

# PUBLIC HEARING

## WHITES POINT QUARRY AND MARINE TERMINAL PROJECT

### JOINT REVIEW PANEL

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#### V O L U M E 2

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

PLACE HEARD: Digby, Nova Scotia

DATE HEARD: Monday, June 18, 2007

PRESENTERS: Bilcon of Nova Scotia  
Mr. Uwe Wittkugel

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Per: H el ene Boudreau-Laforge, CCR

OPENING REMARKS  
(DR. ROBERT FOURNIER)

1 --- Upon resuming on Monday, June 18, 2007, at 9:00 a.m.

2 THE CHAIRPERSON: I'd like to start by  
3 introducing all the panel members. On my left is Jill Grant  
4 who is a professional planner. On my right is Gunter Muecke  
5 who is an earth scientist. And my name is Robert Fournier,  
6 I'm an oceanographer by training and the Chairman of this  
7 particular Panel.

8 I have a couple of housekeeping matters  
9 that I should bring to your attention. First of all is that  
10 all presentations can be made in English or French, so that  
11 means that we have simultaneous translation, which also  
12 means that individuals who for some reason or another feel  
13 the acoustics in the room are not particularly good, they  
14 can get a set of headphones and listen to the presentation  
15 in English or French. Some people did this last week, on  
16 Saturday, and felt that it was helpful.

17 The schedule is being revised every day,  
18 and so if you have a schedule that is from Saturday, it  
19 probably is a bit out of date, so I would suggest that as a  
20 routine thing, if you're going to be here daily or even  
21 today, that you should go to the Secretariat and get a copy  
22 of the schedule. It is the most up-to-date version.

23 Just a couple of comments which I will  
24 repeat from our previous session, which is that we  
25 understand that this is an issue in which emotions run high  
26 within the community, and what we would like to do is to

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1 support the view that this process should be fair and  
2 balanced.

3                   It should be a civil process. It should  
4 have cooperation and courtesy built into it. The Panel  
5 takes this very seriously and if during the presentations or  
6 in the questioning period or in any aspect of the daylong  
7 session people become uncivil or discourteous, then we will  
8 act to change the rules of behaviour within in order to  
9 maximize the end product of this session, which is the  
10 transfer of information from the Proponents, from the  
11 Government, from the NGOs, from the public to us in order to  
12 allow us to make a decision, okay?

13                   So we have laid out a set of rules by  
14 which we will operate, but we will be flexible on those  
15 rules if in fact it appears that the process is not  
16 working. I'm sure that will not happen, but it needs to be  
17 said unfortunately.

18                   I think I should bring to your attention  
19 as well that we have now six undertakings. An undertaking  
20 is a request for information made in a previous session in  
21 which the person to whom the undertaking refers agrees to  
22 bring forward information at a specified time.

23                   I'm going to read these and they will be  
24 available... Copies of this will be available from the  
25 Secretariat.

26                   All of these are undertakings from the

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1 Proponent to us, all of these with the exception of the  
2 first one are to be delivered to us by the 27<sup>th</sup> of June,  
3 2007. The first one will be delivered to us on the 20<sup>th</sup> of  
4 June.

5 Undertaking number one is to provide a  
6 drawing of a cross-section of the marine terminal with an  
7 observation post identified.

8 Number two is to provide an updated  
9 version of the EIS, volume 3, map 2. So map 2 in volume 3  
10 showing the revised 800-metre setback location, to provide  
11 an updated version of the EIS, volume 3, map 2a, the quarry  
12 property ownership.

13 Undertaking three is to provide volume  
14 calculations of quarriable stone inside and outside the  
15 current 800-metre setback distance with and without Whites  
16 Cove Road transecting the property.

17 Undertaking four is to describe the  
18 worst case scenario of settling ponds outflow, channel flow  
19 rates and effects on downstream vegetated channel.

20 Undertaking five is to identify the  
21 dimensions of the grid required to define upper flow/middle  
22 flow contact of basalt layers given a known topographical  
23 variation of 7 metres over 300 metres.

24 Number six, to provide a CV for everyone  
25 appearing on behalf of Bilcon whose CV is not included in  
26 appendix one of the EIS.

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1                   Those are requests made to the  
2 Proponent. They will all be delivered to us by the 27<sup>th</sup>,  
3 except for the 1<sup>st</sup>, which will be on the 20<sup>th</sup>.

4                   Anybody who wants additional  
5 information, you can speak with the Secretariat, they will  
6 provide it to you.

7                   Okay. That's the end of the  
8 housekeeping issues. Now the original schedule was for us  
9 to continue our questioning of the Proponent and then the  
10 Proponent would come forward with another presentation. We  
11 have altered that.

12                   The Proponent will be up first, will  
13 make a presentation on environmental issues and then  
14 following that, we will pick up our questioning and proceed,  
15 and then towards the end of the day, we will in fact be  
16 entertaining questions from the public that can be directed  
17 through us to the Proponent, okay?

18                   So that is the status of the situation  
19 at the moment. So we will now move to a presentation by  
20 Bilcon. Mr. Buxton?

21                   Mr. PAUL BUXTON: Thank you Mr. Chair.  
22 Mr. Uwe Wittkugel will be making the presentation on behalf  
23 of Bilcon this morning. Thank you.

24 **PRESENTATION BY UWE WITTKUGEL ON ENVIRONMENTAL ISSUES**

25                   MR. UWE WITTKUGEL: Good morning. Good  
26 morning members of the Panel, members of the government

1 agencies and members of the public.

2 My name is Uwe Wittkugel, I am an  
3 environmental planner with AMEC Earth and Environmental. I  
4 have got about 25 years of experience in environmental  
5 planning, specifically in environmental assessments.

6 I have been assisting Bilcon with the  
7 environmental assessment and I'm here today to give you a  
8 summary of the work that has been accomplished to date.

9 I must admit it's been quite a challenge  
10 to put the information that has been gathered over a five-  
11 year period and documented in over more than 5,000 pages, to  
12 bring all that into a one-hour presentation.

13 Inevitably, it has to be an overview,  
14 and I can only go into detail on a few key issues. Time is  
15 also a challenge. I hope or I will try to stay within the  
16 allotted one-hour time period.

17 If I go somewhat beyond it, I hope I can  
18 use some of our banked time from Saturday, where we ended  
19 about half an hour earlier.

20 I have organized the presentation in  
21 five parts. Following a few background and introductory  
22 notes, I will talk about the environmental assessment  
23 process itself, the various steps involved, principles,  
24 certain terminology.

25 I will then in part three talk about the  
26 existing environment, the description of it, and in part

1 four I will talk about the actual effects assessment and  
2 then finish with an overall conclusion drawn by the  
3 environmental assessment.

4 Environmental assessments are truly  
5 interdisciplinary team efforts, and I just want to  
6 acknowledge here the participation of a large number of  
7 professional, highly reputable consulting companies, mostly  
8 from Nova Scotia, and they are ranging from AMEC down to  
9 Jacques Whitford, JASCO Research Ltd to XY Geoinformatics  
10 Services.

11 Beyond that, there are also a large  
12 number of individuals who participated in this exercise,  
13 either working on their own or in affiliation with research  
14 institutes or universities.

15 Today, we have of course with us...  
16 Again, like on Saturday, you are familiar with Bilcon  
17 representatives, Paul Buxton, John Wall and Josephine  
18 Lowry.

19 As for experts today, we have assembled  
20 here John Amirault, who is representing Engineering  
21 malfunctions and accidents; George Alliston, our expert for  
22 terrestrial vertebrates and marine birds; David Kern, the  
23 expert for environmental planning issues; Ruth Newell, our  
24 expert botanist; John Walker, the expert for noise and air  
25 emissions; and myself with expertise in the environmental  
26 assessment process.

1                   Now I encourage you today to ask  
2 questions that focus on the expertise assembled around the  
3 table here. There will be experts later on during the week.

4  
5                   There have been theme days established  
6 for marine environment, for the hydrogeological environment,  
7 for the socio-economic environment, and on those days of  
8 course, we will have our experts here that can represent  
9 those particular areas of expertise.

10                  Let's start with the environmental  
11 assessment process. The environmental assessment as  
12 documented in the reports follow the guidance of the Nova  
13 Scotia Environmental Assessment Act, Canadian Environmental  
14 Assessment Act, but in particular the Provincial and  
15 Federal Joint Panel Agreement and the project-specific  
16 EIS guidelines that were generated and issued in March,  
17 2005.

18                  The key elements of the environmental  
19 assessment process involve the project description, followed  
20 by a description of the existing environment; the scoping  
21 exercise which determines the project-environment  
22 interactions; and the valued environmental components are  
23 also part of the typical environmental assessment process  
24 and has been followed by this environmental assessment of  
25 course as well.

26                  Subsequently, there is an assessment of



1 effects, there is an establishment or development of  
2 mitigation measures that allow to either avoid the  
3 identified effects or perhaps minimize the adverse  
4 effects.

5 Residual effects, and they are  
6 significant, is another important component of that process.  
7 Residual effects refers to those effects that remain after  
8 the application of mitigation measures.

9 So the E.A. process looks at the  
10 effects, the mitigation, and then the residual effects and  
11 their significance.

12 The process also looks at the cumulative  
13 effect, what does this project perhaps cause in combination  
14 with other projects in the area.

15 It also looks at effects of the  
16 environment on the project, and it looks not only at regular  
17 operation modes, but also at malfunctions, accidents, and  
18 the potential consequences for the environment that may fall  
19 out of that.

20 And of course, every environmental  
21 assessment concludes with respect to the overall  
22 significance of the effects.

23 Now that listing of steps may lead to  
24 the perception that this is a very linear process, and that  
25 is absolutely not the case.

26 In fact, it's a series of feedback loops

1 and iterative processes where the engineers, together with  
2 the scientists and the planners, will continuously revisit  
3 the project and try to improve the project design, so the  
4 key elements in this iterative and feedback looped process  
5 are the initial project concept, the environmental setting  
6 and the final project.

7                   So at the initial stages, we will be  
8 looking typically at interactions between the initial  
9 project and the environment. We will change the initial  
10 project again, look again, does this perhaps now interact  
11 with the environment?

12                   We will also look at how does the  
13 environment perhaps interact with a project, just a project  
14 description, so that eventually there is something that  
15 comes close to a final project.

16                   Even the final project will be subject  
17 to changes as monitoring results will perhaps indicate that  
18 there is a need for adjustments, which then will through a  
19 feedback loop become part of the final project.

20                   At the end of the day, it's central to  
21 understand what are the adverse effects, and perhaps the  
22 beneficial effects of the project.

23                   This is essential and a requirement of  
24 the Canadian Environmental Assessment Act, and also a  
25 requirement of the guidelines established for this  
26 Project.

1                   It's not enough to just look at: "Are  
2 there changes occurring as a result of this project? Are  
3 they adverse? Are they beneficial?"

4                   We also need to know at the end of the  
5 day: "Are these changes, are these adverse effects  
6 significant?"

7                   The guidelines from the Environmental  
8 Assessment Agency determined a criteria that ought to be  
9 used to establish just that, the significance of the adverse  
10 effects.

11                   The include: Magnitude, frequency  
12 duration, geographic extent, reversibility and the  
13 ecological context.

14                   Magnitude, simply to give you an  
15 example, how large is perhaps the noise level? What noise  
16 levels will be generated by this Project?

17                   Frequency, so how often will these noise  
18 levels be reached? What large of an area is affected by  
19 noise levels? Or dust levels, whatever issue we are looking  
20 at.

21                   Are these effects that are reversible or  
22 are they irreversible and in what kind of ecological context  
23 do they occur? Is this a natural environment or perhaps a  
24 cultural environment or perhaps even a heavily disturbed  
25 industrial setting?

26                   So those are considerations taken into

1 account in the determination of the significance.

2                   And of course one other important  
3 component in the environmental assessment process is public  
4 consultation.

5                   Transparency and consultation are an  
6 essential objective of the environmental assessment process,  
7 and Bilcon has undertaken a comprehensive effort to involve  
8 the public through issue scoping meetings, through public  
9 meetings, open-house events and meetings with individuals  
10 and stakeholders.

11                   Of course, there also has been along the  
12 process an open-door policy. Everybody was invited and  
13 welcome to drop by the office and discuss whatever issues  
14 they felt needed to be discussed.

15                   There was also an active outreach, there  
16 was a community survey, there were quality of life and  
17 attitude surveys. There was a newsletter that on a regular  
18 basis informed the public about the status of the project,  
19 current activities, upcoming events, et cetera.

20                   And of course, e-mails, telephone, fax  
21 and letters were standard communication tools that everybody  
22 was invited to use.

23                   It is not listed here, but I would like  
24 to bring it up because it was mentioned on Saturday,  
25 traditional knowledge was also part of the consultation  
26 process.

1                   There was actually an active effort  
2 spent to go out, survey and interview people about their  
3 knowledge about the path as far as uses are concerned or  
4 perhaps features of the site that might be of interest to  
5 the Project.

6                   That is documented and will also be  
7 discussed on the upcoming human environment session, and the  
8 expert who conducted these surveys will also be present. If  
9 there are further questions on that, it can be addressed  
10 during the human environment theme day.

11                   Now with respect to the adequacy of the  
12 consultation program, I would like to draw attention to one  
13 comment that we received from Health Canada, and I'll read  
14 it to you:

15                   "Health Canada acknowledges the effort  
16 invested by the Proponent regarding the  
17 public information and consultation  
18 process as detailed in the EIS  
19 guidelines. Communication activities  
20 and information are well presented and  
21 easy to retrieve."

22                   This is a comment from an agency that is  
23 very experienced in environmental assessments, and we are  
24 happy to have this positive comment and acknowledgement of  
25 our efforts.

26                   Ecosystem approach, we talked about it

1 on Saturday. I just want to mention the process does  
2 recognize the interconnectedness, the complexity of the  
3 various components in the natural environment and has  
4 addressed them throughout the process.

5                   Precautionary principle is another  
6 principle that has been applied in accordance with the  
7 guidelines that were issued.

8                   Again, we talked about it on Saturday.  
9 It includes such things as planning for worst case  
10 scenarios, conservative model assumptions, avoidance  
11 strategies, et cetera.

12                   I think that during the course of my  
13 presentation, examples will come up that will indicate where  
14 and how this precautionary principle has been applied.

15                   So much about the environmental  
16 assessment itself, the steps involved and the terminology to  
17 some extent. Let's now look at the existing environment.

18                   Obviously, at the beginning of the  
19 process, you have to understand the environment you're  
20 dealing with, the specifics of the site and the immediate  
21 surroundings.

22                   With this slide, I would like to draw  
23 the attention to the comprehensiveness of the work that was  
24 undertaken.

25                   There was a series of component studies,  
26 including terrestrial surveys and studies regarding

1 migratory birds, vegetation, mammals, herpetofauna,  
2 lepidoptora, odonata.

3                   In the marine environment, we undertook  
4 surveys and studies that address the intertidal habitat and  
5 communities, near-shore, coastal habitat and communities,  
6 plankton communities, waterbirds, marine mammals, sediment  
7 transport, et cetera.

8                   I'm not reading them all, but it's just  
9 to give you an idea of how complex and intense the inventory  
10 work actually was.

11                   On the right side, we have  
12 hydrogeological investigations as well as air quality and  
13 noise related investigations.

14                   For the socio-economic or human  
15 environment, the extent of surveys and investigations and  
16 studies were similarly complex and involved topics such as  
17 land use, transportation, land ownership, archaeology, the  
18 visual aesthetics, but also important or very important is  
19 the economic profile of the community, which is the  
20 employment situation, income situation and the business  
21 sectors represented into the community.

22                   Human health and community wellness is  
23 another important consideration in the human environment.  
24 Resident attitudes and traditional knowledge, I mentioned it  
25 earlier already, of course they were also part of these  
26 studies.

1                   So altogether, a very intense effort to  
2 understand the existing environment and to characterize the  
3 environmental conditions.

4                   For those not familiar to where we are,  
5 we are in Digby. The Project site is located approximately  
6 halfway down Digby Neck.

7                   The key features of the site, it's a  
8 154-hectare site. The coast line stretches over about 2.6  
9 kilometres. It's located on the Bay of Fundy side of the  
10 North Mountain.

11                   The soils are very thin and overlaying  
12 in North Mountain basalt, and the highest point is about 90  
13 metres above sea level.

14                   The existing topography slopes towards  
15 the Bay of Fundy. There's a surface water divide east of  
16 the active quarry site or near the eastern property  
17 boundary, and it's important to note that they are only  
18 intermittent water courses on-site, the most defined one on  
19 the northern end and one of the southern end on the  
20 property.

21                   Also identified through the surveys,  
22 there was one wetland classified as a coastal bog present on  
23 the site.

24                   Here again is the location on Digby Neck  
25 within the extensive North Mountain basalt formation, a plan  
26 view of the site. The green area represents the future



1 environmental protection zone.

2                   The key thing that I want to communicate  
3 is here, this line, which indicates the divide and the  
4 surface water flow, everything west of this line will flow  
5 towards the Bay of Fundy. Everything east of this line will  
6 flow into the Little River watershed.

7                   Blue arrows indicate the general flow of  
8 the groundwater in this area. It's flowing away from the  
9 residence and the wells, towards the Bay of Fundy.

10                   It is an item that will be discussed in  
11 more detail during the theme day on hydrogeology and drawn  
12 water issues.

13                   Quickly, a cross-section is an  
14 exaggerated vertical scale, but what I want to communicate  
15 here is that the two watersheds, they divide between the Bay  
16 of Fundy watershed and the Little River watershed.

17                   The quarry area, the active quarry area,  
18 will not intrude into the Little River watershed. All  
19 activities will take place within the Bay of Fundy  
20 watershed. Surface water will flow towards the Bay of  
21 Fundy.

22                   Okay. Now let's take a look at the  
23 existing environment as far as biological features are  
24 concerned.

25                   This is an air photo of the site. This  
26 bright blue pond is the sediment pond of the existing or

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1 previous, historic quarry that had been established on this  
2 site.

3                   What we see here is the typical  
4 vegetation which can be characterized as mostly coastal  
5 spruce-fir forest stands, roughly aging between 10 and 50  
6 years.

7                   Along the exposed coastline, there's  
8 growth which can be characterized as Krummholz. There's one  
9 fresh water wetland on-site that I mentioned earlier that is  
10 located up here, and it has been classified as a coastal  
11 bog.

12                   As far as the Nova Scotia wetland Atlas  
13 is concerned, there are no unique or important fresh water  
14 wetlands at or near the sites, so the only one that has  
15 been identified is the one that we located through our  
16 work.

17                   I'd like to point out these small  
18 headlands though here, which is an interesting feature as  
19 they typically support rare plant species.

20                   Over all, there is a diversity of flora  
21 and fauna on this site, and certainly a diverse marine life  
22 off and near the coast of the site.

23                   In general though, it is a site that has  
24 a very typical vegetation and habitat. It is very typical  
25 for the general area, and we would say that there are no  
26 unique, or specific features that are unique for this

1 location.

2                   There are no features that you would not  
3 find in the general area as far as habitat and vegetation  
4 are concerned.

5                   The only items to highlight perhaps as I  
6 said are these small headlands, but even the small headlands  
7 continue along the entire Digby Neck.

8                   Plant species at risk now. There were  
9 no plant species identified on the site that are protected  
10 under the Federal Species at Risk Act, so no plant species  
11 with Federal Conservation status.

12                   We do have three species though that  
13 have a conservation status as per the Nova Scotia general  
14 species ranking, and that is the Hemlock Parsley, the  
15 Mountain Sandwort and the Glaucous Rattlesnake Root.

16                   Very interesting, the Glaucous  
17 Rattlesnake Root was labelled as a blue species, blue  
18 representing extirpated species.

19                   Through our fieldwork, this species that  
20 was considered to have disappeared from the map in Nova  
21 Scotia has been rediscovered and therefore will have to be  
22 reclassified.

23                   There is a photo on the right of that  
24 plant, and thanks to our expert, Ruth Newell, I can show you  
25 this plant. She took this photograph on the site and she is  
26 here to answer any question that you may have in particular

1 perhaps to these rare species.

2 I should maybe also mention this is a  
3 species or these three species are all appearing on these  
4 headlands that I have pointed out, and are going to be  
5 preserved in the environmental preservation zone that will  
6 surround the site.

7 Before I continue talking about species  
8 at risk, briefly here are the listings that were consulted  
9 in order to identify conservation status of species.

10 In accordance with Nova Scotia Natural  
11 Resources, we consulted four listings: The Federal Species  
12 at Risk List, as per the SARA, the Species at Risk Act; The  
13 COSEWIC listing, COSEWIC representing Committee on the  
14 Status on Endangered Wildlife in Canada; the Nova Scotia  
15 Endangered Species Act and the Nova Scotia General Species  
16 Ranks.

17 Terrestrial fauna at the site now.  
18 There are two mammals that have been identified as having a  
19 conservation status, the Little Brown Bat and the Northern  
20 Long-Eared Bat.

21 It is important to know both are not  
22 breeding on-site. They are using the site though for  
23 foraging purposes.

24 Land birds now. The site has no land  
25 birds, breeding land birds with conservation status  
26 identified. That is not quite true anymore. As of

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1 yesterday evening, I know that there are two species that we  
2 surveyed, the Boreal Chickadee and also the Gray Jay that  
3 have over the course of the last five days or ten days been  
4 upgraded and are now also listed on the Nova Scotia Species  
5 Ranks as yellow-labelled species.

6 So we do now have breeding birds on the  
7 site that have a conservation status under the Nova Scotia  
8 Rank.

9 Odonata, Lepidoptera or in plain English  
10 damsel flies, dragon flies and butterflies, none have been  
11 identified on the site that have a conservation status.

12 I'd like to share with you another quote  
13 here from NSDNR, from their review comments, compliments for  
14 our study team that we are proud about:

15 "The calibre of individual field  
16 investigators is very high and  
17 accordingly, we have high confidence in  
18 the quality of their results and  
19 recommendations."

20 Marine biota at risk. In the Bay of  
21 Fundy, there are a number of marine mammals. These are: the  
22 North Atlantic Right Whale; the harbour porpoise; the fin  
23 whale occasionally near the site; the blue whale  
24 occasionally near the site, and a whole list of marine fish  
25 that are considered species at risk.

26 The marine fish range from Atlantic Cod

1 all the way down to the Inner Bay of Fundy Salmon, Atlantic  
2 Whitefish and Striped Bass, all fish that have been  
3 identified on the Federal Species List as being federally  
4 protected.

5 Other species, there's a reptile in the  
6 Bay of Fundy, the Leatherback turtle, also protected under  
7 the Species at Risk Act (schedule 1).

8 Only one waterbird, a wintering  
9 waterbird has been identified through our intensive bird  
10 surveys as being at the site, but as indicated on the slide,  
11 it's a wintering bird and it's not federally protected, it's  
12 provincially protected.

13 Let's also have a look at the site  
14 characteristics from a socio-economic perspective. So far,  
15 I talked about the physical characteristics of the site, the  
16 biological characteristics of the site.

17 A quick note on the socio-economic  
18 characteristics. It's a vacant property. There has been a  
19 former pit on the property and it's formerly a licensed  
20 four-acre quarry site.

21 The site is accessible via Highway 217.

22 The access to the shoreline is via the public road, the  
23 Whites Cove Road. The nearest village is Little River. The  
24 nearest residence not owned by Bilcon is about 350 metres  
25 from the active quarry, and there are about 24 active wells  
26 within the site vicinity.

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1 I should point out there are no  
2 designated registered heritage properties on the site, and  
3 there's no significant archaeological features identified on  
4 the site as well.

5 We can state this as a result of our  
6 site investigations, as part of the inventory work.

7 Just a quick aerial view of the area  
8 from the Little River site being located in the background  
9 for those in the audience or amongst us who may not have  
10 been at the site.

11 That takes me to the next step in my  
12 presentation, the assessment of the actual effects.

13 I talked about the existing environment,  
14 now let's briefly shed some light on the Project Works and  
15 the activities.

16 The proposed Project was discussed in  
17 detail on Saturday, but for those amongst the audience who  
18 did not participate on Saturday, maybe a very quick synopsis  
19 here of what the project is all about.

20 We are distinguishing three phases, the  
21 construction phase, the operation phase and the  
22 decommissioning/abandonment phase.

23 For the construction phase, there will  
24 be site development clearing, clearing of the vegetation,  
25 there will be development of the infrastructure like the  
26 power supply, water supply, the water treatment features,

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1 the access has to be established, the administration and  
2 processing units have to be built and the marine terminal  
3 will have to be built.

4                   During the operation, we will be  
5 experiencing regularly the quarry face development, which  
6 involves blasting. Subsequently, there will be a processing  
7 of the rock, a stockpiling and then the loading of the rock  
8 onto vessels that will be docked at the marine terminal, and  
9 then from there on, there will be a marine transport also  
10 part of the Project activities.

11                   During the operation phase, there will  
12 be incremental or ongoing site rehabilitation, and there  
13 will be a continuous water management of surface water as  
14 well as processed water.

15                   Decommissioning and the abandonment  
16 phase involves the site decommissioning and the final site  
17 reclamation and associated monitoring.

18                   Just one more slide on the Project Works  
19 and Activities. Again, this is to give you an idea of what  
20 this Project is all about. The green, dark green area  
21 again, the environmental preservation zone.

22                   Within that 150-hectare area, the actual  
23 quarry will slowly move its way through the overall area, so  
24 it's important to understand that at no point in time the  
25 entire area will be covered by the entire project  
26 activities.



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1                   It will be always a small component of  
2 the site that will slowly move through the site, and as it  
3 moves through it, the areas that are quarried will be  
4 immediately reclaimed.

5                   Valued environmental components now. So  
6 there is the Project in the environmental assessment and  
7 there is the environment. Both need to be assessed, what  
8 are the effects falling out of that.

9                   The Environmental Assessment Act and  
10 also the guidelines ask for the establishment or VECs  
11 (valued environmental components).

12                   These are issues or features of concern  
13 such as the air quality, and they are features typically or  
14 potentially affected by the Project, either directly or via  
15 pathways, and they are established to focus the  
16 environmental assessment work.

17                   So rather than studying everything, we  
18 intend here to identify those valued environmental  
19 components that are of concern and that are also affected by  
20 the project, and to focus the work on those components.

21                   They identified that in this exercise  
22 through public consultation, and I have a list here for you  
23 of what has been established as the valued environmental  
24 components in the context of this study.

25                   We have biophysical VECs and we have  
26 socio-economic VECs.

1                   Biophysical VECs range from climate  
2 geology, hydrogeology, surface geology and soils all the way  
3 down to the aquatic ecology, freshwater and marine.

4                   There are a number of socio-economic  
5 VECs as well: Heritage resources, aboriginal land and  
6 resource use, transportation, economy, human health and  
7 wellness and socio-cultural environment.

8                   It's important to bring this up because  
9 the term VEC or valued environmental component is another  
10 one of those technical environmental assessment terms that  
11 the Act and also the guidelines use, and I felt I should  
12 introduce that to you.

13                   Key concerns now. So between the  
14 environment and the Project, the key concerns are  
15 interactions and pathways. There are direct interactions,  
16 for example the Project may and will result in the removal  
17 of habitat, a direct interaction.

18                   But there are also interactions via  
19 pathways, such as groundwater which may function as a  
20 pathway to domestic wells.

21                   The E.A. is concerned about receptors,  
22 any changes, perhaps who is at the receiving end of these  
23 changes, the ecological health or flora and fauna may be at  
24 the receiving end and there are aspects of the socio-  
25 economic environment at the receiving end or of the human  
26 health.

1           A very simplified diagram to explain the  
2 term of pathways. All I want to communicate is that this  
3 concept of pathway involves a source such as, in this  
4 picture, a car that generates exhaust fumes, and a receptor,  
5 which is a person that is breathing the air. In this case,  
6 the air functions as a pathway.

7           It's a typical consideration in  
8 environmental assessments.

9           The other example that is given here is  
10 there is a soil contamination here as a source, and the  
11 groundwater is functioning as a pathway to a receptor, in  
12 this case fish in an aquatic environment.

13           So that's just to explain the term of  
14 pathways.

15           Let's now look at the effects  
16 assessment, and I'm picking one key valued ecosystem  
17 component here, the air quality and noise.

18           We are dealing with a quarry, very  
19 different from complex industrial undertakings such as power  
20 plants or chemical plants.

21           This is a quarry and in terms of air  
22 quality and noise, it's actually fairly simple. They are  
23 dust emissions, there are greenhouse gas emissions and there  
24 are operation-related noise emissions.

25           There's fairly well understood, fairly  
26 limited emission sources.

1                   In our analysis of the air quality and  
2 noise, we looked at the existing air quality, the existing  
3 noise levels. We looked at the potential emission sources  
4 associated with this undertaking.

5                   We also looked at the guidelines and  
6 standards that may be out there, and we undertook a noise  
7 level modelling using the CadnaA model.

8                   Not listed here is also the dust  
9 modeling, as part of the air quality. As I mentioned, dust  
10 is another concern. Dust has also been modeled through an  
11 application of the numeric model.

12                  We looked at mitigation measures, what  
13 can be done to minimize and perhaps even avoid effects. And  
14 then as mentioned before, the significance of the effects is  
15 important to establish.

16                  We looked at the environmental  
17 management, including such things as compliance monitoring  
18 and adaptive management.

19                  On the right side of the slide, just an  
20 example, at the bottom the traditional way of screening  
21 which are uncovered, open facilities.

22                  At the top, a computer generated drawing  
23 of the proposed Bilcon undertaking, which will be  
24 completely enclosed as was pointed out by Mr. Buxton on  
25 Saturday.

26                  So this is the essential difference

1 between the traditional approach and the modern state of the  
2 art engineering that Bilcon is proposing.

3 Now let's look at the thresholds for  
4 significance related to air quality and noise.

5 The Pit and Quarry Guidelines establish  
6 maximum levels for dust or the technical term, "total  
7 suspended particulates", that is at or beyond the property  
8 boundary.

9 The maximum level on an annual mean  
10 basis is 70 micrograms per cubic metre. On a 24-hour period  
11 basis, it's 120 micrograms per cubic metre.

12 As far as sound levels are concerned,  
13 the regulator established a range between 65 dBA and 55 dBA,  
14 depending on the time of the day.

15 This is related to noise associated with  
16 the regular operation.

17 Noise and vibration related to the  
18 blasting aspect of the project has a different set of  
19 criteria, and that's 128 dBA measured within seven metres of  
20 the nearest structure and 12.5 millimetre per second peak  
21 particle velocity at the nearest structure.

