PUBLIC HEARING

WHITES POINT QUARRY AND MARINE TERMINAL PROJECT

JOINT REVIEW PANEL

V O L U M E 1

HELD BEFORE: Dr. Robert Fournier (Chair)
Dr. Jill Grant (Member)
Dr. Gunter Muecke (Member)

PLACE HEARD: Digby, Nova Scotia

DATE HEARD: Saturday, June 16, 2007

PRESENTERS: Bilcon of Nova Scotia
Mr. Paul Buxton

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Per: Hélène Boudreau-Laforge, CCR

of Environment and Labour for Nova Scotia.

That's the reason why this is called a Joint Panel, because it has two masters, one master in Ottawa, one master in Halifax. The Panel's responsibilities are outlined in a memorandum by the two Ministers which delineate the terms of reference and so forth.

The specific terms of reference, that is the rules by which this Panel is operating, are outlined in an addendum to the memorandum and that is available from the Secretariat if anybody wants to see it.

Now what our task is, short-hand task I guess, is that we are empowered to conduct an independent and impartial review of the proposed basalt quarry and marine terminal.

And the final product from this Joint Panel will be a report and that report will offer advice to the two Ministers. I would like to stress to you that we are not a decision-making body. We are an advisory body. We provide advice to the two Ministers and the Ministers make the decision.

Now I think it would be useful if... It will be a little tedious perhaps, but it might be useful if I were to read to you verbatim, and it will

could modify these guidelines and thereby provide them to the Proponent?≅

In fact, that happened and the sessions were well attended and a great deal of public input was received at that time.

In March of 2005, the guidelines, which are the instructions given to the Proponent as to how they should put together an Environmental Impact Statement, they were given to the Proponent in March of 2005.

In March of 2006, the EIS (Environmental Impact Statement) was received by the Panel. We received it then.

Between June of 2006 and January 2007, four sets of information requests were sent to the Proponent. Once we had received the EIS, we reviewed it and found that there were shortcomings. Those shortcomings were put together in what is called an information request which went to the Proponent and we said to the Proponent: ACorrect these≅, and then responses were received.

The complete response was offered to the Panel on February 2007, and then in February 2007 one more set of information request was then forwarded to the Proponent, so five in all.

and it is now thousands of acres of woodlands and wetlands.

It can be done. There are very good examples all the way across Canada, and for those of you that are horticulturists, you will note that the Butchart Gardens, which is one of the highest attractions in Victoria, is in fact in an old stone Quarry.

Environmental management, health and safety, those are very important issues for the company and for the workforce and for the residents in this area.

What designs features have we incorporated to minimize effects? Under the site development, we have incremental site clearing, incremental reclamation, the establishment and maintenance of environmental preservation zones.

Transport. We do not intend to truck aggregate on Highway 217 at any time. There will be no local sales of aggregate.

We have said that if there is an emergency in the area and we were to receive a call from the Department of Transport or small craft harbours or some government agency, we would respond to an emergency, but we will not sell product from the site.

There will be no trucked aggregate on the highways in the area.

In terms of transport, there will be approximately one weekly shipment throughout the life of the Project.

The marine terminal is constructed on piles. No Ainfill≅, no dredging. Very important. So low environmental impact on the fisheries habitat in that area. There will be some impact, but it will be very small and the damage that is done must be compensated for.

Dust, certainly a health feature. Most importantly, the crushers, the screens and the conveyors will be enclosed. The final sizing will be washed by wash screen. We will have a dedicated water truck to keep the dust down on the roads at all times.

Noise. Again, most significant is the use of enclosures, rubber lining for trucks, rubber lining for shoots, rubber screens so there is minimal Aaggregate on steel≅ contact. And again, no night-time backup alarms. All significant health and safety features.

Water management. The water on the site will be recycled. It will be recycled through the wash process. We do not intend to pump ground water.

restructured our Environmental Impact Statement as we structured it.

The subjects were raised and re-raised in various elements of the guidelines, and we found it difficult to have an Environmental Impact Statement that was easy to follow and comprehend.

I think that we made the best efforts we could to follow the outline of the guidelines as they were set out, but I can repeat that we had some difficulty in doing that.

