House of Commons
CANADA

Standing Committee on Environment and Sustainable Development

ENVI • NUMBER 021 • 2nd SESSION • 40th PARLIAMENT

EVIDENCE

Wednesday, May 13, 2009

Chair

Mr. James Bezan

Standing Committee on Environment and Sustainable Development

Wednesday, May 13, 2009

● (0810)

[*English*]

The Vice-Chair (Mr. Francis Scarpaleggia (Lac-Saint-Louis, Lib.)): Good morning to our witnesses. Thanks very much for being here today. We really look forward to what you have to tell us.

The first two days of our trip out west have been very informative, but our trip isn't over. We still have a lot to learn, so we're looking forward to what you have to say.

I'm told that you have a presentation plan worked out. Whoever wishes, then, please start.

Mr. Don Thompson (President, Oil Sands Developers Group): Good morning, Mr. Chair and panel.

I'd like to express our appreciation for your taking the time to listen to us, for inviting us here, and for the time you spent in Fort McMurray viewing our operations and the oil sands.

I'm Don Thompson, president of the Oil Sands Developers Group. I'd like to start by introducing our panel. Stuart Lunn is with Imperial Oil. Mr. Ian Mackenzie is with Golder Associates. Mr. Fred Kuzmic is with Shell Canada. Mr. Greg Stringham is with the Canadian Association of Petroleum Producers.

Water is clearly a critical aspect of the production process used for bitumen extraction and recovery, which we'll talk to in a bit. In reality, Canada's oil sands use a very small percentage of available water, and the water used is highly regulated. For example, oil sands use is currently less than 1% of the mean annual flow of the Athabasca River, and there are procedures and processes in place that cap that withdrawal during low-flow periods

Regulations also do not permit the release of any untreated oil sands process-affected water, and ongoing aquatic monitoring has not shown impacts to the lower Athabasca River aquatic ecosystem associated with oil sands development.

Oil sands projects recycle a high percentage of the water they use, ranging from 80% in surface mining to over 95% in the in situ industry. In fact, the in situ side of the oil sands industry is shifting increasingly from the use of fresh water to the use of saline water, and of course none of that is from the Athabasca River.

The other reality is that pumping water, storing it, and treating it is a key cost of production. We have every incentive to minimize our water use, and that is important to the economics of oil sands production.

Recently there have been calls on both sides of the border to strike a balance between energy, environment, and economy. In my view, that balance is being struck today in the oil sands.

On the environment, local air quality is excellent and is being managed well. Greenhouse gas emissions are low and are a small percentage of Canadian and global totals. The use of water is being reduced through improved and increasing technology. As I've already mentioned, a high percentage of the water we use is recycled, and the in situ industry is moving increasingly to using non-drinkable water.

In terms of the land, minimization of impact has always been a watchword. Of the 530 square kilometres that have been disturbed over 40 years of surface mining, 65 square kilometres are currently under active reclamation. Advanced technology is being developed and innovation is being applied to all aspects of environmental management.

The reality is that the oil sands are a key strategic Canadian resource. They provide today, and will provide increasingly in the future, strong security of supply to Canada. They are a major component of this country's future energy mix.

On the economic side, oil sands economic impacts are felt across this country. Between 2000 and 2020, oil sands development has the potential to generate at least $885 billion in total economic impact, with $123 billion in royalty and tax revenues for Canada's federal and provincial governments. It's important to understand that for each permanent oil sands-related job, nine additional direct, indirect, and induced jobs are created in this country.

Yesterday I was in Drummondville, Quebec, where I met with the Quebec branch of the Canadian Manufacturers and Exporters and a number of steel metal fabricators, mining equipment providers, and the like that support this industry. In fact Suncor, which presented with me, demonstrated that they had 199 vendors in Quebec and almost $200 million of expenditures last year.

It's also important for people to realize that my members have workforces on their sites from coast to coast, from the far east to the west, and the oil sands represent people and industries coming together in Fort McMurray. The oil sands are a national endeavour.

On how oil sands fit into the future energy mix, you should know that global economic growth will require more energy of all kinds. In North America, energy use grows by about 1.5% a year, driven by population growth, lifestyle enhancements, and offset to a small degree by efficiency. Despite growth in the use of renewables and other forms of energy, oil remains an important long-term component of the global energy mix.

We will be needing all forms of energy because of growth in global population. But the reality is that oil sands resources are a vital part of the global petroleum supply. In Canada we are privileged to have the second-largest crude oil reserves in the world—second only to Saudi Arabia—at 178 billion barrels. But the reality is that 97% of those, or 173 billion barrels, are in the oil sands. Stated another way, in other countries and locations where crude oil is accessible, a full 87% of the world's known oil reserves are currently in state-owned or state-controlled locations held by countries such as members of OPEC, Russia, and the like. Only 13%, or one barrel in six, is openly accessible to international oil companies, and half of that is in Canada's oil sands.

Our conventional production is declining by about 4.5% per year and will continue to do so. That gap has to be filled by oil sands and is being filled by oil sands. But the other reality is that the economic turmoil in recent times has flattened that line. You will see in the next forecast that the growth rate from 2008 to 2012 will flatten. So oil sands are critical to this country's future energy security. Oil sands exports will also be a key component of the balance of payments future of this country.

I know that on your tour you witnessed both kinds of oil sands production technologies, so I will not dwell on that. I'm sure you saw mining, trucking, and shovel operations; however, I draw your attention to the fact that 80% of the reserve base I spoke of must be produced by in-ground or in situ technology where there is no mine, no tailings ponds, and no water from the Athabasca River.

With that, I'll turn the floor over to Mr. Lunn, who will talk about water quantity issues.

● (0815)

Mr. Stuart Lunn (Imperial Oil Limited): I'd like to spend a little bit of time talking about the perspective of water availability in the province of Alberta, and then I'll talk specifically about water use in the oil sands industry, both in surface mining and in the in situ industry.

Each year in the province, approximately 130 billion cubic metres of water flow through the rivers of Alberta, and 85% of this water flows north. By far the largest rivers in the province are the Peace and the Athabasca rivers, joining to become the Slave River, leaving the province to the north. In contrast, in the province 88% of the water demand is in the agricultural areas and the major population centres in the south half of the province.

All the oil sands production is in the northern basins. The mining oil sands are all within the Athabasca River basin, and in situ oil projects are distributed among the Peace, the Athabasca, and the Beaver river basins.

Of the 130 billion cubic metres on average available in the rivers of Alberta each year, the Alberta government has licensed or allocated just under 10 billion cubic metres per year to all sectors within the province. The oil and gas industry accounts for about 7% of this provincial allocation—on here, the yellow portion of the bar—after the large sectors of agriculture, commercial, and municipal use.

Most of this allocation, unlike the other sector use, is allocated or licensed for oil sands mining in the Athabasca River basin, about 70% of that 7%. The rest of the oil and gas sector uses the remaining water, and comparatively small volumes are used for in situ oil sands production.

It's noteworthy that criticism of oil sands water use often fails to recognize that the use is in the northern basins, where the water supply is much more plentiful and water use is a small percentage of natural supply.

Focusing on that with a little more detail, oil and gas allocations represent 2.2% of the allocations of the natural flow of the Athabasca River, 0.04% of the natural average flow in the Peace River, and 3.7% of water availability in the Beaver River basin. It's worth noting that the actual water use is often less than the allocation, but concerns and water shortages in central and southern Alberta have led to misperceptions about water supply in the north for the oil sands.

If you take a quick look at the chart, there are three bars. The axis represents billions of cubic metres of water. The blue bar is the average natural supply in the river basin, the red bar represents the total amount of water allocated in that basin for use in all sectors, and the yellow bar represents the amount of water allocated for use in the oil and gas sector. What we can quickly see is that the allocations in the south half of the province, in the North Saskatchewan and South Saskatchewan River basins, represent a large percentage of natural supply, some 30% of the North Saskatchewan and nearly 60% of the South Saskatchewan.

In comparison, including forecast growth in the oil sands industry, the Athabasca, Peace, and Beaver river basins will remain among the least utilized basins in the province.

I'll now focus on the oil sands mining industry. Over the last several years, the Oil Sands Developers Group has been working on forecasting how much water might be required from the Athabasca River. Both lines on the chart represent aggressive growth cases, the purpose being to try to determine how much water might be required from the river if projects go forward as envisioned and if future projects go forward as envisioned.

The lower case represents 2.5 million barrels of oil per day, and the second case is 3.5 million barrels of oil per day, which is approximately four times current production rates. The left axis shows the absolute amounts of water being withdrawn from the Athabasca River, and the right axis shows the percentage that this withdrawal represents of the mean annual flow at Fort McMurray. We can see for those two growth cases that the industry use of water is expected to rise to between 10 and 15 cubic metres per second, which represents about 1.5% to 2.5% of the flow of the Athabasca River. We also see that it peaks, in the most aggressive case, at around 16 cubic metres per second, or just under 2.5% of the mean flow. And I'll be talking about that number again.

● (0820)

So why is there so much concern about water use from the Athabasca River, given the very low percentages of water that are allocated, and the low percentages of water that are being used now, and will be used in the future?

This is mostly because the Athabasca River is ice-covered for five to six months per year, and the winter flows are about 10 times lower than the open-water flows. Also, the Athabasca River's flows are not regulated by dams. The concerns very much focus on withdrawals during low winter flow weeks, and especially in dry periods during those low winter flow weeks.

It's worth mentioning that when the Athabasca River joins the Peace River beyond Lake Athabasca to become the Slave River, the low flows in that river system are not as much of a concern. This is because the Peace River has the W.A.C. Bennett Dam in British Columbia that takes some high summer flows and distributes them for hydro during the winter months, creating higher-than-natural flows in the Peace and Slave rivers—by about 700 cubic metres per second. If you compare that with the 16 cubic metres per second projected for the oil sands industry, we see that the low-flow concerns are really a concern only for the Athabasca River.

These low flows have been regulated by the federal and provincial governments, with water restrictions during these low-flow periods capping the cumulative amounts of water available to the oil sands industry. This is in the *Water Management Framework: Instream Flow Needs and Water Management System for the Lower Athabasca River*.

This framework was released in 2007, after seven years of multi-stakeholder research, resulting in a very protective and conservative framework. It applies to segments four and five of the lower Athabasca River, and these are the segments where we find the oil sands mining operations. It limits water withdrawals by the oil sands operators during low-flow winter periods to between eight and 15 cubic metres per second, depending on the river flow and the time of the year.

This process is being refined in a multi-stakeholder process, taking advantage of additional research on the river, with a phase two water management framework anticipated for implementation at the beginning of 2011.

So what does this mean? Given the projections of oil sands mining growth to a peak of 16 cubic metres per second, and given the protection provided by the lower Athabasca River water management framework, what does this mean for withdrawals and natural flows?

On this next slide, we've taken the driest period on record at the Fort McMurray gauge, as contained in the period of 1998 to 2004. The natural flows are the blue curve on the slide. You can see the low winter flows, and you can see the high summer flows and variability of the flows on the hydrograph. The other curve—which is difficult to make out—is the amount of water that will remain in the Athabasca River if that growth case of 16 cubic metres per second comes to pass.

With the protection provided by the water management framework, we see that the difference between that rate, even for a growth case during a very dry period, and the natural flow of the Athabasca River is almost imperceptible. However, we are concerned about those low winter flow periods, and research is ongoing in that area.

There have been some suggestions that the Athabasca River is drying up in the winter. This very much depends on the timeframes that we look at. If we take a look at the high-flow periods from 1970 to 2004 at the Fort McMurray gauge, we can see there's quite a steep declining trend. It's a little difficult to see on the chart, but if you take a look at the full record of flow history on the Athabasca River at Fort McMurray, you see that from 1957 to 2007, the trend—including a forecast for the future—is much less alarming.

The town of Athabasca, which is upstream of Fort McMurray, has a longer flow history, and the river flows track very similarly. Of course, it's a smaller river upstream, because of fewer tributaries entering into the river. At the town of Athabasca, we have a full century of monitoring data, and if we take a look at that full history, we can see there have been no trends in flows recorded over the last century on the Athabasca River. There are seasonal increases and decreases due to seasonal and longer-term fluctuations in the weather patterns.

● (0825)

However, that having been said, if the flows in the Athabasca River were to decrease because of climate change or for other reasons, the effect would be that the water management framework would be implemented more often, and that would restrict the oil sands withdrawals more often in order to ensure protection of the river.

In addition, industry would manage the reduced water availability through the use of various mitigation tools, including the use of additional off-stream storage, thus spilling storage in the wetter periods, the summer high-flow periods, and then using that water shortfall in those winter periods. In addition to that, we can expect ongoing water efficiency improvements. As well, we've heard about some new technologies that may be promising.

I'd like to spend a couple of minutes talking about the oil sands in situ industry, which is quite different from the mining industry.

Water is also critical for most in situ oil sands production, and as the industry grows, so does the requirement for source water. However, increases in fresh-source water demand have been offset by a number of initiatives, including the transition to the use of saline water—water that's too salty for potability or agriculture—and high recycle rates of water produced with the bitumen. These rates are greater than 90% and sometimes approach 100% in some years.

I'd first like to call your attention to the black line on the chart. It indicates the bitumen production or oil production from the in situ oil sands industry. We can see that over the last 20 years there has been a sixfold increase in production.

In contrast, the blue curve, which indicates fresh water, shows fluctuation over the years. We have seen a slight increase in recent years, but the volume of fresh water has been greatly offset by the volume of saline water used, especially since 2002. There has been quite a steep increase in the use of saline water over fresh water, and you can see for the first time in 2007 that the industry now uses more saline water than fresh water for recovery.

We would expect that trend to continue into the future, depending on the availability of saline water. Depending on this mixture, by 2020 the in situ oil sands industry's forecast is to use between 25 million and 45 million cubic metres of fresh water to produce more than 1.6 million barrels of oil per day, or 90 million cubic metres per year. This represents less than 0.5% of Alberta's current water allocation to produce almost 40% of Canada's total crude oil.

Continuous improvement is also an important aspect of the industry. The chart here shows the water use efficiency of Imperial Oil's Cold Lake operation. It's in terms of units of fresh water per unit of bitumen produced. We can see that over the last 30 years there has been a dramatic reduction in the amount of fresh water required to produce each incremental barrel of oil. It is this record of continuous improvement that gives me confidence that the oil sands industries, both the in situ industry and the mining industry, will continuously improve their water use efficiency.

In closing, I'll mention that some new projects in the in situ industry, such as Devon's Jackfish project, use only saline water for steam generation. They're not using any fresh water at all.

Thank you very much.

I'd like to now introduce Ian Mackenzie, who will talk about water quality.

● (0830)

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you for your presentation, Mr. Lunn.

Welcome, Mr. Mackenzie.

Mr. Ian Mackenzie (Golder Associates): Good morning. I'm going to talk about water quality as it relates to the environmental impact assessment process in the oil sands region in Alberta. My presentation is going to focus exclusively on surface mines.

I'd like to first introduce a slide showing the bitumen outcrops along the Athabasca River. I think it can be seen that water quality has to be influenced by hydrocarbons and polycyclic aromatic hydrocarbons, which I'm sure you've heard about. Then I think it's worthwhile to recognize that based on this water quality and bitumen association, the ecosystem in the Athabasca River has likely adapted over thousands of years or been influenced over thousands of years by these deposits.

I'll frame my presentation on the environmental impact assessment with a focus on water quality by five basic elements: characterization of existing water quality; assessment of project design; confirmation of appropriate mitigation measures; cumulative assessment of water quality in receiving streams; and resolution of residual issues.

There has been extensive monitoring of water quality, sediment quality, and benthic invertebrates and fish, not to mention hydrologic monitoring in the lower Athabasca River for quite some time by numerous agencies. The federal government, through Environment Canada and the Department of Fisheries and Oceans, was involved in the northern rivers basin study from the mid-1990s to the end of that decade. The Panel on Energy Research and Development has been funding dozens of studies since the early 1990s on the lower Athabasca River. The northern rivers ecosystem initiative carried on the recommendations and studies of the NRBS, starting at the beginning of this decade and finishing up in 2003 or 2004. Alberta Environment and its predecessor has been monitoring water quality monthly upstream of Fort McMurray, and downstream of the oil sands development at Old Fort for quite some time.

Alberta Environment has also been involved in the northern rivers basin study with the federal government. You'll hear more about the regional aquatics monitoring program that was initiated in 1997. I'd also like to mention a couple of other regional bodies that have been doing a lot of work in the oil sands area. The first one is the Canadian Oil Sands Network for Research and Development, or CONRAD, which has been funding studies since the early 1990s on many aspects of oil sands, including wetlands research into potential acidification, tainting, loading studies in the river, and many others. In addition, the Wood Buffalo Environmental Association, or WBEA, has been monitoring potential stream acidification for some time.

The Cumulative Environmental Effects Management Association, or CEEMA, which you'll hear more about this afternoon, has been developing several management frameworks on potential acidification of lakes, management of streams, reach-specific water quality objectives, pit lakes, and several other things.

Industry also has to carry out monitoring associated with its approvals, which can be quite extensive. Proponents that are undertaking the EIAs also have to undertake extensive baseline work associated with that assessment.

None of the agencies and programs I've just talked about have been able to detect any effects of oil sands operations on the lower Athabasca River. I have a number of testimonials, and they are just a subset of many more that exist. For example, the PERD study, as reported in the northern rivers ecosystem initiative report in 2003, indicated there was “no evidence to indicate that local industries are contributing significantly to measured hydrocarbon levels or biotic impacts”.

Alberta Environment, in their 2008 report entitled *Alberta's Oil Sands: Opportunity. Balance.*, reported:

> Stringent testing has consistently shown there has been no increase in concentrations of contaminants as oil sands development has progressed. In fact, contaminant levels in other rivers in the area with absolutely no industrial oil sands activity have been found to be higher than those adjacent to oil sands projects. The contaminant sources in the area are natural

● (0835)

RAMP, in their 2007 technical report, indicated:

> Based on comparisons of water quality between upstream and downstream stations over time, no effects of local human activities were apparent on water quality in the Athabasca River in 2007.

Finally but not least, Evans, an Environment Canada researcher, and others stated in a published paper in 2002:

> There is little or no evidence of temporal trends of increasing PAH concentrations in sediment cores collected in Lake Athabasca and the...delta lakes, suggesting no or minimum impact from oil sands operations.

The mitigation measures that are proposed and in place in existing oil sands operations—against which EIA practitioners gauge their effectiveness—include sedimentation ponds that trap particles associated with muskeg and overburdened drainage waters in advance of mining. These waters are released to receiving streams. There are closed-circuit operations of all process-affected waters and waters that may come into contact with exposed bitumen during mining operations.

Tailings are in back-filled cells, of which I have an accompanying diagram. You can see that the tailings are deposited in such a way that associated seepage is directed to reclamation features that are specifically engineered to remediate those waters. On the right side of the diagram you'll see a receiving stream. That is protected by the placement of low-permeability materials to prevent seepage from travelling in that way. Each site-specific circumstance is very unique; this is just a conceptual diagram.

The appropriate design of tailings ponds and tailings sand structures includes perimeter ditches to collect seepage and run-off from the structure. Many of the new tailings ponds that are being proposed include interception wells around the outside of these structures to collect water and put it in the closed-circuit system.

At reclamation of these structures, the hydrostatic head or water pressure is reduced from the top by removing that water and tailings, so the amount of seepage is very small and can be handled within the reclamation landscape. Sustainable reclamation landscapes are developed specifically to remediate seepage on the landscape through engineered wetlands, and then ultimately through pit lakes that have to meet regulatory standards before releasing to receiving streams.

After EIA practitioners confirm, using conservative modelling, that the proposed mitigation measures are adequate to protect local receiving streams, integrated modelling is conducted to ensure that all environmental pathways are considered cumulatively under several different conditions of flow and several timeframes, as well as under many conceivable development scenarios. These state-of-the-art models include integrated outputs from groundwater models, air quality models, and surface water models. The water quality models are then used to ensure that the predictions are robust and in compliance with regulatory benchmarks and thresholds.

Sometimes an iterative process has to take place when it's shown that important thresholds might not otherwise be achieved. Additional mitigation and refinement of modelling assumptions have to take place. That might form the basis of the application that is submitted to the regulators and stakeholders. These submitted EIAs are then reviewed in a transparent and open process that often includes independent expert reviews.

● (0840)

For example, the federal government, through DFO and Environment Canada, has funded international peer reviews of some of the water quality and quantity work. Industry has also funded international peer reviews. Stakeholders also contract independent expert reviews on a routine basis for their assessments.

Given this rather lengthy and comprehensive process, the EIAs in the region continue to predict that the effects on the lower Athabasca River will be negligible and will continue to be negligible into the future.

In the final analysis, regulatory authorities along with stakeholder experts have ample time to review these EIAs and integrated applications and ask clarifying questions of proponents, who respond through formal and informal processes. This clarification process often lasts a year or longer in the oil sands area.

Issues that may not be resolved through the process are carried on to joint federal-provincial hearings for resolution and discussion. At the end of the day, if the project has been ruled to be in the interest of the public, the joint panel makes recommendations that are put into conditions, approvals, and regional programs to validate that systems are operating effectively and ensure that actions taken into the future are protective.

Thank you.

I'd now like to introduce Fred Kuzmic, who represents RAMP.

The Vice-Chair (Mr. Francis Scarpaleggia): Good morning, Mr. Kuzmic...[*Technical difficulty—Editor*]

Mr. Fred Kuzmic (Regional Aquatics Monitoring Program): I'd like to thank the committee for the opportunity to talk today a little bit about the regional aquatics monitoring program, RAMP. I'm past chair and technical chair of this group.

RAMP is really a joint monitoring environmental program that assesses the health of the rivers and lakes in the oil sands region. It's a science-based program that's funded by industry and has multi-stakeholder representation from a broad range of stakeholders in the region. The program was initiated in 1997 and has been ongoing ever since.

A number of industry members are involved in the program. Some of them aren't oil sands companies. A number of government agencies representing both the provincial and the federal governments, including Fisheries and Oceans Canada, Environment Canada, and Health Canada, are part of the RAMP technical group and helped design the program and the technical aspects of it.

Under Environmental Protection and Enhancement Act approvals, operators in the oil sands region are required to conduct aquatic effects monitoring. They can do that themselves, or they can do it through participation in RAMP, which most of them choose to do.

The intent of the RAMP program is really to monitor aquatic environments in the oil sands region and compare that information with the environmental impact assessment predictions. RAMP also has the task of collecting baseline information to characterize the natural range of variability in the area. Again we collect information to compare against EIA predictions to see if they are accurate. Finally, we collect some information to fulfill the particular EPEA approval requirements that operators have.

RAMP is a program that uses both stressor- and effects-based monitoring approaches and achieves a holistic understanding of the potential impacts on the aquatic environment. We try to recognize and incorporate traditional environmental knowledge from some of our first nation stakeholders into the program. We try to communicate with the communities, the regulators, and other interested parties to share information we have. In fact, we publish a technical report each year that summarizes the activities of the monitoring program.

One of the important aspects of RAMP that we're really proud of is the continuous improvement part of it. We really try to focus on reviewing the results and looking for ways to modify the program in reflection of changing science or additional monitoring mechanisms that become available to us.

RAMP is made up of five or six key components. There are some slides that follow, so I'll detail some of the aspects of those further on. But let's start with climate and hydrology.

The climate and hydrology component of RAMP is really there to monitor the changes in water level of selected lakes and the quantity of water flowing through rivers and lakes. That's accomplished through a series of snow course surveys, hydrometric stations on the Athabasca River, and hydrometric stations along a number of the tributaries, including the Muskeg River. There are, in fact, ten hydrometric stations on tributaries north of Fort McMurray, and three hydrometric stations on tributaries south of Fort McMurray. We've taken water levels at three lakes as well.

In terms of the fish populations component, these are biological indicators of ecosystem integrity, and they're a highly valued resource in the area. There's another slide that follows on that, and I'll get into the details of that a bit more.

In terms of benthic invertebrate communities, we look at the aspects in rivers, lakes, and in the Athabasca River delta, the Peace-Athabasca delta. These are biological indicators that contribute to fish habitat, so it's important for us to look at these as well.

The final component of our RAMP program is acid-sensitive lakes. Here, water quality is reviewed as an early indicator of potential effects of acid deposition. RAMP has identified 50 of the most highly susceptible acid-sensitive lakes. We monitor those on an annual basis, looking at trace metals, general water quality, phytoplankton, and zooplankton. The indications are that we have 50 acid-sensitive lakes in the monitoring program, as well as 11 or 12 tributaries that we deal with outside the Athabasca main stem.

There are a couple of regional initiatives that are under way where people can contribute to the RAMP program, and I note a few things that they've noticed.

The first one is the river response network. This provides emergency response to public reports of non-spill events such as fish kills, the presence of foam, or scum floating down the river. This is an effort we have in conjunction with Alberta's environment protection ministry. They have a 1-800 number where they report that information.

In terms of the fish tagging program, this is an opportunity where we encourage the public to report tagged fish. Part of the fish populations program is the capture, tagging, and release of fish. When these fish are caught by fishers downstream or somewhere else in the river, they can report that back with the numbers that are on the tags.

● (0845)

In fact, just in terms of some information, walleye tend to be very far-travelled. In some cases we've had tag recoveries about 715 kilometres from the initial tag sites—in Lesser Slave Lake in the middle of the province at one of the upstream edges of the Athabasca basin—and as far downstream as 403 kilometres along the Slave River. So these fish tend to be far-ranging.

The fish health program that we have promotes reporting of abnormal fish. So if a fisher catches something that looks strange or odd—if there are fish with lesions, growths, or physical abnormalities, such as curved spines or blindness or missing fins—they're encouraged to call the number that we have published and report the information to us so that we can take the fish and send it out for further analysis at the veterinary school.

If you take a look at the map, the RAMP study area is pretty big. It covers the entire regional municipality of Wood Buffalo. There are upstream monitoring sites from the oil sands operation, and downstream of Fort McMurray; and then there are some far downstream sites on the Athabasca River delta that look at the potential effects of development in the region.

The regional study area covers off the RMWB, as I said, but the focus study area looks at particular areas and watersheds where oil sands development is occurring, or is planned to occur in the future. So it's really keyed to those particular areas.

Take a quick look at some of the water quality information. As I mentioned before, water quality and sediment quality are two important components of our program. We look at all the regional tributaries of the rivers, and there are some lakes where the information is reviewed, and then out on the Athabasca and Peace River deltas as well.

The water and sediment quality reflect habitat quality, as well as potential exposure of fish and invertebrates. We have 45 sites that are sampled at a minimum annually, but there are some sites that are sampled monthly. There are 28 different sediment sites that we collect sediment samples from, and those are tied into the benthic invertebrate program as well.

We do toxicity testing. We analyze for polycyclic aromatic hydrocarbons. There are some potential fish-tainting compounds for which we analyze those particular materials as well, and there are some thermographs that we have to monitor for changes in water temperature.

The next few slides really just run through a couple of snapshots for the 10-year monitoring period between 1997 and 2007 on a few key components. The thing you'll notice is that each of them is below current guidelines—either CCME guidelines or other particular guidelines that apply—and there hasn't been a lot of change between the upstream and the downstream, or no change in most cases, between monitoring upstream and downstream of oil sands operations.

Maybe we could just flip through these slides. The first slide is of arsenic concentrations, the second of sulphate concentrations, and the next is of dissolved organic carbon concentrations. You can see that the purple represents the downstream sites and the green triangles represent the upstream sites.

The last slide on water quality that we have here is on PAH concentration, the polycyclic aromatic hydrocarbons. You can see there is a bit of fluctuation on some of those. The levels at upstream sites can be higher, depending on erosion that's occurring along the river, or seepage from some of the sites that Ian mentioned earlier. But the downstream sites tend to be fairly consistent over the period of record. So this is really showing no change across the region.

The benthic invertebrate samples are really biological indicators that reflect fish habitat and the quality of the sediment. There are 29 different locations on 23 river locations, three on the Athabasca River delta and three at the regional lakes. We measure both erosional and depositional habitat. There are 10 replicates collected at each of those sites, so there is some strong statistical power to the analysis that we do. And we collect the required physical measurements as well. None of the sediment samples are showing any changes in sediment quality. The benthic invertebrate community structure is similar and shows no change from previous data.