22 So those are threshold numbers for  
23 significance. We are saying: "If these levels are  
24 exceeded, we would be faced with a significant adverse  
25 effect.

26 Now let's for a minute look at what

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1 mitigation measures are available and what mitigation  
2 measures are suggested as pointed out in our presentation on  
3 Saturday.

4                   For dust and noise, the use of electric  
5 power will be maximized and the conveyor system, stationary  
6 equipment and chip loader will all operate based on electric  
7 power.

8                   There will be marine transport, so there  
9 will be no exhaust intensive truck hauls through residential  
10 areas.

11                   There will be paved access roads from  
12 Highway 217 into the quarry, which will minimize the  
13 generation of dust.

14                   There will be, as mentioned before,  
15 enclosures for the processing equipment, which also includes  
16 the crusher.

17                   There will be minimal direct rock/steel  
18 contact, which is the most important aspect in the noise  
19 generation, in the quarry operation. This will be achieved  
20 through lined steel surfaces throughout the equipment.

21                   There will be a hooded conveyor system,  
22 and there will be the use of dust suppressants such as  
23 water, in order to minimize the dust generation during  
24 regular operation.

25                   As pointed out a couple of times, there  
26 was a perimeter zone which will be forested and vegetated

1 which will provide additional noise abatement and dust  
2 abatement features.

3                   There will be no blasting... In  
4 accordance with the guidelines, no blasting on Sunday or  
5 statutory holidays, and there will also be no blasting  
6 between 6:00 in the evening and 8:00 in the morning, and the  
7 environmental management plan will define all that, all the  
8 restrictions that Bilcon is committed to.

9                   The photograph on the right bottom is an  
10 example for what is proposed here, the completely enclosed  
11 crushing structure, but also hooded conveyor belts.

12                   It's very, very important in terms of  
13 minimizing dust, but also noise effects.

14                   Nevertheless, there will be compliance  
15 monitoring at the site. There will be particulate matter or  
16 dust monitoring. There will be noise and vibration  
17 monitoring related to the operation but also the blast-  
18 related noise.

19                   These results, the monitoring results  
20 will of course be made available to the regulators, but also  
21 to the public and any other interested parties.

22                   What kind of conclusions can we draw  
23 taking into account these mitigation measures?

24                   Our predictions are that the noise  
25 levels related to the operation and the blasting will  
26 definitely remain within the guidelines.

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1                   This is based on the model that was run  
2 and it's also based on our experience with other quarry  
3 sites.

4                   Dust levels, the same thing can be  
5 stated. The dust levels will remain within the guidelines,  
6 again based on similar quarry projects, but also modelling  
7 exercises and also our experience of the effectiveness and  
8 efficiency of the monitoring and mitigation measures.

9                   So we conclude for the effects on the  
10 air quality and noise that the effects will not be  
11 significant. They will be within provincial guidelines,  
12 they are considered to be localized and will be very  
13 infrequent in the sense that blasting noise will only occur  
14 once every one or two weeks.

15                   Then a quote here from the comments that  
16 we received on our environmental assessment, this time from  
17 NSDEL:

18                   "We are satisfied that the mitigation  
19 measures proposed in the EIS for air  
20 quality issues are adequate."

21                   Now not on the slide, but nevertheless a  
22 comment that I would like to share with you, it's something  
23 I picked up from the registry yesterday, and it's from the  
24 presentation that Health Canada will make, and it also  
25 relates to air quality and noise.

26                   Their commentary on the work that has



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1 been accomplished so far and our responses to the  
2 information requests that were filed is as follows. Health  
3 Canada is saying, and I am quoting here:

4 "Health Canada has no further comments  
5 on this issue. Health Canada finds that  
6 this project component as described in  
7 the Environmental Impact Statement is  
8 protective of human health provided all  
9 applicable mitigative measures are  
10 undertaken."

11 So we take this as a very strong support  
12 for our environmental assessments and our conclusion.

13 Greenhouse gases I mentioned under the  
14 air quality and noise. Noise and dust is one issue, the  
15 other issue is greenhouse gases.

16 We look into this in our key  
17 considerations. One of the on-site sources as I mentioned  
18 before is combustion engines, and they will be minimal. So  
19 the on-site sources for greenhouse gas emissions are  
20 actually minimal.

21 What is also important to note is that  
22 there is no legislation or standards for industry in place  
23 at this point in time.

24 The Kyoto protocol applies to states  
25 only. This is also explicitly mentioned in the comment of  
26 Foreign Affairs Department that says:

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1                    "There are no implications under the  
2                    Kyoto protocol for this project."  
3                    Nevertheless, as a good corporate  
4 citizen, Bilcon does take greenhouse gas issues seriously  
5 and is committed to a number of measures to minimize  
6 greenhouse gas generation by this Project.

7                    We think that the incremental site  
8 reclamation will create immediately carbon sinks as we go  
9 along. The chipping and also the reuse of the wood fibres  
10 from the land clearing and the reuse also of this in the  
11 land reclamation will also avoid the combustion of wood  
12 fibres.

13                    And as I said, there's a commitment to  
14 energy conservation. There's a commitment to use of  
15 alternative energy sources, biodiesel just as an example,  
16 and there's a commitment to continuous exploration of new  
17 technologies and evolving policies regarding the climate  
18 change and the greenhouse gas emissions.

19                    And definitely a commitment is that  
20 should future guidelines be established that do relate to  
21 the industry, Bilcon will adjust its operation to comply  
22 with those standards.

23                    This would be a typical example for  
24 adaptive management. New regulations come in, and there  
25 will be an assessment and an adjustment to the operation to  
26 make sure that the new guidelines are adhered to.

1                   So we conclude for greenhouse gases that  
2 the effects, the adverse effects that this Project may have,  
3 are not significant.

4                   Let me move on to another important  
5 valued environmental component, the terrestrial environment.

6  
7                   What effects does the Project  
8 potentially have on the terrestrial environment?

9                   Key concerns are the species at risk,  
10 the flora, the fauna and the on-site wetland.

11                   Again, thanks to Ruth Newell, we have a  
12 photograph of the Mountain sandwort, another one of those  
13 three plant species identified on-site.

14                   In our analysis, in the key  
15 considerations, we looked at the existing conditions. As  
16 mentioned earlier, the surveys and studies undertaken  
17 involve vegetation communities, habitat surveys, bird  
18 surveys, vegetation flora inventories, inventories and  
19 studies of mammals, herpetofauna, arthropods (butterflies,  
20 damselflies and dragonflies).

21                   We looked at the interactions with the  
22 Project. We asked ourselves: "Which habitats will be  
23 removed? Are the habitats that are removed also habitats  
24 for the plant species at risk?"

25                   We identified that all plant species at  
26 risk will actually remain within the preservation zone.

1 They are predominantly on those somewhat more open  
2 headlands, which will be included in the preservation zone.

3 And we looked at what kind of  
4 disturbance may be caused by the Project. Are there any  
5 habitat impairments anticipated, perhaps through the  
6 alteration of the drainage? And we looked at the direct  
7 potential loss of species through the clearing of the  
8 Project of the quarry site.

9 We also looked at: "Do any of these  
10 activities perhaps contribute to the threat factors  
11 identified in the recovery plans that may exist for the one  
12 or the other specie?"

13 We looked at the conservation status,  
14 Federal and Provincial, mitigation measures and the site  
15 rehabilitation that may minimize or avoid the effects of the  
16 species.

17 Again, we looked into the environmental  
18 management, including the monitoring and adaptive management  
19 that is available to avoid or minimize those potential  
20 adverse effects.

21 Coming again to the question of  
22 significance, for species at risk, we defined that the  
23 threshold for significance is the long-term sustainability  
24 of the species at risk population.

25 So in other words, we are seeing a  
26 significant effect, a significant adverse effect that exists

1 where the long-term sustainability of the specie at risk  
2 population is jeopardized as a result of the magnitude, the  
3 geographic extent and the frequency of the effect, and  
4 perhaps the effect being irreversible.

5 For wetlands, the same thing has been  
6 established. We consider an effect, an adverse effect to be  
7 significant if the long-term sustainability of the on-site  
8 wetland is jeopardized as a result of the magnitude,  
9 geographic extent, frequency of the effect and the factor  
10 that the effect may be irreversible.

11 Mitigation measures now. I mentioned  
12 it, there's the environmental preservation zone. There's  
13 also suggesting species-specific mitigation plans that may  
14 take into account specific habitat management requirements  
15 that may be needed.

16 There's wetland and pond creation  
17 included in the Project design. There's the incremental  
18 site reclamation and there's the forest management and  
19 habitat management on-site and off-site.

20 Paul Buxton explains the forest  
21 management has already taken place off-site. It has started  
22 already in order to enhance habitat availability and habitat  
23 diversity beyond the site boundaries.

24 And there is the monitoring effort that  
25 will look at species at risk potential for the invasive  
26 species spreading on the site and the habitat rehabilitation

1 and the effectiveness of this habitat rehabilitation and the  
2 success of it.

3                   So taking those mitigation measures into  
4 account, what can we conclude?

5                   We conclude that the adverse effects are  
6 not significant. There may be effects, they may be adverse,  
7 but we do not consider them significant.

8                   For the plant species at risk, we can  
9 say that all plant species at risk are found within the  
10 protective environmental zone, and therefore the  
11 sustainability of the population is not a factor.

12                   As far as the mammal species at risk are  
13 concerned, the two bats I mentioned earlier, again we don't  
14 think that the sustainability of the population of these  
15 bats is affected.

16                   They're only using the site for  
17 foraging. There's plenty of replacement habitat around the  
18 Project. We even think that by establishing the wetlands,  
19 the ponds, we may even increase foraging habitat for these  
20 bats that live off insects, and which may be attracted and  
21 propagated in association with our ponds.

22                   So the habitat conditions for the bats  
23 are likely not to deteriorate, in fact they may improve.

24                   So we conclude that the effects are not  
25 significant for bats either.

26                   For the on-site wetland, the

1 sustainability of the wetland is also not affected. If at  
2 all, effects will be small scale, very localized and  
3 temporary and certainly reversible.

4                   There is a potential in this context,  
5 and I would like to mention it, but there is even a  
6 potential for a net gain for wetlands as I said, through the  
7 creation of additional wetland and the site reclamation  
8 which will likely benefit some of the species already on-  
9 site.

10                   A quote from the review comments again  
11 as far as this conclusion is concerned, which is supported  
12 by Nova Scotia Department of Natural Resources:

13                   "The authors and Proponent are to be  
14 commended for the rigour applied to the  
15 examination of these issues, in  
16 particular their consideration of rare  
17 species and species potentially at  
18 risk."

19                   Another valued ecosystem component is  
20 the marine environment.

21                   Now there is a huge number of issues or  
22 concerns that are associated with the marine environment,  
23 and that's why the Panel scheduled a specific theme day to  
24 discuss the marine environment. It's upcoming and it will  
25 be this Wednesday.

26                   I have to focus here on a couple of

1 issues, and I picked the key concerns here, the blasting  
2 effects and the potential effects of marine transport  
3 related to ship/whale collisions.

4                   Let's look at blasting. We know from  
5 literature research that the potential effects of blasting  
6 in this context could be for whales auditory damage, it  
7 could cause a behaviour change, and it could also have a  
8 masking effect, which basically represents an interference  
9 with their communication.

10                   For waterbirds, fish and lobster, they  
11 also indicate blasting could have adverse health effects, or  
12 at least it could cause a change in behaviour.

13                   What are the regulatory requirements?  
14 The DFO guidelines for the use of explosives in or near  
15 Canadian fishery waters clearly states that no explosives  
16 should knowingly be detonated within 500 metres of any  
17 marine mammal.

18                   It also establishes a maximum pressure  
19 level of 100 kilopascal in the swim bladder of fish and it  
20 also establishes a vibration maximum of 30 millimetre per  
21 second in spawning areas.

22                   The Pit and Quarry Guidelines in this  
23 context do not help. They don't make those established  
24 thresholds for marine environment.

25                   So for us, regulatory requirements of  
26 key concern here are those maximum pressure level and



1 maximum vibration levels.

2 To understand what this Project may  
3 cause, we ran a model, a numeral model, a CONWEP model, and  
4 we're asking ourselves: "What are the anticipated pressure  
5 levels from the proposed blasting activities?"

6 The result of the model is or the model  
7 predicts a 25 kilopascal pressure level in the nearest water  
8 column. In other words, only one quarter of what the  
9 guideline is asking us for.

10 Mitigation measures have been developed.  
11 They include setback distances from the detonation point  
12 and include such items as...

13 In the blasting protocol, it will be  
14 established that there will be no blasting at low tide, it  
15 will be at least within three hours or further away from the  
16 low-tide point.

17 As a precautionary measure, we are  
18 suggesting a 170-metre setback for waterbirds. We will be  
19 adhering to the 500-metre for marine mammals, but we will be  
20 extending the required setback distance by a factor of three  
21 during the period of May and September when the Inner Bay of  
22 Fundy Salmon migration takes place.

23 This is a precautionary measure and will  
24 not only benefit the salmon, but of course all the other  
25 fish species that I listed earlier.

26 For the marine mammals at risk, another

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1 precautionary mitigative measure that has been established  
2 here, we will actually be extending the minimum distance  
3 that the guidelines ask for by a factor of five. So there  
4 will be a setback distance of 2,500 metres for marine  
5 mammals.

6 A few other mitigative measures that are  
7 suggested, we will be looking for detection and deterring  
8 devices as there are some out there, but they are not ready  
9 yet to be applied.

10 But in consultation with DFO, as soon as  
11 they are considered to be sufficiently reliable, Bilcon will  
12 apply those kinds of devices.

13 There will be a training of marine  
14 observers who will have to ensure that these setback  
15 distances will actually be adhered to, and there will be a  
16 consultation with DFO on the model verification and the  
17 finalization of the safety zones.

18 So the zones that I was discussing  
19 earlier, based on our model predictions, monitoring will  
20 have to verify that these predictions indeed are correct and  
21 if any adjustments are required in consultation with DFO,  
22 they will result in adjusted setback distances.

23 Monitoring. I just jumped ahead of  
24 myself here. As I said, it will take place on the water.  
25 The sound levels will be monitored on a regular basis. This  
26 is for the model verification.

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1                   That clearly represents a precautionary  
2 principle that we want to apply here. We are not solely  
3 relying on this model.

4                   The underwater background noise,  
5 together with the vessel noise, will also be monitored,  
6 another precautionary principle.

7                   Prior to blasting, the presence of  
8 waterbirds, mammals, marine mammals at risk, will be  
9 monitored within the determined setback distances.

10                  This will be achieved through  
11 observations from the boat, from the ship loader, but it  
12 will also include monitoring of advisories issued by Fundy  
13 traffic and perhaps information, if made available, from the  
14 tour boat operators.

15                  So the conclusion for marine environment  
16 and blasting is that the residual adverse effects are not  
17 significant.

18                  The rationale behind that is the sound  
19 pressure levels are definitely within the prescribed  
20 guidelines. The setback distances will be met or even  
21 exceeded as I outlined.

22                  The blasting events are very infrequent  
23 and will happen only every second week, which means... And  
24 the activity is also considered a very localized effect.

25                  Now this conclusion is supported by a  
26 commentary from the Department of Fisheries and Ocean that

1 was received as feedback to our environmental assessment.

2 And I quote from DFO that:

3 "It is unlikely that blasting would  
4 result in physical effects on marine  
5 mammals, endangered or otherwise, beyond  
6 500 metres."

7 As I said, we are establishing a setback  
8 distance that is five times as large, at least as far as the  
9 marine mammals at risk are concerned.

10 And another important comment in this  
11 context:

12 "Since the model parameters were  
13 selected fairly conservatively and in  
14 light of the fact that the model would  
15 appear to overestimate the theoretical  
16 pressure, there seems to be minimal  
17 cause for concern in terms of direct  
18 harm to fish."

19 This quote also addresses the  
20 conservatism that has been built into the model. So I  
21 mentioned the precautionary principle as far as the  
22 dimensions of the setback distances are concerned.

23 A precautionary approach has also been  
24 built into the model, which is built on a series of highly  
25 conservative assumptions and that's confirmed here in the  
26 comment from the Department of Fisheries and Ocean.

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1                   The second big concern related to our  
2 marine environment is ship/whale strikes.

3                   As far as the effects of this project  
4 are concerned, there is a 6 per cent increase of rule vessel  
5 traffic.

6                   The picture in the bottom right  
7 indicates roughly the kind of vessel that will be used.  
8 These larger vessels that are tied to the transport  
9 separation system that's in place in the Bay of Fundy, they  
10 have to report to Fundy traffic, and there are 800 craft  
11 vessels currently travelling through this traffic system.

12                   Therefore, the additional Bilcon vessel  
13 transport will amount to a 6 per cent increase of these rule  
14 vessels.

15                   That does represent a possible or a  
16 potential for a ship/whale strike and would contribute to  
17 the threat of the North Atlantic Right Whale.

18                   There are though mitigation measures in  
19 place. This site has been selected and the route of the  
20 vessel has been selected in a way that the navigation will  
21 take place outside of the North Atlantic Right Whale  
22 Conservation Area.

23                   The vessel will also travel at a reduced  
24 speed, less than 12 knots. Typical vessel/whale accidents  
25 happen at speeds higher than 14 knots.

26                   There's also the possibility for course

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1 adjustments. If any reports are received or observations  
2 are made, this will be communicated to the captain who,  
3 within his safety limits, perhaps will be able to adjust the  
4 course or reduce the speed even further.

5 And this is just to illustrate what I  
6 said. There is a transportation separation system in place  
7 that requires every rule vessel to report to Fundy traffic  
8 and to follow these prescribed or defined transportation  
9 rules.

10 The Bilcon vessel will follow this  
11 route, and then at a point roughly here, will go along a  
12 clearly defined prescribed route on the shortest way to the  
13 site itself, and will follow a similar route on its way out.

14 From this point on, the speed will be  
15 continuously going down from 12 knots to near 5 or 1 knot,  
16 close to the terminal, when it comes to berthing the boat at  
17 the Project site.

18 Now this yellow boundary indicates the  
19 North Atlantic Right Whale Conservation Area. So then keep  
20 in mind there are 800 vessels currently travelling on an  
21 annual basis through that conservation area.

22 Bilcon has selected this site and a  
23 route that ensures that this conservation area is respected  
24 and will not be transected by the Bilcon vessels, and the  
25 vessel speed has been reduced to stay below speed levels in  
26 which collisions are typical to occur.

1                   Then the question is: "What is a  
2 significant effect for whale species at risk?" We also  
3 defined here that the long-term sustainability of the  
4 population would have to be jeopardized as a result of the  
5 magnitude, the geographic extent and the frequency of the  
6 effect. The effect would have to be irreversible.

7                   What can we conclude with respect to  
8 ship/whale strikes? We conclude that the adverse residual  
9 effects, in other words those effects after the application  
10 of the mitigation measures, are not significant.

11                   The rationale behind that is that the  
12 sustainability of the whale population is not jeopardized by  
13 this project.

14                   The ship strikes are considered highly  
15 unlikely. The vessel transport will be very infrequent and  
16 the ship will travel at a reduced speed.

17                   This conclusion too is supported by the  
18 Department of Fisheries and Ocean, and I read their comment  
19 on the environmental assessment:

20                   "The conclusions provided in the EIS  
21 regarding collision risk with the Right  
22 Whales are generally correct. The  
23 increased ship traffic due to proposed  
24 activity and the proposed route will  
25 result in an increase in the probability  
26 of vessel/whale interaction, but the

1                   increase will not be substantial.”

2                   And so this is the rationale behind our  
3 conclusion that the effects are not considered significant.

4                   I’m moving now on to the last of the  
5 valued environment components, the socio-economic  
6 environment. And I’ll discuss some of the effects on the  
7 socio-economic environment.

8                   A large number of valued environmental  
9 components have been identified. They include heritage  
10 resources, marine and land archaeology, heritage  
11 properties... I’m just picking a few topics here. There’s  
12 aesthetics.

13                   What’s very important here, economy of  
14 course. And there is the fishery, the tourism, the land  
15 value.

16                   Under the Human Health and Wellness and  
17 Socio-Cultural Environment, there are issues related to  
18 drinking water quality, marine contaminants, land  
19 contaminants, any particular contaminants that you could  
20 have potentially in country foods.

21                   A large number of issues, and therefore  
22 again a theme day has been set aside. I can only touch on  
23 the surface.

24                   Exactly in a week from today, we will  
25 have a human environment expert here and other experts on  
26 contaminants in the environment and risk assessments.



1                   We will be able to dive into much more  
2 detail. I can only stay at the surface and give you some  
3 key information.

4                   Key concerns are, and I used the word  
5 earlier, the pathways. There's the air quality, there's the  
6 noise and vibration and there's the water quality in the  
7 context of the human environment.

8                   What do these pathways do to the health  
9 effects, also perhaps what do these pathways do to the  
10 labour market and the economy, or what are the direct  
11 effects on labour markets and economy.

12                   Let's look at health first, key  
13 considerations. To draw a conclusion, there's the question:  
14 "What are the predicted effects levels for these pathways?"  
15 Air quality, noise, groundwater and surface water quality,  
16 terrestrial and marine biota.

17                   For all these predicted effects, we  
18 concluded that they will stay where applicable within  
19 government standards and guidelines.

20                   Nevertheless, further mitigation as  
21 suggested, this includes comprehensive monitoring, community  
22 involvement through the Community Liaison Committee, and the  
23 adaptive management approach.

24                   So we conclude that for human health,  
25 the residual adverse effects are not significant. Again,  
26 these are the residual adverse effects, meaning after

1 application of all mitigative measures related to air  
2 quality, groundwater, surface water, marine environment, et  
3 cetera, we conclude the effects are not significant.

4 Labour and economy now. The key  
5 considerations here is we needed to understand the economic  
6 profile of the region and of the local community.

7 We also looked at the economic profile  
8 of the quarry itself, how many jobs are generated, what is  
9 the payroll, what are the tax contributions, et cetera.

10 We also looked at the provincial  
11 economic policies and ran an economic impact model, a  
12 numeric input/output model which identified the potential  
13 for beneficial effects related to labour markets and the  
14 economy.

15 Mitigation in this case to minimize the  
16 effects is not required, but it would be good to perhaps  
17 enhance the beneficial effect, so here we are talking about  
18 enhancement measures.

19 Bilcon is committed to a hiring and  
20 procurement policy that favours the local market. It is  
21 also committed to promote female workforce within its  
22 operation.

23 It has been identified that female  
24 workers have been particularly disadvantaged by recent  
25 developments in the local labour market.

26 Bilcon is also committed to a training

1 policy as an enhancement measure to ensure that the local  
2 labour market can be used in terms of staffing the  
3 operation.

4                   So for labour and economy, we conclude  
5 that there are no significant adverse effects. We can  
6 conclude that there are actually likely beneficial economic  
7 effects.

8                   Generally, this is supported by the  
9 mineral policy for the province of Nova Scotia. I'll cite  
10 from that policy:

11                   "The Government of Nova Scotia  
12 recognizes mineral exploration and  
13 mining as a key sector contributing to  
14 jobs, wealth and a high quality of life  
15 for Nova Scotians."

16                   That's exactly what we are proposing  
17 here, an operation that can do that, contribute to jobs,  
18 wealth and a high quality of life in the area.

19                   I mentioned at the beginning of my  
20 presentation that I have to stay at the surface, I have to  
21 summarize. I cannot go into detail, and I cannot address  
22 every individual valued environmental component that was  
23 assessed.

24                   So this is just to serve as a quick  
25 overview of what other items were addressed and other  
26 conclusions that have been drawn.

1                   We assessed the effects on water  
2 quality, fresh water, marine. We assessed the effects on  
3 groundwater and domestic wells near the Project site.

4                   We assessed the effects on physical  
5 oceanography, the effects on freshwater fish habitat, the  
6 archaeology, transportation and the visual aesthetics.

7                   We established and identified a whole  
8 series of mitigation measures, all related to a sensitive  
9 project design and an operation and we tied into the  
10 operation a monitoring program and an adaptive management  
11 system so that we can, for all those factors, also conclude  
12 that the residual adverse effects are not found to be  
13 significant.

14                   They are generally considerably small  
15 scale, localized short-term or infrequent, and for the most  
16 part reversible.

17                   So aside from these direct effects and  
18 effects via pathways from the Project on the environment,  
19 there are a number of other considerations that the effects  
20 assessment looked into.

21                   We didn't just look at the Project and  
22 the receiving environment, we also asked ourselves: "Does  
23 perhaps the existing environment have an effect on the  
24 Project?"

25                   For example storm surges, climate  
26 change, earthquakes, are those factors that could affect the

1 Project and are they maybe consequences for our valued  
2 environmental components?

3 We also stopped at just looking at  
4 regular operations. We also asked ourselves what are the  
5 potential accidents and malfunctions that are associated  
6 with this operation, and are there consequences for the  
7 marine environment and the terrestrial environment?

8 Thinking about things like grounding of  
9 the vessel, fuel spills, on-land fuel spills within the  
10 marine environment, what are the consequences?

11 We also did not just look at the Project  
12 in isolation. This is a bit in line of the ecosystem  
13 approach.

14 Nothing exists in isolation. Everything  
15 is connected with everything else, so we looked at other  
16 projects in the area and what are the potential effects or  
17 cumulative effects between our project and future planned  
18 and reasonably foreseeable projects such as the LNG project  
19 proposed in the U.S. or the Canaport proposal from Irving in  
20 Saint John.

21 Huge area, so I cannot go into much  
22 detail, but let me say this, the mitigative measures related  
23 to the effects of the environment on the Project, the  
24 mitigative measures related to the malfunctions and  
25 accidents and the cumulative effects include such things as  
26 the detailed design that will be based on the anticipated

1 environmental conditions.

2                   It will include mitigative measures that  
3 include emergency-response plans and spill-prevention plans,  
4 and it includes for the cumulative effects all the  
5 mitigative measures that I explained to you earlier in the  
6 context of our direct effect.

7                   The conclusion for these three  
8 evaluations is that no significant residual adverse effects  
9 are likely to occur.

10                   So again, you realize that  
11 "significance" is a term that I keep using. As I mentioned,  
12 at the end of the day, the environmental assessment is  
13 supposed to determine exactly that, are the effects going to  
14 be significant or not.

15                   As far as the malfunctions and the  
16 accidents are concerned, there's a supportive comment here  
17 from the NSDEL - Pollution and Prevention Branch, and I'm  
18 reading it to you:

19                   "Overall, the Proponent's plan appears  
20 to have anticipated and designed  
21 adequate mitigative measures to address  
22 most potential concerns related to areas  
23 within the P2 mandate."

24                   Okay. What is the P2 mandate? It is  
25 related to the responsibilities for hazardous substances,  
26 environmental emergencies and pollution.

1                   So we feel that the mitigative measures  
2 that we have developed, obviously we were on the right track  
3 here and we have the support of the NSDEL for our  
4 suggestions.

5                   This takes me to the last component of  
6 my presentation, the summary and the conclusion of the  
7 environmental assessment.

8                   Let me review. We have a project  
9 proposal that represents a state of the art modern  
10 operation. It includes extensive environmental management  
11 and protection features. I mentioned several times for  
12 example the enclosures that will be used.

13                   The project site. The project site has  
14 some previous disturbances. There is a pit and quarry  
15 activity on the site and part of the forest cover has been  
16 clear cut.

17                   The vegetation on the site and the  
18 habitat is very typical for the region, these kinds of  
19 habitats extending way beyond the project site.

20                   There's terrestrial habitat of concern,  
21 but that terrestrial habitat of concern is all contained  
22 within the preservation zone.

23                   There's a North Atlantic Right Whale  
24 Conservation Area, but the project site and the navigation  
25 associated with the transport component will take place  
26 outside of this conservation area.

1                   The effects assessment that has been  
2 undertaken is based on a very extensive baseline study.  
3 This is probably one of the best understood quarries in Nova  
4 Scotia.

5                   There have been comprehensive analysis,  
6 including direct effects, pathways, cumulative effects and  
7 we've done extensive modelling, very importantly, based on  
8 very conservative model assumptions.

9                   There's been an extensive set of  
10 mitigation and monitoring established which takes the  
11 precautionary principle into account.

12                   So we conclude that there are effects,  
13 there are adverse effects, but the Project is not likely to  
14 cause significant residual adverse effects.

15                   All effects that are predicted would  
16 stay, where applicable, within regulatory guidelines and  
17 standards.

18                   The residual adverse effects are  
19 generally small scale, localized, infrequent and for the  
20 most part reversible.

21                   The environmental assessment also  
22 identified beneficial effects. The beneficial effects are  
23 related to the socio-economic environment, and it involves  
24 such things as new employment and training opportunities,  
25 contribution to the tax base, a diversification of the local  
26 economy and future development opportunities once the



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1 Project is coming to an end.

2 Also, we see beneficial effects related  
3 to the terrestrial environment. There is a potential for  
4 new terrestrial wetland and forest habitat development not  
5 only on-site, but also beyond the site, on Bilcon-owned  
6 properties.

7 Bilcon is committed to a comprehensive  
8 set of mitigation measures, many of them I mentioned before.  
9 I will run through it here again.

10 There is noise reduction, dust control,  
11 water recycling, incremental reclamation, fish habitat  
12 compensation, environmental preservation zones, setback  
13 distances, the reduced vessel speed and the environmental  
14 management plan.

15 Bilcon is also committed to a  
16 comprehensive monetary program involving such things as  
17 noise level monitoring at the property boundary, noise level  
18 monitoring in the underwater environment, monitoring of dust  
19 levels, monitoring of water discharge quality.

20 Also, on-site water wells will be  
21 monitored as far as quality and quantity is concerned.  
22 Presence of mammals and waterbirds will be monitored. Plant  
23 species at risk and also the potential or the actual  
24 propagation of invasive species will be monitored.

25 We don't want invasive species to  
26 interfere with our habitat development objectives.

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1                   Bilcon is also committed to an adaptive  
2 management approach, which is reflected in a specific  
3 management structure and the frequent and immediate review  
4 of project performance as monitoring results come in.

5                   Bilcon is committed to a continued  
6 public involvement which will happen through the Community  
7 Liaison Committee, and is also committed to running a  
8 complaint record and also implementing an expeditious  
9 response mechanism.

10                  Bilcon is also committed to compensation  
11 policies. Should, nevertheless, despite all the mitigation,  
12 problems arise around domestic water supply or problems with  
13 fishing gear, Bilcon is committed to a compensation in both  
14 of those areas.

