

# PUBLIC HEARING

## WHITES POINT QUARRY AND MARINE TERMINAL PROJECT

### JOINT REVIEW PANEL

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#### V O L U M E 1

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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: Saturday, June 16, 2007

PRESENTERS: Bilcon of Nova Scotia  
Mr. Paul Buxton

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Recorded by: A.S.A.P. Reporting Services Inc.  
200 Elgin Street, Suite 1004 Ottawa, Ontario K2P 1L5  
130 King Street W., Suite 1800 Toronto, Ontario M5X 1E3  
613-564-2727 (Ottawa Office) / 416-861-8720 (Toronto Office)  
613-564-7756 (Ottawa Fax) / 416-946-1693 (Toronto Fax)  
1-888-661-2727 (Toll Free)

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

1 --- Upon commencing on Saturday, June 16, 2007  
2 at 9:00 a.m.

3 THE CHAIRPERSON: Good morning. I  
4 would like to welcome you all to the hearing for the  
5 Whites Point Quarry and Marine Terminal Project. This  
6 is a Joint Panel's review.

7 I'm going to start by introducing the  
8 panel members and then the Secretariat. On my left is  
9 Jill Grant. She is a professional planner by training.  
10 On my right is Gunter Muecke, who is an earth scientist  
11 by training, and I am Robert Fournier, oceanographer and  
12 the Chairman of the Panel.

13 The Secretariat is over on my far right  
14 and I'm going to ask each individual as I identify them  
15 to just put their hand up. Debra Myles, she is the  
16 first of two panel co-managers, and she is an employee  
17 of CEAA, the Canadian Environmental Assessment Agency.  
18 Helen MacPhail, she is the second co-manager. She is  
19 with the Nova Scotia Department of Environment and  
20 Labour. Debbie Hendriksen is our Communications  
21 Advisor, and she is with CEAA, and Adrian MacDonald is  
22 our analyst, and he is with CEAA as well.

23 Now a few words about our mandate. We,  
24 the Joint Panel, were created in the fall of 2004 by the  
25 Minister of the Environment for Canada and the Minister

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1 of Environment and Labour for Nova Scotia.

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

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

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

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

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

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1 take two or three minutes, from the memorandum which I  
2 just mentioned, and that memorandum outlines what our  
3 responsibilities are, so if you just bear with me, I'm  
4 doing it for clarity sake, so everyone in the room will  
5 understand what it is we have to do.

6 The Minister of Environment and  
7 Labour for Nova Scotia, and the  
8 Minister of the Environment,  
9 Canada, have determined that the  
10 Panel shall include in its review  
11 of the Project, consideration of  
12 the following factors (and they go  
13 from (a) to (p)):  
14 (a) purpose of the Project;  
15 (b) need for the Project;  
16 (c) alternative means of carrying  
17 out the Project that are  
18 technically and economically  
19 feasible and the environment  
20 effects of any such alternative  
21 means;  
22 (d) alternatives to the project;  
23 (e) the location of the proposed  
24 undertaking and the nature and  
25 sensitivity of the surrounding

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1 area;

2 (f) planned or existing land uses

3 in the area of the undertaking;

4 (g) other undertakings in the

5 area;

6 (h) the environmental effects of

7 the Project, including the

8 environmental effects of

9 malfunctions or accidents that may

10 occur in connection with the

11 Project and any cumulative

12 environmental effects that are

13 likely to result from the Project

14 in combination with other projects

15 or activities that have been or

16 will be carried out;

17 (i) the socio-economic effects of

18 the Project;

19 (j) the temporal and spatial

20 boundaries of the study area(s);

21 (k) comments from the public that

22 are received during the review;

23 (l) steps taken by the Proponent

24 to address environmental concerns

25 expressed by the public;

1 (m) measures that are technically  
2 and economically feasible and that  
3 would mitigate any significant  
4 adverse environment effects of the  
5 project;  
6 (n) follow-up and monitoring  
7 programs including the need for  
8 such programs;  
9 (o) the capacity of renewable  
10 resources that are likely to be  
11 significantly affected by the  
12 Project to meet the needs of the  
13 present and those of the future;  
14 and  
15 (p) residual adverse effects and  
16 their significance.≡

17 That is our mandate. Those are the  
18 things that we are considering within this Panel of  
19 Review. At this point, I should now identify to you  
20 that to my left is the Proponent. The Proponent of  
21 course is the commercial entity behind the Project, and  
22 the commercial entity is known as Bilcon of Nova Scotia.

23 Bilcon of Nova Scotia is a wholly-owned  
24 subsidiary of another organization called Bilcon of  
25 Delaware. And Bilcon of Delaware, as I understand it,

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1 is a holding company for the Clayton Group of companies,  
2 and Bilcon of Delaware has specific responsibilities for  
3 what are called quarrying interests.

4 The third entity, that is the  
5 commercial entity that owns Bilcon of Nova Scotia and  
6 Bilcon of Delaware is the Ralph Clayton and Sons Group,  
7 and they are referred to as Clayton Concrete Block and  
8 Sand, and they are from New Jersey, in the United  
9 States.

10 Now I would like to point out that I  
11 think it's useful to very briefly give you a chronology  
12 of this Project since it's our first session when we're  
13 together.

14 It came into being in the fall of 2004,  
15 and by this Project I mean the Joint Panel Review  
16 process. The Panel was constituted in the fall of  
17 2004.

18 In January of 2005, the Panel held four  
19 scoping meetings in this area, one in Digby, Digby Neck,  
20 Wolfville and Meteghan.

21 The reason for those scoping meetings  
22 was to reach out to the public using a very preliminary  
23 set of guidelines. The public was asked: Are these  
24 guidelines satisfactory, and if they're not can you  
25 recommend suggestions to us, to the Panel, in which we

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

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

6 In March of 2005, the guidelines, which  
7 are the instructions given to the Proponent as to how  
8 they should put together an Environmental Impact  
9 Statement, they were given to the Proponent in March of  
10 2005.

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

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

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

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1                   And here we are in June of 2007 in our  
2                   hearing. The hearing is the final formal phase in this  
3                   process if you will with one exception, and that is 90  
4                   days after we complete or close the record off, we will  
5                   in fact be delivering a report and that report will go  
6                   to our two political masters, which will be of course  
7                   the Minister of Environment for Canada and the Minister  
8                   of the Environment and Labour here.

9                   Now our report will be constructed on  
10                  the basis of all the information which exists in the  
11                  public record. Now that is the body of information we  
12                  will be using.

13                 The public record is available, and I  
14                 will give you some information about that in just a  
15                 moment, but ever since this Panel came into being, every  
16                 bit of correspondence, every document received, every  
17                 piece of information that is relevant to this process  
18                 has been available to the public.

19                 The hearing, these hearings will be  
20                 transcribed and they will enter into the public record  
21                 as well.

22                 At the end of the hearing, assuming  
23                 everything is in order, we will terminate the public  
24                 record and then begin to write our report.

25                 I would like to emphasize that this is

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1 a public process. It has been a public process from the  
2 beginning. We have done everything within our power to  
3 make it public and transparent. We have engaged the  
4 public in every step of the way and as I said, all the  
5 documents are available to everybody in this room, and  
6 those documents are available in a physical form in the  
7 Isaiah Wilson Library, which is here in Digby, or they  
8 are available electronically through the Website which  
9 you can get from the Secretariat.