So one of the primary conclusions from the 2007 RAMP technical report—you can see the quote there—is that there have been no major effects on benthic invertebrate and sediment quality, as supported by the watershed and lake level analysis.

Talking about fish populations, the RAMP program each year does spring and fall inventories on the Athabasca and Clearwater rivers. In 2007 we collected just over 3,500 fish, and 2,500 of those were caught in the Athabasca River. A number of those fish will be tagged and released, but all of the fish are measured, weighed, and sexed so that we can come up with length and weight distributions and the age structure. There are 19 different species that we record in our inventories. These include walleye, northern pike, goldeye, and long nose sucker, to name a few. And we've seen no ecologically relevant level of change in any of the fish populations, which is really indicative of just natural variations.

We see that "sentinel (fish) species monitored in potentially influenced sites have not exhibited consistent differences in comparison to reference sites".

● (0850)

This is a non-lethal monitoring program we've employed over the last few years to look at upstream-downstream young of the year, to analyze any changes that may be occurring to those populations and the growth expectations related to any development.

There are some other aspects of the fish population study. We do fish fences, as well as the electrofishing and the monitoring that goes on in conjunction with the sentinel species work.

We're the only agency right now that is collecting tissue samples and analyzing for mercury. That information is passed on to Alberta Health and Wellness, Environment Canada, and Health Canada for continuation of the fish consumption advisories.

With that, I would like to turn the floor over to Greg.

● (0855)

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Kuzmic.

Go ahead, Mr. Stringham.

Mr. Greg Stringham (Vice-President, Markets and Fiscal Policy, Canadian Association of Petroleum Producers): Thank you, Mr. Chair.

In the interest of time, I'll keep my comments relatively brief.

I want to talk about two main things. You've heard the regulatory story and what has been going on today, but I want to talk a little bit about the technology advances that are going on. We have a second panel that will come and talk about specific examples, but I thought it would be important for you to understand the research and development and the pilot projects that are going on in both the mining areas and what we call the in situ or the underground areas, to try to reduce the amount of water use, increase the amount of recycle, or in many cases, as you heard, shift from fresh water to saline water and other sources, even using solvents instead of that.

In the mining area, the chart outlines a couple of things that are going on. I know you had presenters from the University of Alberta yesterday. There is a centre there for oil sands innovation that is looking very intensely at water issues associated with that from a research and development perspective. In addition to that, as you've heard in regard to a number of other research activities that are going on, there's a very strong push right now to increase the recycle rates and reduce the amount of tailings. Some of those examples include such things as consolidated tailings—in other words, to get the water to separate out from the fine tailings much more quickly than it has in the past, in order to move it into a reclamation phase more quickly.

You'll hear in the next panel about CO_2 injection, where they will put CO_2 into the tailings to get it to thicken up, and about looking at things such as paste and dry tailings. In fact, there's an oil sands research tailing facility at the university that is looking at pushing the advancement of technology.

So while technology has already been demonstrated, as Stuart talked about, in projects that are in place to reduce the amount of water use, that technology thrust continues into the future to try to look at what would be possible and practical in the future.

The one that probably has the most work going on right now is the dry tailings technology. I think you probably heard about that, but really that is to get to what they call a trafficable—you can walk on it—type of reclamation much more quickly. Shell, Chevron, and Marathon have the $100-million pilot project at Muskeg River, the plant that you flew over on Monday.

As well, NRCan is directly involved, and you can see some of the pictures from the NRCan studies with Syncrude and Suncor that really have the pilots scaled towards these dry tailings. It has not been perfected yet. It's not completely there, but it is getting much, much closer, and the research continues to go on.

Today, that's about 20% of the resource in the mining area. The other 80% is in the in situ area. That's the future resource. Production today is about half and half: about half the oil comes from mining projects, and about half of it comes from in situ.

In the in situ projects, there are some very exciting technologies going forward that will reduce the total environmental impact, including in terms of water. The one that we've shown on the top is the in situ combustion. We have them presenting on the second panel, and they will talk about how they will use underground heat in order to avoid the use of water and still recover the bitumen coming forward. There's no steam that is required for that process at all, and it is up and running, as you'll hear from Petrobank in a few moments.

Other areas on the in situ side of things that are very promising advances, in addition to the shift to saline water, include using solvents, reducing the amount of water or steam that is required, and using things such as propane to be able to get that thick bitumen thin enough to be able to come up the well to the surface. This has really shown some good promise and is done in some pilot projects at this point in time. They're even looking at potentially using full solvent recovery, which would replace water completely, and being able to recover the bitumen that way as it moves forward. That has been done at the lab scale but hasn't yet moved out into the field.

So there are some technological advances that I think are really promising, that continue to push the technologies, as they have in the past. Technology has been a real key to unlocking this resource, but also is a key to the environmental protection.

I'll just quickly summarize. As you have already heard, the balance for us is really critical. We recognize that the water resources are very valuable and need to be managed appropriately, need to be balanced with economics and the environmental and social aspects of development.

To put it in context, in 2008, for example, the oil sands industry used a little more than a third of the amount of water used by the city of Toronto, and that produced about half the oil being produced in Canada. Even if we project into the future, as Don talked about, if we look at maybe 3.3 million barrels a day, and with the decline in conventional oil, about 80% of our oil in Canada would come from the oil sands. At that point in time, we also know that's going to be capped off at 2.5 percentage points of the annual flow of the Athabasca River, in addition to these new technologies on the in situ side of things. So we think we can achieve the balance and we know we need to continue to improve.

We talked about the regulation. The water use and the related impact such as quality are regulated by both federal and provincial authorities, and there's extensive monitoring in place that comes from the governments, as well as from government multi-stakeholder and industry associations that look at that quality on a regular basis and make that information and those reports available to the public.

● (0900)

I already mentioned the split between mineable and in situ, but I also want to come back and say that there has already been significant improvement in water use. We really are striving. There are economic as well as environmental reasons to reduce the amount of water and to increase the amount of water recycled. We can use the water over and over again after there is an initial draw-in. In many projects we're up to greater than 85%, and some of them are up to 95% recycled water. They draw on the water, but then they use it continuously throughout the life of the project.

Last, I want to emphasize the point on technology. Technology has already shown significant gains in helping us reduce the amount of water, finding technologies that don't need water, and pushing those technologies forward. It will still be a critical part of achieving environmental performance into the future.

I'll keep my comments short and turn the time back to you, Mr. Chairman.

Thank you.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Stringham.

We will proceed to a seven-minute round of questioning, starting with Mr. Trudeau.

Mr. Justin Trudeau (Papineau, Lib.): Thank you, Chair.

For the past few days we've been travelling and hearing from various groups and stakeholders. We've heard from industry, from native groups, and from scientists. We are not scientists, but we are trying to pull together the big picture. The fact that there has been such a wide variance of conclusions drawn by the different groups in terms of something as simple as whether the water downstream is being affected by the oil sands is something that I think we all are somewhat struggling with.

Mr. Kuzmic, you talk about the fact that RAMP detected no changes to downstream water quality in 2007, which comes, as far as I can tell, in direct contrast to the results from 2008 that Dr. Schindler has drawn on in terms of levels of aluminum, PAHs, and mercury concentrations.

How do you reconcile what RAMP has found, or not, and what Dr. Schindler has found, or not?

Mr. Fred Kuzmic: Thank you very much for the question.

I don't have the information from Dr. Schindler as to what his assumptions were in the information that he's provided. I know that RAMP is a scientifically credible monitoring program. We do have upstream and downstream samples. There is a 10- or 11-year monitoring record that is available for review. It's published in the RAMP annual technical report. That information is there and it's available.

Mr. Justin Trudeau: The information is available; therefore, you're saying, all the science data that is drawn from industry, from RAMP, from all the different partners is published and available to analysts, researchers, and peer reviewers across the board? Every bit of data that is collected by industry is published?

Mr. Fred Kuzmic: A number of different monitoring programs are in place. The RAMP information is available to RAMP members and other selected individuals who sign the data-sharing agreement that RAMP has. That information has been provided to Dr. Timoney for review through the Mikisew Cree First Nation, as they are members. It's available to consultants or other interested parties who have an association with RAMP members.

Mr. Justin Trudeau: Much has been made of the future of in situ mining with shifts to saline or non-drinkable water. This is all groundwater, obviously, not surface water.

What kinds of studies have been made into the extent of aquifers and groundwater in the region? What can you tell me about the replacement rate of those saline reservoirs?

Mr. Don Thompson: I'll let Mr. Lunn answer that.

Mr. Stuart Lunn: Thank you for the question, Mr. Trudeau.

I can speak in particular detail to the Cold Lake-Beaver River basin, where Imperial operates its in situ operation.

We use saline water in that operation. That's part of the Cold Lake-Beaver River water management plan, which has been published. The industry conducted a survey of the availability of saline water in the region over a fairly extensive geographical area and implemented an annual monitoring program to determine the sustainability of that water resource. The study showed that saline water is available in the region over a widespread area, although it can vary significantly in salinity, which can preclude its use as a source water supply; in fact, if it gets too fresh, it actually trips back into the freshwater category.

That water was found to be sustainable, and we'll continue to monitor those resources to ensure that it continues.

● (0905)

Mr. Justin Trudeau: Sorry; is the water sustainable because the replacement rate of this groundwater is greater than the expected use of the groundwater?

Mr. Stuart Lunn: Typically when we talk about groundwater sustainability, we talk about it either being sustainable or being mined. Technically that means that if you're withdrawing at a rate where if you stop withdrawing water, the levels recover in time—typically taking about the same length of time you were pumping—it's considered sustainable. If you pump at a rate that exceeds that, it's mined. In other words, it's not being replenished.

Mr. Justin Trudeau: And do you have studies for your basin demonstrating it is sustainable at the rate you're taking water out—

Mr. Stuart Lunn: To date, yes.

Mr. Justin Trudeau: —and at the rate you expect? We're only at 50% of use in situ, and you guys said you were going up to 80%. Is it still going to be sustainable, and do you have studies to show that?

Mr. Stuart Lunn: That is a good question. One thing to recall about the in situ oil sands industry is that the resource is spread over quite a large geographical distance. We have operations up in the Peace River area, south of the Fort McMurray area, as well as in the Cold Lake-Beaver River basin. It's probably over a 500 kilometre distance.

In the Cold Lake-Beaver River basin, which is quite a mature in situ oil sands area, there are wells that are currently operating, as well as monitoring wells to track that sustainability. As industry expands into these areas, saline water is evaluated at each project for use within the project, and those sustainability questions are asked as part of the EIA process and expansion.

Mr. Justin Trudeau: Looking at the scope of it, has there been a comprehensive study, or is there a comprehensive study in the works, of groundwater in all potential oil sands development areas?

Please give short answers, as I want to get to my next question

Mr. Stuart Lunn: Yes. In fact, Alberta Environment right now is pulling together the individual monitoring networks that each of the in situ operators have and are required to have. Some of those are quite extensive. Imperial, for example, has over 600 groundwater monitoring wells just for its own operation at Cold Lake. There are three different groundwater networks being pulled together currently: a regional groundwater monitoring network in the oil sands mining area, and one south of the Fort McMurray area—

Mr. Justin Trudeau: Thank you; sorry to interrupt.

Mr. Mackenzie—

The Vice-Chair (Mr. Francis Scarpaleggia): Mr. Trudeau, I'm sorry to say that your time is up. I know you were on a line of questioning there.

Mr. Ouellet.

Mr. Christian Ouellet (Brome—Missisquoi, BQ): I think you'll have to put on your earphones, because I'm going to talk to you in French.

[*Translation*]

Mr. Thompson, what price would you be prepared to pay per litre of water that you use and that comes from the Athabasca River?

[*English*]

Mr. Don Thompson: First of all, the oil sands and the oil and gas industry are not the only users of water in the province. I guess I would be prepared to pay the same price as other users in the province of Alberta.

[*Translation*]

Mr. Christian Ouellet: I believe that the other towns that filter and use the water that comes from the river pay for it to meet their standards. So there's a price for that. If I correctly understood your answer, you're not necessarily prepared to pay all the time. In a free market economy, everything comes at a price. The water you use also has a price.

● (0910)

[*English*]

Mr. Don Thompson: Indeed. In fact, I'm paying the same amount to withdraw water as municipalities and other water users are paying. And indeed, I'm paying a considerable amount to treat that water once I have it in hand, whether it's for potable human consumption in sites, or for boiler feed-water. So I think there's an equitability there already.

[*Translation*]

Mr. Christian Ouellet: Is that the price at which you sell the water? If you export one million barrels of oil to the United States a day, that means that you're exporting three million barrels of water to the United States a day.

[*English*]

Mr. Don Thompson: The price of oil is determined on commodity markets, and that's what I receive for those barrels. Many people use water whether they are producing food stocks or other commodities that are imported or exported from the country. Again, I'm paying the same amount as they are.

[*Translation*]

Mr. Christian Ouellet: I don't think they use as much water as you.

Mr. Lunn, you're telling us that you only use 1% of the water. That's interesting. You justify what you're doing by talking only about the water you use directly. You consider that what you use directly is the only cause of reductions in river water.

However, the oil sands contribute to greenhouse gases, which directly cause climate change. Furthermore, Alberta, because of the oil sands, produces 43% of the greenhouse gases emitted by Canada as a whole. Those greenhouse gases have a direct impact on the quantity of water in the Alberta basins and even further, and you don't consider the effect of the production of greenhouse gases when you try to assess what in your activities contributes to reducing the quantity of water in the Athabasca River and other rivers!

Why do you consider only what you take out of the river?

[*English*]

Mr. Don Thompson: First of all, before I let Mr. Lunn answer, the fact is that greenhouse gas emissions from oil sands are 4.6% of the total emissions of Canada...and something like 80% of the emissions from a barrel of oil produced and the greenhouse gases at the consumptive end. So our contributions to the impact you're speaking of are actually relatively limited, compared with other users of our product.

So with that, I'll let Mr. Lunn speak to your question.

Mr. Stuart Lunn: Thank you for your question, Mr. Ouellet.

I wanted to clarify first the forecasting of the water take from the river. The Oil Sands Developers Group that did the forecast on water requirements specifically looked at a dry period, because it was a dry period when the water management framework would kick in. So that 16 cubic metres per second as a peak was for a very dry period. As such, the major source of water in a dry period is the river, and not other precipitation sources.

I recognize your question on the potential effects of climate change on the Athabasca River flows. It is currently unknown whether or not climate change will increase or decrease the flows. There has been some discussion that summer flows would be expected to decline in a warmer climate, and the winter flows might actually increase. However, I am not a climatologist. I would note this is one of the things being discussed in the phase two process that is looking at another water management framework, or a phase two improved water management framework, for the Athabasca River. So we will be taking a look at potential climate change scenarios and how we might manage that.

Thank you.

[*Translation*]

Mr. Christian Ouellet: Mr. Thompson, I find your answer very interesting. As parliamentarians living in Canada, we are certain that 43% of greenhouse gases are emitted by Alberta. You're telling us that the oil sands emit only 4.6% of those gases. Where would that difference of 38.4% come from? Where would those Alberta emissions come from?

● (0915)

[*English*]

Mr. Don Thompson: First of all, there are other industries in Alberta beyond the oil sands, and there are many consumers in Alberta. The majority of greenhouse gases across the country come from things like transportation, building use, agricultural use, and the like. I don't have the data in front of me, but I presume it's the same relative split for the province of Alberta as well. I'm presuming that we can provide you, as a follow-up, that data of where exactly in Alberta greenhouse gases come from.

I recognize that greenhouse gas emissions are a global issue and that it doesn't matter where in Alberta or Canada they come from. Within Canada, 4.6% of greenhouse gases come from the oil sands. That is our impact. In fact, being that Canada emits 2% of global emissions, the oil sands' impact is at 0.1% of global emissions of greenhouse gases, and it is global emissions that are relevant for climate change purposes.

[*Translation*]

The Vice-Chair (Mr. Francis Scarpaleggia): That's good.

Mr. Ouellet, we now have to move on to Ms. Duncan.

Ms. Duncan, go ahead please.

[*English*]

Ms. Linda Duncan (Edmonton—Strathcona, NDP): Thank you, Mr. Chair.

Following the good questions of my colleague Monsieur Ouellet, in regard to the coal-fired industry in Alberta, after many public interventions the government now requires the coal-fired industry to return the water used to the lake, treated.

You've reported to us how much water is used, but I'm presuming, based on your presentation, those are direct withdrawals. Have you been required by the government to calculate the full water loss to the lake, including from the mining where you're destroying steams and peatlands and you're containing water?

Mr. Don Thompson: I'll let Mr. Lunn deal with that, but I would say that I think the coal-fired power plants use water to produce steam and for cooling, rather a different application. Secondly, at all the mines that I'm familiar with, the root surface water around the mines, such as that which flows from the streams that would otherwise cross the mines, is diverted back into natural systems.

With that kind of overview, I'll let Mr. Lunn speak in more detail.

Mr. Stuart Lunn: Thank you, Ms. Duncan.

Following up on Mr. Thompson's answer, there are two types of water in the mining industry surface water—the water that comes in contact with the oil sands and the water that doesn't. If the water does not come in contact with the oil sands, it is typically diverted around the mine, as Mr. Thompson said, and back into the watershed. If it does come in contact with the oil sands, it is collected in a closed-circuit loop to prevent it from returning back to the ecosystem and potentially having some impacts from dissolved hydrocarbons and substances.

I do want to recall that when we're talking about the full water balance, we did look at a very dry period for the Oil Sands Developers Group forecast of the amount of water that might be withdrawn from the Athabasca River. During those very dry periods, there is very little surface water precipitation. So while it doesn't account for 100% of the water, because there's always some precipitation and some groundwater that needs to be pumped, it is a fairly robust number.

Ms. Linda Duncan: Could somebody just answer my question with a yes or no? Does the 1% that you say you're using from the watershed include—yes or no—the loss of water from the destruction of the watershed, not just the direct withdrawal from the river?

Mr. Stuart Lunn: Again, I would say it's not a yes-or-no answer. That's because it depends on the climate situation.

Under the assumptions that were taken of a very dry period—I'm speculating somewhat—some 80% to 90% of that would be represented by that, say, 1%. There would be some additional water required to be diverted, such as groundwater, to prevent it from filling the mines, for example; and some precipitation also occurs, even during dry periods, that would subsequently evaporate, for the most part, as it would normally.

● (0920)

Ms. Linda Duncan: Okay, thanks. I'm not getting a clear answer, so I'll move on.

Actually, for coal-fired, it is included in the model and they have to report, and the water is treated before it is returned. It is not directly put back into the lake or the river.

Mr. Mackenzie, I wonder if you could comment. You had stated that your water quality assessment is state of the art. Are you aware of the federally commissioned Council of Canadian Academies' national science advisory report that was released yesterday, which raises serious concerns about the science and the use of water in the oil sands?

Among concerns they've raised to the federal government are the lack of data on the aquifer reserves at all, and the risks posed by the tailing ponds to the northern water regime. They find that in situ operations using water and steam are of particular concern, possibly more than the mining. Knowledge is lacking as to whether the aquifer in the region can sustain the groundwater demands and losses, even where reclaimed. There will be less wetlands, more lakes, and no peatlands. Tailing ponds consistent with permeable material are a concern. Aquatic systems are vulnerable to leakage from the ponds.

Those are some of the issues that they have reported to our Parliament and that we will be considering. I wonder whether you could still attest to the fact that your work is state of the art.

Mr. Ian Mackenzie: Well, given that the report was released, I think, yesterday, I haven't had a chance to look at it at all. It's the first time I'm hearing about it, except that I did hear that it was released. So I'm not able to respond specifically to any of the suggestions in that report.

I will say, though, with respect to the statement about tailings ponds and so forth, that the tailings ponds that are in existence and proposed are being managed very effectively to capture seepage so that it isn't going to receiving streams and having any effect on receiving streams.

Beyond that, I'm not sure if Dr. Lunn has anything to say about some of the water use aspects.

Mr. Stuart Lunn: I also have not had a chance to review the report, but I would like to comment on your perspective on the lack of data on aquifer reserves.

Again, in the Cold Lake-Beaver River water management plan, and in fact in Imperial's 30-year history of production in the basin, we've developed a tremendous groundwater monitoring network at our facility, which consists of over 600 groundwater wells. So we have considerable knowledge of the groundwater reserves in that area.

I think the step forward that needs to be taken is to take the silos of very good information collected by individual operators and to incorporate them into groundwater monitoring networks more regionally. We certainly understand very well the groundwater systems within our operations, but we'd like to link other operations so that there's a better regional picture of the understanding of groundwater.

Alberta Environment is currently pulling together three of these groundwater networks. One in the oil sands mining area. One is south of Fort McMurray in an area that's called a steam-assisted gravity drainage area, and another is the Cold Lake-Beaver River, which is somewhat separate from those other two.

Ms. Linda Duncan: So these projects have been allowed to proceed before we have data on the aquifer completely in place as the baseline?

Mr. Stuart Lunn: No, not at all. In fact, as part of each environmental impact assessment for any project, groundwater monitoring is necessary as part of the application process to understand where the aquifers are and what the potential impacts might be to the aquifer resources.

My intent in my previous answer was to suggest that this can be improved by pulling together the best information from all these groundwater networks into a more regional picture.

Ms. Linda Duncan: Thank you.

Mr. Kuzmic, you spoke about the regional aquatics monitoring program, or RAMP. We had testimony yesterday from Drs. Schindler, Donahue, and Griffiths. They reported to us that the peer review of the RAMP report raised serious problems with the sampling methodology and the findings. We now have before us the intensive monitoring work undertaken by Dr. Schindler and associates.

I'm wondering if you can tell us, as a result of that peer review, did the RAMP team address the inadequacies from the peer review, and how have you changed the way you're doing your studies? Are you, additionally, looking at studies done by independent scientists?

● (0925)

Mr. Don Thompson: I'll start by saying that, as far as my members and I are concerned, RAMP is a credible, competent program. It is operated by competent professionals who are working to the best of their ability.

I think if you read that report—I'll let Mr. Kuzmic comment on it—the first block of discussion is about how RAMP should be commended because it is unique, far-reaching, and one of the best that they are aware of.

Obviously, like any review, they will find comments, and that's what I want Mr. Kuzmic to talk about. But I want to set it in context that this is a program operated by competent professionals.

Mr. Fred Kuzmic: Thank you very much for the question. It is a really good question.

The RAMP peer review was carried out in 2003. It was based on a five-year snapshot of RAMP monitoring from 1997 to 2003. The recommendations provided through the peer review panel were considered by RAMP, and I think 90% of those have been incorporated into the program since the 2003 review.

There are a number of peer reviews scheduled for this year as well, to continually improve our program, and we welcome all sorts of studies and any other information that can help us better analyze the information we collect.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you very much.

We'll move on now to Mr. Warawa.

Mr. Mark Warawa (Langley, CPC): Thank you, Chair.

Thank you to the witnesses for being here. Just as an opening comment, this is a multi-party panel and this is our third day. We have unique perspectives, but we appreciate you being here and providing information to enlighten each of us.

I'm sure there will be a lot of very interesting follow-up dialogue in our committee as we head back to Ottawa, particularly looking at Quebec and the suggestion that all energy being created by water should be charged for that water. We'll see how that would affect Quebec in terms of Mr. Ouellet's suggestion that all the energy created in Quebec by water would all be charged. There will be an interesting discussion that will happen, I am sure.

I also want to continue asking about RAMP. We've heard, right from day one, concerns about RAMP from first nations, from aboriginal groups, that they are not happy with RAMP. They were involved. They shared that the membership is mainly made up of industry, that industry meets with government representatives and decisions are made before the panel even meets. So my question is on the makeup of RAMP.

In a briefing document I have here, it says that it is industry-funded, of course, which it should be, but the membership is multi-stakeholder, to monitor the oil sands. Membership includes members from local and aboriginal communities; environmental NGOs; governmental agencies, municipal, provincial and federal; and of course, industry representatives. Do you have NGOs as part of that membership, and aboriginal groups?

Mr. Don Thompson: I'm going to let Mr. Kuzmic go over the membership of RAMP, but I'm going to just explain that membership in RAMP is a requirement of operating approvals. That of course dictates that the industry pays, which is a source of contention, but as you point out, that is what would be expected. I don't know any other way around it.

RAMP is also—it's part of our licence requirements—required to be quantitative, science-based, replicable, and auditable. That sets the parameters for what RAMP is. It is compliance monitoring, first and foremost, and has to comply with those key points.

With that, I will turn it over to Mr. Kuzmic.

Mr. Fred Kuzmic: Thanks, Don.

That is a really good question. RAMP does have multi-stakeholder participation. There are currently 12 funding members of RAMP that are oil sands operators. One member is not an oil sands operator but rather a quarry operator that works in the region, and it is something they want to be part of as well, recognizing the value of the program for their particular operation.

We have first nation membership in Fort McKay First Nation and Mikisew Cree First Nation from Fort Chipewyan, as well as several Métis local individuals who are associated with the program.

With respect to the regulators, we have Alberta Environment, Alberta Energy and Utilities Board, Alberta Sustainable Resource Development, and Alberta Health and Wellness.

From the federal perspective, Fisheries and Oceans Canada, Environment Canada, and Health Canada are all members as well.

We have the Northern Lights Regional Health Authority as part of our membership. I'm not sure of the current status of OSEC, the Oil Sands Environmental Coalition.

● (0930)

Mr. Mark Warawa: Do you have any NGOs that are members?

Mr. Fred Kuzmic: OSEC would be the only one, and I'm not absolutely sure of their membership. Their representation historically has been done with the Pembina Institute, and Pembina has said that they aren't part of that.

Mr. Mark Warawa: Pembina, over the years, has been very active as an NGO on the oil sands. Are they not part of that group?

Mr. Fred Kuzmic: Initially they were, yes, but they've pulled out recently.

Mr. Mark Warawa: What year is recently?

Mr. Fred Kuzmic: It was last year, 2008.

Mr. Mark Warawa: Okay. They'll be witnesses later on. We'll be asking them why they pulled out.

On monitoring, slide 38 shows your study area. How far north does it go?

Mr. Fred Kuzmic: Currently the program goes up to the Peace-Athabasca delta, so it's right up on the delta, south of the actual Lake Athabasca.

Mr. Mark Warawa: Okay.

We've also heard of fish deformities. When we were up at Fort Chipewyan there was a lot of concern about toxins in the water, that the water isn't safe to drink. I believe they have municipal testing and that testing is determining that the water is safe to drink, but there is a huge concern of the residents in the area that there is a problem with the water, and they particularly point at deformities in fish.

You said you've been doing the monitoring. Does the monitoring of fish go that far north?

Mr. Fred Kuzmic: No, we don't extend into Lake Athabasca itself. We look at the Athabasca River, primarily, but the Clearwater River as well.

What was mentioned earlier, though, was that there are a lot of migratory fish species that tend to use the river from the lake, so we have captured or have reported recaptures on the tagged fish from the far north—Slave River and the Athabasca lake itself.

So we don't look at the lake per se, but the fish that inhabit that lake use the rivers in certain parts of their life cycle. We catch them then and look for fish health and any abnormalities that we find there.

Mr. Mark Warawa: When we heard Dr. Schindler yesterday, he raised concern around the lack of access to data from the monitoring by RAMP. I'm not quoting him, but I think he was saying that the data was not made public.

Is the data in your monitoring available to the public?

Mr. Fred Kuzmic: I guess it depends on what you define as data. The information collected is presented in tables and charts and summarized in the RAMP technical report. That information is available publicly on the RAMP website, which is RAMP-Alberta.org. It has all the technical reports from 1997 through to 2008, so that information is available there.

With respect to the individual data points, RAMP has an extensive database that has approximately 2.3 million data points of information collected since 1997. That information is available for members and members' use, and if someone needs access to that information, they can gain it by access through one of the members and a data-sharing agreement.

Mr. Mark Warawa: Do I have a moment longer?

The Vice-Chair (Mr. Francis Scarpaleggia): I think you're on a good line of questioning, so why don't you take a few more minutes.

Mr. Mark Warawa: Thank you.

We've heard concerns about tailings pond leakage, again in our last two days. There's actually a press release that has just gone out from Pembina, saying, Their failure to act has created severe risks, ranging from contamination by leaking tailings lakes [so the ponds, which they're calling lakes] to the collapse of fisheries.