15                  The Environmental Management Plan will  
16 assure that all these things happen. It's a very important  
17 plan and will establish rules and responsibilities and will  
18 establish the monitoring plans. It will establish the  
19 environmental inspections and the audits, who does what,  
20 when, and how frequent, et cetera.

21                  It will also establish the contingency  
22 and emergency response plans and the training and education  
23 that will have to take place on an ongoing basis. And it  
24 will also, very important factor, establish the  
25 communication and the reporting, the reporting of monitoring  
26 results and the reporting of environmental performance.

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1                   With this, I would like to complete my  
2 presentation. We think that the step forward from here is  
3 towards sustainable economic development.

4                   Once the environmental assessment is  
5 approved, we could move on into the next stage, the detailed  
6 design and engineering phase.

7                   We could move into the implementation of  
8 additional studies and follow-up activities and apply for  
9 permits and approvals and, once those have been received,  
10 the tendering process can be initiated. People can be hired  
11 and the Project can move into the realization phase.

12                   All that will take place with ongoing  
13 public consultation and, in five years... in Year 5, the  
14 first step towards reclamation could be undertaken. Thank  
15 you very much.

16                   Mr. PAUL BUXTON: Thank you, Mr.  
17 Wittkugel. Mr. Chair, that concludes our presentation on  
18 effects assessment.

1

2

THE CHAIRPERSON: Thank you, Mr.

3

Wittkugel.

4

This is a natural place for us to break. I suggest we take

5

15 minutes, and then resume following that.

6

--- Recess at 10:45 a.m.

7

--- Upon resuming at 10:52 a.m.

8

THE CHAIRPERSON: Ladies and gentlemen,

9

we'd like to resume the session.

**EXAMINATION BY THE PANEL - Ms. JILL GRANT**

11

Ms. JILL GRANT: I'd like to begin by

12

making a few clarifications, if we might, just so that we

13

have a very clear idea of what the project is so that we

14

understand its effects.

15

There are a couple of...just a couple of

16

little differences in the presentation from what is in some

17

of the documents and we would just like to get those cleared

18

up, if we could.

19

The first was about the speed of the

20

ship leaving the designated lanes. I notice in the

21

presentation that it indicated the maximum speed of 12

22

knots, but in the material that was received in response to

23

the Information Requests, in some places it says a maximum

24

speed of 10 knots outside of the lanes, in some places a

25

maximum speed of 12 knots.

26

So can you just clarify, is 12 knots the

EXAMINATION BY THE PANEL  
(MS JILL GRANT)

1 definitive amount that is the maximum speed?

2 Mr. PAUL BUXTON: Yes, and thank you.

3 Our commitment is to a speed of less than 12 knots. We  
4 understand in talking to various shippers that they have  
5 looked at the plans sent to them with respect to the route  
6 and the distance off the shipping lanes, and it's their view  
7 that, in fact, they would be less than 12 knots.

8 They've got to get down to 0 knots in a  
9 fairly short period of time, and we understand from them  
10 that they would almost certainly be less than that, and some  
11 have said, we think, 10 knots, some have said 9 knots.

12 But we are committing to a speed of less  
13 than 12 knots, and that would be in a contract with the  
14 shipper because our literature search leads us to believe  
15 that the incidence of mortality or serious injury to whales  
16 occurs at speeds of greater than 14 knots, so we want to  
17 make sure that we are well below that level.

18 Ms. JILL GRANT: Thank you.

19 The next clarification is about the list  
20 of commitments that was presented. It had two elements of  
21 compensation that were presented on the list around wells  
22 and... But one of the items that was in the material  
23 received indicated a commitment to compensate for property  
24 values.

25 Has that commitment been withdrawn, or  
26 is that still part of the proposed project?

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1                   Mr. PAUL BUXTON: No. That commitment is  
2 still in place and should have been, perhaps, included in  
3 that. It is certainly clearly indicated as a commitment in  
4 the document.

5                   Ms. JILL GRANT: Thank you.

6                   The third item of clarification is about  
7 the outflow. The other day I asked you in the session about  
8 the outflow structure that could be used to stop flow, and  
9 you responded that it was not in any way, shape or form to  
10 stop the flow going out.

11                   However, in the supplemental material  
12 that we received in response to our Information Request from  
13 February 27<sup>th</sup>, on page 1112 of the first supplemental package  
14 that we received, it says:

15                                 "The control mechanism at the  
16                                 outlet structure will ensure that  
17                                 the discharges can be stopped in  
18                                 case of any malfunctioning in the  
19                                 ponds."

20                   Can you please clarify which of those  
21 answers is the intended project?

22                   Mr. PAUL BUXTON: I'm not quite sure what  
23 that was intended to convey. Certainly if there were some

EXAMINATION BY THE PANEL  
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1 minor malfunction in the pond system between the ponds,  
2 perhaps one could stop the water temporarily.

3                   The control structure would be a  
4 concrete structure, a Weir type structure, in fact, so that  
5 measurements could be taken and that we can take samples  
6 from the same place each time so that we have consistency,  
7 but it would have no real mechanism to hold up the water  
8 flow for any significant period of time.

9                   Ms. JILL GRANT: Thank you. And one  
10 final clarification about the Environmental Protection or  
11 Preservation Zone.

12                   There was a suggestion just made that  
13 all the rare plants would be included in the environmental  
14 preservation zone, but my recollection from the documents is  
15 that there was one plant, skunk cabbage or something, that  
16 was in the forest area that will be lost to the mining  
17 activity. Is that correct?

18                   Mr. PAUL BUXTON: That is correct. One  
19 finding of skunk cabbage was found on the site, and I'm not  
20 quite sure of its status. I'm not an expert as to precisely  
21 what the status of the skunk cabbage is, but I'm sure that  
22 if you would like that reviewed, Ruth Newell would be happy  
23 to clarify the status of the skunk cabbage.

24                   Would you, would you like me to ask her  
25 that?

26                   Ms. JILL GRANT: No. I was just trying

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1 to determine whether the suggestion that all of the rare  
2 plants were in the environmental preservation zone, whether  
3 in fact that was correct or not.

4 Mr. PAUL BUXTON: I think perhaps it lies  
5 in the definition of "rare", and I'm not sure that I can  
6 speak to that.

7 **EXAMINATION BY THE PANEL - THE CHAIRPERSON**

8 THE CHAIRPERSON: Mr. Buxton, I'd like to  
9 talk a little bit about scientific sampling, or the sampling  
10 approach that has been used. This is of some interest to  
11 us.

12 It was referred to earlier in Mr.  
13 Wittkugel's presentation, and the scientific sampling  
14 approach or the sampling approach which is referred to as  
15 the scientific approach is important because it produces  
16 information or data, and then that data, as you well know,  
17 is used in a number of different ways.

18 Some of the ways that the data has been  
19 used that you and your colleagues have collected have been  
20 to establish VECs to create baselines. I presume they're  
21 used in defining the pathways that exist in the ecosystem  
22 approach, but the ones that are mostly of interest to me are  
23 long-term monitoring.

24 I think that long-term monitoring  
25 makes... is addressed using some presumptions and as well as  
26 adaptive management, which you mentioned again this morning



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1 and which, as I said last time, you mention at least 140  
2 times in the EIS and various places.

3 So adaptive management, long-term  
4 monitoring are two things which are of considerable  
5 importance, and you have stressed them repeatedly. And they  
6 are based, to some extent, on the quality of the data that  
7 you have. That is, you have to have a sound baseline in  
8 order to make comparisons down the road.

9 You might say that that baseline  
10 information is a kind of lynchpin.

11 I would like to read something to you.  
12 This appears in Volume 4 of the EIS, and it's 6.7, and it's  
13 just one paragraph. It says:

14 "The overall approach to preparation of  
15 the Environmental Assessment Impact  
16 Statement is science based and uses  
17 scientific methods of investigation.  
18 The scientific research procedure  
19 included literature research and, most  
20 importantly, involved original on-site  
21 research. On-site research followed  
22 acceptable scientific methods of  
23 investigation and, in some cases,  
24 modelling of various environmental  
25 components. Research was also conducted  
26 through public consultation meetings,

EXAMINATION BY THE PANEL  
(THE CHAIRPERSON)

1 traditional community knowledge  
2 interviews, community surveys and  
3 community open- house meetings. Public  
4 involvement has been conducted by Bilcon  
5 and others during the past four years of  
6 the environmental assessment process."  
7

8 There are two elements in that paragraph  
9 that I would like to deal with. One is, I would like to  
10 have you clarify for me, you or your colleagues, clarify for  
11 me what the scientific method of investigation is.

12 What are "accepted scientific methods"?  
13 Can you define those for me?

14 Mr. PAUL BUXTON: I pass that question,  
15 first of all, perhaps, to Mr. Wittkugel, and then I'll  
16 confer with Mr. Kern and see if he can add further  
17 clarification.

18 Mr. UWE WITTKUGEL: I would think that  
19 that is certainly duveck(ph) specific or duveck (ph)  
20 dependent. There are certain ways of undertaking vegetation  
21 analysis for example. There's certain accepted,  
22 scientifically accepted ways of identifying rare species.

23 For example, when it comes to the rare  
24 species, we follow the prescribed approach or the approach  
25 prescribed by the Nova Scotia Department of Natural  
26 Resources, which starts at a 100 kilometre radius and slowly

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(THE CHAIRPERSON)

1 moves into a smaller scale.

2 Those are what we would think  
3 scientifically and professionally accepted methods. And  
4 each discipline, I would think, has a different approach.

5 Toward noise and air quality, the  
6 measurements taken around the site are again based on other  
7 principles that don't apply to, perhaps, other valued eco  
8 assessment components. So we could go through each one of  
9 them, but in general I would think the standard question is  
10 repeatable.

11 Is someone there that's going out doing  
12 the same exercise and arriving at the same results? Is it  
13 in line with the existing guidelines and specifications?  
14 That's the kind of standard the environmental assessment  
15 would tend to achieve.

16 THE CHAIRPERSON: Thank you, Mr.  
17 Wittkugel. Could I hear from Mr. Kerns, what he has to say?

18 Mr. DAVID KERN: I think I would follow  
19 what Mr. Wittkugel had to say in that each discipline would  
20 have their own set of scientific methods and standards that  
21 they would follow that are acceptable within their  
22 profession.

23 THE CHAIRPERSON: Is there anyone else  
24 with an opinion?

25 Mr. PAUL BUXTON: Excuse me. Perhaps...  
26 Would it shed any light if you asked a specific element and

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1 perhaps extrapolated from that?

2 THE CHAIRPERSON: What I'm addressing is  
3 the way in which data was collected and the statement within  
4 the EIS that it was collected according to scientific  
5 methods or the generally accepted format of science.

6 Has anyone in the group heard of the  
7 "scientific method"? The "scientific method", which is the  
8 accepted method whereby scientific research is carried out?

9 It's a well accepted, well agreed upon,  
10 widely used and generally it defines the way in which  
11 science is done. It involves observation, which you have  
12 done, analysis, hypothesis, testing, additional hypotheses,  
13 and a great deal of replication.

14 There is a well defined process which,  
15 as far as I can tell, doesn't warrant the paragraph that has  
16 been used over here because there hasn't been a scientific  
17 approach except in the sense of a rigorous observation.

18 Now, I'm not trying to say this to mince  
19 words or to...or to back you into a corner. What I'm saying  
20 is that a cornerstone to the process that you're involved in  
21 is the gathering of data of a certain level of  
22 respectability, a certain acceptable level which we would  
23 call the baseline level.

24 That baseline level, it would  
25 subsequently be used to monitor. It's the baseline against  
26 which monitoring is done. And in addition, adaptive

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1 management depends on baselines that are rigorously  
2 prescribed.

3 Now in your paragraph, you argue that  
4 that is what you've done, but neither one of the two  
5 individuals has given me what I consider to be an acceptable  
6 response.

7 Now, when you look at some of the data,  
8 for example, that has been collected, the floral survey, the  
9 faunal survey, the odonata survey, the coastal sediments,  
10 the benzoic sediments, the various photographs that have  
11 been taken, and you can even, if you wish, include some of  
12 the mammal surveys, all of these have been done by people  
13 who are competent, but they've done it in a relatively short  
14 window of time.

15 For example, if you go out and collect  
16 benzo and you collect 10 samples and the grab brings back 4  
17 or 5 samples, then what you have, in effect, is 4 or 5  
18 samples taken on one day. That's not replication. That  
19 doesn't lead to anything more than a spot sample.

20 It can be good data, but the question  
21 then becomes, is it adequate? Is it sufficient, in fact, to  
22 make comparisons with or is it sufficient to monitor  
23 against?

24 Well, scientific colleagues would say  
25 no. Now, the regulatory agencies might say: "Yes, it is an  
26 acceptable minimal level", but you are arguing in the EIS

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1 that you're attempting a higher standard. You're  
2 suggesting, in fact, that adaptive management is the process  
3 that you will be using, and I'm saying adaptive management  
4 requires a different set of standards.

5 So it seems to me that the... First of  
6 all, I believe that the paragraph which has been written  
7 here is not appropriate given the standards against which  
8 you're setting yourself. It may be acceptable within other  
9 standards.

10 Now the second part of that paragraph, I  
11 would like to raise the subject of public involvement, which  
12 we raised on Saturday.

13 Now it seems to me that we ended on  
14 Saturday with the view that public involvement was less than  
15 it could be. It seems to me, if I recollect exactly, it was  
16 something to the effect that: "We have an open door policy.  
17 We encourage people to come", but it doesn't necessarily  
18 engage the community to the full extent, perhaps, that CEAA  
19 would like.

20 I'd like to know where the public  
21 consultation, the traditional community knowledge and so  
22 forth is in your surveys. Can you point to specific cases  
23 where the knowledge about tides and currents and formal  
24 surveys and all the rest of it is?

25 Mr. PAUL BUXTON: Yes. I'm not quite  
26 sure that I would agree that that's where we left off

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1 yesterday.

2 THE CHAIRPERSON: Well, could you  
3 redefine where we are, then, with regard to public  
4 involvement?

5 Mr. PAUL BUXTON: Well, I think that my  
6 statement was on Saturday that we felt that we had done a  
7 very thorough public consultation process.

8 I can give you a specific example, and  
9 it concerns, for example, botanical surveys. We engaged  
10 Ruth Newell, who is well known in her field, to carry out  
11 the surveys. Nonetheless, a local person wrote to us and  
12 thought that there may be another rare plant on the site.  
13 And we encouraged her to come to the site and look for the  
14 plant.

15 In fact, we gave her a very small  
16 consulting contract to come onto the site and look for that  
17 plant. And she carried out a small research project,  
18 investigated the site, and completed a report to us  
19 indicating that she had not found the plant on-site.

20 So I think that wherever we have been  
21 able to engage the public, people who have shown specific  
22 interest in elements of the site, we have certainly welcomed  
23 them onto the site. We've welcomed their knowledge. We've  
24 used their knowledge throughout the process.

25 Mr. Wittkugel has another comment to add  
26 to that, if you wouldn't mind, Mr. Chair.

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1 THE CHAIRPERSON: Yes, please.

2 Mr. UWE WITTKUGEL: Yeah. I also... I  
3 would like to add that perhaps your interpretation, yeah, is  
4 incomplete or incorrect in the sense of the nature of the  
5 public consultation as was undertaken.

6 I would say that, for the most part, it  
7 was an active public consultation that reached out to the  
8 community, went way beyond what you just stated, that there  
9 was just a passive, open door policy. That was just one  
10 minor component of it.

11 There was a series of meetings with  
12 adequate notification. There was outreach in terms of  
13 approaching interest groups, and there were meetings  
14 together with the interest groups.

15 There was also a Community Liaison  
16 Committee in place. There were newsletters. Those are all  
17 indications for an active attempt, at least, to involve the  
18 community.

19 It's all been documented in your report,  
20 and the dates of notification, et cetera, can all be  
21 accessed. The surveys that I've mentioned and their  
22 presentation and also the traditional knowledge survey are  
23 examples for an active consultation and attempt to involve  
24 actively the community rather than just sitting back and  
25 saying: "The door is open. Please tell us what you want to  
26 do."



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1                   The project went way beyond that, and I  
2 would say in terms of the effort spent it is absolutely  
3 adequate and in line with what the environmental assessment  
4 process typically requires.

5                   THE CHAIRPERSON: It would seem to me  
6 that some...an area that would be conducive to public  
7 involvement in your project would be in the area of impact  
8 of the elements on the coast given that ship is an important  
9 part of this, the history of storms in the area, the  
10 seasonality of various kinds of effects, things like wind,  
11 tide and currents and distribution of mammals and so forth.

12                   You have interaction, public involvement  
13 in all those areas?

14                   Mr. UWE WITTKUGEL: As far as I know,  
15 there have been a number of meetings with fishermen that  
16 involved, in particular, aspects of navigation and concerns  
17 of interference as far as traffic patterns is concerned and  
18 patterns of where nets and traps are laid out.

19                   Those were aspects where the Proponent  
20 actively attempted to obtain information from the public.

21                   As far as information on the  
22 oceanographic data is concerned, the literature is based,  
23 oceanographic literature, on the Bay of Fundy  
24 characteristics, makes use of thousands of reports from  
25 ships, and is direct data from the 1800s up to nowadays that  
26 were compiled and basically built up today what the

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1 knowledge base is for the Bay of Fundy.

2 That is what Bilcon is using in its  
3 characterization of the existing environment, which I think  
4 is an excellent example of use of traditional knowledge and  
5 knowledge that has been collectively assembled over a period  
6 of about 100 years.

7 THE CHAIRPERSON: So is it... It's  
8 correct to say, then, that you're comfortable with the  
9 degree of traditional knowledge, local knowledge, that  
10 you've drawn into this process?

11 Mr. PAUL BUXTON: I think I...perhaps I  
12 could answer that one. And perhaps just to extend Mr.  
13 Wittkugel's comments, we have had a series of probably six  
14 or seven meetings with a sea urchin fisherman, for example,  
15 who fished directly off that coast with respect to the  
16 bottom, to tides, to waves, to currents, and current is  
17 important to sea urchin fishermen who dive for the sea  
18 urchins.

19 We have a series of discussions with  
20 another fisherman, who fished in the area until he retired  
21 about 10 years ago, who has been into the office on a number  
22 of occasions.

23 I personally have had discussions with a  
24 pilot who was the Bay of Fundy pilot in this area for, I  
25 think, just... The father before him was the pilot. He  
26 took over, I believe, in about 1950, and I think he was

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1 still active four or five years ago, so perhaps had 45  
2 years' pilotage experience in the area, brought every ship  
3 in during that period of time.

4 He also happened to be the MLA for Digby  
5 for a significant period of time.

6 I can perhaps give you another example  
7 where we have tried to use community knowledge in an  
8 investigation of the flora and fauna in the area over  
9 perhaps a more extended period of time.

10 We engaged a local lobster fisherman to  
11 go out on his boat and, using his knowledge in the  
12 identification of marine mammals and waterfowl... And he  
13 went to the same route, I believe, eight times. Maybe I  
14 could check that.

15 He made 10 trips over the course of the  
16 summer on the same route to try to get some baseline and  
17 background using his knowledge.

18 He was certainly... He was not only a  
19 lobster fisherman, but also a whale watch operator, and so  
20 he was able to help us with the specific areas where whale  
21 watch tours tend to go and congregate over the course of the  
22 whale-watch season.

23 So over a period of five years, we  
24 really think that we have had a very thorough background. I  
25 would say that some people did not want to consult with us  
26 on any level, did not want to bring their views to us, did

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1 not want us to in any way participate in the consultation  
2 process with them. There's somewhat little we can do about  
3 that.

4 The Tourism Association, which I believe  
5 represents Digby Neck, was written to, I should think,  
6 three, four, five times. We have documented records of  
7 that. And on all occasions, they refused to consult with  
8 us.

9 Nonetheless, we have consulted with  
10 specific tour operators on the Neck. We went down to Brier  
11 Island Lodge and consulted with the operators there, with  
12 the cottage development at Centreville.

13 We have had considerable ongoing  
14 discussions with them as to how they feel that it would  
15 affect the industry and, in fact, I think they're making a  
16 presentation to you on the 26<sup>th</sup>. So I think that we have put  
17 in a significant amount of outreach consultation.

18 THE CHAIRPERSON: Is it your view that  
19 the level of information that you have right now is adequate  
20 for the delineation of the ecosystem approach, that it's  
21 adequate for monitoring, it's adequate for adaptive  
22 management? That's your belief?

23 Mr. PAUL BUXTON: That is what I'm  
24 advised, but I will direct that question to Mr. Wittkugel as  
25 an expert in the field and have him respond to that.

26 Mr. UWE WITTKUGEL: The answer is yes.

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1 In my experience with environmental assessments, I can say  
2 that this project certainly exhibits a level of detail that  
3 is very high.

4 I've just recently been involved in  
5 another project, the Guysborough LNG tanker project, where a  
6 much more complex project is proposed involving a power  
7 plant, a chemical plant, LNG tanker terminal, and the level  
8 of information available on that project is much smaller  
9 than for this quarry site, which I think is a much easier,  
10 understandable project.

11 So in my experience over 24 years of  
12 environmental assessments with all sorts of infrastructure  
13 projects from power plants to waste management projects to  
14 transmission corridors, et cetera, I can say this project  
15 has a surprisingly high level of detail for what is  
16 proposed.

17 And is it adequate? I would say, yes,  
18 definitely from an environmental assessment perspective.  
19 What do we want to achieve here? We want to be able to say  
20 with reasonable certainty: "Do these activities that are  
21 proposed have an adverse effect? If yes, can these effects  
22 credibly be controlled within levels that are prescribed by  
23 government standards?"

24 And I would say we definitely feel very  
25 comfortable with the mitigation measures and the knowledge  
26 of the existing environment that exactly that can be

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1 achieved.

2 At the end of the day, this project can  
3 be managed and controlled within prescribed government  
4 standards and that, to me, is the measuring stick of whether  
5 the inventory has been adequate or not.

6 THE CHAIRPERSON: Does that confidence  
7 extend to adaptive management as well?

8 Mr. UWE WITTKUGEL: The adaptive  
9 management, to me, is a tool to deal with the remaining  
10 uncertainty that may be out there.

11 Mr. GUNTER MUECKE: Maybe to come back to  
12 the use of traditional knowledge and the Panel's concern  
13 here, you have just said or explained to us that you have  
14 accumulated a substantial amount of ecological information  
15 through public consultation.

16 I guess our concern arises from the fact  
17 that we have found it very difficult to identify where that  
18 contribution appears in the Environmental Impact Statement.  
19 It seems to be... Well, it seems to be almost hidden.  
20 Where should I look for it?

21 Mr. PAUL BUXTON: I think one of the  
22 places to look for it is the 57 individual interviews which  
23 are documented in one of the reference documents. I can't  
24 think of the number of the reference document at the moment,  
25 but there were 57 individual interviews.

26 They were precised, certainly, because

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1 many of the people who were interviewed did not want their  
2 names divulged. But nonetheless, we have detailed  
3 information from 57 specific interviews, and that is  
4 contained in one of the reference documents.

5 Mr. GUNTER MUECKE: I will certainly have  
6 another look at that, and particularly with respect to  
7 ecological information, so I may come back to that.

8 Following that line of questioning,  
9 maybe I can take you to some specifics here, specific  
10 instances.

11 And just to set the context, the fines  
12 that the operation is going to produce from the washing  
13 process are to be used for reclamation, for soil generation.

14 And if that is done, then their chemistry is of  
15 considerable interest and, in particular, the fact that the  
16 North Mountain basalts tend to have an elevated copper  
17 content.

18 To characterize the copper content, you  
19 provided us with six analyses in which the range of values  
20 is from 27 milligrams per kilogram to 230 milligrams per  
21 kilogram. That is a considerable range. The result of  
22 that, of course, is if you take an average, you get about  
23 100 milligrams per kilogram with a standard deviation of  
24 75.

25 Now, that makes the average rather  
26 uncertain. Can you provide me with a measure of the

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1 precision of that average that is a standard statistical  
2 practice? In other words, if I took another six samples  
3 from the cores, what is the likelihood that I would come up  
4 with the same average, or how much could that average  
5 deviate from the average that you have produced?

6                   Could you respond to that?

7                   Mr. PAUL BUXTON: I can't personally  
8 respond to it. That is not my field. However, that issue,  
9 I think, was addressed in one of the IRs by our Mr.  
10 Schupner. He is not here today, but he will be here.

11                   I think he's scheduled for Monday  
12 because we saw this as an issue that would come up under  
13 socio-economic under the health aspect, and we have  
14 scheduled him to be here on that day. And he has answered  
15 all the questions specific to the effect of copper on the  
16 environment or with respect to health aspects.

17                   And also, there was a very specific  
18 question in the comments and which we responded to which  
19 dealt with the adequacy of the number of results that we had  
20 produced.

21                   It would be, I think... I could read  
22 what he said, but I think if you had follow-up questions it  
23 would be more appropriate if he were here to answer the  
24 follow-up questions.

25                   Mr. GUNTER MUECKE: Okay. I'll keep that  
26 in mind. I've obviously read his...the comments to our



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1 response, and the reason I'm bringing this up because I find  
2 the response inadequate. So we'll get back to that.

3 But in terms of the fines, which is the  
4 residue from the crushing and screening operations, what  
5 percentage of the rock volume ends up as fines that have to  
6 be disposed of?

7 Mr. PAUL BUXTON: We are assuming that  
8 the fines from the wash operation will be about 3 to 4 per  
9 cent of the total volume.

10 Mr. GUNTER MUECKE: Well, when I read the  
11 CLC minutes, it was 7 per cent.

12 Mr. PAUL BUXTON: That may have been  
13 before we did further crushing samples to determine... We  
14 would certainly hope it was not 7 per cent because, although  
15 that material is used for site reclamation and so has some  
16 value, we now believe that it would be less than that.

17 Mr. GUNTER MUECKE: Well, I made a site  
18 visit to Glensander, which is a very similar operation to  
19 yours in terms of the screening, crushing operations. And  
20 the figure there I was given was 15 per cent, so I have a  
21 series of numbers here. Three to four, you're telling me.  
22 Prior to that it was seven. It now is 15 per cent.

23 Can you provide me either with  
24 references so I can resolve this discrepancy, or could you  
25 provide us with the tests that have been done that lead you  
26 to believe that 3 to 4 per cent is the amount of fines that

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1 will be produced?

2 Mr. PAUL BUXTON: I think it really  
3 depends here what you're referring to as "fines" and what  
4 your other operation is producing.

5 What would be referred to as "fines" at  
6 other operations we may very well refer to as "grits" which,  
7 in fact, we will be stockpiling and shipping because we use  
8 that fraction in the manufacture of concrete block.

9 So what we're referring to is the very  
10 fine powder material, if you like, which will be pumped up  
11 out of the high rate thickener up into the sediment area.  
12 We do anticipate using the grits as a product.

13 Mr. GUNTER MUECKE: Okay. And I'd like  
14 to be a bit more specific, okay, because what are you  
15 referring to when you refer to "grits"? Down to which grain  
16 size?

17 Mr. PAUL BUXTON: I'm going to ask Mr.  
18 Wall, who would be the Operations Manager, to talk about the  
19 sizes of aggregates that will be produced.

20 Mr. JOHN WALL: The fines will be 100 per  
21 cent minus 200... No, excuse me. 100 per cent minus 140  
22 mesh, 95 per cent minus 200 mesh.

23 Mr. GUNTER MUECKE: Thank you for that.  
24 Just a second. Okay. So in terms of stockpiling this  
25 material, we have material here which is larger than minus  
26 140 mesh size, right?

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1                   Mr. JOHN WALL: We're planning to produce  
2 five sizes: inch by half, half by three-eighths, three-  
3 eighths by quarter, then quarter by eighth, and sand.  
4 Anything that does not fall into the C-33 gradation of sand  
5 - that's ASTM-C-33 - will be rejected, and that will 100 per  
6 cent minus 140, 95 per cent minus 200 mesh.

7                   Mr. GUNTER MUECKE: Coming back to the  
8 percentage of fines, we seem to have a bit of a problem  
9 here. Could I ask you for an undertaking to provide us with  
10 either evidence or reference material to substantiate the  
11 value of 3 to 4 per cent?

12                   Mr. PAUL BUXTON: Yes.

13                   Mr. GUNTER MUECKE: Yeah, and if you  
14 take the value of 3 to 4 per cent, it's fairly easy to  
15 calculate the amount of fines that will eventually  
16 accumulate over the 50-year lifetime of the quarry, and my  
17 question is what percentage of that will be used for  
18 reclamation and also what percentage will have to be left  
19 on-site as a storage pile?

20                   Mr. PAUL BUXTON: We would anticipate  
21 that it would all be used in the reclamation process.

22                   Mr. GUNTER MUECKE: I am a quantitative  
23 type of person. The amount that you're going to generate is  
24 very substantial, even at three to four per cent. You also  
25 have stripped the property of the till cover and the soil  
26 cover, and you are not reclaiming the total area of the

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1 quarry.

2 I really would like to see some  
3 quantities involved over the lifetime, because I find it  
4 hard to reconcile that all the sediment that has been  
5 disposed - I'll call it the fines, just for simplicity -  
6 that all the fines could possibly be used for that purpose.

7 So perhaps you could, again, in the form  
8 of a... Provide us with some quantitative numbers, okay,  
9 that reassure me that this is the case; that you can  
10 actually use all of that material.

11 Mr. PAUL BUXTON: Yes, we'll provide that  
12 information.

13 Mr. GUNTER MUECKE: Now, switching over  
14 to another track here, looking at the terrestrial fauna  
15 surveys, these were carried out for four days in June one  
16 year, and I guess I would like to have some indication how  
17 this would cover species that may only be at the site during  
18 particular times of year, and how this fits into the  
19 ecosystem approach where we have the temporal dimension to  
20 deal with. I think I mentioned that on Saturday.

21 And how is a... Four days is basically  
22 a point in time, in the context of 50 years, certainly, and  
23 how does sampling four days in one month, one year,  
24 constitute the... How does it reflect the ecosystem  
25 approach?

26 Mr. PAUL BUXTON: Could you perhaps be

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1 more specific? I'm sorry, I missed a little bit of that,  
2 and I didn't catch the particular survey that you were  
3 referencing that was four days.