10 Now one small caveat here is that  
11 although this is a public process, there are a few  
12 modest limitations to this process, which means that  
13 some of the people who will be presenting and some of  
14 the people who are in the audience are known to us, and  
15 we need to say this although it's a little bit awkward  
16 in the sense that we will not be interacting with  
17 anybody in the room, with the Proponent or with the  
18 audience or whatever because we're trying to maintain a  
19 distance from that.

20 So if we walk by you without nodding in  
21 your direction, then you probably will understand what  
22 is going on, okay? It's very important that we keep our  
23 distance from all parties.

24 Okay. Let me turn my attention now to  
25 procedures, procedures as they relate to this particular

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1 process.

2 The purpose of these hearings, the  
3 reason why these hearings have been called is to provide  
4 a thorough examination of all the matters which are  
5 relevant to the mandate of this Panel, which is that  
6 list of items which I mentioned earlier.

7 These issues and the complete record of  
8 that information is important to us in terms of decision  
9 making. We are interested in the input of all parties,  
10 the Proponent, both levels of Government, Federal and  
11 Provincial, NGOs and individuals, and we're hoping that  
12 we will have an opportunity for everybody to be  
13 heard.

14 It is the intention, my intention and  
15 my colleagues' as well, to conduct the process in a fair  
16 and equitable manner. What we are looking for is  
17 cooperation by all parties and we're looking for  
18 courtesy. We think that this should be a courteous  
19 process throughout.

20 We are very much aware that emotions  
21 run high on this topic, but nevertheless, if people are  
22 not courteous, then we will take steps to alter the  
23 situation in order to bring it back to a state of what  
24 we think will be a proper operation of the Panel.

25 Now one thing you should know is that

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1 all presentations will be directed to the Panel. One  
2 thing that may not be obvious is that all questions are  
3 directed to the Panel, even though the question might  
4 normally go to the Proponent or even to some other  
5 individual in the audience.

6 It comes through us and then we  
7 redirect it. Or in other words, these are our hearings  
8 and everything flows through us.

9 In many ways, it's not any different  
10 from the House of Parliament where everything goes  
11 through the speaker, okay?

12 Also, even though I am giving you some  
13 rules here, the Chair does have some discretion to alter  
14 or waive the rules if in the Panel's opinion the hearing  
15 objective can be better served in another way.

16 What that really means I think is that  
17 we are going to run with a set of rules, but we are  
18 looking to maximize the possibility in terms of  
19 information transfer and the courteous disposition of  
20 all parties in order to make this process work.

21 If for some reason things go a stray,  
22 then we may have to change the rules. We would not want  
23 to, but it may be necessary.

24 This morning, the presentation... I'm  
25 making the opening remarks and they will be followed by

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1 a presentation by the Proponent over here.

2 Following that presentation, the Panel  
3 will question the Proponent and then questions will be  
4 entertained by the Federal Government, Provincial  
5 Government and by the public.

6 In general, that is the sequence of  
7 questioning that will occur, okay? So that if an  
8 individual... Let's say an individual from one level of  
9 government comes to the meetings and makes the  
10 presentations, the Panel will ask the questions first.  
11 We will then offer the opportunity to the Proponent, and  
12 then we will open it up to the Federal and Provincial  
13 Government, others who are in the room and the public,  
14 okay? So there will be a sequence in which this will  
15 work.

16 In general, most of the presentations  
17 that will be heard over the next two weeks will be  
18 offered by individuals who have pre-registered.

19 If for any reason people come at the  
20 last minute and wish to participate... We made the  
21 rules very clear, we would like to entertain as many  
22 people as possible, but all the pre-registered  
23 individuals will be presenting and those individuals who  
24 have not pre-registered, who simply walk in off the  
25 street, we will try and entertain them but it may not be

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1 possible.

2                   This schedule is very tight. We have  
3 scheduled 15 hearing days, and they are packed solid,  
4 and I was told last night that there are 84  
5 presentations to be heard. So it will be very, very  
6 compact over all.

7                   We don't wish to inhibit anybody, but I  
8 do have to say to you that we will exercise a certain  
9 regulatory process, okay? And by that what I mean is  
10 that if an individual stands up and tells us that they  
11 are scheduled to make a 15-minute presentation and there  
12 is nothing new in that presentation and it is clear to  
13 us that there is nothing new, then we may ask that  
14 individual to sit down.

15                   If an individual stands up and is  
16 repetitious, that is says the same things in minutes one  
17 to two, and then repeats it again in minutes four to  
18 five, and then repeats it again in minutes seven and  
19 eight, we may ask that person to sit down.

20                   If a presentation lacks clarity, that  
21 is if we can't understand what is being said, we may ask  
22 the person to sit down.

23                   If it's uncivil, if it's discourteous  
24 or offensive to any party in the room, we may ask them  
25 to sit down.

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1                   And finally, if individuals stand up  
2                   and speak on a topic which is not relevant to our  
3                   mandate, interesting though it may be, if it's clearly  
4                   irrelevant to these hearings, we may ask them to sit  
5                   down. So all this is a forewarning.

6                   Now just a few additional items, and I  
7                   will be done with these remarks. There are some  
8                   documents available from the Secretariat. The  
9                   memorandum of understanding which I mentioned, the terms  
10                  of reference, and if there are other things that you  
11                  don't have, you can certainly come forward and if they  
12                  don't have it they can certainly direct you to where you  
13                  could find it.

14                  As I said, it's a very, very  
15                  transparent process, and we would like you to feel that  
16                  you can get access to these things.

17                  One thing you should be aware of is the  
18                  schedule has been defined for the next 15 days, but like  
19                  all things it changes rapidly.

20                  I would suggest to you that you check  
21                  with the Secretariat every day for a revised schedule.  
22                  It may not be revised, but it may well be. And it will  
23                  change as people drop out of the process or whatever, so  
24                  even though we have a 15-day schedule, it's a projected  
25                  schedule and perhaps not the real schedule.

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1                   Another comment I should make is that  
2                   any presentation made here can be done in English or  
3                   French. All the presentations will be recorded. They  
4                   are being electronically recorded at the moment. They  
5                   will then be transcribed and then the transcripts will  
6                   become available we think within 72 hours, so that  
7                   everything said in this room will be recorded and  
8                   documented and available.

9                   All of those documents, all of those  
10                  transcripts will end up in the public record and be  
11                  available to anybody at anytime.

12                 Now a couple of constraints. While the  
13                 hearings are underway, while the process is underway, no  
14                 recordings are allowed in this room, no audio recordings  
15                 and no video recordings.

16                 No cell phones ought to be operated.  
17                 If you have an urgent call, leave the room please  
18                 because it should not be operated here.

19                 If there are journalists in the room,  
20                 we would ask those journalists not to conduct interviews  
21                 during the process and to do no filming during the  
22                 process, certainly not during the presentations.

23                 If a journalist wants to do either of  
24                 those things, they can be done at the break, they can be  
25                 done at lunch time, they can be done at other times.

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1                   Also, we are going to try and take a  
2                   break every morning and every afternoon. Now, we don't  
3                   have a set time for that, but we're thinking about 10:15  
4                   to 10:30, that what we will try and do is take a break  
5                   for 15 minutes. And in the afternoons, it will be  
6                   around 2:30.