When we flew over, we saw the ponds. We saw the ponds' perimeter drainage to collect anything, and then, below that, taking out the groundwater and pumping it back into the tailings ponds to ensure there was no leakage into the Athabasca River. But we've heard from aboriginal groups and from, now, a press release from an NGO that the tailings ponds are leaking.

Is there any evidence, through RAMP or any other signs, that the ponds are leaking?

● (0935)

Mr. Don Thompson: Before I ask Mr. Mackenzie to give some details, I want to assure the panel that the tailings ponds are carefully engineered structures that are built by highly competent geotechnical and other engineers. They are non-trivial structures. This industry takes tailings ponds very seriously in terms of their design and operation and reclamation. The people who design and operate these ponds are fully aware of the need to protect ground and surface water in the design and operation and ultimate reclamation.

With that, I'll turn it over to Mr. Mackenzie.

Mr. Ian Mackenzie: That is a good question. Everything leaks, of course. The tailings ponds that you're speaking of, with the capture wells as well as the perimeter ditches, are specifically designed to return that leakage back into the process-affected recycle stream.

There is one discontinued tailings pond in the process of being reclaimed right now that I'm aware of. That's pond 1 at Suncor. There has historically been estimated to be very small leakage directly into the Athabasca River from that, and I believe there's been about two decades' worth of studies, required by Alberta Environment and carried out by various researchers, as well as by Suncor, showing that there's absolutely no effect from that legacy pond.

I'm not aware of any other leakages from other ponds. In our environmental impact assessments—of course, sometimes we get criticized for being so conservative—we do show that very minute amounts of seepage can potentially reach receiving streams, but as Alberta Environment has very clearly said in recent publications, they are not allowing any seepage to occur, and the capture of all seepage is expected. Monitoring wells that are in place and will be required by Alberta Environment will ensure that if there is seepage detected, that seepage will have to be returned to the tailings pond.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Mackenzie.

Before we move on to our second panel, I have two very specific questions that you can perhaps answer.

We run into a lot of acronyms in these reports. What does “PCA” mean? Do you know what I'm talking about? They talked about a study on the PCA. Does that ring a bell?

Mr. Ian Mackenzie: I believe it's principal component analysis, which is a type of statistical treatment.

The Vice-Chair (Mr. Francis Scarpaleggia): In connection with a point Ms. Duncan made about groundwater monitoring and the study of groundwater, I have a report here from February 5, 2004. It's an application for an oil sands mine, bitumen extraction plant, cogeneration plant, and water pipeline. It's from Shell Canada. Part of the report says these are the views of AENV, which I suppose is Alberta Environment.

Mr. Ian Mackenzie: Yes.

The Vice-Chair (Mr. Francis Scarpaleggia): It's the reaction to the application. It says that with respect to project-specific considerations, AENV indicated that a regional groundwater study on the PCA was not necessary, but that the information provided by a regional study might be useful. What does all that mean?

Mr. Ian Mackenzie: I see that my earlier guess was incorrect now that I understand the context. PCA in that context means Pleistocene channel aquifer, which is an aquifer that runs through the eastern side of the oil sands area and up through many of the proposed mining operations. The quality varies from almost potable level to very poor quality. It is similar to a deeper aquifer called the basal aquifer.

In relation to the study you're quoting, I believe at the hearing surrounding the environmental impact assessment there was talk about potential influence of seepage into that Pleistocene channel. In terms of follow-up actions, I do remember the recommendation that there be additional monitoring of that aquifer, and I believe Shell does have required groundwater wells in that aquifer, as do many of the other operators.

● (0940)

The Vice-Chair (Mr. Francis Scarpaleggia): I have just one more point.

If I'm not mistaken, one of the things Dr. Schindler was saying in terms of access was that he didn't have access to the methodologies being used by RAMP. To get access, you had to be a contractor or a researcher working on a RAMP project, and he's not a member of RAMP. If I'm not mistaken, that was one of the points he made.

If you want to respond to it, you may.

Mr. Fred Kuzmic: Sure, I would like to. Thank you very much for the opportunity, and it relates back to something Ms. Duncan had mentioned.

One of the peer review comments was that we didn't have a design and rationale document. That document and a description of how the program was conducted wasn't available to the general public. Since then, that manual has been put together. It is available on the RAMP website for people to look at. How the study was put together, what monitoring activities are under way, and how things are being analyzed and presented in the technical reports is publicly available information. That document is updated on an annual basis, and, again, it is available.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

We'll move on to our next panel. We're thinking that perhaps at the end we could ask questions to both panels. I imagine you'll be remaining in the room.

Thank you very much. I think your document is very rich, and it will be very useful to our researchers in terms of drafting the report.

There will be a short pause before continuing with our next witnesses.

● (0940)

(Pause)

● (0945)

The Vice-Chair (Mr. Francis Scarpaleggia): I would ask that members resume their seats and that our next round of witnesses take their seats.

I imagine all witnesses will be presenting. I would ask that presentations be limited to five minutes so that we can get more questions in.

Without further ado, I will ask for the first witness, Mr. Fordham, to begin.

Thanks again, Mr. Fordham, for that tour on Monday. It was excellent.

Mr. Chris Fordham (Manager, Strategy and Regional Integration, Suncor Energy Inc.): Good. I'm glad you enjoyed it. I certainly enjoy showing off what we're doing.

This morning I'm going to be speaking more specifically about Suncor. We saw most of the major projects in the region on Monday. Specifically, I want to talk to you a bit about what we're doing with water, how we're using it, and how we're trying to make more efficient use of the water we have.

We are currently operating with the same water licence we got when Great Canadian Oil Sands started in the late 1960s. Since that time, we've more than quadrupled our production, and with our Voyageur project we're going to double it again, all with the same water licence, so our water efficiency has increased significantly over the years. Once we've achieved this doubling of production, we're going to continue to explore further opportunities for water efficiencies and continue to reduce our overall environmental impact.

How are we going to do that? Well, we're looking at a number of options. We're looking at recycling and reusing waste water streams and improving our waste water quality so that we can either reuse more of it or provide better quality in what goes back to the river, which will improve our CT performance. I'll get to what CT is shortly, but that also will free up more water for use in the plant. We are also looking at new tailings technologies, such as dry tailings.

I don't want to get too hung up on this graph. It's a little busy. The graph shows that water gets used in every aspect of our operation. We have a mining operation and a bitumen upgrading operation. We have energy services, which produce steam and power. As well, we have a large in situ project, named Firebag, that we couldn't fly over on Monday, unfortunately, because it was fogged in.

Water is used in every part of our operation. What I would like to draw your attention to, though, is on the little chart at the bottom on the left-hand side. It shows our water use efficiency on a cubic-metre-per-cubic-metre basis or barrel-per-barrel basis. Once we have Voyageur up and running, we'll be using about 1.67 barrels of water for every barrel of oil produced.

This is what our water use efficiency and total water use look like over the past few years. We've seen a 30% increase in our water use efficiency and overall water use. We're currently licensed to 59.8 million cubic metres per year from the river. We've used less than 85% over the last three years, and we expect to continue reducing that going forward. Our total use is less than 0.5% of the average annual flow. We heard talk of average annual flow in the river. That's really what we saw in the river on Monday; it was about the average annual flow.

We did have a little bump up last year. We had some plant reliability issues, which we've gotten through; now our production's back on track, and so is our water use.

One of the processes we use at our mine site is consolidated tailings, or CT. CT is a process that was developed through a multi-industry research cooperative effort back in the mid-1990s. It takes a regular tailings stream and densifies it; it takes out a bit of the water, adds some fine tailings out of the tailings pond, mixes that with gypsum, and pumps that slurry out to the pond.

The difference between CT and our normal tailings is that when normal tailings get to the pond, the sand settles to the bottom and the clay stays in water suspension above it. They're very separate. With CT, the sand and the clay stay together. The clay structure collapses because of the gypsum, freeing up water. It consolidates much more quickly and frees up the water. When it frees up the water, you can end up with a dry, trafficable surface much more quickly.

We started with CT back in the mid-1990s. It did take a number of years for us to get it sorted out. It's a very easy process at a lab scale, when you're mixing litres or several litres of fluids together, but when you're doing it at 60,000 gallons a minute, it takes a little more effort to get it right. However, you can see that over the last three years our efficiency with CT has increased significantly. Probably the maximum we can get to is about 76%. About 76% of the time, you can make good CT.

● (0950)

Why is it only 76% of the time? Surprisingly, one of the issues is sand availability. You'd think perhaps with the amount of sand that we mine every day, several hundred thousand tonnes, we would have lots of sand, but in fact a bunch of that sand gets used to build the dikes that contain the CT ponds. We have to do that in conjunction with making CT, so 76% is the about the most effective we can make CT. Producing it at that rate will allow us to use up our mature fine tails inventory.

What else are we doing? We have a number of projects. We're looking at putting in another cooling tower so that we'll be using less water from the river for cooling. We're looking at recycling water to our cokers. Water right now ends up in the tailings ponds; we're going to try to recycle it so that we're not using fresh water, or other waters, to do the coke cutting. We're looking at treating and recycling some of the waste water that currently goes to the river, so that we can use different streams in our boiler feed-water or have better-quality water return to the river. Those projects, in total, would be about $100 million.

There are two other aspects I want to touch on a little bit, dry tailings and pond reclamation.

Once you reclaim a pond, you no longer have that fluid inventory and you can begin to return that land back to what it was before the mining operations were there. We're going to have the first tailings pond in the region reclaimed by next year, pond 1, and we're working on techniques to get ponds 5 and 6, our first consolidated tailings, reclaimed by 2019.

Another area we're exploring is dry tailings. We're looking at a number of techniques there to try to get the water out of the tailings, to free it up so that we can recycle it, reuse it, and produce drier landscapes.

This is our mature fine tails drying, one of our trials. The picture on the right is our starting material, which is mature fine tails that have had some sort of either chemical or mechanical treatment applied to them to make them a little thicker and to increase the solids content. Material gets spread on a beach, where it dries. Over the course of the winter it freezes and cracks, and the water moves into water lenses. When it thaws in the spring, the water runs off, and you're left with a material much like you see in the bottom right picture. It goes from yoghurt to something that's about the consistency of coffee grounds.

In relation to reclamation, this is pond 1. We flew over this on Monday and had a look at it. You can see the progression over the past couple of years. One of the reasons it appears that the infilling doesn't move very quickly is that most of the infilling happens below the water surface, so you don't see any difference.

We saw our first benefits from the efforts of our infilling back in the summer of 2007. You can see a little tiny white beach there in the top of the summer of 2007 picture. By summer 2008, a large area of the infill was above the water level. That's fall 2008. Then you saw it on Monday, and there's an area that still has fluid in it. That fluid is being removed and sand is being infilled into that pond. Next year we will have soil and revegetation materials on it, and by 2020 it'll look very much like the landscape surrounding the mine itself.

Thanks very much. I'd like to pass it over to Mr. Duane.

● (0955)

The Acting Chair (Mr. Blaine Calkins (Wetaskiwin, CPC)): I'll just give a reminder to please stay on time. We're trying to stick around the five-minute mark, or a little bit more.

Mr. Duane, please start.

Mr. Calvin Duane (Manager, Environment, Canadian Natural Resources Ltd): *Bonjour, et bienvenue a Calgary.*

I'm going to talk about three topics that are fairly exciting for Canadian Natural in terms of water and water use in the oil sands.

The first one I want to talk about is our new technology of carbon dioxide use in tailings. It is much the same as what Mr. Fordham talked about in reference to CT usage; we use carbon dioxide to achieve much the same results.

As you can see, in our case we use carbon dioxide to create NST, non-segregating tailings. The picture shows graphically how the material has settled into the bottom part of the cylinders, which essentially is the fines settling out of it. This reduces our use of fresh water and gives us a smaller tailings footprint. Our tailings are solidified sooner, which gives a reclamation surface. It reduces our carbon dioxide emissions by approximately 11%, and overall, through an integrated process, it just saves a lot of factors together.

Borrowing from Mr. Fordham's slide showing you his technique of demonstrating the process, I'm showing a very similar slide so that you can see the similarities between the two processes. We had a thickener of tailings, a carbon dioxide injection to produce thickened tailings or, in our case, non-segregating tailings.

The second item I want to talk to you about is water storage. It's a new feature in the oil sands development, but it's now a common practice for all new projects to develop water storage on-site. We have developed a 1.7 million cubic metre storage facility of raw water from the Athabasca River. This provides us with approximately 30 days of operation, assuming there are 1.3 metres of ice on it.

It was designed three years prior to the IFN coming into place, so it was not the IFN that drove us; it was actually our own recognition of the issue of managing water properly. We made sure it was operational two years prior to the operation of the Horizon project to ensure that we had that water while we were coming into operation, not afterwards. It is the best management practice, and it was designed to meet stakeholder and aboriginal concerns.

The third and last item I want to talk to you about is developing a compensation lake for the fisheries habitat loss. It was a Fisheries and Oceans Canada requirement to do this, and we have done so. We have created a lake, and we filled it in May 2008. To date it has exceeded our expectations. The water quality exceeds what we expected it would be, and already we have fish in the lake; five of the eight species we wanted in this lake are there presently.

The lake replaces the lost habitat in both the Tar and Calumet rivers. It replaces it at a ratio of 2:1, so for every one unit of habitat lost, we replace two into the lake. This design was based on four years of intensive stakeholder consultation and scientific workshops. We brought in science and we brought in traditional environmental knowledge. We brought in a number of factors, and this met the federal requirements under Fisheries and Oceans Canada.

Finally, I wanted to provide you with some statistics on the lake. They are there for your interest.

This summarizes the three topics I wanted to bring to your attention, and I believe I've done so within your timelines.

Thank you.

I'll pass it over to Mr. Fox.

The Acting Chair (Mr. Blaine Calkins): Go ahead, Mr. Fox, for five minutes, please.

Mr. Matt Fox (Senior Vice-President, ConocoPhillips Canada): I'm going to discuss specifically the water use and the SAGD, steam-assisted gravity drainage, aspects of the oil sand business. I hope to leave you with three pretty clear messages: that SAGD uses only non-potable sources of water from deep aquifers; that SAGD companies are moving more and more towards saline water use as time goes on; and that the technology is likely to significantly improve water use in SAGD over the coming years.

First of all, I understand that you didn't fly down to Surmont. This slide, nonetheless, shows you the overall footprint of the Surmont phase one development. You can see the central facility in the front of the picture and the two well pads up towards the top of the picture. That's the overall footprint.

The next slide is a picture of the processing facilities. The only reason I included it is that it shows that the processing facilities for SAGD are mostly dominated by water treatment. SAGD, as you know, is steam-assisted gravity drainage, whereby we inject steam into the reservoir to melt the bitumen. That requires a significant amount of heat; and when you're turning it into steam, it also requires that clean water be used in the process. A lot of the process is dedicated towards cleaning up the produced water, so we can reuse it—cleaning up the water we get from the deep aquifers, because it's not potable or clean enough to put through a boiler, and then processing that water through the plant.

The next slide shows at a high level how the water process works in SAGD. First of all, the thinner blue arrow coming up is our make-up water, the water that we take from the Grand Rapids formation. It's non-potable, but is classified as freshwater because it is less than 4,000 parts per million in dissolved solids; it has about 2,500 parts per million dissolved solids.

If you look at the schematic on the left-hand side of the chart, we turn 2.5 barrels of this water into steam in the plant and then inject it into the reservoir. This process recovers one barrel of bitumen. That water is then produced back with the bitumen, and 90% of it is treated and then recycled. Then a quarter of a barrel is disposed into the deep formation you can see there, the Fort McMurray formation. Then that quarter of a barrel is produced from the Grand Rapids sand and is mixed with the 90% that's recycled, and the process starts again. So we use about a quarter of a barrel of water from the aquifer for every barrel of oil or bitumen that we produce.

We also produce water vapour of about a quarter of a barrel of water, associated with the combustion process. That's what the top of the diagram shows. So we actually produce into the hydrological cycle the same amount of water we take from the aquifer, if you follow me. I'll get back to that on that last slide, when I talk about technology.

The reason we're using what's classified as freshwater is that's all we can find near the Surmont lease. It's what's underneath our lease. So we've been exploring over the past five years or more for more saline sources of water, trying to find water that would be in the 4,000 to 10,000 range of salinity. We've gone as far as 60 kilometres away from the plant, and we recently found some sources of water that would be in that 4,000 to 10,000 range. But the water is quite a significant distance from the plant; it could be easily 30 kilometres from the plant we'd have to pipe that water back to Surmont, and treat it and then put it through the process. But we are actively exploring for more saline water so we can reduce the use of the water from the existing aquifer.

On the final slide, as far as the future is concerned, our future projects have been designed for 95% recycling rather than 90%. Of course, when you go from 90% to 95% recycling, it halves the amount of water you need to use. As I said, we're looking to increase the use of more saline water and we're actively exploring for that. We've spent $70 million over the last five years just exploring for saline water to use in the plant.

We have done a huge amount of research—at least $300 million—and will do between $300 million and $500 million of research over the next five years on oil sands activity.

● (1000)

One of the main focuses is to adjust the steam-oil ratio, because that reduces the cost of buying gas, reduces the greenhouse gas emissions, and reduces the water emissions. There are several encouraging technologies for adjusting steam-oil ratio. One example is injecting solvents with the steam.

We are also doing research into how to economically capture the water from the combustion, that quarter of a barrel I spoke about earlier. If we can do that in an economic way, we could virtually eliminate the need for any external water source for SAGD operations.

The Acting Chair (Mr. Blaine Calkins): Thank you very much, Mr. Fox.

Mr. Scott, please go ahead.

Mr. Michel Scott (Vice-President, Government and Public affairs, Devon Canada Corporation): Thank you.

In a nutshell, our project, which is a steam-assisted gravity drainage project as well, is just about the same thing as was described, with the one key distinction: we use strictly saline water.

● (1005)

[*Translation*]

Good morning, ladies and gentlemen.

I work for Devon Canada Corporation, and we are very proud of what we've have accomplished with regard to water and other issues. I'm also very pleased that we've been given the chance to speak to you.

[*English*]

I will repeat this; don't panic.

Thanks, everybody.

Ladies and gentlemen, at Devon we're very proud of what we've accomplished at our project in terms of how we've treated water and in terms of other aspects as well. It's a great opportunity for us to talk to you.

First of all, our project is located about 140 kilometres south of Fort McMurray. I'm sure you didn't fly through there. We're located about 15 kilometres south and east of a little community called Conklin. We are still located in the regional municipality of Wood Buffalo, and we pay municipal taxes to them. I only make that point because in effect we draw most of our services and quite a few of our people out of Lac La Biche, so we really don't put any pressure on Fort McMurray.

[*Translation*]

So that you remember this presentation, I'm going to enumerate the three main points. First, we use no surface water at Jackfish and no drinking water. Second, we recycle 95% of our water. Third, we have no tailings ponds like in the mines.

[*English*]

I'm going to summarize this very quickly.

There are three key points for Jackfish. First, we use no fresh water or surface water in our operations, with the exception of potable water for human consumption. Second, we have a high recycle rate, upwards of 95%. Third, we do not discharge or have tailing ponds on our sites. We don't withdraw from or discharge to surface locations, and when we do draw water, it's from a deep saline aquifer located about 300 metres below the surface.

In the photo here, although you can't see it very well, we have three small ponds. One of those is called a blowdown pond. That's a pond that we discharge water into when we're trying to ramp up our operations and heat up the operations or cool them down, and then once we're done, we can draw that water back into the process. We also have a sewage pond used to support our people's camp operations, and we have another pond, called a retention pond, that simply captures the surface waters.

Concerning the next slide, you've heard Matt talk about the steam-oil ratio. We're running at about 2.65 right now, but of course we're recycling most of that. Our target for the near future is to achieve a 2.5 ratio, but we are focusing on trying to reduce that even more.

Another thing I'd say about SAGD is that the surface impact or footprint related to this type of activity is quite small relative to even the conventional type of oil operations. We're going to produce 35,000 barrels of oil there daily off four pads, essentially, which have more or less seven wells each. Each well is going to produce about 1,000 to 1,500 barrels. For comparison, an average conventional oil well in Alberta produces less than 20 barrels a day. So there are some benefits from that aspect as well.

Let me tell you, this isn't an accident that we're using saline water at Jackfish. We have a commitment and a policy in the company that we're going to minimize the use of fresh water. We had consultations with our stakeholders, and we do it not just in the oil sands, but in everything we do. When Jackfish came along, we applied this policy and put it in action. Of course we had to find the saline water as well, and we had to deliver on that promise. We too had to drill a number of wells, but we were fortunate and we did find it.

From our standpoint, this was the right thing to do. We wanted to develop the oil sands, but we wanted to do it in an environmentally friendly way.

Matt just showed you a slide similar to this one as well. There are essentially four parts to this plant, from oil separation to oil storage, but there is also a big water treatment component, and of course we have our steam generators. The bottom line is that about half of the capital that goes into this plant is related to water recycling. We tend to think of this as a water recycling plant that enables us to reuse the water.

The other feature, which is not shown on this slide, is the extensive monitoring program that surrounds our property. We have 12 wells that monitor a dozen or so various aquifers. This information is collected and reported to the regulatory bodies. If any change in temperature or pressure were to occur, we would know what was going on and we could take corrective action.

You've seen various versions of the next slide. The only point I'd like to make is that in addition to the monitoring that goes on, above the Fort McMurray formation where we produce our oil there is a buffer of over 200 or 250 metres of cap rock that sits above the formation and essentially seals the formation off from any of the aquifers closer to the surface. That distance, by way of comparison, is roughly the size of the Calgary Tower, or two Peace Towers, in terms of height.

In terms of the road ahead, from our standpoint "good" isn't good enough, and it's particularly true with water. We have a saying in the company that governments grant us permits, but the communities grant us permission. It's very important to listen to what folks want, to try to manage that, and to be as good a neighbour as we can possibly be. We're seeking to do more, and we're directing our activities to that end.

I know you've visited the oil sands, but if you ever have the inclination or if you can make it—any one of you or all of you—you are invited to our site.

● (1010)

[*Translation*]

In closing, I would like to thank you sincerely for the opportunity to make this presentation. We would also be very honoured if some of you would come and visit us.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Scott.

There's only one presenter left.

Mr. Wright, go ahead please.

[*English*]

Go ahead, Mr. Wright.

Mr. John D. Wright (President and Chief Executive Officer, Petrobank Energy and Resources Ltd.): Thank you very much, Mr. Chair and members of the committee. It's a pleasure to be here today.

I'm here representing Petrobank Energy and Resources. By way of background, we operate throughout western Canada as well as in Latin America, and have great exposure to both the regulatory and environmental challenges of the heavy oil and oil sands industry throughout those regions, as well as some of the global implications of that.

Within our heavy oil group, we maintain a technology division, which actually owns some of our proprietary intellectual property. I'm going to talk about some of that today. But the focus of the company in particular is to find global solutions to the heavy oil challenges faced not just in Alberta but throughout the world in all the heavy oil basins.

In terms of location—this might help with Michel's presentation as well—we operate directly to the west of the Devon Jackfish operation, at our Whitesands project area. This is in situ central. That tiny map shown on the right actually represents about 600,000 barrels a day of planned and approved projects in one very tiny part of the oil sands, all of which will be derived by in situ means, none of which is accessible through conventional mining methods.

What we're doing is something radically different from anything that has been tried before. Our Whitesands projects implements the THAI process. I could go on for hours about how this works, but in a nutshell, the acronym, THAI, stands for "toe to heel air injection". Rather than using steam or combusting natural gas on the surface, we drill a horizontal well at the bottom of the reservoir and a vertical well at the toe of that horizontal well, and we inject air, atmospheric air under pressure. The air contacts the bitumen in situ and generates an oxidization reaction that will have temperatures ranging between 700°C and 1,000°C in the combustion zone. That heat mobilizes the oil, actually has the effect of partially upgrading the oil in situ and drops out a percentage of the coke, and all the oil flows naturally to the surface.

In one little slide I can show you the highly underwhelming impact of our surface facilities. There is no water treating facility. There are no steam-generating facilities. It's a simple oil battery and air compressor system.

The key to THAI is more than just the fact that we don't use any fresh water in our process. We actually produce a usable water stream. We've eliminated the use of natural gas. We've increased the recovery rates, with about half the greenhouse gas emissions of any of the other processes available today. Because we have a partially upgraded oil product, we actually have simplified our operations on the surface, and of course, a much smaller surface footprint means that the total overall impact of the process is very minimal.

The best way to characterize the oil that comes out of the ground is that the bitumen that's derived from most processes is like the bitumen shown on the left in our slide. It's actually heavier than water and does not pour at room temperature. On the right in our slide, you'll see our THAI upgraded oil, which has a viscosity that's pipeline-able at surface conditions and is in fact about 4° API to 5° API lighter than the in situ bitumen. That oil is about a 12° API crude.

The importance of having a light oil product in the heavy oil world means that your process becomes much simpler. Our oil floats on the produced water component, which means we have an easily separated emulsion, allowing us access to a very clean produced water stream that has some great characteristics.

When you compare the produced water that we take off our separators, we actually have very similar water characteristics to the water that Devon is taking from the aquifers directly adjacent to us. In fact, our produced water would pretty well match their feed water for their process and would provide another source of water for other industrial uses as well.

The last thing I might emphasize about the water that's produced is that, from the secondary condensing, we actually condense a purer steam component, which means we condense, effectively, distilled water from our process, which has direct use in power generation applications and other applications.

● (1015)

To finish it all off—we all seem to have pictures of this—this slide shows what a typical surface application for our well sites would look like.

The final slide slows the minimal surface impact we would have for a process facility that would be capable of up to 100,000 barrels a day of commercial oil production.

That's our story.

The Vice-Chair (Mr. Francis Scarpaleggia): That was very interesting, Mr. Wright.

I believe we can now move on to our round of questioning, which Mr. Trudeau will open.

Mr. Justin Trudeau: Thank you.

Mr. Fordham, when we flew over with you on Monday, you pointed out the Bison site, which was the first reclamation or the successful project of returning to the land what we had.

What was the total cost of reclaiming that particular site?

Mr. Chris Fordham: That was a Syncrude site, and I don't have those numbers available. I'm guessing that we could probably find them for you, though.

Mr. Justin Trudeau: In one of the testimonies yesterday, someone mentioned that site was one of the easier places to reclaim because of environmental, geographical, and geological factors. It was done first as a showcase of what could be done because it was more easily done than the others. Is that a fair assessment?

Mr. Chris Fordham: The industry has done an awful lot of research into reclamation over the years. I'm not exactly sure of the time that one took, but it's certainly evidence of successful reclamation. We've reclaimed a number of other sites over the years, and each of them probably had their own individual challenges. But we're certainly learning how to make it work.

Mr. Justin Trudeau: There's one other comment that struck me when we flew over Kearl Lake. You mentioned that it's a shallow lake that freezes right through and that the compensation lakes you'll be making are deeper. Certainly on the surface, I thought that seemed to make sense, although subsequent commentary from some of our native elders and chiefs was that it might not necessarily be a good thing.

My concern is that the lakes to be reclaimed are deeper because they were created through mining processes. Have there been a lot of studies done on what kinds of habitat the reclaimed lakes will create in the long term? I guess I'll turn to Mr. Duane afterwards, as he has an extensive slide on this.

Mr. Chris Fordham: Again, there's been a fair amount of research in that area over the years. The specific lakes I referred to in the helicopter are part of the Imperial Kearl project, and I can't speak specifically to the nature of those lakes beyond what we talked about in the helicopter.

I do know that if you are providing compensation as part of the DFO approval, then that compensation has to support fish habitat. Making it shallow enough that it freezes to the bottom probably won't achieve that.

I'll let Mr. Duane speak further to that.

Mr. Calvin Duane: We built a compensation lake and it's functioning, but you're absolutely correct about the importance of shallow areas. In fact, 30% of our lake is shallow just to provide for that value. But to ensure that they last over the years and provide habitat, they need the deep components to them as well. So our lake has a component that's less than five metres deep, but it also has a component that's about 20 metres deep, which provides different habitats. All of those things are important.