4 Mr. GUNTER MUECKE: The terrestrial fauna  
5 survey.

6 Mr. PAUL BUXTON: Thank you. Mr.  
7 Alliston will answer that question, thank you.

8 Mr. GEORGE ALLISTON: The surveys were  
9 carried out for terrestrial fauna on a two-year basis. They  
10 were carried out for four days in 2002, another two days in  
11 2004. We were looking... Of course, the approach that we  
12 had taken was to try and define what the valued  
13 environmental components would be in the fauna and go to the  
14 site at a time when we might find these.

15 Several of these, well many of these  
16 species were bird species, so we went at a time when birds  
17 would be there, and breeding. There's no indication of  
18 migratory mammal species using the property other than that.

19 So it was with this in mind, trying to identify VECs, that  
20 we went and spent out time at the property during the months  
21 of June 2002, 2004.

22 We relied on other information, say for  
23 migratory birds, there has been migratory bird studies going  
24 on, on Brier Island, for over 25 years. We attempted to  
25 take advantage of that information, knowing that land birds  
26 would migrate that were at Brier Island, would follow the

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1 Digby Neck and would go through that part of, if not  
2 necessarily the property itself, the areas adjacent to the  
3 property. So we attempted to use information for migratory  
4 birds from information that already existed.

5 Similarly with, and this is getting into  
6 the marine environment, but we also used information on  
7 winter use of the adjacent areas by water fowl, as was  
8 collected by surveys conducted by the Department of Natural  
9 Resources over a period of - from 1992 to 2000.

10 So it was a combination of both our own  
11 fieldwork and information collected by other agencies that  
12 we attempted to put together and get a grasp on the fauna  
13 using the property.

14 Mr. GUNTER MUECKE: Maybe I'm under the  
15 wrong impression here on one point. You say there were in  
16 fact two years of surveying. My understanding from the  
17 documents is that nesting birds were surveyed twice, but in  
18 terms of amphibians, mammals and so on, it occurred only  
19 once. Correct me on that, if I'm wrong.

20 Mr. GEORGE ALLISTON: That's correct.  
21 The second survey was primarily directed at breeding birds,  
22 although we did, on a casual basis, observe other species.  
23 But its main function was to document breeding birds.

24 Mr. GUNTER MUECKE: In terms of migratory  
25 birds and their use of the property as staging and so on,  
26 it's based on extrapolation from Brier Island, is that

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1 right?

2 Mr. GEORGE ALLISTON: Yes. The species  
3 that would pass through there is based on extrapolation from  
4 what has been observed on Brier Island, and of course just a  
5 comparison of the habitat that exists there.

6 Mr. GUNTER MUECKE: Is the habitat  
7 identical on Brier Island?

8 Mr. GEORGE ALLISTON: Not identical. I  
9 think there is a little more diversity on Brier Island than  
10 there is at this particular site, but the same elements  
11 occur on Brier Island that occur at the site.

12 Mr. GUNTER MUECKE: Many thanks.

13 THE CHAIRPERSON: I'd like to take us in  
14 a slightly different direction now. I'd like to ask you  
15 with regard to your definition of "significance", as in  
16 significant adverse environmental effects.

17 You state categorically in the EIS that  
18 you define "significance" as those items which are regional  
19 or greater in their impact. Could you lead us through the  
20 thinking as to how you arrived at that conclusion?

21 Mr. PAUL BUXTON: Thank you, Mr.  
22 Chairman. I'm going to ask Mr. Wittkugel to respond to that  
23 question.

24 Mr. UWE WITTKUGEL: Yes, that's correct.  
25 The geographic extent of the impact, or the adverse effect  
26 of the environmental change, is one of the criteria that the

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1 guidelines applies in establishing significance.

2                   So for every valued environmental  
3 component, it's again a question of what is a large area  
4 that is affected, what is a small area that is affected.

5                   For noise and dust, for example, we know  
6 that guidelines apply to anything beyond the project site  
7 boundary. Others, for bats for example, mammals on-site,  
8 the question is what will be a large geographic extent  
9 affected.

10                   We know that there is plenty of foraging  
11 habitat in the surrounding area, so what's in this case the  
12 magnitude in terms of the geographic extent of the effect is  
13 really limited to the footprint of the actual project  
14 itself, because it may take potential foraging habit out of  
15 the [inaudible - loud noise].

16                   So any extent of the effect has to be  
17 discussed for each individual value to ecosystem component  
18 separately.

19                   THE CHAIRPERSON: The statement in the  
20 EIS is categorical. It simply says it can't be significant  
21 unless it's regional or broader. Does that mean that there  
22 is no place, there is no situation, where local... that  
23 anything could be significant if it were local?

24                   Mr. CARLOS JOHANSEN: Well for example,  
25 rare plants, if you have only one individual or only one



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1 single population within your site boundaries, or within the  
2 zone of influence of your project, that could be a very  
3 significant effect for that specific population on the site,  
4 but also in terms of its implications on regional and even  
5 provincial and maybe even national level, depending on what  
6 conservation status that the plant has.

7 THE CHAIRPERSON: You are aware that the  
8 size of the study area has an adverse effect on  
9 significance?

10 MR. CARLOS JOHANSEN: The study area also  
11 I think depends on the valued ecosystem component. The  
12 whales, for example, we took the whole Bay of Fundy into  
13 account, what whales are here, because they were migrating  
14 through the entire bay. The inner Bay Fundy salmon, another  
15 example, although highly unlikely to be near our project  
16 site, nevertheless it was taken into account and shows that  
17 the study area in this case was much larger.

18 THE CHAIRPERSON: Thank you. Jill?

19 Ms. JILL GRANT: We have a series of  
20 questions around the endangered plants and the environmental  
21 preservation zone that I'd like to have some clarification  
22 on. I wonder if you could briefly clarify the function and  
23 purpose of the environmental preservation zone?

24 In some places it's talked about as a  
25 buffer, and in others as a conservation, its primary focus  
26 being conservation. So I'd like to have some clarification

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1 on that, please.

2 Mr. PAUL BUXTON: Yes, thank you. Mr.  
3 Kern will speak to that question.

4 Mr. DAVID KERN: The intent of the  
5 environmental preservation zone is to provide a buffer, and  
6 it would be considered a multi-purpose zone. It may  
7 function for aesthetic purposes, it may function as a  
8 continuation of wildlife and plant species. It contains the  
9 primary habitats for the species at risk that we've  
10 identified on the project site. It will be managed from a  
11 forestry habitat systems approach.

12 Ms. JILL GRANT: Thank you. Can you  
13 clarify why 30 metres?

14 Mr. DAVID KERN: I'm sorry, I didn't  
15 catch the question.

16 Ms. JILL GRANT: Why 30 metres? Why is  
17 30 metres used as the size of the zone, in many places?

18 Mr. DAVID KERN: The 30-metre dimension  
19 is basically that prescribed by the Nova Scotia Department  
20 of Environment in their pit inquiry guidelines as a minimum.  
21 In many cases, along the coastal zone, in the coastal bog  
22 area, in the Glaucous Rattlesnake route area, in the  
23 Sandwort area, this buffer is much larger than the 30  
24 metres, and it also... The size of the environmental

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1 preservation zone varies with drainage patterns, especially  
2 in the coastal bog area.

3                   So this was a minimum that was  
4 identified in the Pit and Quarry guidelines that we used,  
5 and we expanded it when we encountered steep terrain and  
6 sensitive habitats and other unusual features on the site.

7                   Ms. JILL GRANT: What are the perceived  
8 risks to the environmental preservation zone from activities  
9 in the Project, especially I mean if we could start with the  
10 construction phase, and then move on.

11                   Mr. PAUL BUXTON: I'm sorry, I didn't  
12 quite get that question.

13                   Ms. JILL GRANT: What are the perceived  
14 risks to the environmental preservation zone, starting with  
15 the construction activities? What are the kinds of threats  
16 or effects that the project would have on the preservation  
17 zone?

18                   Mr. PAUL BUXTON: Thank you. Mr. Kern  
19 will address that.

20                   Mr. DAVID KERN: You alluded to a  
21 potential effect, on Saturday, of the conveyor for the ship  
22 loader transecting the environmental preservation zone.

23                   The intent there is that the conveyor  
24 would be elevated, and in that particular area it's mostly  
25 coastal plain, so we would not be cutting through a forested  
26 environmental preservation zone in that area. We would be

1 going over top of the coastal plain.

2                   The footings for that particular  
3 conveyor would be approximately 35 metres apart, so we have  
4 a good opportunity to span and not directly impact that  
5 environmental preservation zone in the ship loading conveyor  
6 area.

7                   There will be an access road that would  
8 come through the environmental preservation area, whether  
9 it's the existing Whites Cove Road or a new access road to  
10 the quarry compound area. The overall intent of the  
11 preservation zone is to maintain it without any influences  
12 that would disturb the integrity of it.

13                   Ms. JILL GRANT: With 65 to 80 people on  
14 the site during the construction activity, that's the number  
15 of workers that are anticipated, what measures would be  
16 taken to protect the environmental preservation zone from  
17 inadvertent trampling or other activities?

18                   Mr. PAUL BUXTON: I think I can address  
19 that one. It will be addressed, along with other issues,  
20 such as the possibility of finding archaeological remains,  
21 et cetera, through training programs.

22                   People will be clearly advised, trained,  
23 as to what they can and cannot do on the site, what they do  
24 if they find something. So it will be addressed with very  
25 thorough training programs.

26                   Ms. JILL GRANT: Thank you. Obviously

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1 the activities on the site are going to significantly alter  
2 the drainage, and some of these endangered plants may be in  
3 areas where they currently get a fair bit of overland  
4 drainage. Some of the watershed is going to be affected.

5 So what are the anticipated effects of  
6 the change in drainage patterns on these plants?

7 Mr. PAUL BUXTON: Yes, Mr. Kern will  
8 address that question. Thank you.

9 Mr. DAVID KERN: We are in the process  
10 of coordinating the protection of the endangered plant  
11 species with the Nova Scotia Department of Natural  
12 Resources. They are suggesting, based especially where the  
13 Sandwort is located, that it is mostly on a coastal plain,  
14 that to define a watershed for that particular area would be  
15 an exercise that would be done as soon as possible,  
16 certainly before any quarry or any activity in that area  
17 would take place.

18 So during this time period, we would be  
19 identifying, through intensive site monitoring, thresholds  
20 that may exist for the Glaucous Rattlesnake route and the  
21 Sandwort populations that exist on the site.

22 At this point in time, we cannot say  
23 with certainty how much a disruption of a surrounding area  
24 would be on the particular plant populations.

25 Ms. JILL GRANT: And what about the  
26 effects of fugitive dust? Even the best conditions, some

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1 dust will escape, or during construction there may be dust  
2 generated by construction activities. So what are the  
3 anticipated effects of dust on these plants?

4 Mr. PAUL BUXTON: I can speak to the  
5 control, and you are right that during construction,  
6 probably an 18-month period, there's more chance of fugitive  
7 dust than there is during the operational phase.

8 Certainly, we would make every attempt  
9 to keep all the roads dampened down, any area where dust is  
10 being created dampened down with water trucks, sprays, et  
11 cetera. But I will turn to my colleagues and see if they  
12 can answer the second part of your question, perhaps, and  
13 that is what could the effect be.

14 Mr. UWE WITTKUGEL: Perhaps first a very  
15 generic response. If any effect would occur, it would be  
16 very temporary. I mean, that is something that would be  
17 washed off the leaf surface. Or if it has any effect in  
18 terms of reduced productivity by the plant, it would be  
19 very, very temporary and could not be considered a  
20 significant effect.

21 We had similar questions like that in  
22 context of other projects, environmental management or waste  
23 management projects, where there is typically a huge amount  
24 of dust. And there are literature sources out there that  
25 study the effects of dust effects in the vicinity of cement  
26 plants which have tremendous dust, and I can tell you that

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1 the levels are so incredibly high before you would arrive at  
2 measurable, observable effects on plant life that I am  
3 absolutely certain that we are not even near any of those  
4 levels.

5 So I would think it's an effect that is,  
6 first of all, temporary, and secondly, it would take place  
7 at a level that is probably not even measurable or  
8 observable.

9 Ms. JILL GRANT: What about the  
10 anticipated effects of wind? We know that when areas are  
11 cut, there's a potential for a great deal of wind damage,  
12 and especially, for example, on the road that's going to be  
13 left if that ends up in elevated position. There may be  
14 significant problems there.

15 So what effects do you anticipate from  
16 wind damage once these buffer zones are created?

17 Mr. PAUL BUXTON: Mr. Kern will answer  
18 that question. Thank you.

19 Mr. DAVID KERN: It's quite interesting  
20 that you ask that question, because we just received a  
21 comment from I believe Natural Resources Canada concerning  
22 that, and the width of the buffer zones.

23 Regarding the Whites Cove Road, we  
24 believe that the total buffer remaining in trees would act  
25 to dissipate the wind, rather than a very narrow buffer of  
26 just the 30 metres.

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1                   So in total, the buffer zone on the  
2 Whites Cove Road, if it is a 66-foot right-of-way as we are  
3 led to believe it may be by the Nova Scotia Department of  
4 Transportation, and we add 30 metres on either side of that,  
5 we're into a wider buffer zone than just a narrow strip of  
6 30 metres.

7                   So there will be some blow-down, yes.  
8 And there is actually, as you've seen on the site, a  
9 considerable amount of blow-down and dead trees at the  
10 present time. That will continue.

11                  Ms. JILL GRANT: My last question is one  
12 about the ecosystem approach, again. With the number of  
13 potential stresses on these endangered...on the zones that  
14 contain endangered species, how likely is it that these have  
15 a chance of being able to survive and thrive in a  
16 sustainable way? That's a combination of dust and wind,  
17 water, changes to the water regime, potential for trampling  
18 and so on.

19                  Mr. PAUL BUXTON: Ruth Newell will speak  
20 to that. Thank you.

21                  Ms. RUTH NEWELL: I'm not sure I can  
22 answer with a great deal of certainty, but these are plants,  
23 most of these are plants occurring in very exposed habitats,  
24 and a lot of stresses are on them already, and they are  
25 probably all ready to cope with some stress or perhaps extra  
26 stress.



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1                   And I think, through the monitoring and  
2 with the environmental protection zone, they do stand a  
3 fairly good chance. I'm not sure if there...

4                   Ms. JILL GRANT: Thank you.

5                   Mr. PAUL BUXTON: Mr. Wittkugel would  
6 like to add to that, if he may.

7                   Mr. UWE WITTKUGEL: Just maybe from my  
8 perspective, one other stress factor is, as you mentioned,  
9 trampling, and there's perhaps... There is perhaps dust.

10                  Dust, as we said, is a very temporary  
11 stressor and at a level that it does not affect, measurable  
12 or observably, the plant life.

13                  As far as trampling is concerned, I  
14 don't see any reason why any of the workers on-site should  
15 walk through that preservation zone.

16                  As Paul Buxton outlined, there will be  
17 an operational plan. There will be training in place.  
18 There is no foreseeable reason why walkers would, on a  
19 regular basis, walk into the preservation zone. So from my  
20 perspective, the stress level that is added onto the plant  
21 species is basically zero.

22                  Ms. JILL GRANT: One final question on  
23 this. If the monitoring on this shows that the plants are  
24 suffering, the numbers declining, the health of them or so  
25 on, what actions will be taken?

26                  Mr. DAVID KERN: I know we've mentioned

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1 adaptive management several times. If the monitoring starts  
2 to show some degradation in the populations, we would  
3 identify what that particular degradation was, and then we  
4 would take... Our first choice would be to take an adaptive  
5 management procedure to try to correct that. If it's a  
6 simple thing to do, it may be achieved easily.

7                   If it's a more severe thing that is  
8 happening... And as Ruth has mentioned, the plant  
9 communities along the coast there are extremely stressed,  
10 whether it be with salt spray or other, and they have  
11 survived there.

12                   And only certain types of plants are  
13 surviving there. So we believe that there's a good chance  
14 that these rare plants will continue to survive with the  
15 appropriate setbacks with the quarry operation in place.

16                   Ms. JILL GRANT: The Project, though, is  
17 introducing different kinds of stress than what the plants  
18 are currently exposed to, so there's still a question about

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1 what that adaptive management approach might result in, in  
2 terms of action.

3 So if you could give an example of an  
4 action that might result, that would be helpful.

5 Mr. DAVID KERN: I guess one action  
6 could be supplemental water washing foliage during a  
7 heavy...if there was a dust accident or whatever it may be  
8 called. There could be barriers erected, for that matter;  
9 structural measures taken to protect the plants.

10 One of the things is that prevailing  
11 winds are, most of the time, from the coastal area, and  
12 these tend to provide a natural buffering, you might say, of  
13 the plant communities by having things blown away from the  
14 plants, rather than towards the plants.

15 So I think there are several structural  
16 and operational type measures that could be implemented, if  
17 we identify specific causes of any decline in the  
18 populations.

19 Mr. GUNTER MUECKE: Very briefly, to get  
20 back to the rationale of the 30 metres for the preservation  
21 zone. You explained to us that this is the minimum  
22 requirement by the **Pit and Quarry Act** for Nova Scotia.

23 Now correct me here, but my  
24 understanding is that that width of buffer, the intention is  
25 to apply it to streams and lakes inland. How appropriate is  
26 the 30 metres in a coastal environment, along a coastal

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1 strip?

2 Mr. PAUL BUXTON: Mr. Kern will address  
3 that question. Mr. DAVID KERN: Along the coastal zone

4 of the Bay of Fundy, the buffer strip has, as I said, in  
5 many cases been expanded to be greater than that, especially  
6 in the area of the Sandwort populations of plants, and in  
7 the coastal bog area, and also in the headland where the  
8 Glaucous Rattlesnake route exists.

9 We believe, based on the present visual  
10 observations of the coastal zone, that this buffer seems to  
11 be adequate from the high tide line. That is a very  
12 stressed environment to begin with, and not... When you go  
13 back 50 metres from the ordinary high tide line, there isn't  
14 much existing there in the way of plant material. It is  
15 very limited types of plants growing there, and very hardy  
16 plants growing there.

17 And we will be monitoring the  
18 preservation zone and managing it, and if corrective actions  
19 are necessary, we would then take a look at how we can  
20 improve the situation.

21 I have no literature to say that a 30-  
22 metre buffer zone along the coastal zone is adequate or  
23 inadequate. In a coastal salt marsh, it may be a totally  
24 different situation than on an exposed basalt rock face  
25 along the Bay of Fundy coast.

26 Mr. GUNTER MUECKE: Okay. I accept, and

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1 I understood from before, you know, that this coastal strip,  
2 in terms of the buffer zone, varies in width. Okay? That's  
3 accepted.

4 But there are considerable stretches  
5 where it is, at the present time, 30 metres, and I... It  
6 would be very interesting to see some support in the  
7 literature from other jurisdictions that 30 metres is  
8 adequate.

9 And I'll just put to you that in Spain,  
10 for coastal quarries, and this is small quarries, not super-  
11 quarries, the buffer zone prescribed by law is of 200  
12 metres.

13 THE CHAIRPERSON: Ladies and gentlemen,  
14 I think we've reached the end of this session.

15 Mr. PAUL BUXTON: Mr. Chairman, sorry to  
16 interrupt. I wonder if I could do two things, because it  
17 may save time later.

18 One, I would like to make a comment on  
19 the skunk cabbage, since it was raised, and secondly, Dr.  
20 Muecke raised an issue with respect to copper and sampling,  
21 and perhaps I could deal with that one now, very quickly.  
22 It may be satisfactory, it may be not. Then Mr. Wittkugel  
23 will make a comment on the skunk cabbage. Would that be...?

24 THE CHAIRPERSON: Please, go ahead.

25 Mr. PAUL BUXTON: I read from the Natural  
26 Resources Canada's submission to the panel on the

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1 [inaudible] geo-chemistry of waste rocks, and this is by the  
2 NRCAN reviewer of the Can-Met (ph) Mining and Mineral  
3 Sciences Laboratories.

4 NRCAN review and conclusions:

5 "Upon reviewing the responses of Bilcon  
6 of Nova Scotia Corporation and its  
7 consultants to the question raised by  
8 the Joint Review Panel, and other  
9 authorities on the Whites Point Quarry  
10 and Marine Terminal Project at Digby  
11 Neck, Nova Scotia, it is apparent that  
12 the slightly elevated level of copper in  
13 the basalt to be processed, its  
14 leachability and potential impact on the  
15 local biota have become a matter of  
16 concern for the proposed project. The  
17 following remarks address a couple of  
18 key issues on the topic, based on  
19 NRCAN's expertise in this area."

20 One, and I think this addresses Dr.

21 Muecke's question:

22 "(1) Although the amount of geo-chemical  
23 data presented in the EIS is admittedly  
24 sparse, it is doubtful if more data  
25 would be necessary to determine if the  
26 leachability of the waste rock is a

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1 potential concern. In the first place,  
2 a high copper concentration in basalt  
3 does not necessarily correlate with its  
4 leachability.

5 Generally speaking, the form, such as  
6 sparingly soluble sulphides or readily  
7 soluble weathering products in which  
8 copper occurs in the basalt, has more  
9 influence on its leachability than its  
10 concentration.

11 This is clearly demonstrated by the  
12 results of the four samples subjected to  
13 the leach test. Moreover, the leach  
14 procedure involved the application of  
15 acidic acid to bring the leach pH down  
16 to a value of 4.9. Such a low pH will  
17 not be readily realized in a marine  
18 environment, and the test results can  
19 thus be considered as highly  
20 conservative.

21 NRCAN would tend to agree with the  
22 project Proponent that monthly  
23 monitoring of the dissolved copper in  
24 the water of the sediment ponds would  
25 better determine the mobilization of the  
26 contained copper in the basalt than more

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1 laboratory testing."

2 And perhaps I'll pass to Mr. Wittkugel  
3 to address the skunk cabbage question.

4 Mr. UWE WITTKUGEL: The question was  
5 whether the presentation was correct by stating that all  
6 plant species that I identified as rare are actually located  
7 within the preservation zone.

8 That statement is correct. When we take  
9 into account that rarity that the environmental assessment  
10 is taking into account, it's based on full lists, and that's  
11 the Federal Species at Risk List, the COSEWIC List, the Nova  
12 Scotia Endangered Species List, and the Nova Scotia General  
13 Species Ranks.

14 The last one, as far as the ranking of  
15 blue, red and yellow is concerned, the skunk cabbage is  
16 labelled green and therefore has not been taken into  
17 account, as per the guidelines by the Natural Resource  
18 Department.

19 THE CHAIRPERSON: Okay. If there's  
20 nothing else, then we'll break now and be back at ten  
21 minutes after one.

22 --- Recess at 12:00 p.m.

23 --- Upon resuming at 1:12 p.m.

24 THE CHAIRPERSON: Ladies and gentlemen,  
25 we're about to resume.

26 For the first order of business, Mr.



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1 Buxton, during this morning session you agreed, or the  
2 dialogue resulted in three undertakings. The first was the  
3 percentage of fines in the original basalt and the  
4 analytical evidence to support that. The second one was the  
5 numbers that show the total volume of fines generated over  
6 the life of the project, and the third was to provide a  
7 measure of the precision of the average copper content based  
8 on six samples.

9                                 There's nothing you have to do, but what I  
10 need for all three is a date. I need to append a date to  
11 each of these, so what do you think is a reasonable date  
12 that we can expect these back?

13 --- Pause

14                                 And it doesn't have to be the same date  
15 for all of them.

16                                 Mr. PAUL BUXTON: Mr. Chair, we think  
17 Tuesday for all three.

18                                 THE CHAIRPERSON: Tuesday?

19                                 Mr. PAUL BUXTON: For all three questions.

20                                 Ms. JOSEPHINE LOWRY: Not tomorrow.

21                                 THE CHAIRPERSON: Okay. Thank you.

22                                 Mr. PAUL BUXTON: Not tomorrow, but the  
23 next...

24                                 THE CHAIRPERSON: Yes, of course. Thank  
25 you. So that would be... What's today? 16, 17, 18, 25<sup>th</sup>.  
26 Okay. Thank you. Okay, we'll continue with questioning,

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1 and Dr. Muecke will go to the next one.

2 Mr. GUNTER MUECKE: Mr. Buxton, could I  
3 take you to greenhouse gases? In the guidelines, we asked  
4 Bilcon to give us an accounting of greenhouse gases  
5 generated during the operations. I'm talking about the  
6 accounting procedure, not... And that request specifically  
7 included transportation, both terrestrial and marine. When  
8 can we expect that information?

9 Mr. PAUL BUXTON: I think that we did  
10 include, did we not, estimates for transportation on land?

11 Mr. GUNTER MUECKE: It's the marine portion  
12 I'm really interested in.

13 Mr. PAUL BUXTON: We can respond with an  
14 answer for the ship on Tuesday.

15 Mr. GUNTER MUECKE: We take that as an  
16 undertaking then?

17 Mr. PAUL BUXTON: Yes.

18 Mr. JOHN WALL: Yes.

19 Mr. GUNTER MUECKE: Thank you.

20 Ms. JILL GRANT: I have a few questions  
21 around the wetlands on the site. The first one is about the  
22 coastal bog. Can you please give us some clarification  
23 about the change in drainage that will occur in the  
24 watershed to the bog?

25 Mr. PAUL BUXTON: Yes, thank you. I'm  
26 going to ask Mr. Kern to answer that question.

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1                   Mr. DAVID KERN: During a first phase of  
2 construction, a temporary rock storage area will be  
3 constructed within the watershed of the coastal bog, above  
4 the coastal bog, which would also contain sediment pond  
5 number five, after the temporary rock has been shipped.

6                   During the time that the site preparation  
7 goes on for the temporary rock storage area, water from the  
8 upper part of the watershed will be transferred to go  
9 through the coastal bog.

10                  The coastal bog is a typical sloping of  
11 bog. It is not a concave-type bog, so water runs by  
12 gradient through the bog. We would be monitoring the flow  
13 pre-project condition, seasonally, to determine the amount  
14 of flow that will sustain the bog.

15                  My personal observations are that water  
16 does not flow in the bog in August and September, but  
17 certainly there is flow at other times of the year.

18                  Ms. JILL GRANT: Am I right in  
19 understanding that the current conditions of the bog, as  
20 outlined in the assessment, suggests that it takes  
21 unconfined drainage, so it's just collecting drainage off of  
22 the slopes around it, and that the proposal is to change the  
23 nature of the water going into that to a point source?

24                  Mr. DAVID KERN: Not in totality. The...  
25 A good portion of the bog, around the bog itself will still  
26 have a watershed feeding the bog. A point source would come

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1 in where a drainageway flows into the bog at the present  
2 time.

3 Ms. JILL GRANT: My reading of the  
4 assessment seemed to suggest that there wasn't actually a  
5 stream where it's shown on the maps, but is that not  
6 correct; that there was no point source of a stream feeding  
7 in found in the ground survey?

8 Mr. DAVID KERN: There was a explanation of  
9 the stream that was shown on the topographic mapping as  
10 flowing into the coastal bog.

11 The site investigations that we did found  
12 that that stream was actually flowing out of an upper  
13 watershed pond off the quarry site, so that stream, as far  
14 as our site investigations go, is not existent. There are  
15 just small drainageways coming down the side of that  
16 particular watershed feeding the bog, and there's quite a  
17 few of those.

18 Ms. JILL GRANT: And can you clarify what  
19 effect it has to put a fairly substantial amount of water  
20 going in from a pipe into that bog, as a product of the  
21 change in the drainage of the watershed?

22 Mr. DAVID KERN: For the first few years,  
23 as I mentioned, we're going to establish a baseline flow,  
24 and that would be the type of flow we would maintain,  
25 similar to what is occurring there naturally through the  
26 period of disruption of the watershed of the bog.

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1                   Ms. JILL GRANT: You are maintaining the  
2 volume, but the pattern will substantially differ, am I  
3 right?

4                   Mr. DAVID KERN: The point discharge that  
5 you refer to from the pipe that would feed upper watershed  
6 water into the bog is in a deep crevice that is an existing  
7 drainage pattern, so you can't consider that point source,  
8 but it is a confined source, where the water is flowing into  
9 the bog now.

10                  Ms. JILL GRANT: So the original assessment  
11 that said it was an unconfined drainage was not correct?  
12 You just said it was---

13                  Mr. DAVID KERN: There...

14                  Ms. GRANT: ---confined.

15                  Mr. DAVID KERN: Without walking out on the  
16 site there, it's a little hard to explain this. There is  
17 portions of the watershed of the bog that is unconfined, and  
18 then there are other drainageways that are more confined  
19 that also feed the watershed of the bog.

20                  Ms. JILL GRANT: Thank you. Thank you. My  
21 next question has to do with the nature of the disruption.  
22 I see in the assessment that it says there's a temporary  
23 disruption to the watershed that feeds into the bog, but in  
24 reading the assessment and the description of the project,  
25 it seems that there's about 14 years before the watershed  
26 for the bog is reclaimed. Is that correct?

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1                   Mr. DAVID KERN: I would have to go back  
2 and verify the actual time-frame between, or of disruption  
3 of the bog. I do not believe it's 14 years. I believe that  
4 the construction of sediment pond five and the reclamation  
5 of that area would be done within the first five years of  
6 the project.

7                   Ms. JILL GRANT: I'll go back and check my  
8 notes to see where I have that, then.

9                   What effect do you anticipate that  
10 construction and the disruption of that drainage to have on  
11 the plants in the bog ecosystem?

12                  Mr. DAVID KERN: As I mentioned, the water  
13 flowing through the bog is an intermittent flow of water,  
14 and the bog does dry up, and in spring and fall, the bog  
15 flows with more water flow through it.

16                  Our intent, again, is to monitor and get  
17 some hard data on what the flows may be that we can maintain  
18 water flowing into the bog.

19                  The effect... Are you going to answer  
20 that or not?

21                  UNIDENTIFIED MALE: No.

22                  Mr. DAVID KERN: Most of the bog is a  
23 shrub-tree bog. I don't know whether you walked down there  
24 when you were on the site or not, but it's a woody-type bog  
25 growth there, and we have some tidal influence into the bog  
26 at the lower end, from the Bay of Fundy, on extreme high

1 tides.

2 I guess that's kind of the best  
3 explanation I can give you, at this point in time, until we  
4 do more baseline work.

5 We were asked to consider doing sections  
6 through the bog. I believe we responded in saying that if,  
7 after we've given you the initial description of the bog  
8 character, and we have the plant community inventory of the  
9 bog in Ruth Newell's reports, that if you wanted us to do  
10 the cross-sections and cores in the bog, that we would do  
11 additional work at that point in time.