7                   And the reason I say Aaround≅ is  
8                   because we will probably finish fitting a presentation  
9                   or a line of questioning of something. So at about  
10                  those times, you can expect that.

11                  One final thing you should know is that  
12                  there is a phrase used in these kinds of hearings called  
13                  an Aundertaking≅, which means that in the process,  
14                  sometimes an issue is raised and an individual is asked  
15                  for information and is unable to provide that  
16                  information.

17                  So they agree to an undertaking, which  
18                  means that individual agrees to bring that information  
19                  forward at some point down the road, presumably within  
20                  the hearing.

21                  In other words, it could be that by the  
22                  time the hearings are approaching the end, there could  
23                  be several undertakings where people have agreed to  
24                  provide a table of information or a document of some  
25                  sort, that sort of thing.

1                   Just keep in mind that undertakings  
2 will be identified and they will be registered by the  
3 Secretariat and there will be an expectation that that  
4 will be fulfilled.

5                   The reason I point this out is that if  
6 undertakings are granted and they are not fulfilled,  
7 than the record may not be closed off, and the process  
8 of the Committee may be continuing until that  
9 undertaking is received, all right?

10                   It can be seen as a delay of the  
11 process but normally that does not happen. Normally  
12 what you do is you set a time and say: AOn Wednesday, we  
13 expect this undertaking≅, it comes in and then the  
14 record is clear and then we proceed on.

15                   So it is just a quick note, because  
16 it's a term that is not commonly used.

17                   Okay. We now come to the end of my  
18 remarks. The final day of this process is expected to  
19 be Saturday the 30<sup>th</sup> of June, and on that day in the  
20 afternoon we expect to entertain closing remarks.

21                   That means that all the presenters have  
22 an opportunity to summarize, if they wish... That is to  
23 return to the microphone and verbalize some summary  
24 remarks.

25                   Now we have scheduled the afternoon of

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1 Saturday, they are 84 presenters, if you do the  
2 mathematics that means that everybody gets about 90  
3 seconds.

4                   However, I have been told by my  
5 colleagues who have much more experience than me that  
6 the numbers reduce. So what we're thinking is that we  
7 will take a poll, an assessment of the number of  
8 possible presenters towards the end of the second week  
9 to gauge what is available and then time will be  
10 allotted to fit the number of people who will be making  
11 those remarks, okay?

12                   Finally, if all goes well, at the end  
13 of those hearings, as I said before, the record will be  
14 closed.

15                   At that point, the clock is ticking and  
16 our report should come forward within 90 days and that  
17 means that the total evidentiary record will be  
18 available to you in the Isaiah Wilson Library online and  
19 it will represent all the information upon which the  
20 Committee, the Panel, will be making its final  
21 judgement, okay?

22                   I think that is all I have to say on  
23 this topic. Now according to the schedule as I said, we  
24 will now move into a presentation by the Proponent and a  
25 suggestion to Bilcon is that we would like a break

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1 around 10:30, so if we could schedule the presentation  
2 so that we can get a 15-minute slot at the end of one  
3 presentation or before the start of another or whatever,  
4 that would be very convenient, okay?

5 It does not have to be at 10:30, but  
6 approximately 10:30.

7 So we turn it over to you.

8 PRESENTATION BY THE PROPONENT, BILCON OF NOVA SCOTIA

9 Mr. PAUL BUXTON: Good morning. My name  
10 is Mr. Paul Buxton, and I am the Project Manager for  
11 this project.

12 I am pleased to be here this morning to  
13 talk about a project that we believe strongly in, that  
14 we believe is good for the community, good for families,  
15 good for now and good for many years in the future.

16 I would like to take this opportunity  
17 to thank the Panel, the regulators, Federal and  
18 Provincial, and the interveners for lending their  
19 expertise, their judgement and their time to this  
20 important process, and I would like to welcome everyone  
21 to Digby.

22 Today is an opportunity for us at  
23 Bilcon to tell you about our project, the Whites Point  
24 Quarry and Marine Terminal Project, to tell you who we  
25 are, why we are here, how we got here in the first place

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1 five years ago and why in spite of the many challenges  
2 in the past five years, Whites Point is a project that  
3 makes good sense for the region, for the economy, for  
4 the environment and for the company.

5 We will also tell you what the Project  
6 will look like over its 50-year lifespan.

7 First, who we are. Bilcon of Nova  
8 Scotia as the Chair pointed out is owned by the Clayton  
9 Group of companies, which has been operating  
10 successfully for more than 50 years in New Jersey. It  
11 is a father and sons business.

12 Bill Clayton Senior and his three sons  
13 run the company, and they are as admired and respected  
14 as they are successful.

15 Bill Clayton Senior started operations  
16 in the 1950s on a small farm with a single truck. He  
17 now heads an organization of more than 850 employees.

18 The Claytons have received more than  
19 200 citations for excellence in design and  
20 manufacturing. They have made thousands of  
21 contributions to health, education and other community  
22 causes.

23 Clayton Concrete Sand and Gravel was  
24 named outstanding citizen of the year in New Jersey in  
25 2004. The Claytons have a consistently strong record of

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1 employee relations with respect to benefits,  
2 occupational health and safety. Now, they are good  
3 people to work for, and I can certainly vouch for  
4 that.

5 As Project Manager, I am part of  
6 Bilcon's underground team here in Digby County. I have  
7 lived on the Anapolis Basin for almost 35 years. I grew  
8 up in the town of Anapolis Royal on the restoration  
9 projects which took place in 1980 in the historic  
10 gardens and the King's Theatre.

11 I worked on the Upper Clements Theme  
12 Park and on Digby Neck. I and my company worked on such  
13 projects as the Balancing Rock Trail and Brier Island  
14 Lodge. So I have been very heavily involved in the  
15 community since moving here.

16 I'm joined today by John Wall, the  
17 Operations Manager. John, would you put your hand up?  
18 Thank you.

19 John has been in the quarry business  
20 for almost 30 years and has been a resident of the town  
21 of Digby since last August.

22 Josephine Lowry is the 3<sup>rd</sup> member of the  
23 Bilcon team here. Josephine is Document Director and  
24 has put together the voluminous documents submitted to  
25 the Panel during this process.

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1                   Why we are here now. The Claytons  
2                   produce a million and a half cubic yards of concrete and  
3                   50 million concrete blocks a year. This requires a  
4                   secure supply of crushed aggregates and sand.

5                   While the company has been able in the  
6                   past to secure these supplies on the open market, the  
7                   company sees a vital need to generate these products in-  
8                   house in the future.

9                   How did we get to Digby County? An  
10                  extensive examination of potential sites in the  
11                  Northeast United States and in the Atlantic Provinces  
12                  was carried out. I should note first that Digby Neck  
13                  was part of an area targeted as a priority for the  
14                  completion of a report prepared by the New Brunswick  
15                  Department of Natural Resources, Minerals and Energy  
16                  branch, on bedrock aggregate opportunities in Nova  
17                  Scotia. Consequently, it also became a priority target  
18                  for Bilcon in Nova Scotia.

19                  Whites Point was determined to have a  
20                  good supply of high-quality rock, deep water for the  
21                  construction of a marine terminal and is in reasonably  
22                  close proximity to New Jersey. And we will be of course  
23                  dealing more about this in the presentation to follow.