I think by the end of the process, by the time we had responded to comments, various comments from yourselves and from the regulators, I think that we did in fact encompass what the guidelines were intended to do, and to provide the information that was requested.

THE CHAIRPERSON: Perhaps I will offer my view now in that the guidelines are generally perceived as a minimum requirement for the Panel.

The Panel defines the task in front of it and then puts in the guidelines the minimum amount of information that is necessary to make a decision.

The reason I bring this up is that we have, as a Panel, enumerated at least 50 places where we

have requested specific information and that information has either been partially returned to us or not returned to us.

So in our mind, your EIS has many gaps in it, and the relationship between the guidelines and these hearings is that we will, over the next two weeks, return to all of those places within the EIS where there are deficiencies, and we will be asking for elaboration on them.

Now some of them, various reasons have been offered for not providing information, and in some cases the information is just not sufficient.

So all I am saying is that for us, the guidelines are a road map or a blue print to what we need to make an appropriate decision, and at the moment the information available to us is not complete.

So the hearings are a way of completing that information and one of the things that we will be doing during the hearing process is returning to those particular items.

So I just think it's important for you to realize that the guidelines were seen by us as a minimum of information, not a framework. In addition to a framework, they were requests for specifics. Do you have anything you want to add?

But there may be other effects such as dust, ground water, pathways, typically pathways, that are causing indirect effects.

And the way that is done is that the expert who assesses the individual, the effects on the individual component has to ask him or herself what are the potential effects here in terms of direct effects and perhaps pathway effects?

So everyone who evaluates effects on a particular environment component, and we call them the valued ecosystem components, will have to go through that exercise of identifying potential effects that relate to either direct effects or effects resulting from pathways, and that's the way the environmental assessment deals with it.

Mr. GUNTER MUECKE: Now what you' have just outlined is very good in theory. That is the theory behind it.

Mr. UWE WITTKUGEL: Yes.

Mr. GUNTER MUECKE: What I find missing, and correct me, but you said to take a rare plant species as an example. It is the application of these principles, of defining the pathways and so on, in the Environmental Impact Statement.

I look at your rare plants for example,

and I could not find any reference to how the change in hydrology for instance would affect those plants, how the change in air quality may affect those plants.

You just told us: AThese are pathways. These are the linkages we are looking for. We are looking for that.≅ Can you elaborate on that?

Mr. PAUL BUXTON: Mr. Chair, I would like to ask Mr. Kern to respond to that question if I may.

Mr. DAVID KERN: The rare plant, glaucous rattlesnake plant is in a habitat of a coastal headland. The premise for conserving that particular glaucous rattlesnake plant was to preserve the headland or the habitat or ecosystem which that plant exists in.

So in that case, we have taken an ecosystems approach in preserving the habitat for that rare plant.

The coastal bog is another example of an approach to habitat or ecosystem preservation. We have expanded our environmental preservation zones around the coastal bog.

We have done the run off studies for the contribution of the watershed going into that coastal bog and we will be determining how much low from

the watershed is required to sustain the coastal bog.

Mr. GUNTER MUECKE: Yes, I understand what you're saying, but simply isolating areas by not working them or having no traffic across them, it's only part of the solution because as we have just heard, the pathways are...

The hydrology of the property is going to affect these isolated areas. The air quality in these areas will be affected.

In an ecosystem approach, how is that taken into account? That is basically where I am puzzled here.

Mr. DAVID KERN: We have done a series of baseline studies in these various ecosystems from soils to water quality, items like this. So we have established the baseline for these particular areas.

We will then be monitoring over time any potential effects that may be affecting whether it's air quality, water supply, water quality to these particular areas.

If we detect a case that is going into the wrong direction, we will then be taking adaptive management measures in order to create a situation for the healthy continuous life of these species at-risk plants.

Ms. JILL GRANT: Could you give us a bit more of a description about what adaptive management means and how the company will use that?

Mr. DAVID KERN: I will pass that back to Uwe.

Mr. PAUL BUXTON: Yes. Mr. Wittkugel, could you help us with that one? Thank you.

Mr. UWE WITTKUGEL: Adaptive management is a term that is closely related to precautionary principle. In situations where there is a certain degree of uncertainty about the effectiveness of mitigation measures, you should... As a measure of precaution, you should have a system in place that can respond to monitoring results very quickly.