12 Ms. JILL GRANT: Thank you. The  
13 constructed wetland that's part of the project is described  
14 as being kind of the polishing final stage in the release of  
15 water into the Bay of Fundy.

16 During the first two years of the project,  
17 will that constructed wetland be functioning quickly enough  
18 to be operating during the construction phase?

19 Mr. DAVID KERN: As I know you're familiar  
20 with constructed wetlands; that most of the time, it takes a  
21 few years, if not more, depending on the type of wetland it  
22 is, for it to become mature enough to really function from a  
23 polishing standpoint.

24 The intent of this constructed wetland was  
25 not really in the traditional sense of a polishing facility.  
26 It was more to create habitat to accommodate another

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1 retention of flow before it hit the Bay of Fundy.

2 Ms. JILL GRANT: So during the construction  
3 phase, there won't be any of that kind of mitigating effect  
4 possible?

5 Mr. DAVID KERN: Well, the constructed  
6 wetland, along with the associated sediment retention ponds,  
7 are one of the first orders of construction, so it will be  
8 providing a function, at that point in time, prior to  
9 construction. As far as maturing, it will not be a mature  
10 bog, at that point in time, no, but it will still have the  
11 check dams and everything in it that will provide a  
12 functional use of the constructed wetland.

13 Ms. JILL GRANT: When the project is  
14 operating and the water is being stored in the ponds to  
15 maintain the volumes necessary for the wash function,  
16 there's going to be a fair bit of variability in terms of  
17 the flow through this constructed wetland, so what effects  
18 would you anticipate if we have a dry summer, and there's  
19 no... Will water be in this constructed wetland, or not?

20 Mr. DAVID KERN: Our vision of the  
21 constructed wetland is the same as the coastal bog. It  
22 would be the same type of bog wetland, same type of plant  
23 growth in it, and we would see at some points, at the dry  
24 times, that this constructed wetland would dry, have no flow  
25 through it similar to the coastal bog.

26 Ms. JILL GRANT: You don't... Do you see



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1 any time when large volumes might be needed to be released  
2 for storm events, that this constructed wetland would be  
3 disrupted by the high volumes of flow?

4 Mr. DAVID KERN: That particular question  
5 was asked on Saturday and at infrequent times, when we have  
6 a 100-year storm, or a back-to-back heavy rainfall storm,  
7 hurricanes or whatever, the sediment ponds may be drawn down  
8 prior to this storm event, and there would be releases of  
9 water going out from sediment pond one through the  
10 constructed wetland.

11 The velocities of these flows have not  
12 been calculated.

13 Ms. JILL GRANT: I'm just wondering whether  
14 you have any anticipated problem maintaining the habitat.

15 Mr. DAVID KERN: The constructed wetland is  
16 designed with rock check dams in it. I'm sure that if we  
17 get strong enough flows, there will be some scouring of the  
18 constructed wetland, just like there would be with runoff  
19 coming down through the coastal bog, so I guess if we have a  
20 100-year storm, it's going to, or could potentially affect  
21 the constructed wetland the way it would affect the natural  
22 coastal bog area.

23 Mr. GUNTER MUECKE: I have a bit of a  
24 disconnect in my mind in terms of timelines here.

25 You just told us that during the  
26 construction phase, the amount of flow that you will channel

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1 through the bog will be adjusted seasonally, and that the  
2 data as to what volumes are involved will have to be  
3 determined.

4                   Now if I look at the timelines here,  
5 construct... The constructed... If the process is  
6 approved, construction starts this autumn, and stockpiling  
7 and disruption of the flow into the bog will occur at that  
8 time.

9                   How can you obtain the data on the volume  
10 of flow on a seasonal basis if you're already in the  
11 construction phase?

12                   Mr. DAVID KERN: We anticipate a seasonal,  
13 year-seasonal gathering of the flow data, before that area  
14 is into a site preparation phase, so the answer to your  
15 question, more specifically, we would want one year of  
16 seasonal data on the flows.

17                   Mr. GUNTER MUECKE: Okay. Then my next  
18 question is during the first year of construction phase, the  
19 30-metre platform will be constructed. It generates waste  
20 rock which has to be... Or it generates rock, fragmented  
21 rock, which has to be stored somewhere.

22                   Now I got the impression that the area of  
23 the sediment pond one would be the initial storage area for  
24 that material which... And that would impinge on the flow  
25 into the bog. Am I... Am I of the wrong impression here  
26 or...

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1                   Mr. DAVID KERN: The first order of work,  
2 or the environmental control structures, which would include  
3 sediment ponds one, two, three and four, and the water  
4 coming off of the plant area site preparation which would  
5 produce the rock which would go into the temporary rock  
6 storage area would all be channelled into sediment pond four  
7 during that construction phase.

8                   Mr. GUNTER MUECKE: And that construction  
9 phase would last through the first year? In other words,  
10 there will be no waste rock generated during the first year?  
11 Is that what you're saying?

12                  Mr. PAUL BUXTON: That could be, but  
13 there... It doesn't need to go in that particular area. It  
14 will have to go in that area eventually, but it wouldn't all  
15 need to go into that area. It could go on the top of the  
16 hill, for example.

17                  Mr. GUNTER MUECKE: Okay. Well, maybe  
18 that's the answer I was looking for, but... Because that  
19 wasn't indicated in the EIS, that's why I'm confused about  
20 the timelines here.

21                  Mr. DAVID KERN: Maybe I could add  
22 something to that, but that particular use of rock from that  
23 area will be used for a lot of other construction  
24 activities, roads, compound area of construction, site prep,  
25 for those things.

26                  Mr. GUNTER MUECKE: Maybe I could continue,

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1 then, and we have some questions about blasting, and this  
2 concerns the blast sizes and the blast frequency.

3 Mr. Buxton, there will be a test blast  
4 which has been proposed, and which involves two and a half  
5 tons of explosive. Is that accurate?

6 Mr. PAUL BUXTON: I'm not sure. I'd have  
7 to look that up. We have proposed test blasts which would  
8 be fully monitored to test the CONWEP model, but without it  
9 in front of me, I can't give you numbers.

10 Mr. GUNTER MUECKE: Well, maybe you could  
11 confirm that for me, because that is the number I've picked  
12 up from your documentation, which may or may not be right.

13 Could you provide us... When can you  
14 provide us with that information?

15 Mr. PAUL BUXTON: What I perhaps could say  
16 is that unless your questions are generic and something that  
17 I can answer, we do have a blasting engineer coming as an  
18 expert who, in fact, will be, or would be the engineer  
19 charged with designing every blast that will take place on  
20 the site, and he is scheduled to be here Thursday and  
21 Friday.

22 Ms. JILL GRANT: It's Wednesday.

23 Mr. PAUL BUXTON: I'm sorry, Wednesday.  
24 And I think if you had specific and very technical questions  
25 with respect to blasting, that would perhaps be more  
26 appropriate. I could talk about general things, but not

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1 about specifics.

2 Mr. GUNTER MUECKE: Okay. Sorry, you're  
3 saying you would like me to defer any questions regarding to  
4 blast frequency, blast sizes until that time?

5 Mr. PAUL BUXTON: Unless they're general  
6 questions. I think we did... We certainly have made the  
7 statement that we would anticipate average blasting  
8 frequency of perhaps once a week during construction, and in  
9 the order of once every two weeks during operations.

10 That's a sort of a general sort of  
11 standard, but I think if you wanted to get into blast  
12 design, I think it would be more appropriate when our expert  
13 is here.

14 Mr. GUNTER MUECKE: Yeah. My questions are  
15 quantity of, in the sense of how much explosives will be  
16 used relative to the amount of material you propose to  
17 produce.

18 Mr. PAUL BUXTON: Yes, I think it would be  
19 appropriate, then, to perhaps ask those questions of our  
20 blasting expert.

21 Mr. GUNTER MUECKE: Certainly, but how  
22 about concerns regarding the conditions, climatic conditions  
23 under which blasting will occur during the operational  
24 phase?

25 In the documentation we've had, there have  
26 been a number of exclusions mentioned:

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1 "No blasting under fog conditions.  
2 No blasting under overcast  
3 conditions. No blasting during  
4 thermal inversions. No blasting  
5 [inaudible] precipitation."

6 Now all of these, fog, overcast,  
7 precipitation, are parameters that have...that are variable.  
8 You can... In terms of fog conditions, you can have fog  
9 that you don't see your nose. You can have fog which is two  
10 kilometres offshore. Precipitation can be a slight mist, or  
11 it can be a downpour. So each of these has different grades  
12 involved, right?

13 And so then we see statements about:

14 "No blasting occurring under these  
15 conditions."

16 Clearly there have to be the cut-offs or  
17 limits. Would you like to expand upon that?

18 Mr. PAUL BUXTON: (Pause, conferring with  
19 colleagues) Yes, I think with respect to the thermal  
20 inversions, information apparently is available I believe  
21 from Environment Canada, and I think we do have a section on  
22 that in the document.

23 I'm not so sure that there are, in fact,  
24 some parameters that one can devise on-site, but we are  
25 advised that quarries in Nova Scotia, in fact, make contact  
26 with Environment Canada, who make a sort of determination as

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1 to whether there is a thermal inversion in place, and we  
2 would intend to follow that kind of practice.

3 With respect to fog conditions, I think  
4 the primary consideration with respect to fog is in the  
5 periods of time when there may be marine mammals, and  
6 specifically endangered marine mammals in the area, then  
7 that would be the criteria.

8 If we did not have the visibility to  
9 determine whether they were there or not, in accordance with  
10 the setback levels that we established this morning, then we  
11 would not blast.

12 I think there was some concern expressed  
13 in the IRs over the time of fog, the length of periods of  
14 fog.

15 In the Bay of Fundy it does get foggy,  
16 particularly about this time of year, and how would we  
17 manage blasting at this time of year when we have fog  
18 conditions, or perhaps temperature inversions, or some other  
19 impediment?

20 And the reality is that the type of  
21 blasting material that is used today can, in fact, be put  
22 into the blast holes and left there for a significant period  
23 of time, so we only need a fairly short interval of clear  
24 conditions, or non-thermal inversion conditions, et cetera,  
25 in order to be able to set off the blast.

26 We have said that we will certainly

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1 attempt to set off the blasts at time periods during the  
2 day, when they would be less disturbing to people, and I  
3 think we used 11:00 to 4:00, but certainly we don't see that  
4 as a major impediment.

5                   In other words, the blast can be ready to  
6 go. As soon as the fog lifts, basically we're ready to  
7 blast. We don't have to pack the holes, and make all the  
8 arrangements.

9                   Mr. GUNTER MUECKE: Which leaves two  
10 parameters that I asked about, which are overcast and  
11 precipitation.

12                   Overcast, in terms of when it comes to  
13 blasting, obviously the reflection of the noise will  
14 change... The reflection of the blast wave, okay, has the  
15 potential of increasing noise levels in neighbouring areas,  
16 so I guess what I'm interested in is what are considered to  
17 be overcast conditions just depends obviously on the level  
18 of the ceiling, and the per cent cloud cover and so on, and  
19 you know, if one specifies overcast, I think it's reasonable  
20 to ask what degree of overcast; what elevations?

21                   And the same for precipitation. What do  
22 you consider... When is the cut-off?

23                   Mr. PAUL BUXTON: I specifically remember  
24 reading the cloud cover conditions in the document, but it  
25 is a fairly massive document, and I think we'd like to  
26 respond to that after our blasting expert gets here. We'll



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1 discuss it with him, and then we'll give you an undertaking  
2 to provide your answer to that question.

3 Mr. GUNTER MUECKE: Okay. I take that as a  
4 commitment to that date.

5 Mr. PAUL BUXTON: Yes.

6 Mr. GUNTER MUECKE: Thank you.

7 THE CHAIRPERSON: I don't think, Mr.  
8 Buxton, that we'll record that as an undertaking, but rather  
9 as a notation that when your expert is here, we'll resume,  
10 we'll bring the question back up.

11 Mr. PAUL BUXTON: Yes.

12 Mr. GUNTER MUECKE: Thank you.

13 Ms. JILL GRANT: Just one other question  
14 about blasting. Do you intend to restrict blasting if  
15 fishing boats are in the offshore of the project?

16 Mr. PAUL BUXTON: Are you... I guess I...  
17 Are you asking this from the perspective of flyrock  
18 perhaps? Yes.

19 Your flyrock is really a function of bad  
20 blast design. We would be very disturbed if, on any blast  
21 at any time, there would be significant flyrock, and  
22 certainly no flyrock that would reach the water.

23 I think that we would, and typically one  
24 of the warnings of a blast is a horn... That's one of the  
25 warning signals. We have said that we will not only advise  
26 fishers by dedicated telephone line or when a ship comes in,

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1 but we would also, on the dedicated telephone line, indicate  
2 our intended blast time.

3 As we just discussed, that may vary with  
4 fog conditions, et cetera, but we would certainly know an  
5 anticipated blast time.

6 I think if a boat was very close inshore,  
7 within a couple of hundred feet, I think we would certainly  
8 make contact with that boat before we let off a blast.

9 Absolutely.

10 Ms. JILL GRANT: So that will be part of  
11 the protocol given to the blaster?

12 Mr. PAUL BUXTON: I'm sorry. I didn't hear  
13 the question.

14 Ms. JILL GRANT: Will that be part of the  
15 protocol given to the blaster that it won't proceed if  
16 there's a boat close inshore? Is that what you are saying  
17 here?

18 Mr. PAUL BUXTON: Well if you recall, on a  
19 blast, in any event, we do have an observer who is required  
20 to, for example, look for water birds within 170 metres, and  
21 mammals within 500 metres, endangered species, 2,500 metres,  
22 et cetera, so yes, he would certainly be well aware if there  
23 was a boat inshore, and that could certainly be made part of  
24 our protocol to advise a vessel if we thought that he was  
25 getting into some sort of danger zone.

26 But as I've said, flyrock is really a

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1 thing of the past if blasting is done properly.

2 Mr. GUNTER MUECKE: I guess I'd like to  
3 extend that to the bulk carrier that comes in and loads.  
4 Will blast... That's a 12-hour period, I believe,  
5 approximately. Is blasting excluded from that time-frame?

6 Mr. PAUL BUXTON: I would think, in general  
7 terms, we would. I can't... Because we would need some of  
8 the people to assist in the loading operation, I would say  
9 that we would go into a temporary slowdown, if not shutdown  
10 of the processing operation for that 12-hour period, and I  
11 don't think that we would be conducting blasting at that  
12 time. That would just simply overload our workforce.

13 Mr. GUNTER MUECKE: Thank you.

14 THE CHAIRPERSON: Mr. Buxton, I have a  
15 question that's linked to blasting. It's more of a residual  
16 effect.

17 It is the plan to use ammonia nitrate fuel  
18 oil as the explosive? Is that correct?

19 Mr. PAUL BUXTON: That is correct.

20 THE CHAIRPERSON: We've tried to make some  
21 calculations based on the total amount that will be used  
22 over a 50-year period, and it's difficult because the  
23 numbers you use presumably, because it hasn't settled down  
24 yet, but the numbers that you used in the EIS vary quite a  
25 bit.

26 But anyways, over 50 years, one estimate

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1 places the total amount of explosives used at 30,000 tons.  
2 That breaks down to about 600 tons a year, or 50 tons a  
3 month, meaning every second week you'd be shooting off  
4 25,000, 25 tons that is. And that strikes me as a bit high,  
5 so for the sake...

6 I've got a calculation here. For the sake  
7 of being more conservative, I've cut that in half to 25 tons  
8 a month, meaning about 12 per shot, which seems to fall  
9 within the range of what you have been discussing in the  
10 EIS.

11 Now what I'm getting at is that if you  
12 shoot off 12 tons of ammonia nitrate fuel oil explosive,  
13 then one of the by-products of that explosive is ammonia,  
14 because you're starting with ammonia nitrate and fuel oil  
15 mixed here, which we all know is widely used.

16 But ammonium is a by-product and it has  
17 been estimated by DFO that a bout of each shot is unexploded  
18 and left behind, so that you're producing about two percent  
19 of all the explosive material as a by-product that is then  
20 dispersed on the site.

21 My calculations using 25 tons a month  
22 works out to 500 kilograms. Now these numbers are... I  
23 don't want to debate the numbers, because the starting point  
24 is unclear to me. I don't know exactly how much you would  
25 use, but for the sake of argument, 500 kilograms, about  
26 1,000 pounds.

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1                   Now what interests us is the fact that you  
2 use this amount of explosive. You explode it, and so a  
3 residue is left behind. The residue is spread all over the  
4 site on the rocks, in the rocks, and around the rocks, and  
5 of course the rocks are being moved, so they're subject to  
6 weathering.

7                   And in the weathering process, it seems to  
8 me that there are two considerations which I didn't hear  
9 mentioned this morning as environmental impact. One is that  
10 ammonium is a highly toxic substance. It... I mean, if you  
11 spread ammonium nitrate on your plants in your garden, and  
12 you do it a little too enthusiastically, you'll kill them,  
13 even though if you do it modestly, you enhance their growth.  
14 So it's a toxic substance.

15                   The second thing is that it's a very, very  
16 significant nutrient, and in the marine environment, it  
17 is... Which is nutrient-limited, and it's nitrogen-limited,  
18 ammonium is one of the things that if you wanted to create a  
19 bloom in the marine environment, you'd spread ammonium  
20 around, and it would just take off very quickly.

21                   Now what this is leading up to is the fact  
22 that all of this explosive capacity which is used to  
23 dislodge the rocks and feed them into the process of  
24 creating aggregate is going to produce a residual material.  
25 That residual material will be subject to weathering, and  
26 it will be moving over the site.

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1 I would be interested in knowing what  
2 measures have been taken to address this.

3 Mr. PAUL BUXTON: I think the question did  
4 come up in one of the IRs, and we suddenly responded to that  
5 question, and I think it was perhaps more generalized than  
6 your question, which is specific in terms of volume.

7 We have consulted our blasting expert on  
8 that, and he... We provided a response in the IRs. In  
9 general terms, and I... And again, I think that this is a  
10 question that I would like our blasting expert to answer.  
11 This is a very, very specific technical question.

12 Our information is from him that with new  
13 blasting techniques and more sophisticated blasting  
14 techniques, that the amount of residue that is left is  
15 extremely small. I mean, it is a very small quantity.

16 If the blast is conducted properly, that  
17 it is designed properly, it is exploded properly, that the  
18 amount of residue should be extremely small, and we're not  
19 even talking two percent or one percent; we're talking  
20 hundredths of one percent.

21 Now that is not my field of expertise, and  
22 I don't think I have an expert with me today that can  
23 specifically discuss that in a knowledgeable manner, but  
24 yes, we are aware of the issue, and we have discussed it  
25 with our expert, and I would perhaps ask that we get into  
26 the perhaps more calculative mode when he is here.

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1 THE CHAIRPERSON: I would... Rather than  
2 deferring it, I'd like to pursue this for a minute.

3 First of all, the authority that we're  
4 using is a regulatory agency that says two percent, so if  
5 it's less than that, the regulatory agency, to my knowledge,  
6 is unaware of it.

7 So for the sake of argument, let's say it  
8 is two percent. It could even be one percent for that  
9 matter, but still it's a significant amount of material, and  
10 it's really not a blasting subject, it's an environmental  
11 subject.

12 It's a material on the land that needs to  
13 be dealt with, so the blaster may be expert in drilling  
14 holes, packing holes, exploding holes, and developing a  
15 blasting design, but this is really an environmental issue  
16 here.

17 It's an issue that needs to be... To make  
18 the... We need to understand that as a by-product of some  
19 activity, therein lies an environmental problem. So do you  
20 have any suggestions that you or your colleagues might  
21 suggest as solutions to this problem?

22 Mr. PAUL BUXTON: Well, I think first of  
23 all, if there is a very small amount... And this is what  
24 I'm led to believe, that it is a very small amount of  
25 material that comes out. All the runoff from the site, so  
26 anything that picks or were to pick up ammonium off the site

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1 would go into the pond system.

2                   So, in other words, it does not get  
3 discharged into the Bay of Fundy initially. This gives us a  
4 chance, and I think we have said quite specifically in the  
5 EIS that we will be monitoring the water in the pond system,  
6 or any water that goes out into the Bay of Fundy so that if,  
7 in fact, this is a problem, we can identify. We would know  
8 what it is and exactly what the quantities are.

9                   But, you know, this is... The same  
10 material is used as a standard blasting material in  
11 virtually every quarry today, and it is managed today. So I  
12 don't think there's any sense at all that we're saying there  
13 isn't any issue; we're not going to monitor; we are not  
14 going to acknowledge that very minor trace amounts might be  
15 there. We will be able to monitor that in the flow of water  
16 in the settling ponds, and if it has significance, to deal  
17 with it.

18                   THE CHAIRPERSON: Let me paint you a  
19 hypothetical scenario.

20                   The blasting goes on at two-week  
21 intervals, and let's say that even if the percentage is  
22 wrong, which... Well, we stand to be corrected, but  
23 let's... Some amount of residue is being developed and  
24 spread, or is present on land; it ends up in your sediment  
25 ponds; your sediment ponds will fill to some point, and then  
26 they will begin to overflow.



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1                   You will have to manage them by  
2 overflowing them, which means that because the ammonium is  
3 in a dissolved state, it's not going to sediment out.

4                   That means that each and every two weeks,  
5 there will be something additive. So over a period of a  
6 year, there will be 20-some, or 25 explosions, and that  
7 material will be accumulating, so the ponds will be rising  
8 not only in water, but in concentration of ammonia. You  
9 will have to release that water at some point; otherwise the  
10 berms surrounding the ponds will overflow.

11                   Also we heard just a few minutes ago from  
12 Mr. Kerns that occasionally, when a hurricane passes  
13 through, or a major storm occurs or something, you will have  
14 to release water in large concentrations. You'll have to  
15 bring the level of the sediment ponds down.

16                   In the ocean, the amount of ammonium that  
17 it takes to generate significant biological change is on the  
18 order of micrograms, which is parts per billion. If you  
19 suddenly release large volumes of water, 10,000 litres or  
20 20,000 litres or so, and very high concentrations of  
21 ammonium, it can't help but have an impact on the local  
22 environment, perhaps as a toxic agent, or perhaps as a bloom  
23 stimulating agent that will generate dramatic changes in the  
24 flora of the ocean.

25                   So that's the hypothetical scenario.  
26 Well, we can wait until your blasting expert comes back, but

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1 it's a major concern I think, because of the blasting  
2 process. Did you have anything to say?

3 Mr. PAUL BUXTON: Yes. I don't want to  
4 leave you with the impression that this has not been  
5 considered. We have discussed this item, but I think I  
6 would prefer to have experts here to speak to that issue.

7 We have a blasting expert coming, and we  
8 also have Mr. Schupner coming who can deal with risk  
9 assessment as with the copper.

10 Ms. JILL GRANT: Just one follow-up on  
11 that. If, as you indicate, there is evidence that indicates  
12 contemporary methods do not generate as much ammonium  
13 residue, can you please provide the studies that confirm  
14 that science so that we have a better understanding? The  
15 documentation we have now that doesn't give us very much  
16 detail on that. Thank you.

17 Mr. PAUL BUXTON: Yes, I'll provide those  
18 to you.

19 Ms. JILL GRANT: Just following up with  
20 that, another question around residual effects, and that is  
21 around the long term.

22 I think the presentation this morning  
23 suggested that there were no long-term residual negative  
24 effects, but I recall in one of the documents provided that  
25 there was a suggestion that the... there was a long-term  
26 negative effect, and that is the loss of jobs at the end of

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1 the project. So can you comment on whether you're defining  
2 the loss of jobs in the decommissioning phase as an adverse  
3 environmental effect?

4 Mr. PAUL BUXTON: The loss of jobs at the  
5 end of the project is not considered an effect of the  
6 project. There are no jobs now. If the project creates  
7 some, that's a beneficial effect at the end of the lifetime  
8 of the project, those jobs will be terminated and we'll be  
9 back to baseline, basically, so that is not considered an  
10 effect, neither beneficial nor in an adverse sense at the  
11 end of the project.

12 THE CHAIRPERSON: Mr. Buxton, could we have  
13 a date for this undertaking, the document that suggests that  
14 residuals from AMFO Explosions are 2 percent or less, or the  
15 modern assessment?

16 Mr. PAUL BUXTON: If you could just give us  
17 a second, I think...

18 THE CHAIRPERSON: Sure.

19 Mr. PAUL BUXTON: We have one of them up on  
20 the screen, and we might be able to provide it to you right  
21 away.

22 THE CHAIRPERSON: Okay.

23 --- Short pause

24 Mr. PAUL BUXTON: Our blasting expert will  
25 be here Wednesday, Thursday, Friday. Since Wednesday is  
26 generally marine and I think might be a very tight day,

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1 perhaps we could say Thursday.

2 THE CHAIRPERSON: Thursday this week.

3 Mr. PAUL BUXTON: Yes, that is right.

4 THE CHAIRPERSON: 21<sup>st</sup> of June. Okay.

5 Thank you very much. Gunter?

6 Mr. GUNTER MUECKE: Mr. Buxton, I have a  
7 couple of questions about the economics of the operation.  
8 First of all, could you perhaps confirm the numbers that I  
9 have before I proceed?

10 You have told us that the production rate  
11 will be 2 million tons of aggregate per year and that the  
12 operating costs will be 20 million dollars per year. Is  
13 that correct?

14 Mr. PAUL BUXTON: Yes, those are generally  
15 correct figures.

16 Mr. GUNTER MUECKE: Okay. And does that 20  
17 million dollars of operating cost include the amortization  
18 of the loading structures and all the equipment on-site?

19 Mr. PAUL BUXTON: Yes, it would. It would  
20 account for typical accounting adjustments such as  
21 amortization, yes.

22 Mr. GUNTER MUECKE: Okay. If I go back to  
23 the CLC meetings of 2002, there's a quotation on the going  
24 price of basalt aggregate in the U.S., in New Jersey, and  
25 it's quoted as \$6.50 per ton.

26 Now, if I do quick back of the envelope

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1 calculations here, that would mean that the operating costs  
2 are \$20 million and that the product fetches \$13.5 million.

3 Would you like to comment on the viability of an operation  
4 which is losing \$7 million per year?

5 Mr. PAUL BUXTON: I think probably \$6.50 a  
6 ton was probably freight on board the quarry, and was  
7 certainly not delivered to where it's going to be used. And  
8 secondly, I would refer you generally to what has happened  
9 with commodity prices in the last five years.

10 For example, five years ago copper was  
11 selling for about 62 cents a pound. It has risen to fairly  
12 close to 3.90 a pound. The price of nickel has quintupled  
13 in the last five years. Zinc has quadrupled, so there has  
14 been a very, very dramatic change in the price of all  
15 commodities in the past four or five years.

16 My estimate at the moment is that probably  
17 freight on board in New Jersey right now for coarse  
18 aggregate could be well over \$12.00 a ton, and that's before  
19 transportation.

20 Mr. GUNTER MUECKE: Could you confirm that?  
21 I mean, this is something which I'm quite interested in,  
22 that...what the current price actually is.

23 Mr. PAUL BUXTON: Current price at what  
24 point in its production? At its...

25 Mr. GUNTER MUECKE: In [inaudible].

26 Mr. PAUL BUXTON: But, you know, I...

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1 sorry. I keep forgetting to turn my microphone off.

2 We can give you the production price at a  
3 specific quarry, but if you have to move that 50 or 60  
4 miles, it's now double. For 100 miles, it would be triple  
5 the cost. So I think we need to be very specific about what  
6 price it is you're asking for.

7 Mr. GUNTER MUECKE: The production cost at  
8 the quarry.

9 Mr. PAUL BUXTON: Sorry. The simple  
10 production cost, thank you. We'll provide that.

11 THE CHAIRPERSON: On what date?

12 Mr. PAUL BUXTON: Friday of this week?

13 THE CHAIRPERSON: Okay. We have reached  
14 the end of our questions for today, and I'm thinking that  
15 this would be a natural time to take a break. But before we  
16 do, I just wanted to let you know what the rest of the day  
17 is.

18 We are intending now to open up the  
19 microphone to registered participants, and they can then  
20 interact... Obviously, the questions, as I've said before,  
21 are directed to the Panel, but the questions, of course, can  
22 relate to the presentations that have been heard up until  
23 now.

24 We took a show of hands earlier today, and  
25 we have 12 groups or individuals who have expressed an  
26 interest in saying something, and because we have a limited

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1 amount of time and we have 12 groups, the process that we're  
2 going to follow is as follows.

3           The reason for this process is that some  
4 of these groups or individuals have multiple questions, so  
5 it's possible that a single group could be wanting to speak,  
6 to verbalize 10 or 12 questions.

7           What we're going to do is allow one  
8 question, one follow-up, and then we're going to ask that  
9 group to step aside and let the next group take over. And  
10 then we'll go through a complete cycle, probably go through  
11 it a second time, and then we'll see where we're going at  
12 that point.

13           In other words, there are some groups or  
14 individuals who have only one question to ask. There are  
15 some who have multiple. In order to make certain that all  
16 get an opportunity, we're going to go through it in a cyclic  
17 form: one question, one follow-up, step aside, let the next  
18 person. And as people no longer have questions to ask, they  
19 will drop out of that cycle and the cycle will, in fact,  
20 speed up.

21           So for the moment, that's what we're  
22 intending. If that's not workable or if there are some  
23 serious problems that emerge, we can change it, but for the  
24 moment, that seems to be appropriate.

25           The first group that would come up to...  
26 up to the microphone when we return from the break would be

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1 the Atlantic Canada Chapter of the Sierra Club of Canada,  
2 followed by the Native Council of Nova Scotia, followed by  
3 Ashraf Mahtab.

4 Next would be the Institute for Applied  
5 Sciences, then Judith Peach, then Clean Annapolis River  
6 Project, the Partnership for the Sustainable Development of  
7 Digby Neck and Island Society, Don Mullin, Cheryl Denton,  
8 Marilyn Stanton, Sister Barbara, and Bob Morsches. Okay?

9 So we're going to break for 15 minutes.  
10 Let's say 2:30 even, we will come back and start this  
11 process.

12 --- Recess at 2:12 p.m.

13 --- Upon resuming at 2:32 p.m.

14 THE CHAIRPERSON: Ladies and gentlemen, we  
15 would like to resume, please. Okay.

16 We have one item of business that we would  
17 like to conclude before we turn to the questions.

18 Ms. JILL GRANT: Just a couple of other  
19 questions on the rare species. We understand that Ms.  
20 Newell will only be here today, so we just want to make sure  
21 we've got these on the record.