24                  What we are planning is to develop a  
25                  basalt quarry, to crush and wash 2 million tons per year

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1 for shipment to the Clayton operations in New Jersey.

2 As we will note later on in the  
3 presentation, this project is not dependent upon a  
4 marketing process and the search for markets once the  
5 project is opened.

6 Essentially, the product has been sold  
7 and so the jobs and everything else, the capital costs,  
8 are secure.

9 So this morning, we would like to  
10 describe the project itself and I will try to break at a  
11 reasonable time Mr. Chairman so that we can have a break  
12 in the morning. Thank you.

13 I'm advised that I was not coming  
14 through clear and loud enough for everybody in the  
15 audience, so I will try to increase the volume.

16 We will start by just looking at an  
17 artist's conception of the project, and there may be  
18 people who have not seen this before. It is remember an  
19 artist's concept, and it shows the project as it would  
20 look in its very early years.

21 At the top, you will see the  
22 maintenance facilities coming in from the Whites Cove  
23 Road and just below that, you will see storage areas for  
24 organic materials and for sediments.

25 Left centre of the screen, you will see

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1 the process area where all the rock will be crushed,  
2 screened and washed. That process area will remain in  
3 that same location throughout the life of that  
4 project.

5                   Towards the bottom left, you will see  
6 in this particular photograph sediment ponds. To the  
7 left, a large pile of rock which will be the rock taken  
8 off the process area. And of course, it can't be  
9 processed until the plant is put in place. That area  
10 will ultimately become the largest of the sediment  
11 ponds.

12                   And you can see the marine terminal in  
13 place and a ship tied up to the marine terminal being  
14 loaded.

15                   What the outline will encompass is a  
16 brief discussion of the planning process. We will look  
17 at site layout, we will look at key components, site  
18 developments and operations, the reclamation process,  
19 environmental management and safety, Bilcon as a  
20 corporate citizen, and then we will get into a  
21 summary.

22                   As the Chair noted, Bilcon of Nova  
23 Scotia is a subsidiary of Bilcon of Delaware, which is  
24 owned by the Clayton Group of New Jersey, which has had  
25 50 years or more in operation.

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1                   Bilcon of Nova Scotia will construct  
2                   and operate the Whites Point facility without government  
3                   assistance or funding. We have not made any  
4                   applications to any level of government for funding, and  
5                   we do not intend to do so in the future.

6                   Bilcon has made contributions to the  
7                   community since we have been here, and that's in health,  
8                   youth, sports, education, libraries and in other  
9                   community causes and we would certainly intend to do  
10                  that in the future.

11                  As I noted in the introduction, the  
12                  Clayton Group has over 200 citations for excellence of  
13                  design and manufacturing. They have made thousands of  
14                  contributions to health, education, and other community  
15                  causes.

16                  They have an enviable record with  
17                  respect to employee relations, benefits, occupational  
18                  health and safety.

19                  And just a couple of notes, the town of  
20                  Lakewood, New Jersey, which is where until a year ago  
21                  Clayton was headquartered, they received the Citizen of  
22                  the year award in 2004. New Jersey General Assembly in  
23                  1998, award for outstanding service and commitment on  
24                  behalf of others. Also the State of New Jersey in 2004,  
25                  award for outstanding service and commitment to the

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1 community.

2                                   Bilcon and its local team could not  
3 have handled a project the size of this without  
4 significant assistance from a consulting team, and I  
5 just want to review for you because I noted just  
6 recently in the newspaper that it was said that Bilcon  
7 had in fact carried out the study without the assistance  
8 of consultants, and I would just like to review the  
9 consulting firms involved: AMEC Earth and  
10 Environmental; Atlantic Marine Geological Consulting;  
11 Canadian Seabed Research; Conestoga-Rovers and  
12 Associates; Elgin Consulting; Gardner Pinfold; Jacques  
13 Whitford, JASCO Research; LB&W Engineering; LGL Limited;  
14 Mallet Research; Mineral Valuation and Capital Inc.;  
15 Seabulk; XY Geoinformatics Services.

16                                   I would also like to review the extent  
17 of the project team. We saw the companies, now these  
18 are the experts who have helped us on very specific  
19 elements. Some are sort of small elements, quite  
20 sophisticated. We have economists, we have marine  
21 geologists, a significant list, and perhaps you could  
22 run the next list.

23                                   I think at this point we can  
24 demonstrate the extent of the scientific and engineering  
25 assistance that we have requested throughout this

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1 process.

2 Bilcon representatives I have already  
3 introduced to you. We have some consultants in  
4 attendance today to answer specific questions with  
5 respect to the project description, and I would also say  
6 at this point that all the consultants will be available  
7 on other days in order to discuss their specific  
8 sections.

9 Today, we have John Amirault, who is a  
10 professional engineer, and he will and can answer  
11 questions on engineering, accidents and also  
12 malfunctions.

13 Carlos Johansen is here to discuss  
14 elements of the marine terminal, its construction and  
15 operation.

16 David Kern, who has been with Bilcon  
17 since 2002 is assisting with the planning of the  
18 process, David Strajt to discuss surface water and Uwe  
19 Wittkugel who is an expert in the environmental  
20 assessment process.

21 Just a quick review of project time-  
22 lines now. This project goes back to 2002 for us, when  
23 in March a 4-hectare permit was applied for and received  
24 in April, and very shortly after that the decision was  
25 made, the company then being Global Quarry Products, to

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1 expand the area, to look at the possibility of a large  
2 quarry and marine terminal here.

3 Environmental assessments were  
4 commenced at that point back in May of 2002. At the end  
5 of that year, we filed application under the Navigable  
6 Waters Protection Act for the marine terminal. That was  
7 in December.

8 In 2003, a meeting was held in January  
9 with all the players, Federal and Provincial, and it was  
10 determined that we would commence a comprehensive study,  
11 and that was commenced at that time, and then in June of  
12 2003, we were put into a Panel Review process.

13 In November 2004, we received draft  
14 guidelines. Following the draft guidelines as the  
15 Chairman pointed out, scoping sessions on the draft  
16 guidelines were held by the Panel and the final  
17 guidelines were submitted to us in March of 2005.

18 In 2006, the EIS (Environmental Impact  
19 Statement) was submitted and comments were received in  
20 August. Those were responded to in February.

21 The public hearings as we know are now  
22 commenced and the Panel has 90 days following the  
23 termination of the proceedings to make its  
24 recommendations to the ministers, and the ministers  
25 typically have 60 days to make their final decision.

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1                   So that gives you something of a time-  
2 line, certainly towards the end of 2007.

3                   This proposal concerns a 152-hectare  
4 site of which 120 hectares would be used for quarrying  
5 or other activities such as sediment ponds.

6                   This is a processing plant, a marine  
7 terminal which will be designed and which we hope to  
8 operate for a 50-year period and which will produce 2  
9 million tons of crushed, washed aggregate per year.

10                  Again for those who have come in from  
11 other areas, this map gives you an idea of the setting.  
12 You can see the Whites Point Quarry about three  
13 quarters of the way along Digby Neck and on the Bay of  
14 Fundy.

15                  We still have technical troubles here  
16 it seems.

17                  This is the site essentially from the  
18 south and from a significant height obviously. In the  
19 centre of your screen, you can see a small sedimentation  
20 pond, and to the right of that a cleared area.