We developed our lake, and I assume Imperial will do the same with theirs, by working with the stakeholders to find out how to match it. I can't show you the pictures of our lake, because the aboriginal people don't like them to be shown, but we did a blessing of our lake. They were out there and they actually contributed to the lake. We continue to meet with them and they're actually working with us to design the lake and the vegetation around it. We're building a gathering place for them. We've already done 80 hectares of reclamation around the lake.

So we do work with the communities, very much so, on these compensation lakes.

● (1020)

Mr. Justin Trudeau: How was the lake created, or dug?

Mr. Calvin Duane: On this particular lake, we were able to use topography to our advantage. We are removing the Tar River as part of our operation, and so we dammed the Tar River at the toe of the Birch Mountains and allowed it to backfill, much like any hydro reservoir would do.

Mr. Justin Trudeau: So this wasn't actually a lake that you dug; it was a space where there was a natural sort of hole or valley in the land.

Mr. Calvin Duane: That's correct, and our well-water storage pond was different, as we actually dug that one out. So it depends on the use and how you build various lakes and ponds.

Mr. Justin Trudeau: When we talk about reclamation lakes—going forward, I know there are plans for many of them—what proportion will be dug and what proportion will use irregular topography?

Mr. Calvin Duane: That's specific to each project, so I can't answer your question, unfortunately. It's very specific to the land form a project is occurring on, and whether the lease is on-site or off-site. So I really can't address that. I can only speak to what we were able to use on our project site.

Mr. Justin Trudeau: In defining a reclamation lake—I'm sure you're required to have compensation lakes as part of your land use and permitting process—is there a distinction in the requirements to create compensation lakes between naturally occurring or dam-filled lakes versus dug lakes?

Mr. Calvin Duane: No, the requirements would be the same. They still have to meet the requirements of being able to support fish over the long term and meeting certain water quality parameters associated with that. It's not only about having a lake, but also being able to potentially fish out of the lake, and those sorts of things, and maintaining proper water quality.

Mr. Justin Trudeau: It just seems to me that the disturbance of actually digging alters what would be the bottom of the lake, as opposed to natural processes of sedimentation over centuries and millennia. It troubles me that there isn't any distinction between the kind of compensation lakes that are going to be created.

The Vice-Chair (Mr. Francis Scarpaleggia): Do you have a quick question?

Mr. Justin Trudeau: Mr. Fox, I return to something I said in one of my earlier interventions, that there seems to be a real point of pride or distinction in using non-potable water, or even better, saline water, for the process. It makes us feel that saline water is therefore not important, or is less important to ecosystems and the environment than fresh water.

Can you talk a little bit about the importance of saline water in an ecosystem?

Mr. Matt Fox: I'm not an ecologist, so I couldn't talk at any length about that.

Mr. Justin Trudeau: Okay.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Trudeau.

[*Translation*]

Mr. Ouellet, go ahead please.

Mr. Christian Ouellet: Thank you, Mr. Chairman.

I hope that, as a result of my questions, we'll be able to talk about this later. So many things are being said, Mr. Warawa, that we won't necessarily discuss again later. I very much appreciated the comment. Thank you very much.

I'm mainly speaking to Mr. Wright and Mr. Scott, who are showing us that there are new extraction methods and that they may be better for the environment.

Since Canada appears to be one of the only developed countries that does not have a long-term energy plan, don't you think it's high time the federal government conducted a comprehensive assessment of potential impacts? These impacts change, as you have demonstrated to us. They concern the environment, water, life cycles, the economy, society and responsibility toward first nations.

Currently I would say that the government is focused more on the oil sands than elsewhere. Don't you think it's time to conduct a comprehensive assessment to show that progress is being made.

● (1025)

Mr. Michel Scott: Thank you for your question. It's an important question for which there's no easy answer.

I think it would be sensible to have a national energy policy. I often think the debate is focused on the environment, or on the economy, or on energy. I believe it's time we balanced those things. It's not just about one or another of those aspects; there are benefits that must flow back to aboriginal people, others to other communities, and others to the rest of Canada. They have to be integrated.

We need energy. I don't know what we would do without energy. We have to pay attention to what we do. If the idea is to raise the dialogue, I think it's sensible to establish facts on a more scientific basis and to promote greater understanding.

Mr. Christian Ouellet: In fact, it should include the social, economic and environmental aspects. It should be related to the definition of sustainable development.

Mr. Michel Scott: I think it would be possible to find a balance among all the aspects. It's not just about one or the other. We have to find this medium where we can meet our energy needs in such a way that people and the environment are respected.

I think that can be done through technology. That's where we're heading. You heard some ideas today, in particular those of John. However, we can't all get to the same point at the same time. It takes time to demonstrate the viability of these technologies when we make our long-term investments. However, that will evolve.

It should not be forgotten that most of the oil sands resources cannot be recovered through mines. They will be recovered through technologies, such as those that ConocoPhillips Canada, Petrobank Energy and Resources and we are talking about.

Mr. Christian Ouellet: Most of the resource cannot be recovered, and in any case it is very difficult to get at it.

However, I like it when you say that we could strike a balance. You're right. We're not looking for a balance; we're leaning to just one side.

I was saying I very much appreciate hearing you say that we have to strike a balance. It could be producing two million barrels a day, combined with other more adventurous solutions. It could be a balance between the other forms of energy and the—

Mr. Michel Scott: You're going beyond what I said. I didn't say that we would set specific limits, but I think the dialogue—

Mr. Christian Ouellet: You said “balance”. I appreciate that word.

However, could you explain to me the principle you operate on? I understand Mr. Wright's system, but I can't understand yours. Why do you take less water, or why do you recycle all the water? What's the difference between you and the others?

Mr. Michel Scott: We recycle all the water at various levels and in various quantities. The ConocoPhillips people said they managed to recycle 90% of it and they're aiming for 95%. We recycle 95% of it and we're trying to improve.

That probably depends in part on the quality of our reservoir. We've been lucky to find not only drinking water, or fresh water, that we could have used, but we've also found saline water. We undertook our project with the idea that we would use saline water, but we didn't find any at first. We had to continue drilling wells, a little like what the ConocoPhillips people did. So we managed to put all that together in a much more limited physical space. We produce large quantities in limited space.

Mr. Christian Ouellet: Mr. Wright, how long did you take to develop the compressed air system?

● (1030)

[*English*]

Mr. John D. Wright: I think Michel answered your first question, so I'll jump to the second.

The technology that we're using today—patented—was actually invented in 1997 at the University of Bath, and the Government of Alberta...and we purchased the technology from the Government of Alberta in 2001.

[*Translation*]

Mr. Christian Ouellet: Could that technique be used for all in situ extraction?

[*English*]

Mr. John D. Wright: We think it has applicability throughout most of the in situ region. Certainly, in any conventional sandstone that is sustainable with the SAGD operation, our technology will work. Our technology will work in a number of places that do not have a current technology application, and that actually increases the footprint that our technology can be applied to.

[*Translation*]

Mr. Christian Ouellet: If you're the only ones using that technology, is it because it's more costly?

[*English*]

Mr. John D. Wright: We're the only ones using it because we're the owners of it. We're experimenting with it to prove that it works. I think any new technology has an evolutionary phase. It goes through three stages: first of all, it's laughed at; second, it's violently opposed; finally, it's accepted as common knowledge by everyone.

[*Translation*]

Mr. Christian Ouellet: Is it like a pilot project?

[*English*]

Mr. John D. Wright: It was like a pilot project, but we've now moved to the commercial stage, and I think people have stopped laughing.

[*Translation*]

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

Ms. Duncan, go ahead please.

[*English*]

Ms. Linda Duncan: Thank you, Mr. Chair.

I'm curious about this term “recycled water”. Does that mean it's a closed-loop system? Do you withdraw the water once and that's it—you don't have to withdraw any further water?

Mr. Michel Scott: At our operation, when we talk about 95% recycled, we are drawing some new water, but to the tune of 5%, and we're disposing of the water we can't use any more down deeper—below the formation, in fact. There's a new stream, but it represents only 5%; the rest keeps moving around.

Ms. Linda Duncan: What volume of water is that 5% per year?

Mr. Michel Scott: For us, for example, at a 35,000-barrel-a-day project, that would be essentially.... If it's 20,000 cubic metres that we circulate every day, it'd be 1,000 cubic metres, or 6,000 barrels.

Ms. Linda Duncan: Is that per...?

Mr. Michel Scott: It's per day.

Ms. Linda Duncan: So it's still a substantial amount.

There's a lot of talk in Alberta about moving toward cumulative impact assessments. When you apply for an expansion or for any new projects into the future, are the projects actually obliged to take into account the cumulative impacts of all other operations and future operations? Is that a regulatory requirement?

Mr. Chris Fordham: Yes, it is a regulatory requirement. The EIA process is a cumulative assessment of air, land, water, and socio-economic impacts.

Ms. Linda Duncan: How far into the future is the projection for water use?

Mr. Chris Fordham: In the future case in an EIA, you would have to include everything that is known or thought about, essentially.

Ms. Linda Duncan: No. I'm asking if you have to project 20 or 40 years from now, as the tar sands operations continue to expand.

Mr. Chris Fordham: It would be for at least the life of your project, but probably there aren't any new projects known beyond that time anyway.

You saw Mr. Lunn's presentation, which was specific to water. That is a projection of water needs for everything we know of today.

Ms. Linda Duncan: That's into the future.

Mr. Chris Fordham: Yes, it's a projection into the future.

Ms. Linda Duncan: Okay, thanks.

You've spoken about a lot of evolving technologies and so forth, but there's always that qualifier, “subject to affordability”. Are companies actually required to use the best available technology, and are the projects grandfathered?

Mr. Chris Fordham: The first part asked whether we are required to use the best available technology. Yes, we are. That is part of most of the applications. We have to demonstrate why we believe it's the best available technology.

What was the second part, again?

Ms. Linda Duncan: Are the projects grandfathered? In other words, as technology improves, we hear about all this evolving wonderful technology. Is there a requirement that, as it advances, it must be deployed in all the projects?

Mr. Chris Fordham: It depends on the application. In some instances the answer is yes. For major capital pieces of equipment, it is generally not a requirement, but certainly at a capital turnover it would be expected that they would be replaced with the best available technology of the day.

● (1035)

Ms. Linda Duncan: What would the time span be for capital turnover?

Mr. Chris Fordham: That depends on the piece of equipment.

Ms. Linda Duncan: Can you estimate?

Mr. Chris Fordham: It would probably be five to 20 years.

Ms. Linda Duncan: Do you mean that in 20 years, all the companies will be obliged to use this new technology to reduce water use or to treat tailings better? Can we expect that five years from now, all the facilities will be switching over to new and improved technologies?

Mr. Chris Fordham: No. When I said five to 20 years, I was actually speaking of capital equipment. Five years is probably the lifespan for a heavy-haul mine truck. Twenty years would be for a vessel, maybe a boiler, maybe a—

Ms. Linda Duncan: You're talking about processing—

Mr. Chris Fordham: Yes.

Ms. Linda Duncan: —but I'm talking about the use of water and the containment of tailings.

Mr. Chris Fordham: Do you want to try that one, Calvin?

Mr. Calvin Duane: With tailings, of course, the technology evolves over time. As your process allows, you do improve as you go forward. Suncor is probably a good example to show this. Since the time of their inception there's been a very good step change going down; each time something comes along, they do apply it.

New projects such as ours employ the technology of the day. Carbon dioxide is available to us to do this because of the advances in technology, and that's going to help us with our tailings pond.

If new technology comes in and it's economically available, or if a process is available to bring it in—that's often a critical element, because the fundamentals of the process may or may not allow something—it comes into play.

Ms. Linda Duncan: There's that qualifier again, "if it's economically viable".

Mr. Matt Fox: Can I add something from a SAGD perspective?

Ms. Linda Duncan: Sure, quickly; I have another question.

Mr. Matt Fox: In terms of the draft water directive that's been issued for increasing the regulations on water use in SAGD, all new facilities need to have it installed from the beginning. All existing facilities need to meet that standard within five years, because it does require adding capital equipment, and these things take time.

Ms. Linda Duncan: So there is grandfathering, then.

Mr. Matt Fox: That's not grandfathering. It's just getting adequate time for—

Ms. Linda Duncan: You said new facilities.

Mr. Matt Fox: New facilities will have to have it installed from the beginning. Existing facilities have to meet that standard within five years.

Ms. Linda Duncan: Okay. That's for SAGD.

Mr. Matt Fox: Yes.

Ms. Linda Duncan: I'm not sure if it was this panel or the one before that talked about tailings. That's one of the big issues raised by the report that I mentioned to the previous panel, the leakage of tailings. Would I be correct to say that you have independent, qualified scientists do the environmental impact assessments that you table before the tribunals?

Mr. Chris Fordham: That's correct.

Ms. Linda Duncan: I have information that comes from the environmental impact assessments by the project proponents, which appear throughout to raise significant concerns about seepage.

For example, there's Shell Canada' Jackpine: "Jackpine seepage from the tailings ponds expected to be of poor quality. The natural shell of groundwater presents potential risks to groundwater."

There's the Horizon oil sands project: "Closure water from the external tailings area will continue to leak into the groundwater system at a low rate."

There's the Suncor project, the south tailings pond project, of 2003: "Seepage is the most significant pathway for the STP project to impact aquatic resources. Seepage will flow into Wood Creek sand channel." Seepage from the STP, therefore, had the potential to change water quality in the lower portion of McLean Creek.

There seems to be list after list.

There's the Firebag project of Imperial Oil: "Firebag downstream of the confluence from the western most tributary could potentially be affected by seepage from the external tailings area."

So I'm puzzled; if the EIAs produced by your own consultants are indicating that there's going to be a problem with seepage from tailings, it seems to contradict what we're hearing in the testimony from industry, that there is no risk of seepage from the tailings area.

The Vice-Chair (Mr. Francis Scarpaleggia): Who wants to take that?

Mr. Duane.

Mr. Calvin Duane: The environmental impact assessment, by definition, requires that companies present the most conservative case possible so that it can be properly evaluated as to, if all things go wrong, what it would look like.

In the case of the Horizon project that you referenced, we indicate in there that we will release seepage out at 530 metres cubed per day, I believe, or something like that. That's just off the top of my head. That was assuming that the tailings pond was sitting over top of permeable sand material. It assumed that any natural barrier effect that would come out from silt to clays and bitumen sitting on the bottom of the pond would not work, when in fact we know that the tailings pond is sitting over top of Clearwater clay, a very impermeable surface, plus the sand, the silts, the clays, and the bitumens that will seal it.

Through the process of the EIA review to the joint federal-provincial panel, that topic was dealt with in some detail. The decision report that came out addressed that, where in fact the consultants said there potentially could be some issue of concern there, where the panel members themselves said they looked at the evidence provided, recognizing that it is a highly conservative case, and they disagreed with the findings of that, based on the evidence presented to them.

That is clearly evident in our joint panel report that was issued on that.

● (1040)

Ms. Linda Duncan: So you still stand firm that there is no possibility of seepage from tailings ponds.

Mr. Calvin Duane: No, I did not say that. There is seepage that will be there, but the amount that's indicated far exceeds what will actually occur.

As Ian Mackenzie indicated earlier, all things leak.

The Vice-Chair (Mr. Francis Scarpaleggia): Yes, I read that somewhere in a similar report, that with seepage the groundwater will be contaminated but it will still be usable. That what seems to be the language that comes out of these environmental assessments. Is that a correct characterization?

Mr. Calvin Duane: Depending on where you sample it, yes.

The Vice-Chair (Mr. Francis Scarpaleggia): Okay.

[*Translation*]

We'll now go to the Conservative Party.

Mr. Braid, go ahead please.

M. Peter Braid (Kitchener—Waterloo, PCC): Thank you very much.

[*English*]

Thank you very much for the attendance of our company representatives today and for the presentations.

I just have a few questions to go through. If I have time left, I will share it with my colleague Mr. Watson.

Perhaps, if I could, my questions will follow the sequence of the presentations. I'll start with the Suncor presentation.

You indicated, Mr. Fordham, that to date you've already reduced water usage by about 30%, I believe. Looking at it in a future-oriented way, do you have a goal for further water reduction?

Mr. Chris Fordham: We have not set a specific goal at this point. We are looking into that at the moment, but we're still evaluating various projects that would reduce our water usage.

Mr. Peter Braid: Okay.

With respect to the reclamation process, how do we speed that up? What are the methods? What are the ways that we can employ to speed up that process?

Mr. Chris Fordham: Reclamation is very much driven by the available land on which you can put your reclamation soils and vegetation. The largest areas on the mine sites that become available for those will be the tops of tailings ponds.

As the tailings dikes get constructed, generally they're reclaimed as we go forward. But those are relatively small areas compared with the size of the tops of the ponds. So, certainly, speeding up the time in which those ponds are infilled with a trafficable surface on which you can put reclamation materials will speed up reclamation.

The ERCB has recently come out with a new directive putting some new guidelines around how fast tailings ponds have to be reclaimed. So I think the speed is going to increase in the future.

Mr. Peter Braid: Yesterday we had a representative from a company called Gradek Energy, which has a fascinating process, a new technology that will help deal with the issue of tailings ponds. There's a pilot project this fall. I've forgotten which company—

The Vice-Chair (Mr. Francis Scarpaleggia): I think he said it was Syncrude, if I'm not mistaken.

Mr. Peter Braid: In any event, this company has created, for all intents and purposes, through the use of nanotechnology, a bead that can be placed in the tailings ponds and act as a form of a magnet that attracts all of the bitumen in the tailings ponds and separates it from the water.

Are you familiar with that specific technology? Have you considered it? Is this something we could explore?

Mr. Calvin Duane: Yes, we've actually met with them; many companies have. I have personally met with them to review that. We are in discussion with them right now to look at the potential of it. It's at that stage.

Mr. Peter Braid: Okay, very good.

Are there any other comments from any other company representatives?

Mr. Chris Fordham: I guess I'd be the only other one, because they don't have tailings ponds.

Mr. Peter Braid: Right.

Mr. Chris Fordham: My guess is that we've probably met with them as well. I don't have personal knowledge of that, but we're all constantly exploring new technologies.

Mr. Peter Braid: Excellent.

With respect to the companies that are drawing and using saline water, I just want to understand that a bit more. You've indicated that saline water is hard to find, so these are groundwater sources of saline water.

Can you elaborate a little bit on how difficult that process is, and, if possible, the percentage of source water that is actually saline? Just help me understand this.

● (1045)

Mr. Matt Fox: The salinity of the aquifers varies significantly as you move across the Athabasca region and into Cold Lake and other areas. It's driven by the proximity to salt in the subsurface, and a whole load of other issues relating to the groundwater movement. So Devon and its Jackfish project can find saline water, which crosses the 4,000 TDS demarcation line. If it's 4,100, it's saline water; if it's 3,900, it's fresh water.

So as you move around the region and drill these water exploration wells, you find a significant amount of variability. It can vary from 1,500 to 15,000 or 40,000 in salinity.

Mr. Michel Scott: I would just reinforce that. We had one well in particular that was hovering around that 4,000 level. Some days it might have been just under or over, and that's not good enough. We basically said we'd be above the 4,000 mark, and today we use 6,500 total dissolved solids. We're doing work to use even more saline water than that.

I don't know exactly how it is distributed, nor could I answer what the supply is, if that's what you were getting at. That question would probably have to go to some of the water experts.

Mr. Peter Braid: Okay, very good. Thank you.

Mr. Wright, the THAI process is certainly a very intriguing and encouraging process. Monsieur Ouellet asked many of the questions I wanted to ask you, but perhaps I have one other question for you. What's your assessment at this point of the success of this process?

Mr. John D. Wright: Our assessment is that it is fully successful. We've moved to a commercial-scale application and have actually expanded our project application to two new areas, which we'll be developing this year. We're also looking internationally at a variety of other heavy oil opportunities where we can apply the technology.

Mr. Peter Braid: Thank you.

I have a more general question to any or all of you. How do you determine what benchmarks or guidelines you use to determine what percentage of your profits are devoted to R and D? If that's proprietary, that's fine, but please indicate that.

Mr. John D. Wright: I'll take a stab at that, just because we have an R and D division.

I hope through these hearings you reach the appreciation that our business is a constantly evolving one. It is at the leading edge of technology, and quite often the bleeding edge of technology, where new techniques don't always work as we'd hoped they would.

In general, up to 10% of our capital investment in any year goes to applying existing technologies or new technologies in novel ways to enhance our ability to extract oil and maximize the recoveries we can get from various reservoirs. It isn't just a bunch of scientists in white lab coats; it's guys on drilling rigs running new tools underground and testing new ideas. That is the hardcore R and D that we do.

Mr. Peter Braid: How much more time do I have?

The Vice-Chair (Mr. Francis Scarpaleggia): Your time is basically up. If you have a quick question, go ahead.

Mr. Peter Braid: I have a really good one.

How do you define sustainable development or environmental sustainability?

The Vice-Chair (Mr. Francis Scarpaleggia): Make it a concise definition, please.

Mr. Matt Fox: It's a balance of the economic, social, and environmental aspects of project development.

Mr. Peter Braid: Thank you.

Thank you, Mr. Chair.

[*Translation*]

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Braid.

Thanks as well to the witnesses for being with us. Your evidence has greatly enriched our knowledge of the oil sands operation.

We'll now go to the second part of our program. We're going to hear from the NGOs, including the Pembina Institute, the World Wildlife Fund Canada, Ecojustice Canada and the Canadian Boreal Initiative.

[*English*]

Thank you very much for being with us. It was very interesting, and it will add a lot to our report, I'm sure.

We'll take a short break.

● (1045)

(Pause)

● (1055)

The Vice-Chair (Mr. Francis Scarpaleggia): I would ask members to take their seats. We'll start with our segment on ENGOs.

Which witness will start? I believe you are prepared for 10-minute presentations.

● (1100)

Mr. Simon Dyer (Director, Oil Sands Program, Pembina Institute): Yes, five to ten minutes.

The Vice-Chair (Mr. Francis Scarpaleggia): Okay.

Mr. Dyer, go ahead.

Mr. Simon Dyer: Thank you for providing us the opportunity to present here. We're very happy that the committee has come to Alberta.

My name is Simon Dyer. I'm the oil sands program director at the Pembina Institute, where I manage Pembina's research on oil sands development.

The Pembina Institute is a national sustainable energy think tank that works on sustainable energy solutions. We were founded in Drayton Valley, Alberta, in 1985.

We have researched the environmental impacts of oil sands development for over a decade and we are committed to responsible oil sands development. Unfortunately, Canada's current approach to oil sands development is a case study in unsustainable development.

The manner in which the oil sands have developed includes many areas of federal jurisdiction beyond impacts on water. Unfortunately, the federal government has been very weakly involved in oil sands environmental management to date, despite these significant areas of jurisdiction.

I have a presentation that I've circulated in hard copy. I hope you will follow along with that.

Given the limited time available, I'll focus my comments on three main areas—the lack of protection of the flows of the Athabasca River, the unsustainable management of tailings, and the lack of adequacy and transparency in monitoring.

The federal-provincial management framework for the Athabasca River gives priority to oil sands production over protection of water and fisheries. Under the water management framework for the Athabasca River, there is no legal requirement for water withdrawals to be halted in order to protect fish habitat. The water management framework has a traffic-light system, identifying green, yellow, and red zones. During the red zone, fish and fish habitat are being damaged. Unfortunately, in this instance, red does not mean stop, and water withdrawals are allowed to continue, even when fish habitat damage is occurring.

Slide five looks at the current and future risks posed to water by unsustainable tailings management practices. It's estimated that there is a total of 720 million cubic metres of impounded liquid tailings on the landscape north of Fort McMurray. This amounts to 288,000 Olympic swimming pools of toxic waste. Tailings lakes now cover 130 square kilometres of land. That's an area the size of the city of Vancouver. On average, one and a half barrels of liquid tailings accumulate for every barrel of bitumen that is produced.

In over 40 years of oil sands development, no areas containing tailings have ever been certified as reclaimed, and industry has never demonstrated that they are able to deal with the toxic liquid waste in tailings lakes.

When you hear evidence from industry saying the first tailings ponds will be reclaimed in the next few years, this is misleading. The mature, fine liquid tailings will simply be piped to another location while those tailings lakes are filled in. Tailings lakes are toxic and contain hydrocarbons and naphthenic acids at concentrations of up to 100 times those found in bitumen.

Another risk is the risk of the catastrophic discharge, of course, which would be unthinkable.

In addition to the risks associated with current tailings production and the current risks in terms of seepage, which I'll talk about shortly, a bigger risk, I think, is the long-term fate of these tailings. Most Canadians would likely be astonished to learn that the accepted way to deal with this liquid waste in the long term is with an unproven concept called the "end pit lake".

Other industries have end pit lakes. It's a place where you put water in a gravel pit at the end of the gravel pit's mine life, for instance. The oil sands are unique in that their tailings lakes or their end pit lakes will include toxic liquid waste at the bottom. The approved plan is simply to cap the liquid tailings waste with fresh water and hope that through a process called meromixis, in perpetuity, the upper water layers do not mix with the lower layers.

In slide eight, I show a cartoon from CEMA, the Cumulative Environmental Management Association, that shows exactly how these toxic liquid waste dumps are going to be a permanent feature on the landscape.

It's not possible to overemphasize what a risky and unproven concept this is. Concerns about the fact that this concept of an end pit lake has never been demonstrated are continually raised by federal and provincial regulators and by CEMA, yet all oil sands mines have been approved so far with this method. There are 25 end pit lakes approved and proposed so far on the landscape. There's a quote in my presentation that shows how, really, this is a complete experiment. We've never demonstrated that this is a sustainable solution.

I now want to talk about tailings seepage. Tailings lakes are leaking. I know you've heard mixed opinions on this during your stay. It's not surprising that there are mixed opinions, because there is a real absence of publicly available data to get to the root of this problem.

Last year, the Pembina Institute was commissioned to conduct a review of potential seepage from tailings ponds. We contacted the Government of Alberta on at least three occasions, asking for information on seepage data from groundwater wells. No data was provided on any occasion. It is unclear whether cumulative summaries of the data exist, whether the governments of Alberta or Canada have the capacity to analyze that data, or whether the Government of Canada has seen that data.

● (1105)

Despite some of the testimony you may have heard, assessments project that all tailings lakes leak, even after mitigation measures are accounted for. So even after the pumping you've heard about to move that material back to tailings lakes, there is still residual leaking into the environment—into the groundwater and the Athabasca River and its tributaries.

We did a very conservative assessment of environmental impact assessment data and found that tailings lakes could be currently leaking into the ground water at a rate of 11 million litres per day. This rate of leakage could more than double if current proposed projects proceed.

Occasionally, actual validated information on seepage is available. For instance, if you look at some recent approvals for Suncor, it was reported that their pond 1 was leaking into the Athabasca River at a rate of 1,600 cubic metres per day.

Finally, I want to comment on the availability and adequacy of publicly accessible data on oil sands environmental performance.

One of the unfortunate defining features of oil sands development is the lack of transparency and the absence of publicly available data for many elements of environmental concern, such as tailings seepage, tailings reclamation performance, and access to RAMP data. A clear and cumulative picture of the potential scale of tailings lake leakage has never been presented by the Alberta or federal government. It's been up to environmental organizations to try to project what those impacts may be.

There are many stakeholder concerns about inadequate monitoring of the Athabasca River. The regional aquatic monitoring program, RAMP, has been criticized as lacking provincial and federal government leadership. Federal reviewers of RAMP have raised significant concerns about the program itself, and we are not aware that these shortcomings have been addressed.

I'll also make it clear that the Pembina Institute has not been a member or participant in RAMP over the past six years. We simply have concerns about the credibility of the program and lack capacity to participate in all these different processes.

In conclusion, we urge the federal government to play a much more active role in oils sands environmental management. I would like to draw your attention to three specific recommendations.

First, we recommend that the federal government ensure no new approvals for oil sands mines until a scientifically based ecosystem base flow for the Athabasca River is established, beyond which withdrawals by all oil sands operations during the red zone or low-flow periods would be prohibited. The tragedy is that using off-stream water storage is an economically viable approach for the industry, but there's no regulatory requirement to store water and halt withdrawals, so we continue to see withdrawals during these low-flow periods.