22 I wonder if you could comment on the rare  
23 and the species thought to have been extirpated in Nova  
24 Scotia, what that ecological value of those plants are in  
25 the broader sense.

26 Mr. PAUL BUXTON: I'd like to ask Ruth



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1 Newell to answer that question.

2 Ms. RUTH NEWELL: The Glaucous Rattlesnake  
3 root was first recorded from that area from Sandy Cove and  
4 from Whale Cove about 50 or probably 60 years ago. It was  
5 documented from those two areas.

6 And since that time, as far as I know, it  
7 hasn't been seen or reported, so it was considered under the  
8 Nova Scotia General Status of Species to be extirpated or  
9 gone from Nova Scotia.

10 Though it was located during the survey in  
11 2002 on the headland southwest of the Cove, Whites Cove,  
12 it's a discrete population of about 200 plants,  
13 reproductive... reproducing, sorry.

14 It is restricted more or less to the  
15 headland and maybe just below the headland on the rocks or  
16 in crevices, rock crevices below the headland.

17 Is there other information? Where can I  
18 go from there?

19 Ms. JILL GRANT: Well, perhaps you might  
20 comment on the social value of those populations as well.

21 Ms. RUTH NEWELL: I don't... On the social  
22 value?

23 Ms. JILL GRANT: The value of them to the  
24 community as a whole, the province as a whole. What...

25 Ms. RUTH NEWELL: Well, it's the only area  
26 in Nova Scotia where it occurs, so it's... I suppose it's

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1 important in that sense, and significant.

2 Ms. JILL GRANT: And is it your view that  
3 this... The plant was thought or these plants were thought  
4 to be rare or extirpated because they aren't well studied,  
5 there's not enough studies to locate them, or because they  
6 don't exist?

7 Ms. RUTH NEWELL: Yes. Probably there  
8 haven't been that many people recently looking along that  
9 section of the coastline. And it is possible that further  
10 botanical work or surveys may locate other populations  
11 elsewhere along Digby Neck. Yeah.

12 THE CHAIRPERSON: You put the rarity value  
13 in the context of Nova Scotia. Would you like to expand  
14 that for the Maritimes? I just want to get a feeling of the  
15 rarity value of that particular species.

16 Ms. RUTH NEWELL: It is considered rare in  
17 New Brunswick and rare in Maine. And I can't remember, I  
18 can't remember precisely about Newfoundland, but further  
19 west in Canada, it is not considered at risk.

20 THE CHAIRPERSON: Thank you Ms. Newell.  
21 Okay. We now turn to... As I said, we're turning to the  
22 section of the day for registered participants who will be  
23 asking questions of the presenter. Let me just make a  
24 couple of comments before I call the first individual  
25 forward.

26 When an individual comes to the

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1 microphone, I would appreciate it if they would state their  
2 name and affiliation, and if the name is Smith, obviously it  
3 isn't necessary to spell it, but if you think that it needs  
4 to be spelled, please do.

5                   It's for the benefit of the transcription  
6 so we get the accurate representation of the name and the  
7 affiliation.

8                   After you finished asking your questions,  
9 please turn the microphone off. There's a conflict between  
10 these microphones, you've probably noticed. So if two or  
11 several of them are on at the same time, it defeats the  
12 purpose. So ask the question, turn the microphone off.

13                   Also, I'd ask you all... To give you some  
14 kind of rules in which to follow, I ask you all to be  
15 courteous, to try and keep the material that you're going to  
16 ask relatively new, that is try not to repeat the same  
17 thing. If we have five speakers all say the same thing, I'm  
18 not sure it's valuable.

19                   Try not to be repetitious, that is within  
20 your own presentation, not to go into a kind of endless  
21 loop. Try to make it clear. Please be civil, and make it  
22 relevant to the mandate of this particular panel. In other  
23 words, we want to hear things relative to our mandate.

24                   If those various conditions are violated,  
25 I might have to ask the individual to step down. I would  
26 prefer not to do that, but keep it in mind.

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1                   Okay. So, as I said, we're going into  
2 individuals who have one question, one follow-up. I'll ask  
3 them then to sit down unless, of course, we had something to  
4 say. And then the second person will come up, and then the  
5 loop will repeat again.

6                   So the first presenter will be Atlantic  
7 Canada Chapter of the Sierra Club of Canada, please.

8                   Mr. MARK DITTRICK: Thank you. My name is  
9 Mark Dittrich. I'm with the Atlantic Canada Chapter of  
10 Sierra Club of Canada. The name is spelled D-i-t-t-r-i-c-k.

11                   THE CHAIRPERSON: Thank you.

12                   Mr. MARK DITTRICK: And the question I have  
13 for the Proponent has to do with adaptive management and its  
14 application in the concept and its use with respect to the  
15 North Atlantic Right Whale.

16                   And it's more something of a two-parter,  
17 and I wonder if I could just ask a question and then do a  
18 little follow-up with that.

19                   I would like to have the Proponent  
20 describe their use of the concept of adaptive management  
21 with respect to their potential impact on the North Atlantic  
22 Right Whale.

23                   THE CHAIRPERSON: Mr. Buxton, I think it's  
24 going to be two parts, so the first part you've just been  
25 asked.

26                   Mr. PAUL BUXTON: Mr. Wittkugel will

1 respond.

2                   Mr. UWE WITTKUGEL: First, adaptive  
3 management, we briefly discussed it on Saturday. It's an  
4 approach, management approach, that accommodates  
5 uncertainty with respect to the effectiveness of mitigation  
6 measures.

7                   We have a number of mitigation measures in  
8 place like the setback distance, the speed reduction, et  
9 cetera. I also pointed out a number of other potential  
10 mitigation measures in my presentation, such as deterrent  
11 devices, application of such techniques.

12                   And I think I also mentioned that we will  
13 be in close contact with DFO and discussing with them  
14 whether there are any new findings out there that would  
15 suggest that perhaps the operation should be adjusted, and  
16 this could relate, then, to further speed reductions, could  
17 relate to change in the course of the approach. It could  
18 also relate to the setback distances.

19                   Those things will be, obviously, then  
20 evaluated and addressed in consultation with DFO and would  
21 result in a change of the operation. And that's what we  
22 consider adaptive management.

23                   Mr. MARK DITTRICK: My next question for  
24 the Proponent is if they are aware of a document, the  
25 Canadian Wildlife Services "Environmental Best Practices  
26 Guide for Wildlife at Risk in Canada" and their

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1 recommendations, if they're aware of that document and if  
2 they used that document when they... within their EIS, used  
3 adaptive management as a mitigating approach to the  
4 potential harm to the Right Whale.

5 Mr. UWE WITTKUGEL: Yes, I'm aware of that  
6 document. I don't recall now any specific definition or  
7 requirements or suggestions for adaptive management that are  
8 different from what we are suggesting.

9 Mr. MARK DITTRICK: If you could ask  
10 them... I have a point, a quote from that document, which  
11 says:

12 "Adaptive management is not a  
13 solution where harm may be  
14 irreversible. It can be applied only  
15 in cases where harm is reversible  
16 since it implies that mid-course  
17 corrections should be made as  
18 required."

19 And also, a little earlier in that  
20 document, it says:

21 "Where there is a threat of serious  
22 or irreversible harm, significant  
23 adverse effects to wildlife at risk  
24 or a threat of significant reduction  
25 or loss of biological diversity..."

26 Which I'll indicate should be a case in

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1 point with respect to the Right Whale:

2                    "...where any harm or loss of one  
3                    individual of that species is  
4                    irreversible and could cause the  
5                    demise of the species."

6                    That in this case I would submit these  
7                    recommendations would advise not to be using the advisory...  
8                    that principle with respect to the Right Whale and that, in  
9                    this case, it's not applicable.

10                    THE CHAIRPERSON: Thank you, Mr. Dittrick.  
11                    You'll step down now?

12                    Mr. MARK DITTRICK: Okay.

13                    THE CHAIRPERSON: So the next individual is  
14                    from the Native Council of Nova Scotia. I think that's  
15                    Roger Hunka.

16                    Mr. ROGER HUNKA: Good afternoon, Mr.  
17                    Chair, and members of the Secretariat, and Proponent. It's  
18                    Hunka, H-u-n-k-a, and it's with the Native Council of Nova  
19                    Scotia.

20                    Preliminary to my question, it's a point  
21                    on procedures. I understood from the hearing that there  
22                    would be opening comments from yourself and the Proponent,  
23                    and there wasn't any opportunity to have opening comments  
24                    from the interveners or participants.

25                    I don't question the approach. However,  
26                    it does, in some respects, disadvantage, I believe, a

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1 Proponent. Or not a Proponent, but an intervener from  
2 raising other issues that both yourselves and the Proponent  
3 raised outside the EAs. Having said that, I will follow  
4 your procedure.

5 The Proponent, in their opening, indicated  
6 that they had approached the Nova Scotia Department of  
7 Natural Resources for an application back in the early days  
8 of 2003, and at that point in time, they were given some  
9 instructions.

10 I am wondering what those instructions  
11 were and primarily what points did they provide to the  
12 Proponent as to the policy, consultation, Aboriginal  
13 peoples, Aboriginal rights, and accommodation?

14 Mr. PAUL BUXTON: I'm afraid I didn't quite  
15 understand the question, Mr. Chairman. Could I ask what  
16 implication you're referring to, to the Nova Scotia  
17 Department of Environment and Labour in 2003?

18 Mr. ROGER HUNKA: No. Nova Scotia  
19 Department of Natural Resources, when you went to apply for  
20 an application. In your opening, you had indicated that  
21 they had provided you a set of instructions on how to  
22 proceed, and that was followed up with a question by a  
23 committee member as to a Community Liaison Committee  
24 question.

25 Mr. PAUL BUXTON: What I can state is that  
26 in very early 2003, I think January the 6<sup>th</sup>, 2003, a meeting



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1 of all interested parties was held, both federal and  
2 provincial, after the CEAA was triggered.

3 And it was determined that we would go  
4 into a comprehensive study process, and we opened lines of  
5 communication with CEAA at that point and were communicating  
6 with CEAA with respect to project descriptions and  
7 procedures, et cetera, until we were put into a panel in  
8 June of 2003.

9 I'm sure that does answer your question,  
10 but I'm not quite sure what you're referring to.

11 Mr. ROGER HUNKA: Well, if I may, in your  
12 opening when you were presenting for an hour or so, you had  
13 indicated that the Nova Scotia Department of Natural  
14 Resources, on your application, had provided you with some  
15 instructions.

16 And I was just questioning what those  
17 instructions would have been, but obviously you don't  
18 have... You don't know what they are.

19 A supplementary question. In the CEAA...  
20 May I, Mr. Chair? You followed the procedure from 2002  
21 onwards, so you would have been aware that the Native  
22 Council of Nova Scotia did provide guidance to the both Nova  
23 Scotia and the Federal Government on the composition or the  
24 content of what should be included in the guidance document  
25 for an environmental assessment?

26 You're aware of that, are you, that

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1 correspondence and those questions?

2 Mr. PAUL BUXTON: We are certainly aware  
3 that there was, yes, an exchange. And certainly in the long  
4 intervening period, I think it was probably 16 months before  
5 the draft guidelines were issued, I'm sure there was some  
6 sort of contact. But what that was, we were not made aware  
7 of.

8 But certainly, following the issuance of  
9 the draft guidelines and that the panel was empanelled,  
10 scoping sessions were held in, if I get my dates right,  
11 January '05, and certainly the issue of discussions, et  
12 cetera and consultations with First Nations was raised and  
13 it appeared again in the final guidelines.

14 But I'm a little puzzled with instructions  
15 we may have received from Nova Scotia Natural Resources. I  
16 have no idea what those might be.

17 THE CHAIRPERSON: I think that'll have to  
18 do it for the moment. I think you've received the answer to  
19 your question.

20 Before you go Mr. Hunka, the question you  
21 raised at the beginning about opening statement and so  
22 forth, you're a registered participant. Is it not possible  
23 for you, as a registered participant, to raise the issues  
24 that are of a concern to you when you make a presentation?

25 Mr. ROGER HUNKA: Oh, yes. It... Yes, it  
26 will be, Mr. Chair but I just thought that in order...

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1 Since you were making openings, the Proponent was making  
2 openings, it ought to just fall because there's a few  
3 questions that were raised that you won't hear until two  
4 weeks from now.

5 THE CHAIRPERSON: All right. Thank you  
6 very much.

7 Individual number three is Ashraf Mahtab.

8 Mr. ASHRAF MAHTAB: Thank you, Mr. Chair.  
9 My last name is spelled M-a-h-t-a-b. I'm a resident of  
10 Sandy Cove, and I have a question about one of the  
11 illustrations which was projected by Mr. Wittkugel that had  
12 to do with a statement from the Department, Provincial  
13 Department, about the economic benefits of mineral  
14 exploitation.

15 Now, I just wanted to point out that the  
16 definition of minerals does not include basalt. It was  
17 removed from the definition about 10 years ago, and  
18 therefore, everybody should understand that basalt is not a  
19 mineral and there is no royalty attached to exploitation of  
20 basalt. Thank you.

21 THE CHAIRPERSON: That's all you wish to  
22 offer?

23 Mr. ASHRAF MAHTAB: That's all. Thank you.

24 THE CHAIRPERSON: Thank you. Okay.

25 Next we have the Institute for Applied  
26 Sciences, Thomas Sacks.

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1 Mr. THOMAS SACKS: I have no questions at  
2 this point.

3 THE CHAIRPERSON: Okay. Mr. Sacks is  
4 passing. The next one is Judith Peach.

5 Ms. JUDITH PEACH: Judith Peach, P-e-a-c-h.  
6 I'm a local resident, Waterford.

7 And it appeared from the presentation made  
8 on Saturday that a lot of the adaptive management during the  
9 operation phase of the project would maybe be initiated by  
10 the quarry manager. I'm wondering what experience does Mr.  
11 Wall have in quarry management, and specifically in managing  
12 a quarry in a marine environment and with a marine terminal.

13 Mr. PAUL BUXTON: I'll direct to the first  
14 half of that question, perhaps.

15 Yes, the statement is made in the EIS  
16 quite clearly that Mr. Wall, as the operations manager, will  
17 be in overall charge of the operation of this facility, but  
18 it also does state quite clearly that there will be other  
19 qualified people on-site, certainly a head of safety...  
20 occupational health and safety and the environment  
21 responsible for monitoring, reporting and all that sort of  
22 thing.

23 You did ask specifically what  
24 qualifications and experience Mr. Wall had, so I'll pass  
25 that question to him.

26 Mr. JOHN WALL: I operated a quarry on the

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1 Hudson River floating barges for New York City.

2 Ms. JUDITH PEACH: Well, what... how does  
3 the size of that quarry compare with the proposed quarry?

4 Mr. JOHN WALL: That quarry did a million,  
5 two a year. We're proposing to do two here.

6 THE CHAIRPERSON: Okay. Next we have the  
7 Clean Annapolis River Project, Andy Sharp.

8 PRESENTATION BY CLEAN ANNAPOLIS RIVER PROJECT

9 Mr. ANDY SHARP: Yes. My name is Andy  
10 Sharp with Clean Annapolis River Project.

11 My question. In the revised project  
12 description, Section 7, the Proponent indicates that the  
13 marine terminal will not be removed at the end of the  
14 project's 50-year lifespan. On page 162 of the same  
15 document, the Proponent writes:

16 "If no agreement has been entered  
17 into with a community group or  
18 developer, then the marine terminal  
19 facility will be removed as part of  
20 the decommissioning plan."

21 Can the Proponent please clarify whether  
22 or not the marine terminal will be removed at the end of the  
23 project's life?

24 Mr. PAUL BUXTON: Yes, Mr. Chair and  
25 speaker. What we would intend to do is to discuss with  
26 local interest groups whether they might be prepared,

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1 whether they would want the facility, whether they have any  
2 use for the facility. And if that is the case, then we  
3 would enter into some sort of arrangement with respect to  
4 management of the facility.

5 If we find that, in fact, no one is  
6 interested in the facility, it has no value at the end of  
7 the day, then we will remove it.

8 It would appear that there is some  
9 interest, even at these early days, in the use of the  
10 facility. We have been approached in the last week by an  
11 organization to see whether we would have interest in the  
12 joint use, the sharing of that facility, and we've indicated  
13 that we are very willing to discuss that and we intend to  
14 sit down with that group at the end of these hearings.

15 So I can't predict what would happen 50  
16 years from now, but it seems to me that there may be  
17 interest at that time. And if there is interest, I think we  
18 would sooner... obviously the loading terminal, the loader,  
19 ship loader, would come down and be taken away, but the...  
20 there may be value in the facility itself.

21 And if a group is prepared to take it over  
22 and abide by the rules which are then in place, then we  
23 would certainly consider that.

24 Mr. ANDY SHARP: Supplemental, please.

25 Well, there seems to be some degree of  
26 ambiguity, two very different conditions. The terminal may

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1 be removed if no user can be found, or it may remain if a  
2 user can be found. So there's a number of questions that go  
3 with each of these options.

4 For example, if the terminal is to be  
5 removed, it would be useful, perhaps, if the Proponent would  
6 be describing at these hearings how this would be  
7 accomplished and the environmental impacts associated with  
8 the removal as required by the guidelines.

9 And secondly, if the terminal is going to  
10 be remaining in place, it would be useful, I believe, or my  
11 question would be what financial and legal arrangements the  
12 Proponent will be putting in place to ensure the safety and  
13 security of that terminal indefinitely.

14 So I guess, based on the Proponent's  
15 response, there are two supplemental questions there for  
16 these two options. I can come back and ask another one, or  
17 I can... we can break them in half or deal with them both  
18 now.

19 Mr. PAUL BUXTON: Mr. Chair, I think as far  
20 as the first one is concerned, we would be prepared to offer  
21 a statement by next Monday detailing how the facility would  
22 be removed at the end of the day.

23 The second one is much more difficult to  
24 answer because I just don't know what the regime would be in  
25 place at that time and what rules need to be followed, who,  
26 in fact, would be the appropriate authority at that time.

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1 But certainly Bilcon would not enter into an arrangement  
2 unless it met all the conditions of the authorities for the  
3 transfer of legal liabilities and all the other things that  
4 go with such transfers.

5 So if those arrangements could not be made  
6 we'd have to remove the terminal, but I have reason to  
7 believe that there could be significant interest in a joint  
8 use of that facility, perhaps even in its early years of  
9 use.

10 Ms. JILL GRANT: Can I?

11 Mr. GUNTER MUECKE: Mr. Buxton, you brought  
12 up something totally new, and that is a sharing of the  
13 loading facility.

14 What time frame are we talking about here?  
15 Is that in the lifetime of the quarry? And secondly, what  
16 sort of usage would that sharing involve?

17 Mr. PAUL BUXTON: We've not discussed at  
18 any time the sharing of the loading facility. I think we've  
19 made it very clear in the EIS and all our responses that the  
20 loading facility will never be shared.

21 We will not take product from any other  
22 part of Digby Neck or Nova Scotia or any other substance or  
23 material and share the ship loader. But we do have a marine  
24 facility there, and it does have some... could have some  
25 joint uses.

26 I think until they went a little further,



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1 I'm not so sure that we should even be discussing something  
2 as speculative as that. At the present time, we have no  
3 plans to share any use of the marine terminal or any part of  
4 it, but there could be uses, joint uses, which may be of  
5 benefit to the community.

6 And if that is the case, then we would  
7 certainly want to sit down with the appropriate parties and  
8 discuss whether it's viable, whether it's doable, whether it  
9 meets all the regulations of government and so on.

10 We would certainly look at that kind of  
11 joint use of the terminal, but not of the loading facility.

12 There will be no joint use of the loading facility.

13 Mr. GUNTER MUECKE: Okay. I understand  
14 that. Not the loading facility, but the marine facility.

15 So could you specify exactly which parts  
16 of the marine facility are... what are we talking about, the  
17 docking facility, shoreline facilities? I'm puzzled.

18 Mr. PAUL BUXTON: We're talking about the  
19 facility which is there, which is basically the three  
20 dolphins and the support pile structure to get out to the  
21 quadrant loader and the dolphins.

22 Clearly there may be some joint benefit  
23 for fishermen in that facility. There might be, there might  
24 be other joint uses which I can't speculate on at the  
25 present time, but it is possible and we have been approached  
26 by people who think that there may be some value in it for

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1 community use.

2 Ms. JILL GRANT: Another follow-up.

3 Can you tell us what the intended design  
4 life is of the marine terminal?

5 Mr. PAUL BUXTON: The intended design life  
6 is for 50 years. Usually in these cases one adds a fairly  
7 significant factor to that, and I would say that certainly  
8 the main features, which are the piles and the pile camps  
9 forming the dolphins, would be certainly designed for well  
10 over 100 years of anticipated use.

11 THE CHAIRPERSON: Thank you, Mr. Sharp.

12 Next we have the Partnership for the  
13 Sustainable Development of Digby Neck and Island Society.

14 Mr. KEMP STANTON: My name is Kemp Stanton,  
15 K-e-m-p, and I have a question about the preservation zone.

16 My understanding of it, while reading it,  
17 was that it's to be 30 metres from the high water mark. Is  
18 that correct?

19 Mr. PAUL BUXTON: I'll ask Mr. Kern to  
20 address that question, please.

21 Mr. DAVID KERN: It's a minimum of 30  
22 metres from the high water line.

23 Mr. KEMPT STANTON: My supplement question  
24 is, if it's to be 30 metres from the high water mark, that  
25 means it's the level at which the water is when it's high  
26 water on a calm day. But most plants don't start to grow

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1 until back at least 30 metres because of the tide surge  
2 kills them all, so what are you planning to preserve in that  
3 30 metres?

4 Mr. DAVID KERN: It'd be 30 metres of the  
5 width of the existing land.

6 THE CHAIRPERSON: Could you repeat that,  
7 please?

8 Mr. DAVID KERN: We're intending to  
9 preserve a width of a minimum of 30 metres from the high  
10 tide line.

11 THE CHAIRPERSON: I have a question, then.  
12 Based on what Mr. Stanton just said,  
13 nothing grows in that zone, so he's asking if you're going  
14 to preserve it and it's going to be a buffer zone, it's  
15 going to be a buffer zone without anything growing in it.

16 You understood that question?

17 Mr. DAVID KERN: Yes, I do.

18 THE CHAIRPERSON: Okay.

19 Mr. DAVID KERN: And if there's nothing  
20 growing in it, we won't be planting anything in it. We'll  
21 be keeping that as a shoreline, 30 metres of shoreline  
22 between the high tide line and that 30 metre zone.

23 THE CHAIRPERSON: Thank you.

24 Next we have Don Mullin.

25 Mr. DON MULLIN: Thank you, Mr. Chair. My  
26 name is Mullin, M-u-l-l-i-n, as there is another common

1 spelling of that.

2                   This... I'll read this quickly because  
3 it's a rather lengthy question, but it's, this morning you  
4 identified criteria you considered in determining the  
5 significance of an environmental effect as magnitude,  
6 frequency duration, geographical extent, reversibility and  
7 ecological context, yet for wetland species... wetlands and  
8 species at risk effects as well as socio-economic effects  
9 and others, the ecological context does not appear to have  
10 been considered in evaluating the significance of the  
11 environmental effect.

12                   Could you tell me one or more  
13 environmental effects where the ecological context criteria  
14 was used?

15                   Mr. PAUL BUXTON: Mr. Wittkugel will answer  
16 the question.

17                   Mr. UWE WITTKUGEL: Sorry. Could you  
18 repeat the last part of your question?

19                   Mr. DON MULLIN: Yes. I said could you  
20 tell me one or more environmental effects where the  
21 ecological context criteria was used?

22                   Mr. UWE WITTKUGEL: Ecological context, as  
23 I mentioned this morning, yes, takes into consideration  
24 whether this is a pristine environment or whether this is  
25 a... perhaps an already disturbed environment, agricultural  
26 landscape, perhaps.

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1                   In the context of all our environmental  
2 assessment, that factored or played a role, for example,  
3 when it came to the assessment of the effects on habitat.  
4 And we had... I sketched out this morning that there are  
5 disturbances already on the site through the existing  
6 quarry, through the existing or the historic quarry and pit  
7 use, and those uses led to a somewhat disturbed environment.

8                   There's also been clear cutting happening  
9 on the site, which means in this context we are no longer  
10 talking about an absolutely pristine environment. There has  
11 been disturbances that have consequences on the surface  
12 soil, on the vegetation habitat, and that was taken into  
13 account.

14                   Mr. DON MULLIN: The current and  
15 supplementary. I think it's inappropriate to refer to an  
16 historical quarry. There was a pit, historically a pit.  
17 The quarry is only - if you want to call 2002 historic, I  
18 think that might be a stretch.

19                   The second one is the ecological context  
20 in that what... I was simply wondering what other because  
21 you failed to mention ecological context when you discussed  
22 the criteria for determining those significant environmental  
23 effects. That's all.

24                   THE CHAIRPERSON: Thank you, Mr. Mullin.  
25                   Now we turn to Cheryl Denton.

26                   UNIDENTIFIED MALE OFF MIKE: She was at a

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1 funeral, but it's already been asked, so I think she could  
2 be passed.

3 THE CHAIRPERSON: Alright. Thank you.  
4 That brings us to Marilyn Stanton.

5 Ms. MARILYN STANTON: I'd like to pass at  
6 this time. Thank you.

7 THE CHAIRPERSON: Thank you, Ms. Stanton.  
8 Sister Barbara?

9 SISTER BARBARA: Thank you, Mr. Chair. And  
10 my question has to do with blasting.

11 I was just wondering, this morning they  
12 were mentioned about monitoring the wells. I live in  
13 Rossway, which is maybe 30 kilometres from Little River, and  
14 I was just wondering will Bilcon pay for any damages caused  
15 to foundations of private homes caused by blasting and, if  
16 so, will they provide this in writing?

17 Mr. PAUL BUXTON: Bilcon is required or  
18 would typically be required, and I'm sure this will be the  
19 case, to carry out investigations on foundations which  
20 would... could be seen at risk prior to any blasting taking  
21 place.

22 This is certainly in the guidelines and  
23 certainly, to some extent, it's also for the protection of  
24 the Proponent so that if somebody later alleged that a blast  
25 had damaged their building, we would have before examination  
26 by a third party to determine the state of a foundation.

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1                   You are introducing a scale here which I'm  
2 not sure that I, that I think would be appropriate. Thirty  
3 kilometres from the source of a blast of this magnitude, it  
4 is frankly inconceivable that there could be any damage.

5                   We are required to produce a velocity, a  
6 ground velocity, via blast not exceeding a specific level,  
7 13 millimetres per second, 7 metres from any foundation.  
8 The CONWEP model which we have, which admittedly has not yet  
9 been tested empirically, indicates that we will be well  
10 below that threshold for buildings in the 800 metre mark.  
11 Okay?

12                   So 30 kilometres, I don't think there  
13 would have ever been a circumstance where any building could  
14 be demonstrated to have been damaged 30 kilometres away by a  
15 blast of the magnitude that we're producing.

16                   THE CHAIRPERSON: You have no supplementary  
17 questions?

18                   SISTER BARBARA: No.

19                   THE CHAIRPERSON: Thank you.

20                   Just for clarity, Mr. Buxton, perhaps you  
21 could indicate the distance from the quarry involved in the  
22 pre-blast survey of homes.

23                   Mr. PAUL BUXTON: That would be specified  
24 to us rather than us making that determination. This would  
25 be the sort of issue that would be clarified in an  
26 industrial approval under the Nova Scotia Department of

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1 Environment and Labour, so they would lay out and specify to  
2 us precisely what they would require us to do in terms of  
3 pre-blast surveys.

4 That would go for wells as well as  
5 buildings, and that will be laid out and, of course, we must  
6 follow that to the letter.

7 THE CHAIRPERSON: Bob Morsches.

8 Mr. BOB MORSCHEs: Mr. Chairman, my name is  
9 Bob Morsches, spelled M-o-r-s as in Sam-c-h-e-s as in Sam.  
10 I am a summer resident and have a home in East Sandy Cove.

11 During this morning's session, the  
12 environmental planner, Mr. Uwe, I don't know his last name,  
13 was addressing the environmental assessment effects, and he  
14 stated that the rock crushers were not enclosed. After  
15 blasting every week or biweekly, there will be rock crushing  
16 that is not enclosed.

17 How often... this is the question. How  
18 often and what is the duration of each of his rock crushers,  
19 which I think are probably three of them, are... will they  
20 be operating with the rock from that last blast?

21 According to the United States National  
22 Park Service, a rock crusher, a single rock crusher smaller  
23 than the one that Mr. Buxton showed last Saturday, puts out  
24 approximately 180 DBAs to an extent of 500 metres. So the  
25 question is about the... how many times, what is the  
26 duration, how many rock crushers will be used after each



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1 blast.

2 Mr. PAUL BUXTON: Mr. Chairman, I think...  
3 I had thought that we had made it clear on Saturday and  
4 again this morning, and apparently not, that the rock  
5 crushers, in fact, will be enclosed and there will be no  
6 rock crushed on the site by a crusher which is not enclosed  
7 during the operational phase.

8 I think we showed a conceptual drawing of  
9 the crusher enclosed. All the screens will be enclosed, and  
10 the conveyor will be enclosed.

11 So I'm not sure whether you would like to  
12 pursue your question, but I can assure you that that's...  
13 that that is the intent and it is quite specifically set out  
14 in the presentations that we've made.

15 Mr. BOB MORSCHEs: Please forgive me for my  
16 question because, according to the statement by the  
17 environmental planner, he said they would not be enclosed,  
18 and that's the reason I asked the question. Thank you.

19 THE CHAIRPERSON: Thank you, Mr. Morsches.

20 Okay. We're going to start another cycle  
21 now. Sierra Club of Canada?

22 Mr. BRUNO MARCOCCHIO: Thank you, Mr.  
23 Chair. My name is Bruno Marcocchio. The last name is M-a-  
24 r-c-o-c-c-h-i-o.

25 I'd like to address some questions to the  
26 Proponent about their greenhouse gas response and their

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1 response to the Information Request to provide a  
2 compensation plan which would negate the emissions from the  
3 project during the construction and operation phases.

4 THE CHAIRPERSON: Mr. Marcocchio, one  
5 question, one follow-up, and the cycle you can come back  
6 again and ask the other one.