21                  This is cleared by the company to look  
22 at the rock itself, to get a closer look, to see what  
23 the thickness of overburden would be and to generally  
24 get a closer look at the site itself.

25                  Towards the top of the screen, to your

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1 left-hand side, you will see an indent of lighter green  
2 material, and this is the coastal bog, and you will hear  
3 some more about that as we go through the process.

4 There's a fairly small area and it is  
5 essentially the only area of wetland on the site prior  
6 to the construction of that settling pond.

7 You can see the coast is fairly uniform  
8 and the land to your top right would be getting towards  
9 the top of the mountain, which slopes down quite steeply  
10 down to the Bay of Fundy shore.

11 What I'd like to talk about here is the  
12 property itself, which is the large triangular piece of  
13 property, in a salmon colour I think we would call it,  
14 and that is the 152-hectare site. We have 80 acres of  
15 site.

16 That is the site which we talk about as  
17 the AProject site, and that has not changed. It has  
18 not expanded. And it will not expand, that is the  
19 Project site.

20 Other areas, for example in  
21 [inaudible], are lands which Bilcon has acquired in the  
22 last five years.

23 The green area to the bottom is an area  
24 of land where Bilcon has a setback agreement with the  
25 owner of the property.

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1                   The yellow areas are other areas and  
2 houses which have been acquired by Bilcon in the past  
3 several years.

4                   Bilcon has not looked for or acquired  
5 any other property in Digby County or on North Mountain  
6 at any time in the last five years, and I think that  
7 this is important and I'm sure that there will be  
8 discussions of the potential for other quarries in the  
9 area on North Mountain.

10                  There was even a talk of a quarry on  
11 Brier Island, which seems to me to be inconceivable, but  
12 I want to make it very clear to the Panel that Bilcon is  
13 not interested in any other site in Digby County or on  
14 the North Mountain.

15                  So we got into the planning process,  
16 and pre-feasibility studies come first, then a  
17 conceptual design and then environmental assessment.

18                  I want to make the point here that  
19 conceptual design and environmental assessment go hand  
20 in hand. Clearly, we have to start with a conceptual  
21 design and then we look at the potential environmental  
22 effects from that conceptual design.

23                  Very likely, we then go back to the  
24 design because of some of the effects. So a conceptual  
25 design and the environmental assessment is basically a

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1 process which takes place side by side throughout the  
2 entire planning stage.

3                   Once they're satisfied with the  
4 conceptual design and that we have made all the  
5 adjustments that we can make, then we can get into the  
6 implementation stage. This is after hearings, after  
7 permits have been issued.

8                   We get into detailed design and there  
9 are other permits other than the environmental permits  
10 which need to be applied for.

11                   We then get into contract drawings,  
12 specifications and then into an implementation  
13 phase.

14                   Just to give you an idea of schedule,  
15 project planning commenced in 2002. I won't say  
16 terminated in 2006, but certainly the planning up to  
17 this stage we are relatively satisfied with.

18                   Environmental assessment commenced in  
19 2002 and it is 2007 and more work was done in 2007. The  
20 detailed design we would hope would get underway this  
21 winter into 2008, 2009. Construction in 2008, 2009.  
22 Operation and maintenance for a 50-year period.

23                   The reclamation is shown also over that  
24 long period of time, and that is because a major  
25 decision was made in the planning process that the

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1 reclamation on this project would be incremental, and  
2 we'll deal with that a little later on in this  
3 presentation.

4 And then at the end of the 50-year  
5 period, we get into decommissioning and abandonment of  
6 the site.

7 I would just like to put this quarry  
8 into some sort of context. There are 45 to 50 quarries  
9 in Nova Scotia over four hectares, and four hectares is  
10 a threshold.

11 Basalt quarries already exist on Digby  
12 Neck. They are relatively small quarries serving the  
13 local market.

14 The mining industry is a significant  
15 contributor to the Nova Scotia economy. \$400 million  
16 added to the gross domestic product. It employs over  
17 5,000 people. The mining industry is the highest-paid  
18 industry in the province of Nova Scotia.

19 I just want to spend just a couple of  
20 minutes looking at Nova Scotia mineral policy.

21 The mineral industry is an  
22 important participant in the  
23 province's economic strategy,  
24 especially with its contribution  
25 to value added production and

1 export revenue.≅

2 This was the mineral policy for the  
3 province of Nova Scotia (2005). And I would note that  
4 this is a value added product. It is a finished product  
5 which is being shipped, and of course it adds to export  
6 revenue.

7 AThe Government of Nova Scotia  
8 recognizes mineral exploration and  
9 mining as a key sector  
10 contributing to jobs, wealth and a  
11 high quality of life for Nova  
12 Scotians.≅

13 And that is also from the same policy  
14 of 2005.

15 AThe Government will encourage,  
16 support for and recognition of the  
17 mineral industry by including  
18 exploration and mining activities  
19 as part of its overall industrial  
20 strategy.≅

21 And that is again from the 2005  
22 policy.

23 So looking at the project itself, the  
24 construction costs are estimated to be \$40 million. It  
25 would not surprise me that that has not gone up in the

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1 last year. The Canadian dollar has gone up. Many of  
2 the raw materials have gone up in price, but certainly  
3 \$40 million or in excess of that.

4 The operating costs will be \$20 million  
5 a year, on an annual basis. And there will be a cost  
6 upfront, and we will talk about this later, and that is  
7 a reclamation cost guarantee.

8 There is a concern and it has been a  
9 concern in the past that mining companies come in, rip  
10 holes in the ground and move away, declare bankruptcy  
11 and we are left with the results.

12 This does not happen today. Cost  
13 guarantees have to be put up in the form of cash or  
14 bonds before the work can even start.

15 The workforce: 65 to 80 jobs over an  
16 18-month construction period, 34 full-time employees in  
17 the operations of the project, and we will have an  
18 excellent wage scale. The employment will be long term  
19 and this will be family sustaining employment.

20 We will provide on-site training and  
21 even off-site training at Bilcon's expense. We expect  
22 to train the people very thoroughly for this project.  
23 There will be a benefit package, dental plans, a pension  
24 plan. And we will in our hiring process give high  
25 preference to local people.

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1                   Why is this operation different? First  
2 of all, it's a quarry which starts from scratch as a  
3 major operation. Most quarries start as a small  
4 operation and they get bigger over time, and the  
5 expansion is somewhat willy-nilly, pieces of equipment  
6 are added and they tend to be inefficient and always  
7 trying to catch up.

8                   This plant will be started from  
9 scratch. It will have a state of the art plant design.  
10 The plant and the equipment will be new. Safety will be  
11 designed into the plant. Very significantly, and we  
12 will deal with this at some length, all the equipment  
13 such as the crushers, the screens, the wash plant will  
14 be enclosed. We will have minimal direct Arock-metal  
15 contact≅, which is the source of noise on quarry  
16 sites.

17                   We will have catwalks on all  
18 conveyors for safety reasons, good lighting, things  
19 like a conveyor spillage being cleaned by a small skid  
20 steer.

21                   Typically, that is done by hand.  
22 Manual operation leads to back injuries and problems.  
23 The entire plant will be computer controlled with  
24 complete information systems.

25                   Another interesting feature is that the

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1 plant components are able to run independently, which  
2 means that we can reduce electrical demand and we can  
3 increase the plant availability.