Second, the federal government should ensure that no more oil sands mine approvals should be granted that include mature fine tailings or that propose unproven end pit lakes as a reclamation strategy.You've heard a lot of talk about the technological silver bullets that are going to improve the oil sands industry, but technology in the absence of regulation isn't going to drive the sort of change we need to see. Industry has been researching tailings ponds for 40 years, and it hasn't demonstrated they're able to deal with the solution. We need the regulatory levers that prohibit this unsustainable practice.

Finally, independent and transparent monitoring that has a strong, peer-reviewed, scientific basis is needed. Federal leadership is required to ensure that the data is publicly available and greatly enhanced. It should include comprehensive water quality, tailings reclamation, and tailings seepage information.

Thank you very much.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Dyer.

Mr. Maas, you're next to present.

● (1110)

Mr. Tony Maas (Senior Policy Advisor, Fresh Water, World Wildlife Fund Canada): Thanks for the opportunity to speak to you today on what I see as one of the most important freshwater issues in Canada today.

My name is Tony Maas. I'm senior freshwater policy adviser with WWF Canada.

As some of you may know, and as others may not, WWF Canada prides itself on being a science-based and a solutions-based organization. What that means is that we tend to focus our efforts on working across sectors—public, private, not-for-profit—to look for and implement solutions to today's increasingly complex environmental problems, as long as we understand, as well as possible, the underlying science. When we don't understand that science, or when it is incomplete or in question, we advocate precaution.

With that as an early background, not unlike my colleague from the Pembina Institute, I'm here recommending that no further approvals for oil sands projects that require water withdrawals be granted in the near term. I make that recommendation because we believe decisions are being made in the absence of best possible science and with little or no precaution.

I should also note here that WWF is an active member of the phase two management framework committee, the P2FC. This is the group of industry, first nations and Métis, and other environmental organizations, as well as federal and provincial government representatives, that is working to develop a recommendation for what we hope will be an improved water management plan for the lower Athabasca River. As part of that, we have agreed with our colleagues on that committee not to discuss publicly the internal workings of the committee, as it's ongoing.

I'm going to frame my discussion around the concept of environmental flow, or what in Alberta is often referred to as instream flows.

Aquatic ecologists widely recognize that a river's natural flow regime—the peaks and troughs, the high and low flows—is critical to sustaining the integrity and productivity of freshwater ecosystems. The Athabasca River is unique when it comes to environmental flows. It is unimpeded by dams, so flows are largely natural. It is in fact the third-largest free-flowing river in North America.

Because the Athabasca is not impeded by dams and other infrastructure, there is significant interannual and intra-annual variability. It is this variability that sustains not only the integrity of the river but also the downstream Peace-Athabasca delta. That delta, as you might know, is 80% protected by Wood Buffalo National Park, which is a UNESCO world heritage site.

Also worth pointing out in connection with this interannual and intra-annual variability is that winter low-flows are the most critical period of time for the health, productivity, and survivorship of species in the Athabasca River, simply because flows are lowest at that point.

When we talk about environmental flows, it's important to recognize that there are sustainable limits to the degree to which we can disrupt flow regimes. When we think about this in the context of oil sands development, it appears very much that we put the cart before the horse.

Alberta Environment has licensed oil sands operators to extract significant volumes of water from the Athabasca River before setting sustainable limits on those withdrawals and before appropriate protections were put in place. This has been acknowledged, in fact, through the phase one management framework approach; however, we believe the phase one management framework for the lower Athabasca, the existing management framework that is in place, is inadequate, for at least three reasons.

First of all, as has been mentioned, there is no ecosystem base flow. An ecosystem base flow is essentially a threshold or limit below which, in order to protect the ecosystem, no further withdrawals from the river should be allowed. However, under the phase one approach, industry is allowed to take at least 5.2% of the median flow at any time, regardless of the severity of low flow.

It's important to recognize that some of the statistics that were put out this morning around the percentage of annual average flow that oil sands operators take from the river can be very misleading. The important timeframe to be considering is the period of these very low flows. At these times, the proportion of flow being taken by oil sands operators is much more than the annual average numbers would lead you to believe.

Second, there are no provisions for peak flows, those high flows that are very important to replenishing the Peace-Athabasca delta. The phase two framework simply assumes, without significant scientific support, that withdrawals will not affect ecosystem health, and it will therefore allow operators to withdraw the maximum amount of water they can during that period of time.

Finally, and I think incredibly importantly—it's come up a number of times—the phase one framework failed to acknowledge the impacts of climate change on future flows in the Athabasca River. Science tells us that flow is in fact declining in the Athabasca River, and that the decline is largely due to human-induced climate forces.

● (1115)

Over the past couple of years, WWF has commissioned reports by Dr. Jim Bruce, who some of you may know. He's the chair of the groundwater report that has been mentioned a number of times. He's also a member of the Intergovernmental Panel on Climate Change and a world-renowned, Canadian-renowned, climate scientist.

In a report commissioned by WWF, Dr. Bruce predicted that by 2050 the mean annual flow of the Athabasca could decline by 25%, and low flows could decline by 10%. We recently asked Dr. Bruce to update his report. What came out of that was a warning that his early predictions might be wrong for a couple of reasons, and that flows might decline quicker.

Those reasons include the fact that greenhouse gas emissions are increasing more rapidly than the IPCC assessments suggest, and headwater glaciers that provide some of the base flow to rivers like the Athabasca have passed the tipping point. They were providing more flow to rivers because of melting, and are now providing less base flow.

Finally, when we think about environmental flow we can't forget the quality dimension. It is important to recognize that when we're looking at the flow of a river, it carries pollution from upstream activities to downstream communities and ecosystems. I think an important way of looking at this is as an issue of watershed equity. When we are putting downstream communities at risk, we are putting ourselves increasingly in a position of conflict.

At the heart of this issue is the tailings ponds that have been discussed at length today, the seepage from those tailings ponds and its impact on the health of downstream communities such as Fort Chipewyan. But when you think about the potential—regardless of how low it might be—for a catastrophic breach of a tailings pond, the watershed equity issue stretches well downstream into the Mackenzie River basin, including the Northwest Territories.

Here again there's significant uncertainty related to the human and ecosystem impacts associated with tailings seepage, but there's also significant uncertainty related to how pollutants would disperse in the event of a catastrophic tailings breach.

To conclude, I think it's safe to say that for too long oil sands development has progressed without the appropriate oversight and leadership of the federal government. There are clear indications that the federal government has an incredibly important role to play and responsibilities in the realms of fish and fish habitat protection, transboundary water issues, and protection of aboriginal rights. What has been called a complex and confusing allocation of water management powers between federal and provincial governments is often used as an excuse for inaction.

We have a couple of specific recommendations for the federal government to demonstrate and take leadership on freshwater issues related to oil sands. Federal leaders, including the Minister of Fisheries and Oceans, should be encouraged to support the recommendations that come out of the phase two water management framework committee, and ensure that the framework has full political support so it moves toward an implementable water management framework and is resourced so that it can be implemented and enforced.

As you may be aware, under the original phase one management framework, a DFO biologist proposed a more stringent approach that was much more protective of the ecosystem. It included an ecosystem-based flow; however, it is unclear to us why that approach did not end up as part of the phase one management framework.

Finally, there is an opportunity here for the federal government to show leadership in an area where there is potential for growing conflict around transboundary water issues within this country. Alberta and the Northwest Territories are in the midst of negotiating a bilateral agreement under the Mackenzie River basin transboundary agreement. The federal government is a party to that agreement, and we recommend that the federal government participate in those negotiations to ensure that what emerges out of that is a robust water management plan that ensures watershed equity and reduces conflict.

Thank you.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Maas.

Can you tell us the name of that DFO biologist, in case we might want to invite him sometime?

Mr. Tony Maas: I can't tell you at the moment. I'll have to figure out if I can find that out.

The Vice-Chair (Mr. Francis Scarpaleggia): Sure.

You say that the federal government should endorse the phase two framework, but my understanding is that it's not published yet.

● (1120)

Mr. Tony Maas: Exactly.

The Vice-Chair (Mr. Francis Scarpaleggia): So it might not be something that you would want the government to endorse. I mean, you probably didn't want the government to endorse phase one.

Mr. Tony Maas: What I didn't say was what is in parentheses, because it was challenging to fit into my talk.

The Vice-Chair (Mr. Francis Scarpaleggia): Okay, so it's qualified.

Mr. Tony Maas: It presumes that the phase two recommendation reflects an appropriate management approach to protect the ecosystem.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

Who's next?

Mr. Robinson, go ahead, please.

Mr. Barry Robinson (Staff Lawyer, Ecojustice Canada): Thank you, Mr. Chair and committee members, for the opportunity to present to you today.

My name is Barry Robinson. I am the staff lawyer at Ecojustice Canada, formerly the Sierra Legal Defence Fund.

Karin Buss was scheduled to present to you today, but unfortunately she fell ill this morning. She sends her apologies.

The focus of our written presentation and my comments today is the role that the federal government should and must play in the management of our water resources in the Athabasca oil sands region. It is our submission that the federal government has been somewhat missing in action in an area where it has clear responsibilities.

In our written brief, we have provided evidence that the federal government has not been fulfilling its responsibilities to protect water resources in the oil sands regions. Today I would like to focus your attention on the fact that the federal government actually has significant powers and responsibilities that it could and should use, and I urge the committee to recommend that those powers be used.

In the Constitution Act, 1867, the federal government has clear responsibility and defined powers in certain areas, such as fisheries. In other areas, the federal heads of power overlap with the provincial powers, and thus some coordination is required with Alberta. This does not mean, however, in legal terms, abandonment of these federal powers or acquiescence to the province's regulatory regime. Practically, what it requires is leadership, advocacy, and diligent work on the part of the federal authorities.

We must keep in mind that where there is a clear conflict between federal and provincial powers, the federal powers are paramount. Therefore, it is our recommendation that the federal government should begin exercising those powers that are clearly within its jurisdiction. I'd like to run quickly over some of those areas.

First, under the natural resources transfer agreement of 1930, under which Canada transferred ownership of natural resources to Alberta, the federal government reserved to itself the right to determine and secure sufficient flows within the rivers and streams that feed into Wood Buffalo National Park, to protect its “scenic beauties”, to quote the agreement.

In modern terms, I would submit that protection of the ecosystem would fall within that broad category of protecting scenic beauties. This gives the federal government an overriding and preeminent power to determine what flows must flow into Wood Buffalo National Park.

As Tony has mentioned, the Department of Fisheries and Oceans determined in 2006 what the inflow stream needs are in the Athabasca River, so what remains to be done is for the federal government to give Alberta formal notice of what flows it would require into Wood Buffalo National Park.

Second, Canada clearly has primary responsibilities to protect fish habitat under the Fisheries Act, and low flow levels, as has been pointed out by my colleagues, can destroy fish habitat.

To date, DFO has issued HADD permits—that is, harmful alteration, disruption or destruction of fish habitat permits—only for, as far as I'm aware, the actual process of digging out streams and water courses in order to mine underneath them, to reroute streams. I am not aware of DFO issuing any permits that deal with the impacts of lower flows in the Athabasca that result from diversions of water for these industrial schemes.

In fact, I'm only aware of one permit, which is the Albian Sands permit, for their Muskeg project, that did set a restriction. This was the permit for the actual physical structures to withdraw water from the Athabasca. That did set a minimum water flow below which no water was to be withdrawn.

I would suggest that the federal government, and DFO, in its power, should be doing that on all the HADD permits they issue and on other permits they issue with respect to oil sands.

Third, Environment Canada has administrative responsibility for those provisions in the Fisheries Act that deal with depositing deleterious substances into waters frequented by fish. The courts have been clear that this includes prohibiting the seepage of deleterious materials into water that does not contain fish but which eventually discharge into water containing fish. So the discharge does not have to be directly into fish-bearing streams to be prohibited.

I am fascinated by the discussions that I heard this morning and things I've read that tailings ponds are not seeping. We did have evidence this morning that Suncor's pond 1 did leak, for a number of years, and I understand it continues to leak into the Athabasca.

● (1125)

The Syncrude groundwater report for 2007 indicates water seeping from their Muskeg River tailings pond into Beaver Creek. This is not theoretical, but is measured in their groundwater report, which shows that the water is seeping into Beaver Creek. It's beyond their containment system. So it's not something theoretical in an environmental impact assessment, but is actual seepage happening beyond the containment systems.

I also understand that you may have heard from Dr. Schindler yesterday that there are deleterious substances entering surface waters through air emissions. Therefore, we would ask that Environment Canada step up and enforce the deleterious materials provisions of the Fisheries Act.

Fourth, the Canadian Environmental Assessment Act requires the federal assessment of proposed oil sands projects, which I'm sure you've heard of a number of times. This not only gives the federal government the power to assess these projects before they begin, but there are also monitoring provisions in there, on which they could require follow-up after these projects are approved.

This is the area where we see some weakness, in that commitments are made during the joint review panel hearings, and then, at times, the commitments made there are not followed through on by the companies. So the basis on which the approval is granted, that certain mitigation steps will be effective, turns out to be.... Either the steps are not implemented or they're not effective, yet no one is following up on these steps.

There are other pieces of legislation and powers that are set out in our written submission, such as the peace, order, and good government provisions, which give the federal government residual jurisdiction over environmental matters of national concern, including transboundary waters.

Finally, we wish to highlight that Canada does have a water policy. It was made in 1987, and has laudable goals and strategies to protect Canada's water resources and to promote efficient water management and use. The strategies that are set out in that water policy include Canada's fiscal and regulatory powers to penalize polluters and to encourage water efficiency. The 1987 water policy also identified water pricing as a key to conservation. This policy has not been implemented, but it is a tool that could be used.

In conclusion, we would recommend that the federal government use its available powers, including spending and other fiscal powers, to improve environmental performance in the oil sands. We are asking the federal government to step up and address the water issues in the oil sands area.

I thank you for your attention.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Robinson.

Mr. Chapman.

Mr. Ken Chapman (Advisor, Canadian Boreal Initiative): Thank you, sir.

My name is Ken Chapman. I'm standing in for Mary Granskou, who is in Vancouver today with the Canadian Boreal Leadership Council. I'm from Cambridge Strategies in Edmonton, and I'm pleased to present to you on behalf of the Canadian Boreal Initiative.

As we understand, the committee has particular interest in water quality and water quantity.

Let me tell you a little bit about the CBI. It's a national organization guided by the boreal forest conservation framework. It's a vision to support the protection of at least half of Canada's boreal forests with world-class sustainable development in the remainder of the landscape and in a manner that respects aboriginal rights. This vision is supported by leading resource companies, first nations, and conservation groups, many of them located right here in Alberta.

We get behind real solutions. Our forestry company partners actually have over 50 million acres under Forest Stewardship Council certification, and they actually lead the world in this. Our oil and gas company partners are committed to demonstrating environmental, social, and technological performance improvements. Our first nation partners are shaping land use plans and balancing protection with sustainable resource development. And we work with environmental groups to raise standards for environmental performance. We have memoranda of understanding with governments, and we cover the whole range and spectrum of the boreal forest in our partnerships.

We believe that conservation-based planning and the establishment of large, interconnected protected areas is required to ensure that development, where it occurs, will not impair ecological and cultural values. We believe that planning for sustainability of the boreal forest is the key to economic prosperity, cultural vitality, and ecological integrity.

However, we'd like to note at the outset that these approaches also require immediate action to meet the challenges presented by climate change. We recognize that without a robust global and national response to reducing greenhouse gas emissions, including substantial performance improvements in the energy sector, all bets are off. Although we will focus in this presentation on the management of terrestrial and aquatic impacts, it is in that context and with that caveat I make these comments.

Today three countries on earth are home to the world's remaining large tracts of intact forest: Brazil, Russia, and Canada. Of those, Canada's boreal forest houses one-quarter of the world's remaining original forest, and is one of the largest intact ecosystems on the planet. Protecting this global resource is a responsibility Canada has to the world. There are 1.4 billion acres spanning 58% of our gross land mass, stretching from Newfoundland to the Yukon.

Scientists are telling us that large-scale protected areas to maintain wildlife and other ecological values are important to protect this landscape. There are some areas of the boreal forest, such as in Alberta, where the need for such protection is absolutely critical. For example, woodland caribou are very sensitive to disturbance, and the boreal population is declining in this province. Unless critical habitat is protected, this already threatened species may be extirpated over its former range.

Now, regarding the oil sands' impact on the broader boreal region, in Alberta, the boreal forest covers 60% of our land mass and most of the province's forested lands. The boreal forest is an economic engine for Alberta and indeed for the country as a whole, but development in this region is having specific impacts and is presenting tremendous challenges to the climate, boreal ecosystems, local communities, and wildlife populations.

Many of these pressures result from the unprecedented pace and scale of development in Alberta's oil sands. The substantial expansion of oil sands development, combined with industrial forestry and conventional oil and gas development, is straining a range of ecological services in northern Alberta.

After 41 years of oil sands mining in Alberta, the pace of reclamation to date has not matched the rate of disturbance. The level of impact on water quality and quantity is of great concern as a result.

What is urgently needed is a solution to set new and significant land and wetland conservation commitments within an overall regulatory system that gives first priority to proactive planning to protect air, water, and other ecosystem values in the broader region around the oil sands. The second priority is to ensure the health and sustainability of local communities, and particularly aboriginal communities. And the third priority is reducing the footprint and mitigating the impacts of development in a way that can be demonstrated as compatible with the first two priorities.

We have four recommendations for you. First, we recommend that the committee support and advance a cross-jurisdictional water strategy involving all governments in the Mackenzie River basin, with demonstrated leadership by the federal government.

● (1130)

The Mackenzie River is Canada's longest river, and its 1.8 million square kilometres watershed drains one-fifth of the country. It is truly the heart of much of Canada's north. The oil sands are located in the Peace and Athabasca watersheds, which are critical headwaters for the broader Mackenzie basin. Our recommendations focus on remedies within this larger watershed context as the impacts of oil sands development are and will be felt through this entire region, particularly in the many aboriginal communities downstream.

There is a need for effective integrated water resources management that has given rise in the past to the Mackenzie River Basin Board and the Mackenzie River Basin Transboundary Waters Master Agreement that guides that operation. Members of the MRBB include the NWT, Yukon, British Columbia, Alberta, and Saskatchewan. In 2008 the governments of the NWT and Alberta signed a memorandum of understanding on economic development that identified water and wildlife management as two priorities.

The Government of the Northwest Territories has been engaging with first nations and the broader community to develop transboundary water strategies for the Mackenzie basin. Environment Canada has been supporting this financially.

The federal government has to become a leader in this process. As you know, Canada has specific constitutional responsibilities for fisheries, navigable waters, migratory birds, and aboriginal communities, but it is also the senior government with responsibilities for interjurisdictional environmental impact. Canada must be at this table and must be prepared to ensure that our national interests in ensuring clean water, environmental quality, and healthy, sustainable aboriginal communities are advanced through this process.

Our second recommendation is that the committee support implementation of conservation offsets through providing federal resources, particularly to advance first nations-led offsets proposals.

Status quo land management and reclamation approaches in the oil sands have demonstrably failed to keep pace with public expectations, while environmental liabilities are accumulating rapidly. There is a pressing need to put new tools and approaches into practice to address decades of delay in initiating reclamation while proactively meeting the challenges of new development.

Since early 2008, CBI has been working with first nations, industry, and other interested parties to advance conservation offset as a regulatory tool to address the impacts of industrial development in the oil sands region. Through a report and subsequent workshops, it was concluded that conservation offsets should be considered to address the gap between Alberta's growing development footprint and unrealized reclamation and conservation needs in the boreal forest. Conservation offsets are compensatory actions and can be used to offset industrial footprints by securing areas of equal or greater biological value.

As part of a complementary strategy that will require significant new conservation and protected areas; world-leading mitigation and monitoring practices to protect land, air and water; enacting and enforcing higher standards for reclamation and limits on the extent of development footprints; and dealing equitably with impacted communities, conservation offsets are one tool that can be effectively used to limit industrial footprints in order to protect biodiversity within Alberta's boreal forest. It's in this context that conservation offsets can be cost-effective and operationally efficient methods to secure important conservation outcomes, help companies strengthen their social licence to operate, and help manage reputational risk.

In fact, in Alberta, the land use framework, the Alberta Land Stewardship Act, and oil sands plans identify conservation offsets as a land management tool that would contribute to achieving desired conservation outcomes within regional planning processes.

Through financing support, the federal government has a role to play in advancing conservation program offsets. As a good parallel for this, look at British Columbia's Great Bear Rainforest agreement, in which Ottawa matched B.C.'s $30 million contribution towards a $120 million fund to implement a plan for conservation and environmentally sensitive development.

Our third recommendation is that the committee support the advancement of protected areas in the region around the oil sands and the broader Mackenzie River basin.

Due to the size and intensity of oil sands extraction, the success of actions to mitigate the impact of development will have to be a large influence on the integrity of the Mackenzie River basin itself. The ability of Canada to fulfill this international agreement and the perception of Canada internationally are at stake here.

● (1135)

A key component of necessary conservation offset measures is protected areas. Protected areas are needed to sustain regional ecological processes, to protect representative examples of native ecological communities, and to maintain native biodiversity. If properly selected, protected areas can act as benchmarks for sustainable management strategies for the region while maintaining ecological integrity. They can also provide an opportunity for diversification of local and regional economies, where many of the benefits have the potential to stay within those local communities.

The Vice-Chair (Mr. Francis Scarpaleggia): Mr. Chapman, will you be wrapping up shortly?

Mr. Ken Chapman: I need 30 seconds, sir.

Protected areas options in Alberta's northeast have been identified by conservation organizations, first nations, and industry through the Cumulative Environmental Management Association, who are appearing here later. They have identified potential sites in the oil sands region that have ecological value and minimal conflict with petroleum resources.

Finally, we recommend that the committee support the initiation of a strategic environmental impact assessment of the full range of direct and cumulative effects from present and proposed oil sands and heavy oil projects in the Mackenzie River basin.

Other priorities for consideration—

The Vice-Chair (Mr. Francis Scarpaleggia): Mr. Chapman, thank you. I know the members will want to ask you questions, and I'd like to leave enough time for that.

Mr. Trudeau, you have the first question.

Mr. Justin Trudeau: Thank you.

To follow up, I'm probably stealing a question from Mr. Warawa here, but I believe the RAMP testimony was that Pembina had pulled out last year from RAMP. You are saying it was six years ago. Where is the discrepancy there? Did you pull out in name and not in fact?

Mr. Simon Dyer: That's a great question.

The Pembina Institute stopped attending RAMP meetings and withdrew from the association six years ago.

It came to our attention last year, rather alarmingly, that our name was still listed on the website, at which point we contacted them and reminded them that we are not a member of RAMP and to please take our name off the website. Perhaps that is the reason for the 2008 thing, but we have not participated in that process.

We have serious concerns about the absence of federal government leadership, access to data, and the direction of monitoring. That's why we chose not to participate in that process.

● (1140)

Mr. Justin Trudeau: We're here on a trip to try to separate fact from fiction and to get a sense of what impact the oil sands development has on water. The one thing that seems to be coming up is an issue of discrepancy between the different groups' understanding, views, and even research into it, from the anecdotal evidence and traditional knowledge of the aboriginal peoples, who are saying one thing, to what the NGOs and various scientists are bringing forward as facts and concerns, to what industry itself is bringing forward as a demonstrable fact. So we're in a position of having a little difficulty figuring out what he said, she said, they said, we said, and who's right.

You mentioned a need for transparency and for a comprehensive cumulative overview that is properly monitored and pushed by the federal government. It surprises me that the data is still not transparent. Can you talk about the lack of availability of the science?

Mr. Simon Dyer: I think it's relatively straightforward. The data is not available for a number of reasons. Most of it is collected by industry. Some of it is collected by the Government of Alberta, and the Government of Alberta clearly doesn't have the capacity to manipulate that data and make it publicly available.

There's a real lack of transparency on things such as reclamation. Industry talks about the first reclamation, of Gateway Hill, last year. There have been repeated requests for information about the status of that reclamation process, and nothing is provided. I think it comes down to a real lack of resources from both the provincial and federal government to actually ensure that data is collected and made available to the public, the people who need the data.

The problem with RAMP, of course, is that there's data being collected there, but as you heard, you have to be a member of RAMP to get access to that data.

The federal government should be leading these processes. They shouldn't be warming a single chair as part of a multi-stakeholder committee; they should be leading these processes and making sure the data is available to Canadians.

I think the lack of information is a black eye for Canada. It certainly contributes to some of the concerns about oil sands development. If data were available, I think that would go some way to allay concerns, but there are real issues beyond.

Mr. Justin Trudeau: I'd like to give everyone a chance to respond to the transparency issue.

Mr. Tony Maas: I fully agree with Simon. I would suggest that this is a persistent problem around water issues and not limited to the Athabasca or the oil sands, the ability to access data around fresh water. In part, it's because there are multiple jurisdictions involved in this. I agree wholeheartedly that this is a role, and I would say a fairly safe role, for the federal government to play.

We were, at one point, world leaders in integrated freshwater science in this country, as I'm sure you might have heard David Schindler say yesterday. I know I've heard him say it a number of times. In fact, we are falling off the table in that respect.

There is a significant opportunity here for us to build the research science and also rebuild the monitoring capacity that we once had in place. The oil sands seem to be a logical place to start on this, given that it seems to be ground zero around water issues.

Mr. Justin Trudeau: Do you have a legal perspective, Barry?

Mr. Barry Robinson: I would just reiterate some of the difficulties of getting information. For example, there is a disclosure information regulation under Alberta's Environmental Protection and Enhancement Act. If you want information that's been produced by the company, you must request it from the company first and wait 30 days. If they don't respond, then you can request the same information from the government.

In requesting groundwater reports, for example, we got a response from one company that actually sent us their data. With the other ones we had to wait 30 days and then ask Alberta Environment, so it ended up taking 60 days to get a report that we knew was sitting on Alberta Environment's desk.

Mr. Justin Trudeau: Much has been made of the issue around flow and seasonal variability. Is phase one of the existing water management framework enforced and in play yet? Some of the studies we saw yesterday suggested that far from being 5% of the time in yellow and 5% of the time in red, they were under limited situations significantly more often that. Has that proven to be the case?

● (1145)

Mr. Simon Dyer: Certainly the amount of time the river is spending in the red and yellow zones is increasing through time, and as withdrawals increase you'd expect that to continue to push the river below the line. It really is important. The 5.2% of median flow that Tony talked about is the median weekly flow; the actual withdrawal could be any number, based on how low the flows close up. So there really is no protection for the river in those extremely low-flow periods.

Mr. Justin Trudeau: Around most of these multi-stakeholder tables where the federal government has a seat, is it there mostly as an observer or an active participant, or is it overseeing the process? What has the government's level of intervention been?

Mr. Tony Maas: I can speak on a limited capacity to the phase two framework, but I don't sit at the table on behalf of our organization.

The federal government, through DFO, is actively involved in developing the science, helping with the science, and participating in the decision-making process. The current process under way is a complex process of trade-offs, and a lot of science is being imbedded in that. However, at the end of the day what comes out of that process is a recommendation to provincial and federal regulators. At that point—assuming from our perspective that the recommendation is beneficial in ecosystem protection—it still lies with legislators to make sure it is enforced, resourced, and implemented as an effective plan.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

We have to move on to Monsieur Ouellet now.

[*Translation*]

Mr. Christian Ouellet: Mr. Maas, you mentioned in your presentation that the river levels were falling because of climate change. That's something we've been told since we've been here. Climate change is having a direct impact on water quality and river levels.

The decision whether to regulate greenhouse gases is really a federal jurisdiction. What specific measures could we take to limit climate change in this region?

[*English*]

Mr. Tony Maas: Thank you for your question.

I am not a climate change expert with the WWF. My portfolio, as it were, is freshwater. I recall from the earlier sessions that you brought up an interesting point, however, that the emission of greenhouse gases from the oil sands industry, as well as the downstream use of that product—and let's be clear, it starts at the extraction side of things—is a significant contributor to greenhouse gas emissions, when you take it along the life cycle. So it is in fact a driver of the change that we're seeing in the river.

What I can maybe speak to more clearly is whether there is some discrepancy around how to look at what's happening in the river, and to look at past trends in river flow and what they mean for the future. We saw this morning that there are some very differing opinions on how to do that. If we look at a longer-term record, we may not see the same trend.