7 Mr. BRUNO MARCOCCHIO: Yes, I understand.

8 THE CHAIRPERSON: Yeah.

9 Mr. PAUL BUXTON: I think I'd like the  
10 question repeated, Mr. Chair.

11 Mr. BRUNO MARCOCCHIO: There wasn't a  
12 question yet. I was just in a preamble, and I'm just...  
13 I'll continue. I'll proceed now with my question.

14 In your response, it's page... it's  
15 document EIS Volume 3, 9.1, you outline your greenhouse gas  
16 emissions at approximately 82,000 tons of CO<sub>2</sub>. And I'm  
17 somewhat confused by the fact that you characterize those  
18 emissions as not meeting the Federal Government's  
19 requirement for being a large emitter.

20 Can you please explain that, since the...  
21 Environment Canada's average annual emissions of 8 kilotons  
22 per establishment would qualify as a large final emitter?

23 Mr. PAUL BUXTON: Perhaps we'd take that  
24 under advisement. My expert seems to think that that is not  
25 in effect, but we'll look at it and respond.

26 THE CHAIRPERSON: I think what he's saying

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1 is he can't answer it right now for you, Mr. Marcocchio,  
2 and... but that it will get answered in... over the course  
3 of the meetings. If you wanted to ask another question,  
4 that would be okay.

5 Mr. MARCOCCHIO: Yes. So they will  
6 undertake to provide a response because I can provide  
7 documentation from another environmental assessment, if need  
8 be, that outlines those levels.

9 THE CHAIRPERSON: Let's put that down as an  
10 undertaking. When do you think that you would have that for  
11 us, Mr. Buxton?

12 Mr. PAUL BUXTON: Tuesday, next week.

13 THE CHAIRPERSON: Tuesday. Mr. Marcocchio,  
14 I would like... before you leave, perhaps you could go over  
15 to the Secretariat and write the question down so that we  
16 have it specifically as you're asking it. Then we'll  
17 forward it as an undertaking.

18 Mr. MARCOCCHIO: Yes.

19 THE CHAIRPERSON: Okay. Now you can ask...

20 Mr. MARCOCCHIO: Your... the response to  
21 this question, in short, if I may paraphrase it, is that you  
22 don't feel that you're obliged and you will only comply with  
23 regulations that the federal or Provincial Governments may  
24 impose.

25 I remind you that the Provincial  
26 Government has recently passed legislation committing to a

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1 20 percent reduction over the last... over the next 13 years  
2 or so in the province of Nova Scotia, and that your attempts  
3 at minimizing by outlining your significant emissions that,  
4 as I've outlined, are those of a major emitter, will  
5 significantly increase the Provincial Government's CO<sub>2</sub>  
6 emissions at a time when they're committing to a 20 percent  
7 reduction.

8                   You have not answered the question here.  
9 Could you now please answer it, put together a plan that  
10 would include buying carbon offsets to ensure that your  
11 emissions of CO<sub>2</sub> are responsible, provincially responsible,  
12 federally, most importantly, responsible to the community  
13 you're operating in?

14                   Mr. PAUL BUXTON: I think, Mr. Chairman,  
15 we've made our position very clear, that when a set of rules  
16 and regulations is devised by either the federal or the  
17 provincial government which applies to industry, and  
18 specifically our industry, we would commit and, of course,  
19 must follow those rules and regulations, and we will do so.

20                   It's simply not possible for us to guess  
21 at this time what those might be, so I think we'll simply  
22 stick to the same answer, and that is that when the rules  
23 and regulations come out and the standards come out which  
24 apply to our sector of the industry, we will comply in full.

25                   THE CHAIRPERSON: Mr. Marcocchio, do you  
26 have a follow-up? No? No follow-up? Okay.

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1 Native Council of Nova Scotia.

2 Mr. ROGER HUNKA: Yes, it's Mr. Hunka  
3 again. Just to... I have a series of questions that just  
4 follows up.

5 You ended with the term you knew something  
6 about First Nations. Do you know anything about the  
7 Aboriginal peoples of Nova Scotia, both on reserve and off  
8 reserve?

9 Mr. PAUL BUXTON: I'm not quite sure how to  
10 answer that, Mr. Chair. I have personal contact with people  
11 in First Nations. I work with people in First Nations. I  
12 have a... I think a reasonable grasp of the history.

13 I'm not quite sure where your question is  
14 going.

15 Mr. ROGER HUNKA: Okay. The question is  
16 going, do you know the distinction between Band Councils and  
17 Native Councils?

18 Mr. PAUL BUXTON: I certainly wouldn't want  
19 to define that. Perhaps you could enlighten me.

20 Mr. ROGER HUNKA: The Band Councils are  
21 creations of the Department of Indian and Northern Affairs  
22 and represent and work for the communities that are on  
23 **Indian Act** Reserves, and we have a Reserve in this area.

24 Native Councils are established by the  
25 communities and with the Department of Heritage, or now  
26 Heritage, and are democratic organized and represent

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1 communities that continue to live on traditional ancestral  
2 homelands, not on Reserve, but on their traditional lands  
3 known as Mi'kmaq here in Nova Scotia.

4 Mr. PAUL BUXTON: Thank you.

5 Mr. ROGER HUNKA: And I raise that  
6 question, Mr. Chairman, because I want to know, did Bilcon  
7 or does Bilcon have a consultation process with the  
8 Aboriginal peoples of Nova Scotia?

9 Mr. PAUL BUXTON: No, we do not. We, I  
10 believe, have made a great attempt to consult for a period  
11 of five years with the local Band in Bear River. We've had  
12 very good communication on a personal level. We held an  
13 information meeting at the Reserve.

14 We have made continuous, numerous requests  
15 to consult with them. They have chosen... well, let me  
16 rephrase that. The same thing I would say, to some extent,  
17 with the Confederacy of Mainland Mi'kmaq, we have been in  
18 correspondence, both by e-mail and by mail, for five years  
19 with Mr. Cox.

20 The last determination that I was able to  
21 get was perhaps a year or more ago, and that a very specific  
22 Council, and I'm sorry, you'll probably have... you'll have  
23 to help me with the Mi'kmaq name, which was established in  
24 Truro. And again, I'm sorry that I can't remember the  
25 Executive Director's name, but a group that was set up quite  
26 specifically for consultation.

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1 I spoke with the Director of that group on  
2 more than one occasion, who advised me that the... there  
3 would be no consultation with Bilcon or, indeed, any other  
4 company, that consultation would only take place with the  
5 Federal Government and it would only take place through this  
6 new group.

7 And if you just... I believe the group  
8 started with Croisiault(ph) something. You'll have to help  
9 me with it. But it is a new group in Truro which has been  
10 specifically put in place to consult.

11 And so I can say that we have made  
12 extensive attempts, if you like, to gather information.  
13 Call it consultation if you like. We have held information  
14 meetings at the Bear River Reserve. I have spoken to one of  
15 the Councils of the Bear River Reserve probably on at least  
16 a biweekly basis for the last four years.

17 But in terms of sitting down and formally  
18 consulting, we have not been able to do that. And I'm not  
19 quite sure how we can when we are advised that the Mi'kmaq  
20 people will not consult with anybody else but the Federal  
21 Government.

22 THE CHAIRPERSON: Follow-up?

23 Mr. ROGER HUNKA: Yes. I'll just follow up  
24 and... Mr. Buxton, this is why I raised the question earlier  
25 on, were you provided any instructions, because what was,  
26 indeed, happening is that you were focused on one group

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1 alone, and that's the on-Reserve group, the 13 Band groups,  
2 and not the Native Council group. And the fault does not  
3 necessarily lie with you.

4                   It lies with the government of Nova  
5 Scotia, Natural Resources, Federal Government, and the Nova  
6 Scotia Department of Environment and Labour. But most  
7 assuredly, the Native Council was on record. The panel does  
8 know of us being on record. You would have known that we do  
9 represent well over 9,000 Aboriginal peoples who live  
10 throughout traditional lands, as compared to the 7,000 on  
11 the 13 Reserves.

12                   It's unfortunate, but you're caught in the  
13 middle of not really having a consultation process with one  
14 group, and another group that did want to have a  
15 consultation process is prepared to have a consultation  
16 process and will entertain a consultation process. I just  
17 leave that at that.

18                   Mr. PAUL BUXTON: Mr. Chair, I can say that  
19 we would be delighted to meet with you, and we have  
20 actually, over the past year or so, had a number of  
21 discussions with I think perhaps your Membership, and I'm  
22 not quite sure yet whether they're properly accredited. I  
23 don't profess to understand the process, but they hold  
24 themselves the forgotten people of Digby County.

25                   The Grand Chief and the Chief have been  
26 into my office on at least half a dozen occasions, and we've



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1 exchanged views, and we're very pleased to do so. So all I  
2 can say is that we would be very pleased to meet with you at  
3 any time to discussion any issues or concerns that you have,  
4 and to try to accommodate those.

5 THE CHAIRPERSON: Thank you, Mr. Hunka.  
6 Ashraf Mahtab?

7 Mr. ASHRAF MAHTAB: I have a question about  
8 how much is actually the total wasted material which cannot  
9 be shipped. You have 2 million tonnes a year aggregate, and  
10 I'm just... My estimate is that 20 percent in addition to  
11 this 2 million will have to be blasted to produce that  
12 amount of aggregate. I have noticed the conversation which  
13 has gone on before.

14 In my estimate, the waste which cannot be  
15 shipped as aggregate will include, first of all, whatever is  
16 existing as fillings in the fractures, and the there will be  
17 the crushing and grinding and sealing, and that will produce  
18 this fine sand and some other material, and the grit which  
19 was mentioned, which will not be shipped.

20 So I just want to know if you agree with  
21 my estimate of 20 percent waste, which will not be shipped.

22 Mr. PAUL BUXTON: Mr. Chairman, I think in  
23 answer to a very similar question from Dr. Muecke this  
24 morning, that we did in fact enter into an undertaking to  
25 provide those detailed figures, and we will provide those  
26 figures on the date that we set. I can't remember what date

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1 we set now, but we will undertake to provide them.

2 THE CHAIRPERSON: So it's forthcoming, in  
3 your answer, it's forthcoming, but not this afternoon. But  
4 soon.

5 Mr. ASHRAF MAHTAB: No, that's all right.  
6 I just wanted to make sure that that number, 20 percent,  
7 has to be refuted or else some other number has to be  
8 supplied so I can do my own calculation from my next  
9 calculation.

10 THE CHAIRPERSON: Thank you.

11 Mr. ASHRAF MAHTAB: Thank you, Mr. Chair.

12 THE CHAIRPERSON: Judith Peach?

13 Ms. JUDITH PEACH: I do have other  
14 questions, but I was asked to follow up on my first question  
15 again about the quarry manager's experience in this kind of  
16 operation.

17 When he was manager of the quarry on the  
18 Hudson River for New York City, it was part of his job,  
19 dealing with environmental issues, environmental impacts,  
20 resulting from that quarry.

21 Mr. PAUL BUXTON: Mr. Wall will answer that  
22 question.

23 THE CHAIRPERSON: Yes. Ms. Peach, you can  
24 ask another question, since you didn't ask a follow-up the  
25 first time.

26 Ms. JUDITH PEACH: Yes. So on another

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1 subject, on Saturday Mr. Buxton said he'd have 400-plus job  
2 seekers at the office. Can he give me an estimate as to how  
3 many of those job seekers currently live on Digby Neck and  
4 Islands?

5 Mr. PAUL BUXTON: I know that we were  
6 running that figure. We were asked that question about 18  
7 months ago, but no, I can't tell you what it is to date, and  
8 it would take a fairly thorough review because some of those  
9 applications have been on file for three years, and while we  
10 know that separate applications, we do know that a fair  
11 number of those people have already left for Alberta and  
12 parts west.

13 If you consider the information vital, I  
14 think that we - I'm not sure we could extract it in the  
15 time, Mr. Chair. But if it's considered vital to the  
16 process, we would make a stab at it.

17 THE CHAIRPERSON: It's your call, Ms.  
18 Peach.

19 Ms. JUDITH PEACH: Well, my concern is that  
20 possibly a lot of the people that would be working at the  
21 quarry live nearby, within driving distance, in Digby Town  
22 or other parts of Digby Municipality, which goes all the way  
23 to Weymouth, or up the Valley somewhere, and they would not  
24 be contributing to the school population if they're further  
25 toward Digby from Gulliver's Cove Road.

26 So any benefit you might get from the

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1 employees to the local schools or fire departments, for  
2 instance, you know, if they stayed in their home community  
3 because they can commute, those benefits would not come to  
4 Digby Neck.

5 THE CHAIRPERSON: Are you asking for that  
6 information?

7 Ms. JUDITH PEACH: I would think he could  
8 give it to me in just very general terms, like 50 percent,  
9 90 percent, 80 percent.

10 THE CHAIRPERSON: I think the answer is  
11 yes. We'll make that an undertaking, and you can deliver  
12 that for us when?

13 Mr. PAUL BUXTON: Our office staff is  
14 basically here, so it's somewhat difficult. But perhaps the  
15 end of next week. What I could say, and this may satisfy,  
16 I'm not sure, that we have basically stated in virtually all  
17 our meetings in the last two years that we would give  
18 priority to people living in the local area.

19 What do we mean by "local area"? Well,  
20 starting with Little River, and the on to one side of  
21 Tidville, the other side Mink Cove and Sandy Cove and East  
22 Ferry and so on. I'm not sure that we can fulfill all the  
23 positions from that area. Some of the positions require  
24 very specific qualifications. We can't pick up an  
25 electrician - or, I'm sorry, we can't pick up, you know, and  
26 18-year-old and turn them into an electrician in six weeks.

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1 They need to go through qualifying courses.

2 But those people that can be trained  
3 within the time element that we have that do not have the  
4 training, in the local area, we will train. I think I'm  
5 correct in saying that at the last job meeting that was held  
6 at the (Inaudible) House, you're saying 47, I think 43, 45  
7 people were there. That meeting was held for people in the  
8 local area. Now, we do - we had all the names and addresses  
9 for those people. Whether they all came from Waterford to  
10 Freeport, I can't tell you, but I think that the majority of  
11 them did. Possibly there were one or two from Digby.

12 The first meeting that was held there was  
13 called by the young people of the Little River area, and we  
14 were asked to attend their meeting. We provided the forum.  
15 And I believe that there were 23 people at that meeting,  
16 young people, and I'm quite sure that those were from the  
17 immediate area.

18 They had heard that we were not going to  
19 hire locally and were concerned about that, and we responded  
20 to that by asking them to call the meeting. They called the  
21 meeting, we attended. And my own view is that if we can, if  
22 we can get them before they go to Alberta, we will hire  
23 virtually our full complement off of Digby Neck, apart from  
24 those that required extensive training.

25 THE CHAIRPERSON: We've made that an  
26 undertaking. I've set it for the 29th of June, which is the

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1 Friday before we close the hearings, and if you're here,  
2 you'll get it then. If not, it will appear in the  
3 transcripts. Okay?

4 Next is the Clean Annapolis River Project.

5 Mr. ANDY SHARP: Yes, my question concerns  
6 the procedures for the docking and departure of ships from  
7 the marine terminal. The EIS, in Section 11, makes  
8 reference to:

9 "Standard mooring buoys for the  
10 previously-described Panamax-sized  
11 vessels will be installed for the bow  
12 and stern lines."

13 No information was provided, though, on  
14 how these lines will be connected between the buoys and the  
15 ship. My question therefore is will a small boat or boats  
16 be available to tow and connect these lines when the ships  
17 arrive and then depart?

18 Mr. PAUL BUXTON: Yes.

19 Mr. ANDY SHARP: Would it be useful,  
20 therefore, to know where these boats will be docked? Will  
21 it be at the project site or elsewhere? How will they be on  
22 hand? How many? How many crew members?

23 Mr. PAUL BUXTON: I think, generally  
24 speaking, the work boat will be kept on-site, perhaps in the  
25 event of a predicted severe storm it might be taken to a  
26 safer place for a couple of days, but generally speaking it

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1 will be moored on-site.

2                   We would have people that we would train  
3 from our work force in the docking procedure, how to take  
4 the rope and take it out to the mooring buoys. They would  
5 be specifically trained to do that task. I suspect that  
6 they will not be additional employees. They will be  
7 employees taken from our work force but specifically trained  
8 to that task.

9                   Mr. ANDY SHARP: Excuse me, Mr. Chair.  
10 I'm still not clear. Will the work boat be pulled up on  
11 shore, or be kept at anchor?

12                   Mr. PAUL BUXTON: I would assume that it  
13 would be tied up to the facility. We have moorings we can  
14 tie up to back of the dolphins or to the piles. I'm not  
15 sure that we've gone into that much detail yet.

16                   THE CHAIRPERSON: Thank you. The  
17 Partnership.

18                   Ms. LISA MITCHELL: Thank you, Mr. Chair.  
19 My name is Lisa. I'm representing The Partnership.

20                   My question is with regard to  
21 environmental audit and monitoring information. I believe  
22 it was said perhaps yesterday that environmental audit  
23 information and monitoring information would be transparent,  
24 and I'm interpreting that to mean that it would be made  
25 available to the public.

26                   And I'm looking, I guess, for a little

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1 elaboration on what they mean by "environmental audit", and  
2 how that would be made available to the public.

3 Mr. PAUL BUXTON: Mr. Wittkugel will answer  
4 the question. Thank you.

5 Mr. UWE WITTKUGEL: Yes. We distinguished  
6 between monitoring and auditing. The monitoring will  
7 address the effects monitoring and the compliance  
8 monitoring.

9 The auditing, what we mean by that is the  
10 very basically an internal corporate review of their own  
11 environmental performance, and that will be done either on a  
12 half-year basis or a yearly basis, and then will be made  
13 available to anyone who's interested in that.

14 The CLC, of course, but even the general  
15 public can access those documents or require those documents  
16 and that information will be released, and it will include  
17 general performance in the environmental sector, based on  
18 monitoring and perhaps also based on feedback received  
19 through the CLC.

20 Ms. LISA MITCHELL: A follow-up to that  
21 question would be, do any of the other Clayton companies  
22 engage in this kind of process whereby they release  
23 environmental audit information and monitoring information  
24 to the public?

25 Mr. PAUL BUXTON: I can't answer that  
26 question, Mr. Chair.



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1 THE CHAIRPERSON: I don't think he's  
2 refusing; I don't think he has that knowledge. But I don't  
3 know how important it is that - well, I don't know. Did  
4 you want to request some sort of additional information?  
5 Like an undertaking in that area? And I don't know if  
6 that's even feasible, given that it is the Clayton company  
7 and not the Bilcon company.

8 Ms. LISA MITCHELL: Perhaps I could do a  
9 second part follow-up which might be beneficial. Has Bilcon  
10 of Nova Scotia considered obtaining a 14,001 certification  
11 for their facility as part of the environmental management  
12 program?

13 Mr. PAUL BUXTON: It has been discussed,  
14 Mr. Chair. I think we've been - perhaps had our focus on  
15 this process rather than a quality assurance and a quality  
16 control process later on.

17 It would certainly be my policy to  
18 recommend that and to drive that process forward.

19 THE CHAIRPERSON: Okay. Don Mullin.

20 Mr. DON MULLIN: Twice this morning you  
21 discussed cumulative effects; however, on both occasions you  
22 appeared to consider only other known or potential projects.

23 Would the Proponent explain what it  
24 considers a cumulative effect, and why it appears to use  
25 such a narrow definition?

26 Mr. PAUL BUXTON: Mr. Wittkugel will answer

1 that question.

2 Mr. UWE WITTKUGEL: The cumulative effects  
3 are defined by the Canadian Environmental Assessment Agency,  
4 and there's a guideline for practitioners that describes  
5 what are cumulative effects. Cumulative - and then we  
6 adhere to that definition and conduct a cumulative effects  
7 assessment that follows their definition, which is that you  
8 assess not only your own project, but also how your project,  
9 with other potential projects, may interact.

10 These other projects are future projects,  
11 reasonably foreseeable projects, and also perhaps existing  
12 and present projects. But it's clearly related to other  
13 projects.

14 Mr. DON MULLIN: But not exclusively. You  
15 said cumulative effects of your own project and other known  
16 or expected projects, and yet your consideration seems to be  
17 only of other known or potentially projected projects. That  
18 was my comment.

19 Mr. UWE WITTKUGEL: In our cumulative  
20 effects assessments, yes, we focused on other known  
21 projects, whether planned or reasonably foreseeable.

22 The other cumulative effects built into  
23 the direct effects assessment - for example, cumulative  
24 effects of noise-generating activities - we didn't - I think  
25 it described it. We used the very conservative model  
26 approach where we took various activities into account that

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1 cumulatively contribute to the maximum worst-case noise  
2 level; in that sense, that were also cumulative effects  
3 assessed within our project, but we stuck in the cumulative  
4 effects assessment to the definition of the **Canadian**  
5 **Environmental Assessment Act** and Agency.

6 Mr. DON MULLIN: Not to split a hair, but  
7 additive effects cumulative effects may not be identical.  
8 That's only my comment. I have no opportunity for further  
9 question.

10 THE CHAIRPERSON: Sister Barbara? No? Bob  
11 Morsches?

12 Mr. BOB MORSCHEs: Mr. Chairman, this  
13 concerns the briefing by Mr. Buxton last Saturday, if I may  
14 address that. It doesn't have much to do with the  
15 environment.

16 This concerns alternative sites for basalt  
17 quarries. Last year, the year before, Reykjavik, Iceland,  
18 was wanting people to come to take away the basalt which is,  
19 they have very active volcanoes up there, and a lot of  
20 basalt, and you want to ship it by sea, and therefore it  
21 would be a perfect area to use it, 'cause those people  
22 wanted to get rid of it.

23 An alternative site which is under  
24 consideration by NASA is to go ahead and explore Mars  
25 because it's full of basalt and there's - it doesn't hurt  
26 the environment or anything. They're thinking about having

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1 large carriers do such a thing, and then bring it back to  
2 the United States, and they could drop it in lake water.

3 Now that's a couple alternatives, you  
4 know, that I've taken a look at. I realize that maybe  
5 that's far-fetched, but that's what I found out.

6 THE CHAIRPERSON: Was that in a form of a  
7 question, or was that - that's a comment, is it?

8 Mr. BOB MORSCHEs: Well, I was wondering if  
9 those two alternatives were researched, because I know you  
10 haven't listed any alternatives sites.

11 THE CHAIRPERSON: I think the first one  
12 might have some merit. The other one is a trifle fanciful,  
13 think you not?

14 Mr. BOB MORSCHEs: My discussion with NASA  
15 is that it's in a, not a detailed planning area, but it's a  
16 concept plan, Mr. Chairman.

17 THE CHAIRPERSON: Well, Mr. Buxton, I guess  
18 you're being asked about Iceland.

19 Mr. PAUL BUXTON: No, we did not consider  
20 Iceland, Mr. Chair. I do not profess to be an expert on  
21 shipping, but I would've thought that the shipping costs  
22 would have been excessive to Iceland, but I'll certainly  
23 draw that to the attention of my principals.

24 THE CHAIRPERSON: Okay.

25 Mr. BOB MORSCHEs: Thank you very much.

26 THE CHAIRPERSON: Well, we've finished two

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1 cycles of this now, and we will go to a third, but before we  
2 do, I just wanted to be sure that there isn't anyone else in  
3 the audience who's a registered participant who might, in  
4 fact, want to join this list. Raise your hand. No? Okay.

5 Let's start at the top again. Sierra  
6 Club.

7 Mr. MARK DITTRICK: Yes, Mark Dittrick  
8 again from Sierra Club. Are we doing just three cycles?

9 THE CHAIRPERSON: We...

10 Mr. MARK DITTRICK: Might we do a fourth?

11 THE CHAIRPERSON: It's entirely within the  
12 realm of possibility.

13 Mr. MARK DITTRICK: Okay. Then I'll ask a  
14 real quick one, and we'll get through this cycle fast, I  
15 hope.

16 I believe it was mentioned earlier that  
17 not explosives, in the project descriptions, that no  
18 explosives would be stored on-site. And if that's correct,  
19 my question is, if nothing is stored on-site, are they being  
20 stored off site in some way, and if that's not the case, how  
21 are they getting to the quarry site to be used? Are they  
22 coming by road or are they coming by sea?

23 Mr. PAUL BUXTON: There will be no  
24 explosives stored on the quarry site. There will be no  
25 explosives associated with this operation stored elsewhere.  
26 The ingredients for the explosive will be driven to the

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1 site in purpose-designed vehicles, and the ingredients of  
2 the explosive will be prepared on-site and used immediately.

3 So there will be no finished product on-  
4 site or off-site.

5 Mr. MARK DITTRICK: But then I assume that  
6 there will be ammonium nitrate and gasoline, but not mixed  
7 together on the site; so that there will be explosives, but  
8 not put together in an explosive state to be used.

9 Mr. PAUL BUXTON: But that's generally  
10 correct, but they're not an explosive until they're made to  
11 be an explosive.

12 Mr. MARK DITTRICK: So in other words, this  
13 was semantic sort of thing. When you said that there'd be  
14 no explosives stored on-site, the components for the  
15 explosives will be stored on site?

16 Mr. PAUL BUXTON: There's no components of  
17 those explosives stored on site. The components are brought  
18 to the site in purpose vehicles. They are then mixed and  
19 used as an explosive for a specific blast. Neither ammonium  
20 nitrate or the fuel oil is stored on site. It's brought to  
21 the site for a specific blast.

22 THE CHAIRPERSON: Yes, and you said  
23 "gasoline", and I don't think you meant "gasoline". It's  
24 fuel oil.

25 Mr. MARK DITTRICK: Fuel oil. Fuel oil,  
26 right.

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1 THE CHAIRPERSON: Yes. Native Council of  
2 Nova Scotia?

3 Mr. ROGER HUNKA: And appreciating that  
4 there isn't a consultation process and you're a bit  
5 disadvantaged. However, on the environmental side, having  
6 done or doing or following to do or proposing to do or  
7 having done an environmental assessment, the guidance  
8 documents specifically talked about and asked the Proponent  
9 to review land uses and resource uses, and then describe  
10 what those uses are. This is through possibly yourself or  
11 Mr. - got such an interesting last name I keep forgetting  
12 it.

13 Why haven't you, or even the Panel or  
14 anybody, asked what Aboriginal peoples' uses were for food,  
15 fishing? Why doesn't your EI even have any indication  
16 whatsoever about food uses, let alone traditional uses of  
17 resources along that area? Why is it totally absent? Aside  
18 from the fact that there's no consultation?

19 Mr. PAUL BUXTON: I don't believe that it  
20 is totally absent. One of the things that we did back in  
21 2002, and continued right up until some little short time  
22 ago, was to attempt to have a traditional knowledge study  
23 carried out by people qualified to do this, and we rather  
24 thought that the only people qualified to do this were First  
25 Nations.

26 We made contact with the Confederacy of

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1 Mainland Mi'kmaq, and initially there was an agreement,  
2 although a loose one, that they would carry out a  
3 traditional knowledge study, including food and all the  
4 other aspects of a traditional knowledge study, for us.

5 I can't tell you quite what went wrong  
6 with that, but in any event, that did not happen.

7 We then went to the equivalent of the  
8 Confederacy on Cape Breton Island, and you'll have to help  
9 me with that. I can't...

10 Mr. ROGER HUNKA: (Inaudible)

11 Mr. PAUL BUXTON: It was the group, in any  
12 event. And the group specifically, they advised, the group  
13 at Eskasoni also had people on staff capable of carrying out  
14 a traditional knowledge study. We did approach them, and  
15 they agreed that they would carry out a traditional  
16 knowledge study for us.

17 Again, my understanding is that then there  
18 was somewhat of a contretemps of a Cape Breton group coming  
19 on to mainland and doing a traditional study.

20 The net result of all of this is that we  
21 ourselves were unable to sponsor or produce a traditional  
22 knowledge study. However, all was not lost because the  
23 Confederacy of Mainland Mi'kmaq did, in fact, complete a  
24 traditional knowledge study which included food and the use  
25 of Digby Neck for hunting, and it was called Oositookum, and  
26 I can't remember the entire name of it - but I can give it



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1 to you: "The Mi'kmaq use of Oositookum, Digby Neck, and  
2 Surrounding Waters, and the Mainland Shore of St. Mary's  
3 Bay."

4 That was submitted to the Panel by the  
5 Confederacy of Mainland Mi'kmaq, and in fact participant  
6 funding was received by the Confederacy of Mainland Mi'kmaq  
7 to produce that study.

8 So you're quite right, we did not do a  
9 traditional knowledge study. We regret that. We made every  
10 attempt to have one done. And in fact, it was done at a  
11 later time. We have communicated with the Confederacy of  
12 Mainland Mi'kmaq and said that we wish to communicate with  
13 them in future to assist, to co-operate, et cetera, in the  
14 future, and we hope that that can be - that that will fall  
15 into place.

16 We've made the same sort of offer to the  
17 Bear River First Nation, and as I said, I'm in constant  
18 communication with one of the councillors there. We have  
19 met with the group from Digby County calling themselves the  
20 Lost People, with the Grand Chief and the Chief. So yes, we  
21 have not done, we have not done a food study, a traditional  
22 knowledge study, because we were simply unable to hire  
23 somebody qualified to do it, and we felt that that should  
24 come from the First Nations.

25 Mr. ROGER HUNKA: As a supplementary to it,  
26 but the studies, even the one from the Confederacy, would

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1 have indicated that there are uses of those resources, be  
2 they fish or animal life or plant life. I think they did.  
3 The last page of the reported indicated.

4 I'm asking why, then, didn't your  
5 consultant follow that up on what to do with that, how to  
6 mitigate or compensate for that? In other words, you'll  
7 have clam diggers, you'll have persons lobstering, you'll  
8 have persons fishing, or you'll have persons picking sweet  
9 grass or whatever are - it's quite a large coast, 1.6 miles  
10 of coast line that your property is on.

11 And you know that there are going to be  
12 Mi'kmaq persons occupying or going through that. So why - I  
13 know you don't have all the details, but at least it  
14 should've been somehow identified as a land use; that there  
15 are people using it.

16 Mr. PAUL BUXTON: I think we did make that  
17 point, and you know, it's it isn't quite six miles long.

18 Mr. ROGER HUNKA: No, 16.

19 Mr. PAUL BUXTON: 1.6, yes. And I think  
20 one would be hard pressed to dig clams there. But we take  
21 your point that there may be First Nations people gathering  
22 periwinkles. We've certainly made provision for them to get  
23 to the beach. You know, I don't think we wish to interfere  
24 in any way with traditional use of the land.