4 The loading of the finished product is  
5 by belt, it's not by front-end loaders into harbours.

6 What is the need for the Whites Point  
7 Project from our perspective? Our parent company  
8 requires a source of raw aggregate which is not subject  
9 to market fluctuations or disruptions. This quarry can  
10 satisfy that need for a 50-year period.

11 What are the alternatives to the  
12 project? Well unfortunately the crushing of rock does  
13 not lead to many alternative scenarios. One can recycle  
14 used concrete and other material, and in fact the  
15 Claytons do that at the present time. They recycle all  
16 the concrete material they can get their hands on, but  
17 it is simply not a feasible option to fully supply their  
18 requirements.

19 Alternative means evaluated. Well, we  
20 looked at different aggregates sites, extraction  
21 methods, rock fragmentation, rock processing, different  
22 methods of handling waste material management and  
23 utilization, different methods of handling wastewater  
24 and different methods of handling process water on the  
25 site, transportation modes and routes, ship loading

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1 methods, terminal construction, timing and scheduling,  
2 timing for the reclamation, alternatives to reclamation  
3 and decommissioning.

4 So all these were considered in the  
5 initial planning process.

6 When we consider alternatives, we have  
7 to evaluate the alternatives and we carry out three  
8 levels: Is it technically feasible? The suitability,  
9 reliability and safety. Is it economically feasible?  
10 Looking at the development and operating cost, the  
11 commercial viability and the commercial risk.

12 If those two things are in fact in  
13 place, then we look at the environmental feasibility.  
14 But all three are required to meet the test to have a  
15 reasonable alternative in place.

16 Alternative sites. There needs to be  
17 suitability of good geological resources, high-quality  
18 rock, a good quantity of rock, availability and size of  
19 the land base (very important), proximity to residential  
20 development, adequacy of transportation systems, the  
21 technical feasibility involved in the particular site,  
22 the economic feasibility of considering a particular  
23 site, and of course last but very much not least, the  
24 environmental considerations (socio-cultural and  
25 natural).

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1                   What are the advantages of the Whites  
2 Point site? It has high-quality basalt rock. It has  
3 minimal overburden. It has limited site visibility. It  
4 cannot be seen from Highway 217, the scenic drive down  
5 Digby Neck to the Islands. There is no salmonid fresh  
6 water fish habitat on the site. It has minimal wetland  
7 habitat. There is feasible water depths for marine  
8 transportation. Access to the marine terminal can be  
9 gained without passage through the North Atlantic Right  
10 Whale Conservation Area. And the site is economically  
11 feasible.

12                   I think later on in these sessions, you  
13 will hear from the Nova Scotia Department of Natural  
14 Resources with respect to the locations of high-quality  
15 basalt rock and the feasible water depth for marine  
16 transportation.

17                   So what are the key components of this  
18 Project? There will be a processing plant area. It  
19 will involve crushing, screening, washing and  
20 stockpiling the product.

21                   It is a finished product. The  
22 crushing, screening and washing is in fact a process to  
23 produce a finished product. And again, the crushing and  
24 the screening areas on this process site will all be  
25 enclosed.

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1                   There will be a ship loader. There  
2 will be a marine terminal. There will be infrastructure  
3 such as maintenance buildings, administrative offices,  
4 sediment ponds, topsoil and sediment storage areas,  
5 access road, mobile equipment and the environmental  
6 preservation zone or zones on the site itself.

7                   The processing plant will consist of a  
8 jaw crusher and a vibrating grizzly feeder. There will  
9 be three cone crushers, five vibrating sizing screens,  
10 high rate thickener, reverse slope dewatering screens,  
11 35 conveyor belts and this will give a capacity of 500  
12 tons per hour net production of minus 1 inch stone in  
13 five different sizes.

14                   This is obviously conceptualized, but  
15 here we have the Bay of Fundy, there is the crusher  
16 operation. The rock is brought by truck and dumped into  
17 this crusher operation, which you will see is enclosed,  
18 into the screening areas, the washing areas, back by  
19 conveyor to the various sizes and by loading tunnel onto  
20 the loader, the ship loader and on to the vessel.

21                   And I would also make the note here,  
22 because we can see it here, that the processing plant is  
23 at a height of about 30 metres.

24                   A little closer up again, the crusher  
25 plant enclosed. The screening operations enclosed. The

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1 washing operations enclosed. The conveyor belts will be  
2 enclosed. Here, we have again the loading tunnels.  
3 Here is the loading tunnel.

4 So essentially, no mobile equipment is  
5 required to load this ship. Essentially, the conveyor  
6 stops in the loading tunnel, and the ship is basically  
7 automatically loaded.

8 For those of you who have not seen a  
9 cone crusher, that's what they look like, and these are  
10 just to give you some sort of... We did have a request  
11 through the process that some people did not know what  
12 these elements look like, and so we tried to produce  
13 some photographs.

14 This is a high rate thickener. In this  
15 particular piece of apparatus, the wash water containing  
16 the fines is processed to the extent that fines are  
17 extracted, and the fines are then pumped as a sludge to  
18 the top of the site in a barn storage area, and the  
19 clean water left goes back into the wash process. So  
20 this is a closed cycle system.

21 Here we have the ship loader. It will  
22 have a capacity of 5,000 tons an hour. The loader is 2,200  
23 feet of 16 foot diameter reclaim tunnel. This will be a  
24 radial arm ship loader and it will use belts only. This  
25 is a ship loader that has just been completed on

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1 Vancouver Island for another quarry project.

2 This is that same ship loader complete.

3 This one goes further out into the water than ours  
4 will. We go out about 200 metres into the Bay of Fundy.  
5 This one is significantly longer than that because of  
6 water depths.

7 And the ship itself, up to about 750  
8 feet long and 100 feet wide, with the hatches as you can  
9 see. This is not a loading operation that will be at  
10 Whites Point, but I want you to get an image of the ship  
11 itself.

12 This is a ship loader that has been in  
13 operation for a significant period of time. It's the  
14 Sechelt on the sunshine coast of British Columbia,  
15 fairly close to Vancouver, and you can see the cottages  
16 along the coast here, and these are very high-priced  
17 cottages which have been living in compatibility of a  
18 significant period of time.

19 The marine terminal will be supported  
20 on pipe piles. The mooring dolphins themselves, about 6  
21 metres wide, 15 metres long, 20 feet by 50 feet  
22 approximately. The pipe piles will go into bedrock.  
23 There's very little sediment in that area. And the  
24 terminal itself will extend 200 metres into the Bay of  
25 Fundy.

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1                   We have a minimum berthing draft at a  
2                   little better than 16 metres, and there will be no ship  
3                   pooling at the terminal.

4                   A plan view. It's a very simplified  
5                   plan view, but you can see the radio on loader here.  
6                   This is the loader, and it is able to rotate here so  
7                   that the various holds can be filled without the ship  
8                   being moved. This is a very efficient operation. It  
9                   enables much speedier loading of the ship.

10                  And here is a cross-section. And very  
11                  specifically, this design of pipe piles was selected  
12                  because it does not interfere with current flows along  
13                  the coast, it damages a minimal amount of bedrock bottom  
14                  and certainly it does damage the bottom, precisely where  
15                  that pile goes in, and that area must be compensated  
16                  under the Fisheries Act, and that will of course be  
17                  dealt with in much greater detail later on.