The approach that we take, and which our scientific experts inform us is the best approach, is to look at the period from 1970 onward. That's because it's the point in time when the IPCC determined that the forcing of global climate change became a human-induced impact. It suggests there was a significant change in what was normal at that point, and that's the trend we should be looking at. In fact there's a report put forward by a bunch of global experts on climate impacts on stream flow, and they use the term "stationarity". In the past, we've assumed stationarity, meaning we assumed that the future would be like the past. Their overarching conclusion from their paper is that in fact stationarity is dead, that this underlying or fundamental premise of freshwater management planning is no longer valid as we move forward with climate change.

I know that doesn't quite answer your question about addressing the greenhouse gas emissions, but....

● (1150)

[*Translation*]

Mr. Christian Ouellet: That's interesting. Thank you very much.

My question is for whoever can answer it.

We've talked about water pollution, but there's one subject we haven't addressed at all: vandalism on oil and crude pipelines. These acts, which some have characterized as terrorism, caused the explosion of some pipelines last year. In those cases, there is definitely pollution.

Would you have any information to provide us on that subject?

[*English*]

Mr. Tony Maas: I can start there, though I can't provide you with specific information on what occurred from pipeline leakage or fracture or issues in that respect. But again, it raises an interesting and important point that I intended to include in my brief, but I didn't want to give you guys a tome.

We use a concept called water footprint or virtual water in a lot of our work. Monsieur Ouellet, you alluded to it this morning when you talked about the water that's embedded in a barrel of oil. In fact, when you follow oil sands bitumen along its supply chain, you realize that in fact we're having impacts not only on the Athabasca River, but on others as well. As the bitumen moves to the North Saskatchewan River basin and Edmonton and Upgrader Alley, we're having impacts on the water use in that river basin. And then when we pipe that, as we're planning to, or are already doing, to the Great Lakes basin, we displace that issue to an area that I'm sure is as close to your heart as it is to mine.

So we're in fact having impacts along a number of watersheds, and the virtual water concept helps us to understand that. But it's an important point to recognize that when we start to extract this resource, by the time it gets to its end use—in fact, even before it gets to its end use, because we're still talking only about the products that come out of the refiners—we're in fact impacting a number of watersheds and a number of areas of important freshwater habitat and resources across the country.

[*Translation*]

Mr. Christian Ouellet: Thank you very much.

Do I have a little time left? All right, thank you.

Mr. Chapman, I get the impression you're painting a very broad, very nice and very accurate picture, but perhaps you lacked precision. Is that due to the fact that you're afraid to talk about industries? I would like to ask you to talk about them specifically because that's where these oil sands come from.

Based on your experience, could you tell us what recommendations could be submitted to the federal government as part of this committee's study to change matters?

[*English*]

Mr. Ken Chapman: It's not so much that we have any difficulty talking about specific companies, but the major role, in terms of the boreal, for the federal government is to deal with inter-jurisdictional conflicts and to help resolve those; to help with aboriginal communities and health issues there, sustainability issues there, in large portion; and in habitat: migratory issues, fish and wildlife, and biodiversity. I think there's a fundamental role there to play.

There are competing interests on the land. It's interesting that the Alberta land use framework organized itself around watersheds. I think that showed great insight, and I think it's something that should be seen as positive by this committee, as a way to participate in these activities, but it's a very large problem. The impact of oil sands on the water issues goes all the way to the Arctic, and it happens all the way into urban areas, as you've just heard; it goes into Canada and all the way into the United States.

So it's a very large issue. I think that rather than be specific, I'd rather see you take a philosophical approach and find how you can help deal with those inter-jurisdictional issues and the natural biodiversity issues, and primarily, a place to start is on aboriginal issues.

● (1155)

[*Translation*]

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Ouellet.

We'll now go to Ms. Duncan.

[*English*]

Ms. Linda Duncan: Thank you, Mr. Chair.

My first question is for Dr. Dyer. The Pembina Institute, including yourself, has been involved in the review of oil sands projects for well over two decades. Is that correct?

Mr. Simon Dyer: That is correct, but I got thrown out of school before I completed my PhD.

Ms. Linda Duncan: I'll still call you Dr. Dyer. You look very learned.

Mr. Simon Dyer: That's correct, yes.

Ms. Linda Duncan: Can you comment, based on that several decades of experience in directly intervening and observing the role of the federal government, what has been the role of the federal government over time in the scrutiny of the projects and prescribing mitigation measures, and enforcing and in turn requiring improved mitigation measures, particularly for water?

Mr. Simon Dyer: Unfortunately, it's been a sort of mixed approach, and I think it's been declining through time.

About a decade ago, much fanfare was made about setting up CEMA, the Cumulative Environmental Management Association, which was going to set environmental limits and ensure that oil sands development would proceed responsibly. At the time, the federal government played a pretty active role in helping set up that process. In many ways, that's a way of handing off responsibility to another group, CEMA.

Since then I think we've seen continued declines in involvement from the federal government, and we've seen clear examples where although there seems to be some evidence of good work behind the scenes.... A particular example would be the DFO science that went into the phase one framework. I think there's a clear paper trail that said the DFO scientists did the right thing in identifying an ecosystem base flow that would have protected the river. Then the federal government seemed to capitulate and then that disappeared in a later draft.

There's certainly evidence that the federal government participates in hearings and seems to ask questions as another stakeholder, good technical questions, but we don't see leadership in terms of ensuring management frameworks are in place.

A classic example would be woodland caribou. Alberta's woodland caribou are in the worst shape of any herds in the entire country. The science shows that every herd in the oil sands region is on the route to extirpation, and the federal government has not identified critical habitat that would protect caribou. There are many issues like this that give you a sense of....

Ms. Linda Duncan: You mentioned RAMP at the outset. I think you were here to hear the two industry panels who were lauding the values of RAMP. I think Pembina also used to be part of CEMA.

I'm wondering if you could comment a little bit more on why Pembina has withdrawn from those and whether or not you think those are still potential avenues to do better science. Or do you have a framework to recommend another alternative way?

Mr. Simon Dyer: Sure, yes. The Pembina Institute was one of the founding members of CEMA, the Cumulative Environmental Management Association. We participated in CEMA for eight years and invested a significant amount of time in a number of working groups and on the management committee of CEMA.

We felt that, unfortunately, the approval process continued to undermine the work of CEMA. This was a group that was supposed to set the rules about oil sands development, but the federal and provincial regulators showed they were willing to approve project after project before those rules were in place. CEMA became a parking lot for contentious issues, and it's in many ways a convenient whipping boy to place the blame on the lack of environmental management while they're letting the Alberta and federal governments off the hook.

We felt that continuing to participate in CEMA, until those rules were in place, was actually just exacerbating the situation, so we recommended that if CEMA's going to be allowed to do its work there needs to be a pause on new approvals until CEMA's work is done. The idea of doing the research and talking about environmental management in one room while rubber-stamping project approvals in the other room is not effective oil sands management.

Ms. Linda Duncan: Thanks.

Mr. Robinson, I understand your organization has brought a number of court actions involving oil sands activities, but in most cases against the Government of Canada. Can you outline why your clients felt it necessary to take the federal government to court?

Mr. Barry Robinson: Thank you for your question.

The first case was the Kearl case, where the joint review panel had indicated that for Imperial Oil's Kearl project, the emission of greenhouse gases—the equivalent to 800,000 vehicles—was not a significant impact. Our client in that case, the Oil Sands Environmental Coalition and others, just felt that was an unreasonable decision. So that was challenged in Federal Court. The Federal Court agreed that the panel had an obligation to give some reasons for its decision, so in that case the fisheries permit was temporarily revoked and then re-issued.

The other one is related to January of this year, and most people would be familiar with an incident at the Syncrude tailings pond in which 1,600 ducks died after landing on the pond. We attempted to discuss that with federal and provincial investigators and the crown in the fall of 2008, and were stonewalled on that. So through a resident of Alberta and the Sierra Club, we brought a private prosecution for that action.

The reason for our actions? Either we thought a decision was unreasonable, or we thought the government was not taking action it should have been taking.

● (1200)

Ms. Linda Duncan: There's clearly a lot of controversy around the tar ponds leaking and the tailings ponds leaking. Are they not leaking?

I'm wondering, Dr. Dyer, if you could recommend to this committee, or to the Government of Canada, how this matter could be addressed.

Mr. Simon Dyer: First of all, we need to see the data. I think it needs to be clearly demonstrated what the leakage rate from these ponds actually is. There is some data being collected individually by companies and by the Government of Alberta, but we have no sense of what that looks like cumulatively.

I think at the very least, the Government of Canada should provide publicly available information and synthesis on how significant this issue is. In the interim, I think we need to stop approving these tailings lakes. Industries talk about phasing out tailings lakes and looking for solutions, but they all have proposals on their books currently, and they're going to actually expand these lakes. It's not a solution to reclamation. Tailings have never demonstrated that these areas can be reclaimed. So I think we need to get a handle on how significant this issue is, first of all, before we make more mistakes and give ourselves a bigger issue we have to deal with.

Ms. Linda Duncan: I had asked the previous industry panels this question, and I'd be interested if anybody on the panel would speak to this.

I remain troubled that it appears that the focus of the decision is about loss of water, particularly to the Athabasca River, but I know that there are other rivers, like Muskeg and others, that are drawn down. I wonder if someone could speak to me about whether you think there is adequate consideration being given to the water loss to the watershed surrounding the Peace-Athabasca Delta, as opposed to just the straight withdrawal, and whether you think there's adequate attention being given to it. Does it come up in the hearings? Do any of the regulatory authorities responsible for source water address that, DFO or Environment Canada, along with Alberta Environment?

Mr. Barry Robinson: I would just comment again on the point I made earlier, that the HAB permits are issued for the destruction of the actual stream beds and stream areas, and then we have this concept of compensation lakes, which restores the fish habitat, but I am not aware of any science that is looking at the impact of having disrupted these tributary streams on future flows.

Perhaps Mr. Maas is more familiar.

Mr. Tony Maas: My perspective is about the same, but it's a critically important point.

When you think about something like the P2FC, the phase two management framework, it is scoped around the lower Athabasca River. That's appropriate because it was a scoped stakeholder engagement approach. But in fact there are, as we mine these areas, whole tributaries in some cases being lost, and the contribution of those tributaries in terms of water is one thing to consider, but also in terms of habitat, spawning area for fish species. In some respects it could be a small contribution of total flow to a very significant river in the Athabasca, but in terms of habitat for aquatic species and the people who rely on those species, it's significant.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

We'll move now to the government side. Please go ahead, Mr. Warawa.

Mr. Mark Warawa: Thank you, Chair, and thank you to the witnesses for being here.

I also want to thank Mr. Dyer for having Pembina forward your press release that you issued this morning. It uses very similar language in saying that the federal government has been missing in action, the same terms used by Mr. Robinson. It says “The federal government has been missing in action in terms of regulating the oil sands industry, and its absence has come at the expense of the environment and the long-term interests of Canadians”, and “Their failure to act has created severe risks, ranging from contamination by leaking tailings lakes to the collapse of fisheries”.

We have a natural resource that is second only to Saudi Arabia's. If the clock could be turned back, would you have supported the development of that resource?

● (1205)

Mr. Simon Dyer: Yes. The Pembina Institute has always held the position that oil sands development could proceed responsibly.

The key thing is that we should have planned first before we developed it. We should have set environmental rules. We should have dealt with greenhouse gases. We should have protected the Athabasca River. We should have established a land use plan. We should have prohibited tailings and said that you can do it once you can demonstrate that you can get this out of the ground without creating this liability that we don't know how to deal with.

Pembina Institute has never held the perspective that we're anti-oil-sands—

Mr. Mark Warawa: That answers my question.

You've shared with us this morning that we should stop any more tailings ponds, and we have heard you use the term “tailings lakes”. In situ is the technology being used to develop.... About 80% of the resource will be using in situ technology. Do you support in situ?

Mr. Simon Dyer: Based on time constraints, I didn't include in situ in my presentation today. I know you got a lot of information yesterday about groundwater concerns in situ from my former colleague, Mary Griffiths.

We often get asked if in situ is a more environmentally friendly way of doing oil sands than mining. It's a mixed bag. The greenhouse gas emissions are more significant with in situ than with mining. Although there is less water use on a per-barrel basis, we still have an underlying concern about the cumulative withdrawals from in situ projects. We can imagine having many straws in a milk shake, and we don't really know the size of what's available underground for those withdrawals.

We're also concerned about the disposal of in situ waste and the movement of that material underground in the subsurface channels. We need to do a lot more exploration around in situ oil sands development as well.

Mr. Mark Warawa: You support the development of the resource, and the technologies we have now are actually changing very quickly, including the management of tailings ponds. If you don't support in situ and you don't support surface mining, yet you support development of that resource, what technology would you support using?

Mr. Simon Dyer: We're not prescriptive about technologies. As Canadians we need to be concerned about the environmental outcomes, and if we can demonstrate we can develop the resource in a responsible way, that is the key question that we have to ask. I think it's—

Mr. Mark Warawa: I'm sorry to break you off, but my time is limited.

Are you saying there is no technology that you would support at this time, but that in principle you do support developing the resource if it can be done in a sustainable way?

Mr. Simon Dyer: Our perspective is that there should be no approvals, no new expansion of the existing projects, until we fix some of the existing problems. We are not talking about those existing projects; we're talking about not approving new projects that use these old technologies.

Mr. Mark Warawa: We are not going to be able to turn back the clock, so let's be careful with what we have now.

Mr. Simon Dyer: Absolutely.

Mr. Mark Warawa: There was a peer review of the RAMP program in 2003, and in 2003 you withdrew from RAMP. Was that before or after the peer review?

Mr. Simon Dyer: We stopped participating before the results of that peer review appeared. The report was published in 2004, I believe.

Mr. Mark Warawa: If you want to be involved with having input on how that resource is being developed, and the tools to do that are CEMA and RAMP, which is funded by the industry and is for NGOs, aboriginal communities, and government, and everybody is sitting at the same organization and providing input, and if you are not participating in a tangible way at those organizations, how can you be part of that organization in a positive way? In what way are you going to be participating in the system to make sure that the resource is being developed in a proper way?

When was the last time you looked at the RAMP web page?

● (1210)

Mr. Simon Dyer: There are different multi-stakeholder opportunities. There are environmental management opportunities through groups like CEMA and RAMP, which doesn't have a management function but has a monitoring function. I think it's fair to say—you might have heard it speaking to other stakeholders—there is a real sense of consultation fatigue.

Pembina Institute has four staff to work on oil sands issues. We have to be very choosey about where we invest that time. After choosing not to participate in RAMP, we invested substantial amounts of time in CEMA from 2002 to 2008. We participate in both negotiating directly with companies and appearing at regulatory hearings. We also invest time in trying to get information that's not really publicly available out into the public discourse through our oil sands research that you can see on our website.

We participated in good faith through the CEMA process, and I think that process failed. When we left that process we provided a list of recommendations on ways to improve environmental management that would bring us back to the table.

Mr. Mark Warawa: My suggestion is that it is important that Pembina be part of that process. That's the mechanism for input and monitoring. When I first started studying the oil sands, one of my main sources was Pembina and how you've been critiquing it.

I'm looking back at a lot of your recommendations from 2005, and I don't think your position has changed since then. You said:

> If oil sands development is not curtailed or aggressively managed, Canada will have to shoulder its responsibility in the global effort to reduce emissions by requiring the industry to implement technologies that cut the emission intensity of production, or to offset GHG emissions by investing in emission reductions elsewhere.

The Vice-Chair (Mr. Francis Scarpaleggia): Mr. Warawa, could you please go quickly on this?

Mr. Mark Warawa: I will.

You also quoted the then environment minister, Stéphane Dion, saying:

> There is no environment minister on earth who can stop the oil from coming out of the sand, because the money is too big.

Is that when your frustration level got to the point where you thought you were going to remove yourselves and withdraw from the mechanisms to oversee?

The Vice-Chair (Mr. Francis Scarpaleggia): Please be brief, Mr. Dyer.

Mr. Simon Dyer: No. I think we can continue to work on solutions and dialogue with industry and government, but we're obviously choosey about where we invest our time.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

We have time for two-minute questions from the members who haven't had a chance yet.

I have a very pointed question. You mentioned that 11 million litres of water are seeping from the tailings ponds per day.

Mr. Simon Dyer: That is a projection based on a review of the environmental impact assessment.

The Vice-Chair (Mr. Francis Scarpaleggia): So you don't have the data to really back that up with 100% accuracy. Can you get that data from the RAMP website? Other people today told us it was all on the website.

Mr. Simon Dyer: RAMP's focus is not on tailings and seepage.

The Vice-Chair (Mr. Francis Scarpaleggia): Is it on water levels mostly?

Mr. Simon Dyer: Yes, it's on that and river quality.

The Vice-Chair (Mr. Francis Scarpaleggia): Mr. Robinson, you said you can get data but it's a multi-layered process. You have to go to the company first, and if they refuse then you need to go to the Alberta government. So you can get it but it just takes a while.

Mr. Barry Robinson: You can get data—not the raw data, but the annual groundwater reports and annual service water reports of the companies.

The Vice-Chair (Mr. Francis Scarpaleggia): So if we're not happy with RAMP we can just go to the companies individually, and maybe with a 60-day delay get it at some point.

Mr. Barry Robinson: You can get the final report but not the raw data.

The Vice-Chair (Mr. Francis Scarpaleggia): Okay. That's it for me.

Do any other members on the government side wish to ask a question?

Go ahead, Mr. Watson.

Mr. Jeff Watson (Essex, CPC): Thank you very much.

I've had a chance to read the submissions from each of your groups. You've made a lot of recommendations on how to construct the regulatory and fiscal frameworks to address both current and future development of the oil sands resources. You've given recommendations on methods of extraction or processing, and how to make improvements there.

I want to come back to the question Mr. Warawa posed that was answered by Mr. Dyer. Am I to draw from your submissions that you support the development of the oil sands resource in principle, and it's just a question of how we do it? I'd like the three groups that haven't commented to say whether we can draw that conclusion from your reports. Then I have a quick follow-up.

● (1215)

Mr. Tony Maas: I can be brief, because I can be clear that we don't have a firm position on that as an organization. As I said in my opening statement, at this point in time we feel that we don't have the sufficient information to actually form that position, and personally, I'm not as well versed as some on the technology and other aspects of the project.

Mr. Barry Robinson: Our position probably is pretty much parallel to Pembina Institute's position. On the areas flagged, it seems strange that now we are doing a land use plan, after so much oil sands development is already under way. It would seem that's the cart before the horse.

If I could respond to Mr. Warawa's comment—

Mr. Jeff Watson: I'd like to hear Mr. Chapman, though, if I could, on the question I asked.

Mr. Ken Chapman: The Canadian Boreal Initiative is supportive of the responsible, sustainable development of the oil sands, and conservation offsets are an opportunity to actually do real-time reclamation as a substitute while we're waiting for the other technologies to come forward. So there are other ways of addressing the problem as well.

Mr. Jeff Watson: I have a quick question, then, leaving off where you've started, and I'd like your comment on this.

I come from as far south as you can go in Canada. Middle Island, for example, is in my riding. This was my first chance to come half a continent to see the oil sands in its development. I admittedly have some mixed feelings about it. One of my concerns, briefly, is the change in topography with respect to the mining operation.

I'd like your comments on the idea of compensation lakes and wetlands, the relationship between groundwater impacts and surface water. There's obviously a permanent change to the topography. It's not going to look exactly as it was. There may be shifts in where the wetlands are located and things like that.

What are the effects in the relationship between groundwater and surface water? If you could comment on that for me, it would be great.

The Vice-Chair (Mr. Francis Scarpaleggia): Can you comment on that quickly, Mr. Chapman?

Mr. Ken Chapman: I think there are other experts here who would be better at answering that question.

The Vice-Chair (Mr. Francis Scarpaleggia): Sorry. Does somebody want to comment quickly on that?

Mr. Simon Dyer: Yes, you're going to see permanent loss of peatland and the transformation of the landscape. Even if we are successful with reclamation, and I think industry's track record on reclamation thus far is very poor, we're going to see a very different landscape to what exists there currently.

Alberta still doesn't have a wetlands policy, so those wetlands are being lost uncompensated for. I think the hydrological impacts of that are likely to be significant, but they are outside my area of expertise.

The Vice-Chair (Mr. Francis Scarpaleggia): Mr. Robinson, do you have a quick comment to make?

Mr. Barry Robinson: Not on that topic. Thank you.

The Vice-Chair (Mr. Francis Scarpaleggia): Mr. Calkins, did you have a question?

Mr. Blaine Calkins: I have a couple of quick comments. My concern, after visiting the Fort Chipewyan first nations group and visiting Lake Athabasca, deals with the lowering of the lake level.

Mr. Maas, you talked quite a bit in your presentation about, obviously, the UNESCO heritage site, Wood Buffalo National Park. You talked about flow disruptions. You were very critical of flow disruptions caused by drawings on the Athabasca River for oil sands operations, particularly during low flows and peak flows.

When I flew over the oil sands, I saw several ponds that had the nice green that almost looks like a mountain lake. So I'm assuming that those ponds were water that was drawn from the river and kept in storage—pre-processing, quite distinctively different from the tailings ponds, which is unmistakable.

My question is going to focus on the other aspect. What I heard from the testimony and the questions I've asked is that the major cause of loss of water is due to the flow disruption of the Peace River, which is substantially larger than the Athabasca River. Can you provide our committee any historical information as to what those flow rates are? How big is the Athabasca relative to the Peace?

Mr. Tony Maas: I can provide that after the fact, if that benefits the committee, and I would be happy to do so.

You raise a very important point, and that does point to cumulative impacts of various developments on a watershed basis. You're very correct if what you're saying is that impacts upstream on the Peace River also have an impact on the Peace-Athabasca Delta. So it's not as simple, and the entire situation does not lie with oil sands operators, but as we add on the cumulative effects of these things, particularly around the high flows—

● (1220)

Mr. Blaine Calkins: I would actually submit to you that the dam has probably actually caused more disruption, because the Peace River is a substantially larger river than the Athabasca River, in the order of several magnitudes.

Mr. Tony Maas: It is substantially larger.

Mr. Blaine Calkins: When the flow of that river is disrupted, I would suggest to you that the downstream effects from that particular disruption are every bit as significant as the oil sands, if not more than the oil sands. That's just my personal perspective.

The Vice-Chair (Mr. Francis Scarpaleggia): Maybe Mr. Maas wants to respond to that.

Mr. Blaine Calkins: Your recommendations call for basically a moratorium on any further development, any further expansion, given the current technology and the current applications that are before the government. The question I have is why is your recommendation not a little less harsh in terms of just basically raising the bar when it comes to time periods when water can be drawn from the Athabasca River? Maybe you should ask the oil companies to bring forward a recommendation where the extraction companies would have to have off-site storage of water that could be taken out during a peak flow. Why have you gone to basically an all-or-nothing type of recommendation? Why haven't you found some modicum in between?

Mr. Tony Maas: To be clear on the recommendation, what we're saying is no additional projects that require water withdrawals from the Athabasca River, so that sets aside in situ. I'm not an expert on in situ development, and that's why it wasn't covered in the brief.

In terms of what opportunities may be available to deal with the issue that we've put forward in terms of protecting instream flows, that's why we made a strategic and measured decision to engage in the phase two management framework committee. So we're at the table along with industry and government, hoping to develop a plan that is powerful. Before that plan is put forward, we see it as a wise move to not move forward with any additional water withdrawals or projects that require water withdrawals. That's December 2009. We're talking six months, seven months, eight months from the timeframe that this recommendation will be put forward. It is anticipated to be implemented by 2011.

The Vice-Chair (Mr. Francis Scarpaleggia): You also wanted to comment on the issue of the dam. I saw that you wanted to respond to Mr. Calkins about the Peace River and the dam.

Mr. Tony Maas: Yes, I need to catch up on the numbers, but as I understand it there are two critical drivers, and the dam is one of them. There's also the impact of climate change on that river as well, in fact, on the Peace-Athabasca Delta itself. It is a net loss of water from the Peace-Athabasca Delta, so it loses more water than it gets because of evaporation, actually. There are a whole range of complex factors, human-induced as well as natural, at play in that area.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you very much.

I thought you deferred, Mr. Braid, but go ahead if you can make it brief.

Mr. Peter Braid: Mr. Maas has come all this way and we live ten minutes from each other in Kitchener-Waterloo. He came all the way to Calgary to see me, so I wanted to show some respect and ask Mr. Maas a question.

The Vice-Chair (Mr. Francis Scarpaleggia): I'm glad we could facilitate this rendez-vous. Please proceed.

Mr. Peter Braid: Mr. Maas, this is a bit of a follow-on from Mr. Calkins. I just wonder, with respect to the issue of the concerns over the flows of the Athabasca River and the current oil sands projects, do you have any recommendations that we might consider with respect to either the percentage of withdrawal from the river and a cap on that, or a range in terms of cubic metres per second that's different from current guidelines and ranges?

Mr. Tony Maas: I guess my advice would be to look back to the DFO biologists and see what they proposed. In fact, what they proposed was a cap. I don't have those numbers at my disposal. If I can access them through my staff, I certainly will pass them on to you, but that would be my advice. They are government biologists; I'm not a biologist. I haven't been engaged in this study. Clearly, there was a recommendation there, and something happened to it along the way, because it didn't end up in the existing framework.

● (1225)

Mr. Peter Braid: Thank you.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

Mr. Jeff Watson: I was hoping the witnesses could provide a written answer to my question with respect to topography and its effects on drainage.

The Vice-Chair (Mr. Francis Scarpaleggia): Could the witnesses do that, through the clerk, of course? Okay, thank you.

Thank you again to our witnesses for travelling out here and for your insights.

We'll start the next phase at 1:30 with CEMA. We were scheduled to go from 1:30 to 2 o'clock, but we could go for an extra 30 minutes with CEMA if you like. Is that the wish of the committee?

Ms. Linda Duncan: I have to catch a flight at five.

The Vice-Chair (Mr. Francis Scarpaleggia): You'll have plenty of time.

Ms. Linda Duncan: Is there another session after that?

The Vice-Chair (Mr. Francis Scarpaleggia): One of our witnesses didn't come, so we'll be finished at 3:30.

Are we in agreement to spend an hour with CEMA?

Some hon. members: Agreed.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

● (1225)

(Pause)

● (1330)

The Vice-Chair (Mr. Francis Scarpaleggia): Welcome back. I hope everyone had a good lunch.

We're moving into the last segment of our hearings in Alberta, which have been fantastic. Again we thank the people of Alberta and their representatives for receiving us so well and providing us with so much good information.

We have before us Mr. Glen Semenchuk, executive director of CEMA. We will be spending about half an hour, maybe a bit more.

Is your presentation about ten minutes long, Mr. Semenchuk?

Mr. Glen Semenchuk (Executive Director, Cumulative Environmental Management Association): Correct.

The Vice-Chair (Mr. Francis Scarpaleggia): Okay, so why don't you start and tell us about your organization?

Mr. Glen Semenchuk: Thank you, Mr. Chair. I'd like to thank you and all the committee members for inviting CEMA to appear before this committee.

In the time allotted I'll attempt to convey to the committee all the effort and good results CEMA has contributed to developers, regulators of the oil sands, and the citizens of Alberta and Canada.

CEMA is a non-profit, multi-stakeholder association based in Fort McMurray. It has an annual budget of around $8.5 million that is focused on research and studies looking at the cumulative environmental effects of oil sands development. We accomplish this through five working groups. The working groups look at air, land, and water, and also involve people issues. We have a traditional environmental knowledge advisory committee and an aboriginal round table. These working groups are composed of technical experts from our members, as well as individuals from non-member organizations with expertise, to help us tackle some of these big issues. It is a daunting task, and we rely on these volunteers to help us accomplish it.

As this can be a very intensive commitment of time, it limits the involvement of some of the CEMA members and leads to certain frustrations. CEMA has 46 members, which we call the CEMA board. This includes representatives from industry; different levels of government—municipal, federal, and provincial; first nations and aboriginal groups; and ENGOs. The federal agencies that are represented at the CEMA board are Health Canada, Environment Canada, Department of Fisheries and Oceans, Natural Resources Canada, and the Canadian Environmental Assessment Agency.