So those three components are all very interrelated, the precautionary principle, monitoring, and adaptive management.

It is very simple. Basically what it means is if monitoring identifies inefficiencies or dysfunctions of the mitigation measures or non-compliance perhaps, there should be a mechanism in place that allows to correct the situation, and it should be in place before this occurs so that there's a quick response.

That's a system that Bilcon suggests to

have in place, in other words a team that identifies it as a task, monitoring that is done frequently, that assesses any non-compliance, any issues that are identified through that.

The monitoring could also be the CLC, the Community Liaison Committee. It would then result in an assessment of this situation and appropriate adjustments to the mitigative measures.

THE CHAIRPERSON: In the EIS, the phrase Aadaptive management≅ at last count was mentioned 140 times. So it strikes us as it is absolutely central to what you are planning to do.

Every time there is uncertainty, it seems that adaptive management has been invoked. Could you be more specific about how it works? Because I would like very much to know how you are going to use it in a specific instance.

Mr. UWE WITTKUGEL: Examples. For example, there will be on a daily basis dust monitoring at the perimeter of the site. There is a standard in effect that Bilcon will need. If for any reason the monitoring indicates that the dust levels are beyond that standard, above the standard, there will be immediately... This will be identified by the environmental team employed by Bilcon and we will

analyse the situation.

Was it a malfunction perhaps of the monitor mechanism? Was this perhaps because of some activity outside of the property boundary? Was this perhaps indeed something that was caused on the site, maybe because of maintenance reasons or was it really regular operation that caused this exceedance.

Depending on the answers to these questions, there will be an action. If it's obviously within the property boundaries and operation related, it's something that Bilcon can act upon. And again, there would be...

The environmental team would search out the source for this, would identify what can be done about it.

Was it perhaps an enclosure panel that was removed for maintenance reasons? Is it just as simple as putting that back on or is it maybe another procedure in place that has not been addressed?

Is it maybe the water truck that has not been operational that day? Various causes may be behind this problem, and this adaptive management is simply meant to identify this, assess it, and then react to it expeditiously.

THE CHAIRPERSON: With respect, that

sounds like trial and error, and it does not resonate with me in the sense of the way I understand adaptive management. Or you could argue that that's passive adaptive management.

There's another form of adaptive management, which is very different from that as well. Are you aware of that?

Mr. UWE WITTKUGEL: We are also promoting... Not promoting. Bilcon is committed to work with DFO for example on the latest research on the problem of potential for a ship's collision with whales.

Any new research that may surface, any new information that will be identified through recovery plants when it comes to rare species, that information will be actively researched by Bilcon in consultation with the research community or in consultation with the regulators and will then perhaps, if warranted, introduce totally new mitigative measures that may at this point not even be within the list.

So there is not only this reactive, but there is also this pro-active attempt to constantly upgrade the mitigative measures and the effectiveness.

THE CHAIRPERSON: I will take that as a no, that you really are not familiar with the other term of adaptive management. Did you want to go on? I

think...

Mr. PAUL BUXTON: Mr. Chairman, perhaps Mr. Kern could add to that?

Mr. DAVID KERN: I think Bilcon is taking a precautionary approach to many of the aspects as far as mitigation goes. I will give you a concrete example on that.

In blasting in or near Canadian fisheries waters, we have certain criteria that we have to meet so that we don't transmit sound pressure into the marine environment.

We have taken the precautionary approach with a SARA lifted species, the Bay of Fundy salmon, to increase on a precautionary basis the separation zone three times when we do blasting, when the inner Bay of Fundy salmon may be near shore waters.

So in using the precautionary approach in that case and using our monitoring results in association with guidelines or thresholds that exist, we think the precautionary approach and the mitigation and the adaptative management all work hand in hand.

Mr. GUNTER MUECKE: Could I come briefly back to the ecosystem approach? What I am concerned about is temporal and spacial boundaries of eco-systems, and how Bilcon defined these boundaries in

the case of the impact statements?

Mr. PAUL BUXTON: I'd like Mr. Wittkugel to address that please.