18                  You can see the loader itself is able  
19                  to extend as it rotates on this quadrant device here.  
20                  And again, about 16 metres of water.

21                  Just looking at the layout where you  
22                  saw the concept plan, this is a plan layout and the  
23                  Whites Cove Road coming in from Highway 217, going  
24                  through down to Whites Cove, and the dark green around  
25                  the site and down the Whites Cove Road is an

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1 environmental preservation zone, which will be  
2 maintained throughout the Project.

3 The processing plant is in this area,  
4 administrative buildings and maintenance building here.  
5 Sediment disposal area is here. Organic disposal area  
6 here, and in the early years, first two or three years  
7 of the site, four settling ponds.

8 This would be rock storage for the  
9 material that comes off the processing plant area when  
10 it is being built. It will be temporarily stored here  
11 and possibly up in this area, and this will be the first  
12 material that goes through the processing plant and gets  
13 crushed, and then this will become the largest of the  
14 sediment ponds.

15 The road plan. Again, the Whites  
16 Cove Road coming in and going down. Roads to the  
17 disposal storage areas. Roads down through here to the  
18 crusher.

19 A road right along here, down to the  
20 bottom of the site. And you know, these will vary  
21 somewhat throughout the life of the Project.

22 Mobile equipment. We will have  
23 loaders, we will have haul trucks, an excavator, a  
24 bulldozer, skid steers, utility forklift, a crane and  
25 very importantly a 5,000 gallon water truck.

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1                   Again for those people that perhaps are  
2 not familiar, this is a loader, typical haul truck on a  
3 quarry site, typical excavator, bulldozer, the little  
4 skid steer that I talked about, which is a very  
5 important utility vehicle which is for personal safety,  
6 and a water truck with a spray bar at the back, which  
7 will be continuously employed during dry weather.

8                   Still under key components, we have  
9 noise. And I would like to make the point here that  
10 Bilcon, throughout this process, held or attended  
11 committee meetings. People came into the office and  
12 expressed their concerns and we looked at these  
13 concerns very carefully through the process and in fact  
14 changed conceptual design in order to address these  
15 concerns.

16                   Noise was clearly a concern. This is a  
17 rural area. So what we have done is make very  
18 significant improvements to typical quarry layout to  
19 deal with the issue of noise.

20                   Whatever possible noise reducing  
21 materials will be used such as rubber and urethane  
22 screens. When the rock is being screened, it will be  
23 rubber. There will be rubber body liners to the rock  
24 trucks. There will be rubber liners in the impact zones  
25 of the hoppers, where the rock is dropped in, almost a

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1 complete elimination in fact of aggregate on steel.  
2 Most important is that the crushers, the screens and the  
3 conveyors will be enclosed.

4 One other feature which I think is  
5 important is that we will be using no night-time back up  
6 alarms, which tend to have a high-impulse noise.

7 These are rubber lined trucks. You  
8 don't get the boom when the rock is dropped into these  
9 trucks. These are shoots lined with thick rubber, and  
10 at the bottom left-hand side, you can see the thickness  
11 of the rubber here. It's three or four inches thick  
12 rubber.

13 This is sort of interesting and high-  
14 tech and one of the things that one can do with a new  
15 state of the art processing camera on the back of the  
16 truck.

17 And here is somebody standing behind  
18 the truck. The driver can actually see on his screen  
19 what is happening. The fellow is behind the truck and  
20 he can be seen on camera. It's a very good safety  
21 feature.

22 The second very significant concern  
23 raised by the public is dust. How will we control dust  
24 on this site?

25 Well first of all, we will add water to

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1 the basted shot rock to bring the moisture content to  
2 1.5 per cent. So when it is being moved and put on the  
3 trucks, it will already be moist.

4 The haul roads will be continuously  
5 dampened by a dedicated water truck. We will apply high  
6 pressure water at transfer points in the screening  
7 process. The conveyors will be covered. The final  
8 sizing of this product will be done by a wash screen,  
9 wet.

10 Most important of all, the crushers,  
11 the screens will be enclosed in buildings.

12 There's a high population urban area,  
13 very strict noise and dust controls. The noise and dust  
14 control technology used here certainly met all the  
15 conditions. All the process is enclosed.

16 Debris. No debris will be removed from  
17 the site. The top soil and the sediment will be  
18 stockpiled in bermed areas and they will be used in the  
19 reclamation process. There will be no ocean dumping of  
20 any kind.

21 The debris cycle, and this is in the  
22 first five years, and of course it would change as the  
23 features of the quarry change, but essentially when the  
24 early area is stripped, these early areas here, that  
25 material will go in the organic disposal area.

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1                   This is the washer area, the high rate  
2                   thickener. That material will be pumped up to the  
3                   sediment storage area. When the reclamation process  
4                   starts, which will in fact be in the first five years,  
5                   that material will be mixed together and taken down, and  
6                   the reclamation process will start back here.

7                   And of course, the finished product  
8                   will be shipped. Nothing will be wasted on this job  
9                   site.

10                  Surface water management. All the  
11                  surface water run off will be stored in the sediment  
12                  retention ponds, and they're designed for a 100-year  
13                  storm event.

14                  All the water on the site will be used  
15                  in the process so the surface water, the rain water that  
16                  comes down onto the site, is what we will use in the  
17                  process and it will be recycled.

18                  If we were to get, which could happen,  
19                  two 100-year storms back to back, there may be discharge  
20                  to the Bay of Fundy, but it would go through a newly  
21                  constructed wetland on the site and into the Bay of  
22                  Fundy in a controlled outlet structure.

23                  This is a little bit later on in the  
24                  process, and again I just want to talk about the water  
25                  here, but here are the ponds now established. The

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1 original four, the very large fifth pond and in year 17,  
2 another pond up in here.

3 Essentially, all the water from process  
4 area, from the roads, will come into here. Most of the  
5 sediment will be gathered here, and that sediment will  
6 be cleaned out on a regular basis and be taken up to the  
7 sediment disposal area.

8 The water will get cleaner and  
9 cleaner and cleaner as it comes down into here and this  
10 will be from this pond, the make-up water for the wash  
11 cycle.

12 Here, we have the constructed wetland  
13 so that if any water gets out of pond number one, it  
14 will have to go through this constructed wetland and  
15 then through a controlled outlet structure into the Bay  
16 of Fundy.

17 So the make-up water for aggregate  
18 washing, it will be reclaimed from the sediment ponds.  
19 All the wash water systems are arranged in closed  
20 circuit.

21 The fines are captured by the high rate  
22 thickener, taken to the top of the hill. The fines from  
23 the washing operation, again to be pumped to the dyked  
24 sediment area.

25 Fuel handling. No ship refuelling at

1 the marine terminal. That's a given. There will be  
2 no ship refuelling at any time in the life of the  
3 Project.

4 All bulk fuel storage will be triple  
5 contained. Fuel and oils will be distributed through  
6 Wiggins type quick couplers, which will eliminate  
7 possible fuel spills.

8 Again, this is important and is the  
9 sort of thing that we can do because this is a new  
10 quarry. These are snap type fittings. One is not  
11 waiving a hose of diesel in the air. These are leak-  
12 proof, and this can be used for not just fuel but for  
13 oil, for coolants, for hydraulic fluids, et cetera.

