

Hi Angie,

We are having our next meeting tentatively on March 13th 930-1100 hrs at the North Shore Emergency Operations. Would that date work for you ?

Thanks

Julie Pavey, R.P. Bio.
Section Manager – Environmental Sustainability
District of North Vancouver
Phone: 604-990-2445
Email: PaveyJ@dnv.org

From: Poss, Angie ENV:EX [mailto:Angie.Poss@gov.bc.ca]
Sent: Wednesday, February 26, 2014 1:11 PM
To: Julie Pavey
Cc: 'Dorit Mason'; Michelle Weston
Subject: RE: Presentation on land based spill policy paper #2

Hi Julie,

Thanks for getting in touch. I'm happy to meet with you and/or the working group whenever it suits you. Our team is in the Vancouver area in the third week of March and has some time on the morning of March 20, if that works for you. Otherwise, just send me a couple of date options and we'll go from there. We're certainly available before March 20 if you prefer.

Best,
Angie

Angie Poss
Project Lead, Land Based Spill Preparedness and Response
BC Ministry of Environment
O: 250 356-9833
C: 250 812-0114

From: Julie Pavey [mailto:PaveyJ@dnv.org]
Sent: February-26-14 1:04 PM
To: Poss, Angie ENV:EX
Cc: 'Dorit Mason'; Michelle Weston
Subject: Presentation on land based spill policy paper #2

Hi Angie,

We am interested in having a presentation on this item; we are currently working on an updated spill response plan with two other munis and have a working group that meets regularly.

Regards

Julie Pavey, R.P. Bio.
Section Manager – Environmental Sustainability
District of North Vancouver
Phone: 604-990-2445
Email: PaveyJ@dnv.org

Cc: Vander Steen, Benjamin ENV:EX; Poss, Angie ENV:EX; Knox, Graham G ENV:EX; Denis, Alexandra ENV:EX; Paterson, Kellie ENV:EX; Hofweber, Jim E ENV:EX
Subject: Mtg with Haisla re Land based Spill Response & Preparedness Project

Jim Hofweber requested that I propose some meeting times for the Ministry's Project Team to meet with yourself and Haisla representatives on the status of the Land based Spill Preparedness and Response project. Would one of the following dates work for you and the Haisla reps to meet in Vancouver?

Friday, April 11	1:00 – 3:30pm
Thursday, April 24	1:00 – 3:30pm
Friday, April 25	9:00 – 11:30am

Thanks.

Kellie Paterson
Sr. Administrative Assistant
Environmental Emergencies and Land Remediation Branch
Environmental Protection Division
Ministry of Environment
Tel: 250-387-9971

Denis, Alexandra ENV:EX

From: Hofweber, Jim E ENV:EX
Sent: Monday, March 31, 2014 11:25 AM
To: Knox, Graham G ENV:EX
Subject: Re: P&P World Leading Spill Preparedness and Response_mar 12 2014

Thx Graham

From: Knox, Graham G ENV:EX
Sent: Monday, March 31, 2014 11:16 AM Pacific Standard Time
To: Shoemaker, Wes ENV:EX
Cc: Poss, Angie ENV:EX; Hofweber, Jim E ENV:EX; Standen, Jim ENV:EX; Jackson, Vickie ENV:EX; Lee, Bonnie ENV:EX
Subject: RE: P&P World Leading Spill Preparedness and Response_mar 12 2014

Greetings,

I have attempted to provide the information you are looking for below in red text adjacent to your questions / comments. Please let me know if you require further clarification or additional information?

Immediately below is a very small sampling of examples of existing gaps or deficiencies s.13 s.13 We could point to hundreds of spills on annual basis where gaps occurred or improvements are needed. Compiling such a report however would involve significant staff resources, that we currently do not have, s.13

s.13

- Spill Reporting – CN rail advises ministry of small spill at rail yard in lower mainland. Ministry staff subsequently discover their was actually a collision between locomotives and substantially more fuel released then reported and that the spilled materials were moving offsite.
- Capability and Capacity – s.14, s.15