Mr. UWE WITTKUGEL: Yes. Boundaries are very important components in the ecosystem approach. Every valued environmental component or every component of the environment has sort of its own field that exists. So any environmental assessment should take that into consideration.

We have done that in the environmental assessment. For example, human environment. Obviously, it's not just the site, it's not just the homes that are adjacent to the site, you have to look at the larger context.

This is a Project that has implications for the community, perhaps even the region's natural environment.

We are dealing with a terrestrial component and we're dealing with an aquatic component here for the species at risk.

In the marine environment, it's not sufficient to just look at the ship loader and the site itself, we also have to take into account where is the vessel going and where is it coming from, what route is it taking, what biota are existing in that environment?

So we are extending the study area or the area that is assessed accordingly.

For plant species for example, we again started out at a regional level in accordance with the guidelines from the Nova Scotia Department of Natural Resources and looked at a 100 kilometre radius, what potentially rare species may occur in that area, and then narrowed it down to what is likely to occur on the site and did targeted surveys.

So that is another example for how we applied a different study area, a different spatial boundary for the inventory and then of course also for the effects assessment.

Mr. GUNTER MUECKE: Could I come back to time boundaries, temporal boundaries. To define the functioning of an eco-system, is it sufficient to take one or two points in time and extrapolate those over the life of the...

Mr. UWE WITTKUGEL: In a more general response, the environmental assessment did have various time-lines. There's a construction phase, there's the operation phase and then there's the decommissioning/ abandonment phase.

Each phase comes with its own set of effects. Blasting we heard will be more frequent during

the construction phase. Thus, we have noise also perhaps increased during the construction phrase.

So we did take those different spatial... I'm sorry, temporal phases, into account into the assessment.

Mr. GUNTER MUECKE: Okay. We could perhaps move into what has already come up several times, precautionary principle and the link to adaptive management.

I guess I'm wondering how does Bilcon view this precautionary principle in the context of climate change?

Mr. PAUL BUXTON: Mr. Wittkugel will respond to that.

THE CHAIRPERSON: Thank you.

Mr. UWE WITTKUGEL: One of the principles or one of the characteristics of the precautionary principle is avoidance. It's best to avoid certain impacts. That is what is proposed as far as impacts on for example greenhouse gas emissions are concerned.

There's an avoidance of [inaudible] on-site and there's an avoidance of truck traffic in terms of hauling product out of the site. Instead, the vessel will be used.

So largely the emissions from combustion engines is avoided through the application of power driven machinery. The only combustion engines will be related to the mobile machinery on site.

So the avoidance is an example for the precautionary principle in this context.

Mr. GUNTER MUECKE: If I could draw your attention to the sediment ponds. Was the climate change... Has it been incorporated as a precautionary principle in the design of the sediment ponds?

Mr. PAUL BUXTON: I'd like Mr. Strajt to comment on that please.

Mr. DAVID STRAJT: We looked at the volumetric sizing of the ponds, and looked at the sizing for the 100-year storm, which is typical sizing criteria, and then looking at some of the guidance on climate change, it seemed to indicate that the frequency of occurrence of such a storm would possibly increase, and also a small change in the amount of precipitation.

It was more of a frequency increase than a quantity increase, so the ponds... The capacity of the ponds as they stand now we feel would be sufficient to handle the increased volume.

The volume that is predicted from a storm, it would just be more of a need to handle that

potentially more frequently.

Mr. GUNTER MUECKE: Okay. I take your answer at this stage, and perhaps when we start having more particulars about the sediment ponds, maybe you could illustrate for us just how this is going to work in detail and how the climate change component comes into play.

THE CHAIRPERSON: One last question about precautionary principle. Risk assessment, formal risk assessment is considered part of the precautionary principle. Can you point to any formal risk assessments which have been done?

Mr. UWE WITTKUGEL: I would like to point out that the coming... Not this Monday but the 28th I think, the 26th, there will be an expert with a team. He is a risk assessor and we have not undertaken a formal risk assessment, but it's sort of a precursor of an assessment of the risk that may be faced, and I think he's the right person to give a more elaborate answer on this.

The short answer is that the precautionary principle has been taken into account, has been applied, has been looked at, but it's not what I would call a formal risk assessment.

Ms. JILL GRANT: One of the elements of