CEMA's work is guided by the regional sustainable development strategy that was developed for the Athabasca oil sands area by Alberta Environment. This was developed to provide a framework for managing cumulative effects and ensure sustainable development in the oil sands area. At that time, 72 environmental issues were identified and prioritized. CEMA was given a number of these issues, and at present CEMA is dealing with 27 of these 72 issues.

Since its inception CEMA has forwarded eight major frameworks to both federal and provincial regulators. We have forwarded a revegetation manual and a wetlands manual. In developing these documents, CEMA has produced over 200 reports and amassed a number of databases related to relevant subject matter. The majority of this information is available on our website, and we encourage people to go there and use it.

Over the last 18 months CEMA has had a number of challenges with the withdrawal of members from first nations and ENGOs. This may be viewed as entirely negative, but in fact it has thrown the ball back to CEMA to respond to the concerns that these groups had on their departure.

Managing a multi-stakeholder organization is very challenging, and how CEMA responds and manages this multi-stakeholder organization could be a major contribution to projects in the future. Establishing this network and making it viable and effective are ongoing challenges that we will respond to.

There have been three third-party reviews of CEMA over the last couple of years. All are available to the public on our website now.

● (1335)

The CEMA board, through its management committee, has held a retreat recently to deal with the issues raised in these reviews. The interesting fact is that the majority of recommendations were not directed at CEMA itself, but towards the regulators and how they interact with CEMA.

The CEMA management committee, with the approval of the board, is looking at how we can reshape CEMA to make it more effective, more efficient, and more attractive for organizations to participate in—and for those that left, to come back. I say this because one of the key messages we received from all of the organizations who left CEMA is that they all left the door open. They made suggestions for change and they put the challenge to CEMA.

CEMA has also recently teamed up with a joint federal-provincial regulator committee—over the next few months, between now and the end of the year—to look at this reshaping of CEMA and to make recommendations to the members of CEMA on how that reshaping may take place, because it's only the members of CEMA who can initiate that change.

CEMA is no different from any other non-profit organization. It relies on outside funding. To date, the majority of that funding has come from industry, and there's a blessing and a curse on that part. The blessing is that it's a fairly secure form of funding and it has come on a regular basis. The curse is that when the majority of your funding comes from one direction, there are perceptions that maybe it has more of an influence than it really does.

I recently went to Ottawa to meet with our five federal agencies that are members of CEMA to deliver the message to them that CEMA needs their help in two areas. One, they need to take a very active participation in the reshaping of CEMA to make it more effective, which would include a higher level of involvement in our management committees, our membership, and also in our working groups. We understand the challenges when the expertise is in Ottawa and meetings are held in Fort McMurray, Edmonton, and Calgary. There are financial challenges to this, but we feel it's very important, and we conveyed that message.

The other part of that message was to convey the uncertainty in these uncertain economic times in the petroleum industry about whether the level of support from industry will be maintained, or whether CEMA will have to rely on other sources of funding to continue its mandate, specifically from federal and provincial government agencies.

In the last two years, the provincial government has stepped up and contributed a significant amount to our annual budgets. The federal contributions to date have been rather minimal. We were very happy, though, to have announced very recently that the Department of Fisheries and Oceans has assisted us greatly by taking over the funding of a couple of our projects, and also by providing in-kind support to one of our major fisheries studies, amounting to support at a level of $350,000.

Also, in responding in part to some of the criticisms of CEMA and the cumbersome decision-making and transparency of CEMA, the CEMA board has adopted two new policies in a very short period of time in the last few months. We now have a new decision-making policy wherein the consensus-based model is used, mainly on recommendations going out the door of CEMA to the regulators. And on a number of internal process questions, we now operate more on a majority vote.

The latter isn't an effort try to minimize anybody around the table or to try to target groups, but to try to be more effective. One of the criticisms that CEMA took from the phase one instream flow needs study was that we didn't meet the deadlines, that we didn't do our job. I could look at it a different way: we finally realized there were limitations to what multi-stakeholder groups could do. And instead of continuing to beat each other over the head with baseball bats when we've completed 95% of the job, the decision was made that it's actually the regulator who makes the final decision, so let's turn the final product over to the regulators and let them make that decision. But that decision was based on 95% of the work being completed by CEMA. CEMA completed the research; it completed the studies that contributed to that.

● (1340)

One of the things that was missed this morning is that the phase two study is being coordinated by CEMA. We're the ones who had to go out and raise the funds to complete that study. We had to change some of our internal policies to allow groups like the World Wildlife Fund to participate, because we had a policy that if you weren't a member, you didn't participate.

So we are changing. We are trying to respond to make this multi-stakeholder group more responsive.

We have also just completed a release of information policy that will result in the release of the majority of information CEMA has, including reports, databases, and so on. There are some restrictions, as there are pieces of data we are not free to release. One example is that we have collected a fair bit of information on traditional environmental knowledge from various first nation groups, with whom we have legally binding agreements that we cannot release that information without their approval.

In our release of information policy, led by industry members, we are not trying to recover costs on these studies. If the information is being used for research, whether by an NGO, a research institution, or a government agency, we should be prepared to release that data. The only restriction would be that if it were going to be used for a commercial venture, there might then be opportunities for CEMA to recover some of its costs.

On the issue of water, the majority of the water issues in CEMA are conducted through our surface water working group, and their main effort is focused on dealing with the RSDS issues related to water. The surface water quantity issues include a focus on ensuring the health of the aquatic ecosystem and the maintenance of socio-economic uses of the lower Athabasca River. The main surface water task, at this point in time, is supporting the creation of that phase two water management framework for the lower Athabasca River.

It is anticipated that the final draft report will be completed by the end of this year. It will be formulated into a recommendation to the government, and we would hope that recommendation will be going forward in 2010.

The opportunity of creating a multi-stakeholder group to deal with tough issues is unique, and I think the fact that there are still 46 agencies sitting around that table trying to deal with these issues is a bit of a milestone. Yes, organizations—

● (1345)

The Vice-Chair (Mr. Francis Scarpaleggia): Mr. Semenchuk, will you be concluding shortly, so that we can ask questions?

Mr. Glen Semenchuk: Very shortly.

It is a challenge, and as I say, all of these groups did leave the door open to come back, and we're taking up that challenge.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you very much.

We'll start with Mr. Trudeau, for seven minutes.

Mr. Justin Trudeau: Thank you.

You mentioned the barriers to the release of information, with the excellent example of aboriginal traditional knowledge. They want to keep control over it, and that's understandable. However, any time that information is not being released, particularly in an organization like CEMA, which has so many different partners with different motivations and reasons for it, there's always a suspicion that you don't want the information released because somehow it would be damning to a particular member of industry, or a particular partner, or a particular something, such that if these facts were known, it would cause negative impacts on a particular group.

Is that one of the concerns or reasons that you're not releasing all of the information, or all of the data?

Mr. Glen Semenchuk: No, that's the main one. The only other way we wouldn't release information would be timing, if it was still in draft form. The way we work through our working groups, they would have to approve the database and move it up the CEMA ladder.

Once it has been approved by the working groups as a final report, it's basically public information.

Mr. Justin Trudeau: I'm also interested in the relationship between CEMA and regulators. You spoke about this a little bit, but I'd like you to go into more detail.

Specifically, the Government of Alberta is much more the regulator than the federal government in this case. I'd like you to talk about the difference between the two levels of government and their levels of participation and activity.

Mr. Glen Semenchuk: It is a unique role. Some people consider the regulators being at the table not a good thing. I think it's a very good thing. It's a very good idea that the regulators are there, seeing what the work is, and also helping to direct that work.

One thing I've learned in many years in the environmental movement is that we don't have a lot of resources, so we'd better use them effectively and efficiently. We also don't want to see duplication of information. Having the regulators at the table and having it in a non-confrontational way, these regulators can provide a lot of assistance not only to the ENGOs and the aboriginals around the table, but to industry as well. If industry takes a path and the regulators think it's the wrong path, it's a good idea to find that out as early as possible.

To date, as regards the activities at our various working groups, there has been a lot more involvement at the provincial level than there has been at the federal level. That was one of the points I made going to Ottawa.

I was apprehensive going to Ottawa and not sure what kind of response I'd get from our federal members, but it was very positive. They all saw the value of more involvement at CEMA and in fact have asked me to come back in September with more details as to how they can get involved.

● (1350)

Mr. Justin Trudeau: In regard to the process whereby CEMA makes recommendations that are then implemented by government, has that been smooth? Has that been responsive? Is there resistance to that? How is the Alberta government, mostly, and to a lesser extent the federal government, responding to the recommendations and responses of CEMA?

Mr. Glen Semenchuk: All of the frameworks that CEMA has put forward, with the exception of one, have been accepted almost immediately by government and have influenced policy a fair bit. I don't have it here, but I can provide a document to the committee that I had prepared showing exactly how each of the frameworks was implemented by both federal and provincial agencies.

The one framework that is still under review is the terrestrial ecosystem management framework, which is basically contributing to a land use plan. At the time that CEMA made its recommendation, the provincial government was just initiating its land use framework.

I can say, being involved in that process, that the work of CEMA is going to have a fairly big influence on the creation of the lower Athabasca regional plan.

Mr. Justin Trudeau: Okay.

As to the groups that have left CEMA and left the door open, you just said you shifted some of your decision-making processes recently. Have those processes and the recent changes made the groups that have left more favourable to coming back? What is it going to take to get those groups that have left to come back around the table?

Mr. Glen Semenchuk: I think it was a big step forward. I think they're still going to be looking at how the governance model of CEMA is going to be re-established.

One of their concerns, from the aboriginal groups especially, was that they feel outnumbered. So we have to come up with a way to balance the voting so they feel that their contribution is equal to other people's contribution. That's not going to be an easy task, but there are some good models right here in Alberta to help us. It's not like we have to start with a blank page. I think that's going to be the key one.

We have open lines of communications with the ENGOs and the aboriginal groups that have left, and the feedback I have received personally from them is that we're on the right track. We may not be there yet, but we're on the right track.

We are going to encourage them to participate in our restructuring, to give us any suggestions they may have, but again, as I say, ultimately the responsibility for that restructuring is with the CEMA member board.

The Vice-Chair (Mr. Francis Scarpaleggia): We'll move on to Mr. Ouellet, but first I want to clarify something.

You said you were coordinating the phase two framework for employees. Is that correct?

Mr. Glen Semenchuk: That's correct.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

Go ahead, Mr. Ouellet.

[*Translation*]

Mr. Christian Ouellet: Thank you.

Mr. Semenchuk, I'm very surprised that you talked about CEMA's structure and the problems it's facing. I thought we had invited you to come and tell us about what CEMA thinks about the oil sands operation relative to water resources, which is the subject on the agenda.

Our committee is concerned about environmental issues and sustainable development, not organizational structure. I'm surprised that you didn't talk about CEMA's views on sustainable development and the environment. Could you tell us about the oil sands?

● (1355)

[*English*]

Mr. Glen Semenchuk: I will, but perhaps I can take half a second to qualify the other part.

I believe an effective and efficient multi-stakeholder group is a very valuable part of looking at the sustainable development of the oil sands. It provides a forum for the various groups to come together and exchange their information and their concerns, which leads forward to good recommendations. If you are going to put that effort into a multi-stakeholder group, it is critical for it to be running effectively.

I probably made the wrong assumption and assumed that people understood where CEMA was and some of the criticisms of CEMA that have somewhat taken away from its role of providing good research. To go back to the explanation of how CEMA contributes to the overall picture of achieving sustainability in the oil sands, CEMA facilitates research and studies that are used to formulate these regulations through recommendations to the regulators. The regulators and the CEMA members have given to the CEMA administration the responsibility of designing studies and working with experts from all over the world to try to address some of these tough questions.

[*Translation*]

Mr. Christian Ouellet: Do you have any concrete things to say about the oil sands?

[*English*]

Mr. Glen Semenchuk: Yes. CEMA has put forward a number of these recommendations. I can undertake to forward these through the committee chair to you.

Over the last ten years, a number of them have gone forward. For example, one of the big areas that we work in is reclamation. We're doing the majority of research on reclamation. We have recently produced a guideline on how you re-establish a wetland. If wetlands are destroyed through the mining operations, the guideline deals with how you reclaim them.

Through our reclamation group we are also looking at one of the issues that was brought up earlier today, the issue of end pit lakes. We're facilitating bringing in experts in modelling and trying to see if that is a viable alternative. In the case of air, we have two working groups looking at some of the factors that will contribute to the establishment of these thresholds and ultimately to what should be monitored. In our trace metals group, we are also looking at things like human health issues. We have just finished a traditional food study with the aboriginal groups in the area.

So we're contributing research in a number of areas towards that goal of sustainability.

[*Translation*]

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Ouellet.

Ms. Duncan.

[*English*]

Ms. Linda Duncan: Thank you, Mr. Chair.

Mr. Semenchuk, I'm actually a little surprised at your comment saying that CEMA is unique in being a multi-stakeholder group where government refers matters for review. I sat on the Clean Air Strategic Alliance for seven years. It's 20 years old. We also have the water council of Alberta, and the airsheds of Alberta. All of these organizations are multi-stakeholder and deal with major policy initiatives.

I'm puzzled for you to suggest that CEMA is unique and the only one in Alberta. All of those are also based on consensus.

Mr. Glen Semenchuk: I did not say it was the only one in Alberta. I said it was unique.

Part of the reshaping of CEMA is to try to emulate some of the ones that you referred to. CEMA was unique in that it had a large membership, where every member was part of the board, and you had about a 44-member board. It was unique in that it was attempting to come to this consensus with such a large group, and the challenges involved in that.

As you may recall, I then alluded to the fact that we needed to do some rethinking, we needed to do some reshaping, and we didn't have to start with a blank page. There were some very good examples here in Alberta.

● (1400)

Ms. Linda Duncan: So you agree that there are other good—

Mr. Glen Semenchuk: Oh, absolutely. The uniqueness of CEMA is just CEMA itself.

Ms. Linda Duncan: Organizations such as Pembina continue to be involved in those other organizations that are consensus-based and multi-stakeholder.

Mr. Glen Semenchuk: And as I indicated, when Pembina and the aboriginal groups left, they all left good suggestions. They left the door open and put the challenge back to CEMA.

Ms. Linda Duncan: I wonder if you could clarify something. Who was originally represented on CEMA, and who's left there now?

Mr. Glen Semenchuk: Right now we have 44 members: 20 industry, 13 government agencies, six aboriginal groups, and five ENGO groups. We lost three first nations and three ENGOs.

Ms. Linda Duncan: So it's by and large an industry-government group now.

Mr. Glen Semenchuk: That is the majority of members.

Ms. Linda Duncan: To my understanding, one of the concerns for the first nations—it wasn't peculiar to CEMA—is their frustration with being recognized as an order of government, that they are first nation. For example, in the Clean Air Strategic Alliance, there are three sectors—government, industry, and NGOs. The first nations and Métis representatives added are clearly there as government.

Is it your understanding that part of their frustration is they don't feel they should have to sit and reach consensus with industry or with the provincial government? It's not that they may not think there's some useful research, and so forth, that goes on, but rather that they have a problem with the process. They argue that they have an overriding constitutional right to be consulted and accommodated, and that they should not have to pare back their demands through negotiation and consensus with industry and the provinces.

Mr. Glen Semenchuk: That is the view of some of the first nations. It's not the view of all first nations.

The Fort McKay First Nation is still part of CEMA, a very active and contributing member of CEMA. So it's not a universally held belief.

Ms. Linda Duncan: But that is one of the issues that needs to be addressed.

Mr. Glen Semenchuk: Absolutely. And that's something that cannot be addressed within CEMA.

Ms. Linda Duncan: I can understand your frustration with that.

I'm advised that when a number of the NGOs withdrew, after a long-time involvement with CEMA, they withdrew after a consensus recommendation. It was recommended that 20% to 40% of the boreal area be set aside. That recommendation was rejected by the Alberta government. They felt they couldn't continue in the process.

Can you advise if there's been any breakthrough in that?

Mr. Glen Semenchuk: First of all, the recommendation wasn't rejected by the Alberta government. It kept it under review. And it was under review in light of its initiation of its land use framework. The terrestrial ecosystem management framework has not been adopted in whole by government, but government has directed its regional advisory council that the document becomes a very important part of the ultimate lower Athabasca regional plan.

Ms. Linda Duncan: But isn't that the issue, that some groups who formerly did not necessarily support a moratorium are now calling for a moratorium? There's a strong feeling that some areas, wetlands and boreal areas, have to be set aside, because once they're mined, there's no chance to do that. Is that not why they're frustrated, that there's just continuing dialogue, and in the meantime there are projects being approved that will clear those areas?

Mr. Glen Semenchuk: That was one of the major concerns. CEMA thought enough of it that it actually sent two letters to the provincial regulators to clarify that position of calling for delays in the granting of more dispositions in the areas it had designated for potential protected areas.

Ms. Linda Duncan: Okay. Thanks.

Can you explain to me the relationship or the different roles between the Energy Resources Conservation Board and CEMA? You seem to be alluding to the fact that CEMA is the place where there are discussions on setting frameworks for managing impacts and so on and so forth. Is that not the role of the Energy Resources Conservation Board, to review a project, and to impose binding conditions themselves...than through the regulatory agency?

● (1405)

Mr. Glen Semenchuk: Absolutely that is their role. But as an active member of CEMA, what they participate in is the science and research. How do you arrive at those regulations? How do you arrive at those thresholds? How do you arrive at those indicators? That way, the research and the studies being undertaken to arrive at those things can be conducted by CEMA.

Ms. Linda Duncan: How do the two come together? Somebody proposes a project, people can intervene. Where does CEMA come into that and what's the timing? Is the CEMA work all done before the ERCB reviews and decides to approve a project?

Mr. Glen Semenchuk: CEMA's research is ongoing, so, as was confirmed this morning, there have been approvals before the completion of some of CEMA's work, yes. And some of the problems or issues that CEMA deals with may arise after the granting of permission to do things, so it's an ongoing thing.

Probably, in a perfect world, a lot of CEMA's working groups would have preferred to have done some of this 10 years ago.

Ms. Linda Duncan: My understanding is that some of the frustration is particularly with agencies like the Department of Fisheries and Oceans, who have the power to actually impose binding obligations for the proponent to do something to mitigate or restore a fishery, but what in fact is happening is it's just simply being referred to CEMA instead of a legally binding mitigation measure.

Mr. Glen Semenchuk: I really couldn't comment on that. All I know is the issues that CEMA is asked to deal with; sometimes I'm not sure of the origin of those things. But with the Department of Fisheries and Oceans, it recently put together an oil sands group specifically to look at those issues. It requested to work very closely with CEMA on helping to identify those issues, and then on how to deal with the issues.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you. Your time is up, Ms. Duncan.

Mr. Warawa.

Mr. Mark Warawa: Thank you.

On the membership, again, what is the number of members who are representing industry?

Mr. Glen Semenchuk: Twenty.

Mr. Mark Warawa: Twenty. And then there were 13 with government.

Mr. Glen Semenchuk: My math might be wrong here.

Mr. Mark Warawa: Well, approximately.

Mr. Glen Semenchuk: Yes.

Mr. Mark Warawa: Okay. And then there are approximately six aboriginal groups—

Mr. Glen Semenchuk: Yes; and five ENGOs.

Mr. Mark Warawa: Now, how many ENGOs left?

Mr. Glen Semenchuk: Three, and three first nations.

Mr. Mark Warawa: Okay. So the majority of ENGOs and the majority of aboriginal representation stayed?

Mr. Glen Semenchuk: Correct.

Mr. Mark Warawa: So the group continues on, CEMA continues on, the research continues on. A small number of ENGOs and aboriginal representatives have left.

Are they providing input? I think you would accept that input if they were to provide that input in writing. Is that a correct assumption? And do they provide input?

Mr. Glen Semenchuk: Yes, in answer to your question. We've actually gone beyond that. We've established a non-member policy so that, for example, in the phase two water study, we changed our rules to allow non-member organizations to participate fully. That's why groups like World Wildlife Fund are sitting at that table, even though they are not CEMA members.

Mr. Mark Warawa: Were they before?

Mr. Glen Semenchuk: No.

Mr. Mark Warawa: So they never have been, but they are non-members, and they're still participating in—

Mr. Glen Semenchuk: Yes. They demonstrated that they had expertise that they could bring to the table, and it was the decision of the members of CEMA to allow them to bring that expertise to the table.

Mr. Mark Warawa: Was it at the same time that the aboriginal representatives and ENGOs withdrew from RAMP? Was it approximately 2003? And was it in a similar timeframe when they actually stepped back from CEMA?

Mr. Glen Semenchuk: No, they left CEMA in early 2008, I think it was.

Mr. Mark Warawa: So just recently.

Mr. Glen Semenchuk: Just recently.

Mr. Mark Warawa: So three ENGOs left; and how many aboriginal representatives were there again?

● (1410)

Mr. Glen Semenchuk: There were three first nations.

Mr. Mark Warawa: So there was a total of six.

Mr. Glen Semenchuk: Correct.

Mr. Mark Warawa: I'm just looking at the list. I printed it off; that's why I ran out of the room.

We have the Chard Métis Local 214; the Conklin Métis Local 193; Fort Chipewyan Métis Local 125; Fort McKay Métis Local 63; Fort McKay First Nation; and Fort McMurray Métis Local 2020.

Does that sound accurate?

Mr. Glen Semenchuk: Yes, it does.

We also have two new applications from aboriginal groups to join CEMA, which will be considered at our June general meeting.

Mr. Mark Warawa: So one of the groups that left...and we heard from a number of ENGOs in the previous group. Pembina is well known to be involved in taking a good look at the oil sands. We had a representative of Pembina here, and I asked him about withdrawing from RAMP. As you continue your studies, do they participate and provide input as a non-member?

Mr. Glen Semenchuk: They don't at this time.

Mr. Mark Warawa: Have you been in contact with them to ask why they're not providing input?

Mr. Glen Semenchuk: We keep an open dialogue. I haven't specifically gone after them about why they're not members. When they left, they were fairly specific about some of the changes they would like to see in CEMA. We took it on as a challenge, and over the next few months we're going to look at those recommendations. Hopefully the changes we make to CEMA will attract them back, because they did leave the door open.

Mr. Mark Warawa: Okay, but they are aware that their input is welcome.

Mr. Glen Semenchuk: Absolutely.

Mr. Mark Warawa: I'm reading your vision statement, and it says that the environment of the region, including the land, forest, air, water—which we're studying today—wildlife and biodiversity will be protected, sustained, and restored over the long term, and the collective activity of industry in the region will not cause any lasting harm to the environment or adverse effects to the health of humans. We've heard a lot about that over the last few days.

It continues to say that should these impacts be evident—referring to negative impacts—the association and its members will recommend, promote, and implement mitigation action to reverse their effects. Then it goes on to say that the purpose is to provide a forum for stakeholders to discuss and make consensus-based decisions.

Ms. Duncan raised the importance of consensus. So your point is that it's difficult to get consensus when you have a very large group.

When you're dealing with a project, do you get consensus from a smaller group on a project—a subcommittee—and send that recommendation from the smaller group to the larger group?

Mr. Glen Semenchuk: That's the way we operate. It can go down to a subgroup, up through a working group, and up through our management committee to the members.

Mr. Mark Warawa: At the subgroups, you have good representation and opportunities for the ENGOs, aboriginals, government, and industry—everybody—to have input. They then come back with consensus on a recommendation.

Mr. Glen Semenchuk: That's correct.

Mr. Mark Warawa: When you get back to the larger group, is that where you have the problem?

Mr. Glen Semenchuk: No. Before the new decision-making policy was put in place there were sometimes problems getting consensus at the subgroup. But to become more effective and limit the number of hours of volunteer time, if groups get to the point where they cannot reach a consensus, we encourage them to send it up to the next level. We have changed the decision-making policy so that on some of the process questions you don't require a consensus at the working group levels—more of a majority vote—and you pass the responsibility on to another level.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Warawa.

Do you have one more short question?

Mr. Mark Warawa: I do.

One of your recommendations was for a higher level of help from the federal government for administration. When we were in Fort Chipewyan we had a concern with RAMP that there was a perception that industry and government had met ahead of time, made decisions, and then those decisions went to the larger group. That's not how it works, but that was the perception.

So if you have increased involvement, with the government providing administration, it might exacerbate that perception. Again it's government more involved providing.... It needs to be multi-stakeholder and hopefully get consensus. As you point out, the larger the group the more difficult it is to get consensus.

Thank you.

● (1415)

Mr. Glen Semenchuk: I think part of that request for help from the federal government relates to expertise. They do have a lot of expertise in a number of the areas we are operating in. We've asked the departments to provide that expertise to our working groups.

The Vice-Chair (Mr. Francis Scarpaleggia): I think we can do a two-minute round for the remaining members. I don't have any questions.

Mr. Braid.

Mr. Peter Braid: Thank you, Mr. Chair.

Thank you very much, Mr. Semenchuk, for being here and for your presentation to us.

I have a couple of questions.

With respect to aboriginal community members of CEMA, you mentioned that originally there were six, three have left, and you have two new applications, which is encouraging to hear.

Are there other potential communities beyond the original six, plus the two? I'm not familiar enough with the number of aboriginal communities in the area. Are there other potential aboriginal communities that you could look to as potential members?

Mr. Glen Semenchuk: There are still a couple of Métis locals. There are no other first nations.

Mr. Peter Braid: Are you pursuing those potential Métis community memberships?

Mr. Glen Semenchuk: Yes. Next Friday I'm spending all day in one of those communities.

Mr. Peter Braid: Very good.

You mentioned, either in your presentation or in response to a question, that you've just concluded a traditional food study. Can you tell us anything about that study or the results?

Mr. Glen Semenchuk: Basically, it was conducted under our trace metals working group.

Initially, we found dietary experts who went into the communities and trained people within those communities to interview the residents as to what traditional foods they were still using and in what percentage of their diet. The next phase is to go back into those communities and report back what we have found.

Health Canada has always been a member of CEMA, but very recently, Alberta Health and Wellness has applied for membership in CEMA, to take that information to the next step of analyzing the results of those studies as to what is in those traditional foods.

Mr. Peter Braid: What's the purpose of the study, then, ultimately?

Mr. Glen Semenchuk: Under the trace metals working group, it's to see how those traditional foods may be affected over time.

Mr. Peter Braid: When might we have further results from this study? When might they be publicly available?

Mr. Glen Semenchuk: For the initial studies, as soon as we get confirmation from the participating communities, we can make some of that public. That's always the restriction when dealing with first nations communities. You have to have their permission to release their data. We hope to work on that by the end of the year.

Mr. Peter Braid: Finally and very quickly, you mentioned that you're in the process of making changes that will hopefully attract back the groups that have left. On a scale of one to ten, in your mind, how far along do you think you are in making those changes?

Mr. Glen Semenchuk: We're probably about halfway there. We have a lot of the process in place, and now we're into the details, but I'm an optimist.

Mr. Peter Braid: It's where the devil is, right?

Mr. Glen Semenchuk: That's exactly right.

Mr. Peter Braid: Thank you, sir.

The Vice-Chair (Mr. Francis Scarpaleggia): I believe there are no other questions.

I would like to thank you, Mr. Semenchuk, for coming by and explaining the CEMA process and answering our questions.

We now move into our last segment, with Ms. Arlene Kwasniak, from the faculty of law at the University of Calgary; and Mr. J. Owen Saunders, from the Canadian Institute of Resources Law.

Welcome, and thank you for coming here to speak to us. You'll be capping three days of very interesting testimony and site visits.

I understand you each have a 10-minute presentation.

● (1420)

Mr. J. Owen Saunders (Executive Director, Canadian Institute of Resources Law, University of Calgary, As an Individual): We've been told that we have seven minutes.

The Vice-Chair (Mr. Francis Scarpaleggia): Okay, seven minutes.

Mr. J. Owen Saunders: I'll be able to speak at a reasonable speed, then. That's fine.

I should probably begin, Mr. Chairman, because it sounds like I have somewhat more of a broader overview than my colleague.

Thank you for the invitation. I want to begin by emphasizing that I'm here in my personal capacity. The Canadian Institute of Resources Law does not actually take positions on public policy issues, so the views of its professional staff remain just that, their own views.