25 Clearly, there's going to be activities on  
26 the property which, you know, will restrict at certain

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1 times. For example, when blasting is going on or in  
2 dangerous areas of the quarry. But for the balance of the  
3 land and on the adjacent land which we've acquired, I assume  
4 that traditional activities will continue.

5 Mr. ROGER HUNKA: Thank you.

6 THE CHAIRPERSON: Ashraf Mahtab?

7 Mr. ASHRAF MAHTAB: No more questions.

8 THE CHAIRPERSON: No more questions.

9 Judith Peach?

10 Ms. JUDITH PEACH: Mr. Buxton stated that  
11 this project's a good fit for this area, and he - I believe  
12 he said on Saturday that if he brought a high-tech firm into  
13 the area you couldn't find enough personnel to man it,  
14 something to that effect.

15 I wonder how Mr. Buxton would characterize  
16 the labour force of this area? What kinds of jobs does he  
17 think we are suitable for?

18 Mr. PAUL BUXTON: I'm sure that I'm really  
19 qualified to answer that question. I've certainly lived  
20 here for a significant period of time, and over that time  
21 I've employed a significant number of people. Certainly  
22 well over a hundred people on the projects in Annapolis  
23 Royal; 300, I should think, at the Upper Clements Project.  
24 So I have a fairly good idea of the capabilities of this  
25 area.

26 One of the things that has happened to us

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1 is that many of our qualified people have gone. Let me just  
2 give you an example of that. In the construction of the  
3 wooden roller coaster at the Upper Clements Park, there were  
4 about 120 carpenters working on that specific project alone.

5 I don't think you could find 120 carpenters all the way  
6 from Shelburne around to Yarmouth, all the way down to  
7 Kentville now. They're gone.

8                   If you want activity on your house,  
9 whether it's roofing or an extension, or in fact virtually  
10 any activity now, it is very difficult to arrange. Our  
11 skilled people are moving away, and I think we need to  
12 retain them in this area.

13                   I don't think I was being terribly  
14 facetious when I said that, you know, you could not attract  
15 a 300-person high-tech company here. I don't think that we  
16 could find 300 people qualified in computer programming and  
17 that sort of thing in this area.

18                   I think we have an adaptable people here,  
19 I think we have a trainable people here. All the projects  
20 that I've been associated with in this area I have built  
21 with local labour. I am the biggest booster of local labour  
22 in this area. And it would have been far easier for me to  
23 simply bring a contractor in to build some of those projects  
24 and stand back and let somebody else take the strain.

25                   I have always considered the work force of  
26 this area to be absolutely first class, but we're losing

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1 them. They're going from this area. So I'm not sure that I  
2 could - I'm not qualified to say, I don't have the  
3 statistics to say there are X carpenters and X plumbers and  
4 X people with this kind of education and training.

5                   What I do say is that the people in this  
6 area are highly trainable and make extremely dedicated and  
7 loyal employees.

8                   Ms. JUDITH PEACH: My observation is  
9 they're generally under-employed, that they're generally  
10 better-qualified than the jobs they're working in. And this  
11 project, for the people that will be employed from the local  
12 area, probably isn't going to be much of a challenge for  
13 them.

14                   THE CHAIRPERSON: Thank you, Ms. Peach.  
15 Clean Annapolis River Project?

16                   Mr. ANDY SHARP: Bilcon of Nova Scotia  
17 retained the services of Mr. Kenneth Neil to survey the  
18 project site for rare and endangered butterfly species. His  
19 report was included in last year's EIS.

20                   In his report, Mr. Neil identified  
21 suitable habitat and/or breeding sites for three species of  
22 threatened butterflies, but he could not confirm the  
23 presence of these species due to the timing of his survey.

24                   His principal recommendation was a follow-  
25 up survey be completed in 2006 to confirm the presence of  
26 these species. Did Bilcon of Nova Scotia complete the

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1 follow-up butterfly survey in 2006, as recommended by Mr.  
2 Neil, and will it be added to the public record?

3 Mr. PAUL BUXTON: Dr. Alliston will answer  
4 that question, please. We do have that survey available.

5 Mr. GEORGE ALLISTON: That survey was  
6 completed by Ken Neil in August and September of 2006, and  
7 that should be on the record. The results of that were none  
8 of the species that he had identified as potential there  
9 were found. He did find adults of the Monarch butterfly,  
10 but there was no host plants for the larva of the Monarch  
11 butterfly. Last year happened to be an exceptional year for  
12 Monarch butterflies in the east, in general.

13 Mr. ANDY SHARP: From my examination of the  
14 comments of the EIS, the four volumes and also the website,  
15 I've been unable to locate that actual report.

16 THE CHAIRPERSON: I think they're trying to  
17 track it now.

18 Mr. PAUL BUXTON: We have the document  
19 here. We're just not quite sure where it went into the  
20 document, or into which - it probably was included as an  
21 attachment to one of the responses for specific information.

22 Mr. GUNTER MUECKE: Could it be made  
23 available?

24 Mr. PAUL BUXTON: Very much so.

25 Mr. GUNTER MUECKE: Could you make it  
26 available to the Panel, too, because we have not seen it.

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1 Mr. PAUL BUXTON: We will email that  
2 immediately to the Panel manager.

3 THE CHAIRPERSON: Partnership? No? Yes?

4 Mr. KEMP STANTON: When you were talking  
5 earlier about the coastal bogs and the potential release of  
6 nutrients, I would like to know if a coastal bog which is  
7 characterized by it being nutrient deficient and nitrogen  
8 deficient could withstand the discharge of large amounts of  
9 nutrients and nitrogen into them, from the quarry site.

10 Mr. PAUL BUXTON: Mr. Chairman, we have  
11 been tasked with a undertaking to provide information on the  
12 levels of nitrogen might be produced, and I think it might  
13 be useful perhaps to use that information. This is sort of  
14 so general that I'm sure that we can comment on it. We  
15 don't know what type of information or what the levels are  
16 in the bog. Perhaps when we've given you the answer to that  
17 undertaking, if that's not satisfactory we could then follow  
18 it up with a specific answer to this question.

19 THE CHAIRPERSON: So Mr. Stanton, your  
20 question can't be answered right now, but there is a request  
21 in the process to bring an answer forward, so it'll be  
22 coming in the next week or so.

23 You can ask another question, if you like.

24 Mr. KEMP STANTON: Yes. You were talking,  
25 I forget what material you said come out of (inaudible),  
26 come out of the - well, if I'm correct, blasting residue is

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1 rich in nitrogen, I don't know whether your request included  
2 nitrogen or not.

3 THE CHAIRPERSON: I'll answer. Ammonium is  
4 a nitrogen molecule, so that one half of the explosive is  
5 ammonium. The other - ammonium nitrate, both of those have  
6 nitrogen in it. The other side has fuel oil in it. So yes,  
7 the answer is yes. Alright? That takes us down to Bob  
8 Morsches. Oh, did I miss - sorry. Sorry, Mr. Morsches. I  
9 missed Don Mullin, here.

10 Mr. DON MULLIN: Real quick question. On  
11 what scientific basis do you make the conclusion that ship-  
12 whale collision is "highly unlikely", given the six percent  
13 increase in whale traffic, even with slightly reduced ship  
14 speed?

15 Mr. PAUL BUXTON: We make this on a, I  
16 think, coming from a number of aspects, and I would repeat  
17 again that the people that we would consider to be experts  
18 on this, DFO, have basically made that same statement. They  
19 believe that it's unlikely.

20 There is a significant amount of  
21 information available, and I'm sure that you have access to  
22 it. With respect to the number of strikes, the likelihood  
23 of strikes, and you know, it is interesting to note from  
24 some of this data, and I'm sure that you have access to it,  
25 is that for example the annual rate for entanglements is 1.0  
26 in Canadian waters, and the ratio for vessel collisions, the



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1 annual rate is 0.2 in Canadian waters.

2                   And for example, from Moira Brown, who I  
3 think is considered to be one of the experts from the New  
4 England aquarium and Canadian Whale Institute, during the  
5 last 34 years, from 1970, 62 right whales deaths have been  
6 observed; 21 from ship strike with four right whale deaths  
7 in the Bay of Fundy attributed to ship strikes. So in the  
8 last 34 years, four right whale deaths in the Bay of Fundy  
9 have been attributed to ship strikes.

10                   Now, if my mathematics is correct, if 21  
11 from ship strikes, and there were 62 right whale deaths,  
12 then 41 would have come from net entanglements or other  
13 fishing gear entanglements. So I think there is a  
14 significant amount of information out there. There is also  
15 a report which we have not included because it's not peer  
16 reviewed and we don't know whether it is publishable data,  
17 and it gives some very good detail on the likelihood of ship  
18 strikes in various areas of the Bay of Fundy.

19                   And certainly the route which we have from  
20 White's Point to the shipping lanes is in a zone which we  
21 interpret from this as being very, very low probability of  
22 ship strikes. And again, I think we have put mitigation  
23 measures in place, keeping to low speeds, not going through  
24 the North Atlantic right whale conservation area, et cetera.

25                   THE CHAIRPERSON: Mr. Buxton, that was -  
26 when you said 1.0 entanglements, that was an annual rate,

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1 was it?

2 Mr. PAUL BUXTON: Yes, it was, Mr.  
3 Chairman.

4 THE CHAIRPERSON: Bob Morsches now.

5 Mr. BOB MORSCHEs: Doctor, I promise not  
6 to mention Mars anymore. Mr. Buxton on Saturday mentioned  
7 the fact that there would be - there were between 45 and 50  
8 quarries that were over four hectare.

9 I was wondering if the Proponent could  
10 provide us a list and the size of those 45 to 50 quarries,  
11 and are there any quarries that are of 150 hectares in size?

12 Mr. PAUL BUXTON: Yes, we will attempt to  
13 do that. We acquired this information from I believe Nova  
14 Scotia Department of Environment and Labour, and used it in  
15 our presentation. Whether they have that in list format I  
16 can't answer you right now, but if you would like that list,  
17 we will attempt to get it for you.

18 Mr. MORSCHEs: Thank you, sir. I  
19 appreciate it.

20 THE CHAIRPERSON: Maybe - that's an  
21 undertaking, a list of the 45 to 50 quarries in Nova Scotia  
22 that are in excess of four hectares, and if there are any  
23 that are 150 hectares in size.

24 Mr. MORSCHEs: Thank you, doctor.

25 THE CHAIRPERSON: Thank you. So when could  
26 we have that by?

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1                   Mr. PAUL BUXTON: That will be a function  
2 of when we can get that information from the Government.  
3 Perhaps we should set it fairly late in the process.

4                   THE CHAIRPERSON: The 29th, perhaps?

5                   Mr. PAUL BUXTON: Thank you.

6                   THE CHAIRPERSON: Okay. We're back  
7 starting the cycle again. Sierra Club.

8                   Mr. MARK DITTRICK: Mark Dittrick speaking  
9 for Sierra Club again. If you'd permit me, I'd like to add  
10 a little clarification on that, the statement that was just  
11 made about ship strikes and right whales, and I'd like to  
12 indicate that in the last three - within a period of three  
13 years, three necropsies were performed on female right  
14 whales, all of which died from ship strikes within a 60-mile  
15 radius in the Bay of Fundy.

16                   The first one was necropsied in October of  
17 '03 at Kilaudin(ph), not far from here. The second was  
18 necropsied in July of 2006 on Campobello Island, and the  
19 third was necropsied in September of 2006 at Kelly Cove,  
20 near Yarmouth. So we had three right whale fatalities by  
21 ship strike within a three-year period in the vicinity of  
22 the Bay of Fundy recently.

23                   So the statistics that you quoted  
24 certainly aren't up to date, I would say.

25                   Another clarification, if you'd permit me  
26 to do this, is that in the case of...

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1 THE CHAIRPERSON: Is this leading to a  
2 question is it?

3 Mr. MARK DITTRICK: Well, yeah. I mean, if  
4 they'd like to, if he'd like to comment on that, my little  
5 clarification on that.

6 THE CHAIRPERSON: Okay, continue.

7 Mr. MARK DITTRICK: But I have another  
8 issue that I spoke to before, which was explosives, and I  
9 just wanted to inform the Panel that in the issue of  
10 liquefied natural gas tankers going to proposed terminals in  
11 Passamaquoddy Bay in Maine, the Proponents of those  
12 terminals has pointed out that the ships going to the  
13 Bayside quarry, which carry ammonium nitrate, are carrying  
14 hazardous cargo, and that they are using that to say that  
15 the Canadian Government, which is now denying passage of L&G  
16 tankers in the future through Passamaquoddy Bay, are doing  
17 so because, in part, that they are carrying what is  
18 considered hazardous cargo.

19 So I think I'd like to find out about the  
20 nature of ammonium nitrate, since companies proposing to  
21 ship L&G to Passamaquoddy Bay are making the point that  
22 ammonium nitrate shipped to Bayside is hazardous.

23 So I just - and if you have a comment on  
24 that, I wouldn't mind hearing it.

25 Mr. PAUL BUXTON: Just on the first issue,  
26 I thought that I had read this out correctly, but perhaps I

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1 didn't. The Moira Brown study, which was published in March  
2 2005, said during the last 34 years, from 1970, so it was  
3 statistics to 2004. It did not clearly talk about any ship  
4 strikes in the last two years.

5                   On your second point, we are unaware of  
6 any - we do not think that ammonium is shipped to Bayside by  
7 ship. We'd be very surprised to hear that, although we have  
8 no certain knowledge, and if you have any clear information  
9 on that with some sort of reference, I'd be pleased to see  
10 it.

11                   Mr. MARK DITTRICK: I would think that  
12 Fundy Cargo may have something to say about what the cargos  
13 are going to Bayside. They might be aware of that.

14                   I do have a question, though, and my  
15 question has to do again with greenhouse gasses, and I would  
16 hope that this might lead to an undertaking. I've read the  
17 mitigation portions of the Proponent's discussion of  
18 greenhouse gasses, and I've heard about planting trees and  
19 composting and such.

20                   But I haven't read any numbers or heard  
21 anything about to what extent the 80,000-plus greenhouse gas  
22 emissions will be mitigated by the efforts, by the  
23 mitigation efforts. Is it 90 percent of the greenhouse  
24 gasses mitigated of that 80,000? Is it 5 percent? Is it 2  
25 percent?

26                   And away from percents for a minute, what

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1 amounts would be mitigated by the various mitigation  
2 efforts? I'd like to see something, a little number  
3 crunching there, and I'd like to see the actual numbers of  
4 the offsets creates by the various efforts.

5 Mr. PAUL BUXTON: I think I can give you  
6 the answer immediately, and the answer has already been  
7 stated; that we acknowledge that we are creating greenhouse  
8 gasses, and when the Government of Canada brings in rules  
9 and regulations and specifics we will comply with them, both  
10 to the spirit and the letter of the law.

11 Mr. MARK DITTRICK: I submit that since you  
12 have already described the mitigation efforts that the  
13 mitigation efforts in themselves carry a certain amount of  
14 mitigation for the greenhouse gasses that you're asserting  
15 you will be creating. And I don't see how this is connected  
16 with rules and regulations from Environment Canada about  
17 greenhouse gasses, and that you will then have to - I assume  
18 that you will just then have to come up with new and better  
19 mitigation efforts.

20 I would like to see some numbers for  
21 exactly what you think, you assume, you will now be  
22 mitigating or offsetting at this point.

23 Mr. PAUL BUXTON: Mr. Chairman, we cannot  
24 predict what the Government regulations will be in the  
25 future, and when those are passed by the House and they  
26 become regulations and there are stipulations attached to

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1 them, we will comply with them in their entirety.

2 Mr. MARK DITTRICK: I believe I heard  
3 earlier on some reference, or in the PowerPoint, that the  
4 Kyoto commitments did not apply to this project, and that  
5 they didn't exert any pressure on you, and that I don't see  
6 how regulations now in this case has any effect, either.

7 I'm still puzzled as to why we can't find  
8 out from all of the efforts that you say you're going to  
9 take to offset carbon, how much carbon you think those will  
10 offset, if it's 0.1 percent of all of the carbon from the -  
11 it certainly is insignificant. I think we're using the  
12 words "significant" and "insignificant".

13 Are your carbon offsets significant, or  
14 are they insignificant? And if they are significant, can  
15 you give us a ballpark figure about how much you're  
16 offsetting the carbon, and if they're insignificant, can you  
17 tell us what percent that is? I don't think that's an  
18 unreasonable question.

19 THE CHAIRPERSON: Mr. Dietrich, okay, I  
20 think you've had a comment and you've had a question and  
21 you've had a follow-up, I think. I think we're all...

22 Mr. MARK DITTRICK: My concern is if we are  
23 possibly having an undertaking having to do with carbon  
24 already, is there a possibility of having some effort made  
25 by the Proponent to come up with some numbers for these  
26 mitigation efforts, or should they just simply be vague

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1 assertions that they will somehow, you know, help the  
2 matter?

3 THE CHAIRPERSON: Okay, one final comment  
4 from Bilcon.

5 Mr. PAUL BUXTON: I think we've made our  
6 position clear, Mr. Chair. At the present time, there is no  
7 requirement for large emitters in Canada to prepare or  
8 comply with a specific number when that number is devised by  
9 the Government that we, and I'm sure that all other  
10 industries, like industries, will comply and will be  
11 required to comply.

12 THE CHAIRPERSON: I think you have your  
13 answer, Mr. Dittrick. Oh, sorry, Gunter.

14 Mr. GUNTER MUECKE: I would like to follow  
15 that up slightly here. I think what I was hearing is that  
16 in the document that we have provided to us you have  
17 indicated some voluntary measures to offset greenhouse  
18 gases. Is that correct?

19 Mr. PAUL BUXTON: That is correct.

20 Mr. GUNTER MUECKE: And what you have been  
21 asked to do here is to assign some values to that. I don't  
22 think that has anything to do with regulations. Simply  
23 provide some numbers of the offset that this would produce;  
24 that the voluntary efforts you put in would produce.

25 It is not uncommon now for industrial  
26 enterprises to indicate what level of voluntary carbon



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1 reduction they are contemplating.

2 Mr. PAUL BUXTON: Yes, I think we made  
3 those commitments as good corporate citizens. There is a  
4 reasonable alternative to hand. Clearly, burning is not the  
5 best solution, and we have advantages in using that product  
6 later on for reclamation.

7 But I don't think the calculation of that  
8 would be of any great significance. I suppose it can be  
9 calculated, if you would like that calculation done, but I  
10 don't think that we were attempting to say, well, this is  
11 worth three tonnes, and using Tier Three emissions standards  
12 is worth ten tonnes. I think we were just simply making the  
13 statement that we wish to be a good corporate citizen by  
14 using state-of-the-art equipment, the latest engine emission  
15 standards, et cetera.

16 I don't think we really intended for that  
17 to be totted up in terms of tonnage.

18 Mr. GUNTER MUECKE: Okay.

19 THE CHAIRPERSON: Native Council of Nova  
20 Scotia?

21 Mr. ROGER HUNKA: Thank you. I'll start  
22 with a follow-up from my friend Michael from the  
23 Confederacy. This is to do with the consultation, and I  
24 know that you've had a lot of communications with different  
25 persons.

26 The Council that you indicated you had

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1 consultations with or discussions with, do you know who that  
2 was at Bear River?

3 Mr. PAUL BUXTON: Sorry, Mr. Chair. The  
4 Councillor?

5 Mr. ROGER HUNKA: you had indicated you had  
6 thought you were talking with a Councillor a few times. Do  
7 you know who that was at Bear River?

8 Mr. PAUL BUXTON: Well, certainly I know  
9 who it was, Mr. Chair.

10 Mr. ROGER HUNKA: Could you share that with  
11 me? Or privately, then?

12 Mr. PAUL BUXTON: I will share it with you  
13 privately.

14 Mr. ROGER HUNKA: Alright. Thank you. On  
15 the matter of our question as to employment, is Bilcon, as a  
16 corporate citizen, are they considering employment of  
17 disadvantaged groups, building that into their employment?  
18 I know it's small, it's 34, but training and that... Are  
19 you considering that?

20 Mr. PAUL BUXTON: The answer to that is  
21 yes, and I'm not sure I want to get into a definition of  
22 disadvantaged groups, because I'm simply not qualified to  
23 speak on that subject. But I can tell you that when we held  
24 the information session at the Bear River First Nation, I  
25 think that 90 percent of the questions, after a brief  
26 presentation, were on jobs, and we indicated these were

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1 mostly from young people, that we would be very prepared to  
2 take them on and give them sufficient training.

3 This is, in fact, one of the elements that  
4 I've been discussing with the particular Councillor.

5 Mr. ROGER HUNKA: Alright, thank you. Mr.  
6 Chair, a much more general question possibly to consider, to  
7 be fair to both the Panel, the Secretariat, the Proponent,  
8 this wide subject of Aboriginal peoples, consultation,  
9 employment, traditional uses, and so forth, I ask this  
10 question to the Panel as well as to the Proponent.

11 Would the Proponent and the Panel be  
12 prepared to consider having the Proponent enter into some  
13 sort of a protocol arrangement as a condition of approval  
14 that they would work with one or two of the Aboriginal  
15 (inaudible) groups as far as things such as ongoing  
16 discussions throughout project term, consultations, if you  
17 have it, employment, training, use of lands, and so forth.

18 Would that be something that the Proponent  
19 and the Panel would consider as helpful and valuable, rather  
20 than do this piecemeal?

21 Mr. PAUL BUXTON: Mr. Chair, I think we  
22 were very pleased to have discussions with Native groups. I  
23 think one of the things that concerns us with respect to a  
24 condition is that there are always two sides to this issue.  
25 I believe that we have been willing to consult, to discuss,  
26 to sit down with any Native group over the past five years.

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1 It just simply didn't make any headway, because we were  
2 told very specifically that we could not consult with Native  
3 groups.

4 So I would say I would certainly give an  
5 undertaking that, and I think we have in the document on  
6 several occasions, that we would be pleased to consult with  
7 your group, with the Bear River First Nation, with any other  
8 First Nation group.

9 But we are fearful in being told to  
10 consult and make an agreement with a group that does not  
11 want to consult with us. So there has to be two sides to  
12 this equation. We can only consult with and discuss with a  
13 group who is prepared to sit down with us.

14 We are prepared to discuss specific issues  
15 like employment from specific groups, whether it's from the  
16 Digby group or from the Bear River First Nation.  
17 Absolutely. But we need some assurance that this is a two-  
18 sided discussion; that there is somebody for us to discuss  
19 is with and then, after having made a commitment, the other  
20 side simply goes away and says, "We're not going to  
21 consult".

22 THE CHAIRPERSON: As far as the Panel goes,  
23 we will just take it under advisement, like we do all the  
24 other information that we receive here.

25 Mr. ROGER HUNKA: Okay.

26 THE CHAIRPERSON: In other words, I'm not

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1 going to give you a decision on the spur of the moment.

2 Mr. ROGER HUNKA: Alright, thank you.

3 THE CHAIRPERSON: You're welcome. Judith  
4 Peach?

5 Ms. JUDITH PEACH: Well, I can't remember  
6 if it was today or Saturday, but I believe Mr. Buxton said  
7 that the power lines would need to be upgraded to the site,  
8 and that local residents should be pleased by that.

9 THE CHAIRPERSON: Mm-hm.

10 Ms. JUDITH PEACH: I just want to note that  
11 I think our power is remarkably reliable, and last winter we  
12 had a week of northeast winds and the ferry didn't run for I  
13 think four or five days, our power didn't flicker.

14 So I'm wondering, what is the nature of  
15 the upgrades, and who is going to pay for it, and I may have  
16 missed in the EIS, but what is the projected requirement for  
17 electricity at this height? Like, how many kilowatt hours  
18 or whatever they measure it in?

19 Mr. PAUL BUXTON: Maybe I'll answer the  
20 questions backwards. We do have a calculation of kilowatt  
21 hours there just somewhere in the document that we will try  
22 and find for you that has been done. That would I think  
23 tend to give you the level of upgrade that we require.

24 What we did was to engage an electrical  
25 engineer who made contact with Nova Scotia Power Inc.  
26 indicating our total power requirement. Nova Scotia Power

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1 came back with a cost estimate of what it would cost to  
2 upgrade that line, to supply it and other users on Digby  
3 Neck.

4                   And the third part of your question I  
5 believe was who would pay for it, and Bilcon would have to  
6 pay 100 percent of that cost. And I may say that I don't  
7 live on the Neck so I can't comment, but somebody was  
8 talking to me the other day in Sandy Cove with respect to  
9 the issue of a pump station in connection with an on-site  
10 sewage disposal system, and they indicated to me that they  
11 did not want, in any way, shape or form, a pump station,  
12 because their power was so unreliable that they didn't want  
13 to be without power when they had guests.

14                   So you may be right, there may be areas on  
15 the neck that get perfectly good service. There may be  
16 others that are not getting good service. I can't speak to  
17 that. But certainly I would've thought that the upgrading  
18 of the line would have been an overall advantage.

19                   Ms. JUDITH PEACH: How, like what would be  
20 the upgrade? Would it be running new wires, new poles, a  
21 sub-station? What kind of thing would be required?

22                   Mr. PAUL BUXTON: Generally speaking, new  
23 wires. Yes, I don't - there would certainly be a sub-  
24 station and transformer bases, et cetera, on site.

25                   Ms. JUDITH PEACH: And also, had the  
26 electrical, the use of electricity been figured into the

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1 greenhouse gas calculations?

2 Mr. PAUL BUXTON: That's where that came  
3 from. That's where that tonnage came from.

4 THE CHAIRPERSON: Thank you, Ms. Peach.  
5 Clean Annapolis River?

6 Mr. ANDY SHARP: The Proponent has  
7 indicated that ships speeds will be kept below 10 to 12  
8 knots to minimize the likelihood of whale strikes.

9 It's my understanding, though, that ship  
10 manoeuvrability and steerage is reduced with ship speed.  
11 What is the minimum safe ship operating speed, given the  
12 tides and the winds that are typical of this area of the Bay  
13 of Fundy?

14 Mr. PAUL BUXTON: I can't answer that, Mr.  
15 Chairman. All I can say is that a ship's Master makes the  
16 decision as to whether an approach is safe or not. We would  
17 have absolutely no say in it whatsoever. If we wanted a  
18 ship to come in because stock piles were loaded and the ship  
19 captain said no, that would be the end of it.

20 I think that they know precisely what the  
21 manoeuvrability of their ships is. They're certainly well  
22 aware of the wind action and the current action. They go  
23 into Saint John all the time in dense fog. These are very  
24 qualified people.

25 And I can't answer that question for you.  
26 I'm sorry.

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1                   Mr. ANDY SHARP: My question relates to the  
2 overall safety of large ship movements and docking where the  
3 ship will have to be brought to a speed of zero at an  
4 exposed marine terminal.

5                   I guess we believe it would be useful for  
6 this hearing to have a bit more information on this approach  
7 speed of the ship and the effects that will have on  
8 manoeuvrability, particularly close to shore.

9                   THE CHAIRPERSON: I believe we have an  
10 individual from Transport Canada here tomorrow, and I think  
11 that you could probably direct that question to them. The  
12 Partnership?

13                   Mr. KEMP STANTON: Yes. I would like to  
14 know whether the Proponent has considered that this area is,  
15 in different ways, but always, a spawning area. Because  
16 certain species of fish spawn there, shellfish spawn there,  
17 and lobsters carry their eggs on their body for long periods  
18 of time.

19                   And how would they deal with making sure  
20 that they didn't interfere with a reproduction cycle of the  
21 animals that were reproducing in the area?

22                   Mr. PAUL BUXTON: Mr. Chairman, I wonder  
23 whether this question could be deferred until Wednesday,  
24 when we have marine specialists here who could, I think,  
25 answer that question. We don't have the appropriate experts



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1 here today to answer it.

2 THE CHAIRPERSON: What do you say, Mr.  
3 Stanton? Is it worth waiting until Wednesday when basically  
4 we have a theme session on Wednesday, which is marine, and  
5 subjects such as this might more appropriately fit into that  
6 environment.

7 Mr. KEMP STANTON: It would be all right,  
8 but I just wondered if they had - you know, I have seen  
9 nothing that indicates they had much idea. There's nothing  
10 in their EIS that has any idea of what goes on in that  
11 particular area, and I don't think that there's been any  
12 survey or any scientist that has gone to that particular  
13 part of the shore and done his research.

14 So I don't know how to put that in a  
15 question, but I don't know whether their expert will just  
16 give me generalities about the whole Bay or particulars  
17 about the area.

18 THE CHAIRPERSON: I don't know either.  
19 We'll just, I guess we'll just have to bring that up again.  
20 Con Mullin?

21 Mr. DON MULLIN: I'll save my question,  
22 because it's marine environment related, and could be more  
23 properly addressed by the other experts.

24 THE CHAIRPERSON: Thank you. Bob Morsches?

25 Mr. BOB MORSCHEs: I investigated, doctor,

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1 about the use of a ship, and during turbulent times, I think  
2 it's a sea state of eight or above, a ship must require, the  
3 size of that ship that they're proposing, to have a tug  
4 assisting it when it comes into the quarry or into the  
5 docking area.

6 I just was wondering whether the Proponent  
7 had investigated that. And certain times you require two  
8 tugs.

9 Mr. PAUL BUXTON: We have discussed this  
10 issue, Mr. Chair, with potential shippers. We're not quite  
11 in the same sort of situation as, for example, Hantsport is,  
12 where a ship has got to be berthed, virtually  
13 instantaneously loaded for three hours, and got out of there  
14 on the tide.

15 We don't have that sort of criticality.  
16 We can wait for better weather conditions. But it will  
17 depend upon the shipper, and it's certainly within the realm  
18 of possibility.

19 Mr. BOB MORSCHEs: Thank you, doctor. I  
20 was just wondering about that, because when a ship comes in  
21 it depends on the way the wind is blowing, because the ship  
22 has to go into the wind and not follow the wind.

23 And I notice their inward/outward bound  
24 thing was always going the same direction, but it really  
25 should, the direction or whatever, should be dual rather

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1 than one direction.

2 THE CHAIRPERSON: Thank you, Mr. Morsches.  
3 We're going to wrap this up now, except for one thing, and  
4 that is, is there anybody in the audience who wants to ask  
5 any questions, a single question I suppose, who is not pre-  
6 registered? That is, an individual who has been excluded  
7 from the round up until now? Any takers? There are none.

8 Okay, then we conclude this session at  
9 this point. Thank you all.

10 --- Whereupon the matter was adjourned at 4:43 p.m. to  
11 resume on Tuesday, June 19, 2007, at 9:00 a.m.