s.14, s.15

- Training and Certification of Responders – Tulameen coal mine tailings release resulted in coal sediments being washed down the Tulameen River. The company was directed to conduct an assessment of the materials deposited in and along the river. The contractor hired claimed their were trained in "Shoreline Cleanup and Assessment Techniques" but based on the work they completed it became apparent to the ministry that this contractor did not have sufficient training to complete the work appropriately. The failure to conduct this work in a timely manner resulted increased public and local government pressure and concerns with a response the characterised as slow and incompetent.
- Data Collection and Monitoring – Spillers and existing requirements (by federal agencies) do not ensure important activities are planned and prepared for to ensure the data and sample can be done in a timely manner to protect public health and determine environmental impacts. Both the Kinder Morgan Pipeline spill at their Sumas Tank farm and the recent rail spill of coal into a creek in Burnaby showed the lack of preparedness. In the Kinder Morgan example no air monitoring or sampling was done to determine what the concentrations of chemicals in the air were to assure the public and provide scientific basis for the company's claims that there were no health impacts and the surrounding community members and elementary school children were safe (even though they were reporting nausea, headaches, strong odours, etc.). In the rail coal

spill incident the company did not undertake environmental sampling and monitoring for days. This is problematic as the data is ephemeral and needs be collected immediately. In this incident both the public and local government expressed their concerns of the incompetence of the response by the railway.

- Restoration – the Goldstream fuel tank truck incident exemplifies the current lack of process or requirements of restoration of the environment after a spill. The ministry continues to work with Columbia Fuels and numerous stakeholders on a restoration plan but without clear rules and guidelines the process has continued on and the responsible party could ultimately walk away if it so chose leaving either restoration undone or the province to identify funds and undertake the required restoration planning and work.
- Compensation of loss of public use – Kinder Morgan pipeline rupture in Burnaby resulted in oil travelling to the marine environment and the closure or numerous parks and beaches for a significant time period. The public was not compensated for the loss of use to these public lands and resources. If a spill were to occur that effected both Washington state and BC (example: A Teck Cominco spill into Columbia River in Trail) the public on the U.S. would be entitled to compensation for loss of public use for its lands / resources while British Columbians would be entitled to no compensation (even though the spill occurred here and involves a BC based company).

> ----- Original Message -----
> From: Shoemaker, Wes ENV:EX
> Sent: Sunday, March 30, 2014 11:14 AM Pacific Standard Time
> To: Hofweber, Jim E ENV:EX; Standen, Jim ENV:EX; Jackson, Vickie ENV:EX; Lee, Bonnie ENV:EX; Poss, Angie ENV:EX

s.12, s.13, s.17

Pages 173 through 174 redacted for the following reasons:
- -
s.12, s.13, s.17

RE: Follow-up on CEPA information

Monday, May 26, 2014
12:01 PM

Subject	**RE: Follow-up on CEPA information**
From	Poss, Angie ENV:EX
To	'Amanda Affonso'; Vander Steen, Benjamin ENV:EX
Cc	Hofweber, Jim E ENV:EX
Sent	Thursday, February 27, 2014 4:14 PM

Hi Amanda,

Thanks for sharing this information, particularly the document on CEPA's safety program. This will be useful reading for our team. You should have examples of the stakeholder presentations in your inbox now, along with a summary of our last call and a request for your preferred dates for our next conference call. Let me know if you haven't received this.

We are expecting content from one last federal agency to complete the regulatory matrix. If this doesn't arrive in the next few days we will share the draft with the Advisory Committee on the understanding that more information may be forthcoming.

I hope this helps. Happy to chat if you have further questions.

Angie

From: Amanda Affonso [mailto:aaffonso@cepa.com]
Sent: February-27-14 2:57 PM
To: Poss, Angie ENV:EX; Vander Steen, Benjamin ENV:EX
Cc: Hofweber, Jim E ENV:EX
Subject: FW: Follow-up on CEPA information

Angie/Ben/Jim,

Fazil Mihlar attended an education workshop I organized in the fall on the federal financial responsibility crude oil pipelines are expected to have. I believe this information was shared with MoE.

I wanted to follow-up on our conference call last week –

1. When will we receive the MoE matrix to review? This was to be shared with the Advisory Committee members.

2. MoE committed to sending the Advisory members copies of the presentation to the communities, ENGO's , First Nations who have been consulted. Can we please receive these no later than March 6th?

Look forward to the information.

Amanda Affonso
Director, Regulatory & Financial

Canadian Energy Pipeline Association
Suite 200, 505–3rd St. SW
Calgary, Alberta T2P 3E6

Phone 403.221.8756

Cell 403.585.6933
Fax 403.221.8760

aaffonso@cepa.com
aboutpipelines.com

Not Responsive