Turning to the substance of what I want to say, I'm going to restrict my comments here to two issues: first, transboundary water issues that may arise as the consequence of oil sands development; and second, some of the interjurisdictional implications arising out of new provincial approaches to natural resources management, particularly as they affect the oil sands.

I'm going to deal with the first of these issues very briefly. The federal role in transboundary water management is of relevance to this committee, it seems to me, in at least two respects.

First, with respect to the lower Athabasca, this watershed is, of course, part of the large Mackenzie basin. If one were to take the broader view and look at the likely stresses on the basin in coming years, particularly in light of possible impacts of climate change, then one is inevitably struck, it seems to me, first, by the highly deferential role that the federal government has played in the negotiation of the interjurisdictional agreement on the Mackenzie; second, by the consequent weaknesses of the agreement itself; and third, by what I think we have to say is the poor track record of jurisdictions in concluding the subsequent bilateral agreements necessary to give some substance to the master agreement.

In sum, there are important federal interests here and a clear need for federal leadership, which has largely been abdicated by the federal government over the past three decades.

A second transboundary issue the committee might want to consider relates to the federal interest that would be triggered by the use of transboundary deep saline aquifers that extend into the United States, and that would be for CCS purposes. This is not idle speculation. There are indeed just such transboundary formations that are of interest in the south of the province.

Again, there would appear to be a clear federal interest in these aquifers, but as legislation now stands, it is not clear that there's even a trigger for the federal government to initiate an environmental assessment. Put differently, would the federal government in such a situation simply leave the field to the province even though we are dealing with transboundary waters?

Turning now to the second issue I referred to at the beginning, I'd like to discuss briefly how one reconciles the nature of the federal government's constitutional responsibilities with the imperatives of modern approaches to natural resources management.

I think the challenge facing the federal government in this respect may be summed up this way. The role that our Constitution contemplates for the federal government in natural resources management is, in some respects, strong, but more importantly it is narrow, predicated primarily on a relatively small range of interests—for example, fisheries, navigable waters, and so forth.

By comparison, of course, the provincial basis for exercising jurisdiction in this field is very broad, and in the result, the proposition that the provinces should, in general, take the lead in the management of their own natural resources endowments is not seriously questioned. What is more problematic, though, is how natural resources management regimes can be structured to both recognize the pre-eminence of provincial authority and yet accommodate the federal government's constitutional responsibilities, while still allowing decisions on resource development to be made in an effective fashion.

One of the primary tools for integrating federal concerns into the process of natural resources management in recent decades, of course, has been environmental assessment. Over the years, federal and provincial cooperation on EA has enabled the federal government to introduce its specific concerns with particular projects into approval processes for projects that are primarily of provincial interest. The value of EA is beyond doubt; however, the limitations of project-specific analyses have also increasingly been recognized in recent years, particularly with respect to the recognition of cumulative effects.

To some extent, EA itself has been adapted to take account of cumulative effects. However, there has also been a move, more generally, to create different processes that take on this planning function independently of EA.

● (1425)

Sometimes these processes are sectoral in nature, such as Alberta's “Water for Life“ strategy. Sometimes they are broader, such as Alberta's land use framework, for which legislation has recently been introduced in the legislature. The signature of most of these new initiatives, though, is the recognition of two fundamental principles: first, that planning is best done at the landscape level, so that all interactions between humans and the natural environment are taken into account; and second, that planning exercises should be place-based, so that planning reflects the unique conditions of the area in which it is being conducted, and should therefore include a significant role for local input.

The challenge posed to the federal government by such approaches is if the nature of effective planning is that it is landscape in scope and place-based in orientation, how does that fit with the federal goal that is largely sectoral in scope, whether protecting fisheries, or navigable waters, and primarily national in orientation?

One possible response to this challenge lies in the approach that has been taken with respect to the lower Athabasca River; that is, to deal with federal interests—in this case, those primarily related to fish and fish habitat—on an ad hoc basis, and initially in the context of CEMA, and subsequently through a federal-provincial agreement on a water management framework. I won't address the merits of either CEMA or that framework at this point, though I suspect my colleague will, but I would point out that even CEMA has questioned where they stand in the face of the types of provincial planning exercises represented by the new land-use framework in its implementing legislation.

I think this is an area where the committee could provide some useful advice as to how the federal government should adapt its own role in natural resources management in light of these new and emerging provincial approaches.

Thank you.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Saunders.

Ms. Kwasniak.

Mrs. Arlene Kwasniak (Professor, Faculty of Law, University of Calgary, As an Individual): Thank you very much.

Of course I don't represent the University of Calgary either. These are my own points of view.

My presentation will concern two areas. I will speak on the importance of an effective legislated enforcement mechanism for the water management framework, instream flow needs of and water management system for the lower Athabasca River. This is what my colleague was referring to—that is, to one of the agreements and whether there is such a mechanism.

I will also briefly discuss how critical it is that we have an effective wetlands policy covering the northern boreal forest, where oil sands mining and in situ operations are occurring, and how the oil sands or oil and gas industry have effectively blocked a consensus policy recommendation to the government.

With respect to the first issue, the water management framework, as you probably know from other submissions, oil sands operations use a very large quantity of water. As development increases, so will their water needs, and there will be more of an impact on the Athabasca River. So in an attempt to deal with these water quantity issues, the Department of Fisheries and Oceans and Alberta Environment developed the water management framework, which, among other things, determines the instream flow needs of the lower Athabasca River and sets out water management responses for the oil sands industries that are using the water.

The primary mechanism of the framework is to establish three river flow conditions: green, yellow, and red for each week of the year. So far in 2009 Alberta Environment has issued three yellow zone warnings. Both the yellow and the red zone management actions potentially require a Fisheries Act authorization, if the withdrawal or cumulative withdrawal "results in the harmful alteration, disruption or destruction of fish habitat" under subsection 35(1) of the Fisheries Act.

As well, the framework contemplates that when water supplies are limited by flow conditions, the industrial water users will cumulatively limit their withdrawals from the river to meet the targets established by the framework, and will then share the residual amount so that every industry will get some water to keep carrying on with their development.

But to protect the instream flow, it is critical that the oil sands water users, at minimum, adhere to the framework's required water management responses. There are some who indeed think that the instream flow requirements could have been set higher than they are.

So the question I raise here is what is there in place to ensure compliance? Under the Water Act, where the industry users have their rights to use water, there is nothing that would require compliance, nor is there anything under predecessor legislation. In fact, water rights are based on first in time and first in right, and each water user has the right to take their entire allocation in accordance with their licences and the terms and conditions of those licences.

What the framework is requiring the industries to do is essentially to contract out of the legislation in order to maintain the instream flow requirements in the Athabasca River. So I then raise the question, what is there to require this contracting out to be maintained?

Having looked at the 2008 industry agreement, I do not even see consideration of this mentioned in it, and it's not clear to me that it is an actual binding contract. Moreover, there is no legislation requiring this voluntary arrangement to be continued.

There are other things that have been touted as regulatory backstops. For example, there are conditions on water licences. However, if one were to look at these conditions, you'd see that the conditions are different on all the licences. Some of them I think are legally specious, in that they seem to have been added after the licences were issued, and I'm not sure if government would actually be enforcing these conditions.

● (1430)

In any case, in other areas the province has indicated that it will not enforce such conditions—this is for the South Saskatchewan River basin, a different basin—unless they were issued after 2005. So I'm certainly not confident that conditions on licences will do the trick.

There's also, of course, the Fisheries Act and the requirement for a Fisheries Act authorization if withdrawals will cumulatively, or I guess individually, result in a harmful alteration, destruction, or disturbance of fish habitat, or HADD. However, I think there are real issues with that as well, because unless you can pinpoint one licence, it's going to be difficult to determine who was responsible for that HADD. And in any case, it could always be authorized by the federal government, which is not going to protect our instream flows.

Finally, the agreement, the framework itself, says that it does not apply to pre-1977 water licences, because that's when the HADD provisions were put into the Fisheries Act. The pre-1977 licences are those of Suncor and Syncrude, or at least some of Suncor's licence, and they amount to about 75,000 acre-feet of water per year. I would contend that there really is no reason in law to exempt those licences, and indeed, the DFO otherwise has published a policy that says it will apply section 35 to pre-1977 structures. So it's not clear to me why they haven't amended the framework to make it clear that it also applies to pre-1977 licences.

My suggestion is that it's in the public interest, and if we're going to protect the river, we're going to have to have some effective legislated control over these licences and to maintain the industry agreement. If industry is bona fide, as it claims to be, about really wanting to adhere to the framework, it shouldn't be unhappy about having such legislation put in place.

The second thing I want to talk about briefly is the provincial wetlands policy. Since 1993, Alberta has had a wetland policy that applies to what we call the white area of the province, or the settled area of the province, and not the boreal forest where the oil sands mining is occurring. That is a no-net-loss policy, meaning that if someone wants to destroy or disturb a slough-marsh wetland, then they have to, according to the policy, restore one in some other place.

Since 1993 the government has been trying to develop a comprehensive wetland policy that applies not only to the white area, the settled area of the province, but also to the northern boreal forest and the peatlands. In May 2005, the province took a major step to this end when the Alberta Water Council was charged with the mandate to develop such a comprehensive policy and struck a wetland team, of which I was a member. I represented the Alberta Environmental Network.

We met for three years. We had numerous meetings, all-day meetings. It was a huge amount of work. During this, the NGO community made many concessions in order to reach a consensus document at the end, which I thought we had. Indeed, after we had our last meeting, the two oil and gas stakeholder organizations sent letters in and either denied they had consensus or withdrew consensus and said they could not accept the document. So that's where it stands right now, after three years.

The document now is with the provincial government and we do not have a wetland policy, notwithstanding that oil sands mining will destroy or has destroyed 80,000 hectares of peatlands. As I'm sure all of you know, these peatlands, these wetlands in the north, provide numerous water quality and water quantity functions, as well as provide for ecosystem health.

● (1435)

My recommendation—and I don't know what power you would have to do this—is that somehow we really need to get this policy in place before there are more approvals. My hope would be that it would apply to approvals under consideration and that the government no longer delay on this.

Thank you very much.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you very much. That was fascinating testimony from both of you.

We'll start with Mr. Trudeau, for seven minutes.

Mr. Justin Trudeau: Thank you.

Mr. Saunders, you mentioned at one point that you feel that the federal government, for two or even three decades, has been stepping back from its legal and potential interventions and responsibilities towards environmental enforcement in areas particularly of provincial and jurisdictional conflict. Do you get a sense of why that trend has been so marked, regardless of which governments have been in place?

Mr. J. Owen Saunders: I think my comments were a little more restricted than that. I might agree with a more general comment, but my comments really were restricted to the federal government's role on transboundary water management, and specifically with respect to the Mackenzie basin. I think one could make the case more generally.

If you look at the Mackenzie, for example, the first meetings geared at getting some agreement on the Mackenzie were in 1972. They produced an agreement in 1997, 25 years later. That agreement is contingent on subsequent bilateral agreements that would actually provide the substance. Well, 12 years later, we have one, between the Northwest Territories and the Yukon, and that's possibly because there's virtually no water flowing between them.

It's characteristic, I think, of all federal governments. There have been times when the federal government has indicated that it might become more interventionist, or I won't say "interventionist," but that it might take on its responsibilities, because I think the federal government really has to be the place of last resort where you have conflicts in interests between the jurisdictions.

The last time you saw that willingness was in the mid-1980s, when two successive governments—first, a Liberal government with the Pearse inquiry, and then a Progressive Conservative government, which followed up with the federal water policy of 1987—showed some interest in that, but it has really fallen apart since then. This is, I think, aggravated by the fact that the federal government has in many respects lost the capacity to engage in this sort of work even if it wanted to. It has largely stripped itself of much of the expertise it once had in terms of policy.

● (1440)

Mr. Justin Trudeau: It stripped itself of expertise how? Is it in not having the staff, or just not having the habit of intervening?

Mr. J. Owen Saunders: At one time in the 1980s, if I wanted to talk to the federal government about water policy, I knew where to go: I'd go to the inland waters directorate. That doesn't exist any more. I wouldn't know who to go to in the federal government. That "who" may be a number of who's, located in different places.

One of the things you need, of course, in the federal government, if you're going to advance an agenda, is a champion. I think the inland waters directorate did that. It's hard to see who the champion is in the federal public service on water right now.

Mr. Justin Trudeau: With the issue that water is becoming in the 21st century, I think we need to get back to that.

Ms. Kwasniak, in our capacity as a committee on environment, we're doing an oil sands and water study here. We're also looking at renewal of SARA. We're looking as well at a bill on environmental enforcement, which has been a big issue of direction that this government is enthused about. So it concerns me to hear that we are not, as a government, stepping up in terms of enforcement of the rules that are on the books. Is that consistent, that there are regulations we could be applying in terms of protecting the environment that are not being enforced?

Mrs. Arlene Kwasniak: It's really quite complex, because our water law was developed in the 1800s and we realize we cannot really protect the Athabasca River with that law the way it is. That is why this framework was entered into. It is designed to protect the instream flows where our water law does not, but we need a way to enforce the framework in order for this to be effective in the end.

We have to amend our Water Act to make these contracting-out agreements legal, even though they do not comply with the water rights system that's set out in the Water Act. It's not really a case of not enforcing the law; it's having a way to get around the fact that the law is insufficient for today's situation, and not having a way to enforce this fix.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you, Mr. Trudeau.

Mr. Ouellet.

Mr. Christian Ouellet: I will be giving my time to Madame Duncan, because the subject is much over my capacity. But before that I would like to tell you about jurisdictions in my own riding.

My constituency is along the border with the United States, and if I go fishing close to the border and send my line over, I can steal a fish from the U.S. By the time it comes into Canada's waters it is federal and I'm not stealing it any more. But when I get it out, the water is federal but the top is provincial. So the top of the fish, the head, is provincial, and the tail is federal. That's the jurisdiction in my place.

The Vice-Chair (Mr. Francis Scarpaleggia): Ms. Duncan.

Ms. Linda Duncan: Thank you, Mr. Chair.

Thank you, Mr. Ouellet.

Thank you both for your presentations. They were very thoughtful. It's hard to know where to start.

You will be interested and encouraged to know that there were a number of presentations dealing with the need for the federal government to step up to the plate on water management. The most profound intervention to us on that was from the deputy premier of the Northwest Territories. You've probably been following his work. He definitely called for federal intervention.

As Professor Saunders has stated, it took 25 years to get the Peace-Athabasca, Mackenzie basin delta plan negotiated. Some of my former colleagues were part of that back in the early eighties—twelve years later, one bilateral. So he essentially called on us to recommend to the federal government to step forward to get those agreements negotiated, perhaps make it more trilateral, and have everybody there negotiating multilaterally. Plus he recommended strongly that the first nations governments, which have been completely excluded, should also be at the negotiating table.

So it came before us before, and it's noteworthy that you're raising that again.

There's one statute that neither of you has mentioned that keeps occurring to me—the Canada Water Act. It could be of limited use, but maybe could be expanded. I notice that under the Canada Water Act there is a provision where the federal government can designate special management areas. Do either of you want to speak to that?

● (1445)

Mr. J. Owen Saunders: I can certainly speak to it, because I remember writing about this 20 years ago, and it had never been used then. Part II of the Canada Water Act has never been used.

The Canada Water Act was introduced in 1970, at a time when there was a different tone to what the federal government wanted to accomplish in environmental areas generally. There was a fair bit of literature at that time speculating on the constitutionality of it. That might be one of the reasons it has never been invoked. The other reason is what I've already described as general retrenchment, on the part of the federal government in the last two decades, in being willing to get engaged in some of these issues.

We probably wouldn't go with part II today. It's there and is probably dated. Do we need something like it? That might very well be the case, but now I think a lot of the language and the tone of it, which hasn't been amended, are probably somewhat outdated. Certainly at the time it generated a lot of hope.

On one final point, if you look at subsequent jurisprudence in constitutional law, I think the concerns about the constitutionality of part II have probably been alleviated by a number of other cases, such as Crown Zellerbach.

Ms. Linda Duncan: Last I noticed, the Constitution hasn't been reformed, so it sounds more like an issue of political will.

Mr. J. Owen Saunders: Much of this is political will, of course.

Ms. Linda Duncan: Okay.

Professor Kwasniak, I found your presentation really interesting. It was certainly the case under the old regimes that licences for water were issued in perpetuity. Certainly for the original Suncor and Syncrude, they would be under that system. It's my understanding now that specific point-in-time water withdrawal licences, for example, for a ten-year period, are allowed. Is that not possible? Is that what's happening in the tar sands operations now?

Mrs. Arlene Kwasniak: Yes. Under the new water act that came into effect in 1999, licences have a term of ten years. However, they are automatically renewable, provided that the licence holder has complied with the conditions. So they can be, in effect, in perpetuity. Even though they are renewable, they do have a term now.

Ms. Linda Duncan: Okay.

How would you explain the interface between the federal fisheries powers and the federal powers over transboundary waters with the provincial power to authorize water withdrawal? Is it not possible that the federal government could have the power to intervene? If, for example, you have, certainly for the prairie water systems, an obligation to send the waters over, is it anticipated in these bilateral agreements that they're going to set the terms for how much water is delivered over and in what quality, and so forth?

● (1450)

Mr. J. Owen Saunders: There are two points on that. The first goes to the general question as to the interaction of the federal and provincial powers. It seems to me the fisheries power would be treated somewhat differently from the power with respect to transboundary waters, and that is because the fisheries power is a specific power. The power with respect to transboundary waters would arise out of national concern, and I think it's fair to say that jurisprudence suggests that the courts tend to be somewhat more circumspect in terms of giving the federal government power there. I still think they would have plenty of power to do what they need to do, because they've done virtually nothing.

With respect to the bilateral agreements, the ideal, I suppose, would have been to have just what you're talking about: specific allocations as to both quantity and I suppose a condition on some measurable types of quality. That would be analogous to the prairie provinces' water agreements, which is really what the Mackenzie agreement was originally modelled on, although those are really done in terms of water quantity. Water quality was added later, but they were focused on water quantity, for obvious reasons.

That's not going to happen in the Mackenzie agreement and the likely bilaterals, because we know from the memorandum of understanding between the Northwest Territories and Alberta what the general shape of the bilateral will look like if it's ever reached. We know that the undertakings there will be very modern, in the sense that they will say all the right things that, interestingly, the prairie provinces' water agreements, which are much older, dating to the 1960s, don't say, but they'll be largely unenforceable.

For one thing, on just a basic point, if you compare the prairie provinces' agreements, they have recourse to the Federal Court. They are binding. Dispute resolution in the master agreement and in the bilaterals is basically referred to the board, and then ultimately to the ministers. So it becomes a political decision. But there is no binding dispute mechanism, which lessens, of course, considerably the power of a downstream province to demand compliance.

Hopefully, things will work out and the upstream jurisdictions will behave nicely, but—

Ms. Linda Duncan: Can I just interject there? What about first nations' jurisdiction rights?

Mr. J. Owen Saunders: They are certainly referred to in the Mackenzie agreement. As I recall, they are not in the prairie provinces' agreements.

But there is recognition of all the right things: first nations rights, the need for prior consultation, notification, public participation, and ecosystemic views. All the right things are said there; it's just that they're at a very general level.

Mrs. Arlene Kwasniak: There should be riparian rights, as you started to say. They presumably would not be modified by provincial legislation, although the province has taken the point of view that there are no water rights with respect to the numbered treaties or reserves, outside of the ones that are given by the government.

Ms. Linda Duncan: What about the Fisheries Act? Is there a clear power of the government under the fisheries laws to control water?

Mrs. Arlene Kwasniak: I would say there is. In fact, DFO has taken the position that water withdrawal can be a HADD. If you take enough water out of a watercourse that you disturb fish habitat, that is a HADD and a violation of the Fisheries Act, unless it's authorized under the act.

The Vice-Chair (Mr. Francis Scarpaleggia): Do you have more questions?

Mr. Ouellet was kind enough to give you his time.

● (1455)

Ms. Linda Duncan: Okay, that's lots of time.

I would like to hear a little about wetlands. I ended up being in a very interesting seminar that was all government and me about three years ago. There was a big discussion about what we were going to do about the Alberta wetlands policy. There was a very interesting presentation by the U.S. state and federal governments. Apparently there is a very strong federal policy on wetlands that prescribes requirements. They have a tier where first of all you will not damage; you have to show that there are alternatives, and so on.

Is there a big difference constitutionally between Canada and the United States? Is there any reason why we couldn't have a binding federal wetlands policy?

Mrs. Arlene Kwasniak: Yes. In the United States the wetlands are governed by the Army Corps of Engineers. It's their job to protect wetlands.

Generally in the United States there's more federal jurisdiction over water. Even though water quantity is state, water quality is generally federal.

I think it would be very difficult to have a federal policy. It would somehow have to be seated in fisheries or navigation.

Ms. Linda Duncan: What about SARA?

Mrs. Arlene Kwasniak: Yes, but with SARA it would be very limited to species at risk. Certainly recovery plans under SARA would be one way to protect the wetlands.

Mr. J. Owen Saunders: One of the additional problems with fisheries and navigable waters power is that they have been read down by the courts. If it doesn't look like fish, even though you put it in the Fisheries Act it doesn't mean the courts will accept it. There were a couple of cases in the early 1980s that addressed that. One dealt with a provision in the Fisheries Act that says you can't throw your trash in the water. I think it was primarily aimed at logging. It was struck down by the courts—I'm sure you're aware of Fowler—precisely because it wasn't linked directly to harm to fish.

So the courts have been relatively jealous about ultimately protecting provincial resource management policies where the federal government seems to be going beyond the strict confines of the heads of power it's been given.

Ms. Linda Duncan: Dr. Schindler presented to us yesterday his findings about the river. He determined that there was a very serious impact on the fingerlings downstream of the tar sands facilities. I presume with that kind of data a fisheries power would be triggered.

Mr. J. Owen Saunders: Absolutely.

The Vice-Chair (Mr. Francis Scarpaleggia): We will now go to Mr. Warawa.

Mr. Mark Warawa: Thank you.

To begin, I have just a couple of comments. Thank you for being here.

You initially touched on carbon capture and storage, on the impacts of the direction in which Canada and the United States are heading, and on some of the transboundary water issues.

The two countries in the world that are proceeding with and investing heavily in that technology of carbon capture and storage are Canada, at a little over $3 billion, and the United States, at about $3.5 billion.

Also, with the clean energy dialogue that's ongoing with the new Obama administration—it's moving very quickly, preparing for Copenhagen in December but also on harmonizing an approach—Canada and the U.S. will be on a parallel path to meeting a number of environmental issues. I'm sure you're aware of it.

There was a question, I think, on what power this committee has. Our committee is on a fact-finding trip. We will debate, when we get back to Ottawa, what we've heard over the three days. The committee meets twice a week. The committee has a very busy agenda. We are scheduled to discuss the water issues and the oil sands in the fall. It may be the fall or it may be sooner; we'll see.

We hopefully will reach consensus. If we do reach consensus—there are diverse opinions around this table—then recommendations could be made. Those recommendations then would be forwarded on to the House of Commons, where it would be debated. Those recommendations could go to government for changes.

That's just in answer to your question.

I want to thank both of you for your presentations. They were thought-provoking. We'll see where we go from here.

Thank you.

● (1500)

The Vice-Chair (Mr. Francis Scarpaleggia): Do any other members have questions? No? Then I have a couple of brief questions.

I was under the impression, from some of the testimony, that the framework was voluntary and not just for the companies that received their licences before 1977. Obviously I missed something.

So is it only voluntary for those who've been grandfathered, or...?

Mrs. Arlene Kwasniak: The framework is completely voluntary for everyone. Of course, that worries me greatly, because the provincial government is hanging, and so is the federal government hanging, so much on it. Those in-stream flows are only going to be protected if this voluntary arrangement stays in place. I think in the public interest it's better to have something better than voluntary.

The 1977 matter has to do with the Fisheries Act. That's when the section 35 provisions on the harmful alteration, disruption, or destruction of fish habitat were added to the act. The framework states that those provisions will not apply to pre-1977 water licences. That would be Syncrude's licence and one of Suncor's licences. That's when I argued that there is no reason in law for that exemption.

The Vice-Chair (Mr. Francis Scarpaleggia): Right.

So that's an exemption that could be taken away, and probably that would be held up in court? Or you don't know; it's hard to say, I suppose.

Mrs. Arlene Kwasniak: I don't think it should be, because the Department of Fisheries and Oceans recently issued a policy stating that the HADD provisions do apply to pre-1977 structures and frameworks. By extension, then, they should apply to pre-1977 water licences as well.

The Vice-Chair (Mr. Francis Scarpaleggia): So there's no need for legislation. The government has stated the policy.

Mrs. Arlene Kwasniak: It would be an amendment to the framework, in the phase two.

The Vice-Chair (Mr. Francis Scarpaleggia): Okay.

In terms of interprovincial disputes, let's say one province's actions were depleting an aquifer and having an impact on another province, or even, let's say the oil sands were having a deleterious effect on watersheds in Saskatchewan. How could the federal government get involved in mediating a dispute like that? Would there first have to be some kind of framework legislation, or some kind of agreement arrived at beforehand, such as the Mackenzie River basin agreement? Does it go to Federal Court?

Just how does it get resolved?

Mr. J. Owen Saunders: It might not get resolved at all. The tendency in Canada is not to litigate, of course. There is a remarkably sparse history of interprovincial litigation—or, for that matter, federal-provincial litigation. That's partly because of the nature of our Constitution. Unlike the United States, we don't have a Supreme Court that has original jurisdiction over disputes between different levels of government. That's one of the reasons why we have never developed a history of litigation that would resolve some of these issues.

In the United States, for example, many of these water issues have been litigated for well over a century now. Some principles have evolved. In Canada we just don't have that history of litigation. There's the interprovincial cooperatives case, which didn't say very much. That was not a case of the federal government getting involved, although there was sort of a suggestion that maybe they should have been.

How would the federal government be involved? Of course it could be invited in. But that's not something the provinces typically do with respect to the federal government, I think.

One of the most useful suggestions that I have seen in terms of asserting a general federal role as opposed to dealing with this on an ad hoc basis was offered by the Pearse inquiry, which was almost 25 years ago now. It suggested that the federal government pass legislation that essentially would make it the default place to go if provinces just could not agree on an interprovincial water dispute. The system there was sort of a staged situation: you would have attempts to reach an agreement, and, ultimately, if they failed, arbitration.

I should say that arbitration, given the Canadian context, would probably never take place, just as the provision for dispute resolution, the ultimate hammer in the prairie provinces agreements, which is the Federal Court, has never been used. The very possibility of having that tends to mean that you'll push the parties to an arrangement that accounts for both interests as opposed to a possible result that no one would like from an arbitral tribunal or from the Federal Court.

● (1505)

The Vice-Chair (Mr. Francis Scarpaleggia): One more question, and then I'll leave you be.

If we got to a situation where the river was very low, would the Alberta government have the power to start suspending or withdrawing water licences?

Mrs. Arlene Kwasniak: No. Under the Alberta Water Act, there is no right of the government to expropriate a licence. What they could do is declare an emergency, if there truly was an emergency. But that's a rather radical power, and the courts will not allow that kind of power, or at least not allow it to be declared for too long.

There are provisions in the Water Act, when human health is at risk, that allow the government to step in. But if the issues are just aquatic ecosystem issues—i.e., there are fish dying—then, under our Water Act, the government can step in for licences issued after 1999 if the effect on the aquatic ecosystem wasn't foreseeable when that licence was issued.

The Water Act is a unique act because it just continues on legislation that started in 1894, when there were no water issues. Although the Water Act has improved a lot of the situations, still, it's the water rights holders who are truly ruling here.

The Vice-Chair (Mr. Francis Scarpaleggia): Thank you.

Thank you so much for your testimony. It was a great way to end our sessions.

Members, just for your information, the next meeting of the committee will be on May 26 at 9 a.m., in Ottawa, with the Commissioner of the Environment and Sustainable Development.

I'd like to thank you all for your participation, and we'll see you in Ottawa.

The meeting is adjourned.

Published under the authority of the Speaker of the House of Commons

Publié en conformité de l'autorité du Président de la Chambre des communes

Also available on the Parliament of Canada Web Site at the following address:
Aussi disponible sur le site Web du Parlement du Canada à l'adresse suivante :
http://www.parl.gc.ca