14 The possibility of leakage is virtually  
15 eliminated by using this sort of high-tech nozzle.

16 Just very quickly... And this Mr.  
17 Chair could be an appropriate place to break, if that is  
18 all right with you? Before we get into those.

19 THE CHAIRPERSON: So we will take a 15-  
20 minute break and resume following it.

21 --- Recess at 10:25 a.m.

22 --- Upon resuming at 10:45 a.m.

23 THE CHAIRPERSON: Please continue.

24 Mr. PAUL BUXTON: We left off looking at  
25 the three components of the project, and I'd like to run

1 you just quickly through the various phases.

2 The phases for five-year periods are  
3 actually in the Environmental Impact Statement, so this  
4 is the first phase and the second phase and the medium  
5 phase, and then the end phases.

6 The beginning of the phases, the first  
7 five years, the rock will be taken from this area, this  
8 is the broken rock taken from the process area, and it  
9 will be crushed first.

10 This little area here will be the next  
11 area of quarry opened up, and this pond then will come  
12 into being.

13 A sediment disposal area here, organic  
14 disposal area here. So five operating sediment ponds,  
15 quarry area here, and the processing plant here, and it  
16 will remain there through the life of the quarry.

17 Six to ten, not much change. You can  
18 see the sediment pond here now in place. The quarrying  
19 has now moved down into this area. The processing plant  
20 again in the same place, the organic disposal area and  
21 the sediment disposal area in the same place, and  
22 clearly the marine terminal still in the same place.

23 And here, we go to years 16 to 20. It  
24 is not quite halfway through the life of the quarry. A  
25 sixth sediment pond will be opened here because this

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1 area of the quarry will be opened up.

2 And again, the sediment disposal area,  
3 organic disposal area, they're still in the same place  
4 and this material will have already been mixed to  
5 reclaim this area and this area and all the way around  
6 the pond. So this area will already be reclaimed at  
7 that time.

8 Going through now into the later  
9 stages, the sediment pond, a sediment disposal area I'm  
10 sorry, will have been moved down into this area and the  
11 organic disposal area moved down into here. This area  
12 will now be reclaimed and this area is now being  
13 quarried.

14 This area is also reclaimed. So  
15 probably 60 per cent, 70 per cent of the site has  
16 already been reclaimed at this stage of the process.  
17 The six sediment ponds are still there in operation.

18 And here, we go at the end of the  
19 process. Now the rock has been quarried out, these  
20 areas and this area are being made ready for  
21 reclamation.

22 All the other areas on the site will  
23 have already been reclaimed.

24 So site developments and operations.  
25 How do we go about opening up this quarry and getting

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1 into the business of crushing rock?

2 Quarry development and operation  
3 requires blasting, crushing, washing, stockpiling and  
4 loading, and then the marine transportation. So those  
5 are the key activities.

6 Site development: The vegetation is  
7 removed on the small area of the quarry which is being  
8 opened up. These will be removed, they will be chipped  
9 and they will be composted. They will not be burned,  
10 and that material again will be used in the reclamation  
11 process.

12 The top soil and overburden which we  
13 have noted is really very thin on the site. It will be  
14 removed and it will be stored.

15 The roads, the ponds, the disposal  
16 areas and the processing plant will be erected,  
17 constructed, put into place.

18 The blasting. The blasting will take  
19 place approximately once a week during construction,  
20 approximately every two weeks during production.

21 Every blast will be carried out by  
22 certified blasters, licensed in the province of Nova  
23 Scotia. Pre-blast surveys will be conducted as  
24 required by the Nova Scotia Department of Environment  
25 and Labour.

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1                   Bilcon will have on-site full time a  
2 professional engineer with very significant blasting  
3 experience to supervise all the drilling and blasting to  
4 ensure the project is meeting or exceeding the  
5 regulations and guidelines. There will be no explosive  
6 storage on the site at any time during the 50-year  
7 life.

8                   The quarrying and ship loading, we  
9 anticipate that will continue for 44 weeks of the year.  
10 This is to take into account the typical bad weather  
11 that we get in January and February.

12                   This past year, we did not get any poor  
13 weather until perhaps January the 15<sup>th</sup>, but the time will  
14 come when it becomes difficult to wash the aggregate in  
15 extreme cold weather, because the waterlines will freeze  
16 up.

17                   The radial arm ship loader will be used  
18 to load the ship. We anticipate that it will take less  
19 than 12 hours to load a ship, and we anticipate over the  
20 life of the project that we will be shipping basically  
21 on a weekly basis and that in the winter of course will  
22 depend upon whether the quarry is in fact crushing rock  
23 and whether weather conditions allow us to bring the  
24 vessel in.

25                   The terminal is designed to accommodate

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1 a Panamax size ship 250 metres long, a beam of 30 metres  
2 and draft maximum of 15 metres. A typical vessel load  
3 would be about 45,000 tons.

4 The vessel will approach the terminal  
5 by the designated shipping lanes. When it leaves the  
6 shipping lanes, it will reach the marine terminal on a  
7 prescribed route, and it will go in and out on precisely  
8 the same line each time.

9 The ship, as it approaches and departs  
10 the shipping lanes, will maintain a speed of less than  
11 12 knots. This is very significant when it comes to the  
12 safety of the marine mammals that are in the area.

13 The product will go to the Northeast  
14 Coast of the United States.

15 The ballast water management. This has  
16 changed somewhat over the past year or so. Prior to  
17 June 2006, there were guidelines for dealing with the  
18 management of ballast water.

19 In June of last year, regulations came  
20 into place and all shippers are now required to comply  
21 with Transport Canada's regulations with respect to the  
22 management of ballast water.

23 Here, we have the new shipping lanes  
24 and a designated route on the shipping lane into the  
25 terminal, back out the same route and into the outbound

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1 lane of the terminal.

2 This approach and departure route does  
3 not go into the North Atlantic White Whale Conservation  
4 Area, and you will note that all our traffic going up  
5 the Bay of Fundy into Saint John and to other terminals  
6 in fact go through that Conservation Area.

7 The reclamation process. Why do we do  
8 it? Why do we reclaim? Well at the end of the day, we  
9 are required to reclaim but during the quarry operation  
10 itself, it provides advantages to reclaim as we go. It  
11 provides immediate erosion control, stabilizes the  
12 watershed.

13 We can start to re-establish maybe  
14 vegetation and wildlife on the site, and we can maintain  
15 at the end of the day and re-establish as we go  
16 aesthetics.

17 So the reclamation process will proceed  
18 incrementally over the life of the project. In fact, it  
19 will commence almost immediately.

20 When we construct, the sediment  
21 retention ponds, soil will be disturbed, and those areas  
22 will be immediately reclaimed.

23 The process includes site grading and  
24 drainage, soil preparation and planting (native  
25 species), and it will involve monitoring and control of

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1       invasive species.

2                       One thing that we don't want to do in  
3       the reclamation process is introduce invasive species to  
4       the site.

5                       So the reclamation generally will take  
6       place landward from the coast around the settling ponds  
7       adjacent to the Bay of Fundy, and then landward towards  
8       the east.

9                       At the end of the day, we will have a  
10      slurping site and a series of vertical or near vertical  
11      hitches at the back. These will be fenced. The  
12      reclamation zones will still be in place. I'm sorry,  
13      the preservation zones will still be in place.

14                      The planting that will have been put in  
15      front of the pond areas will now be quite mature, and we  
16      think that this will become a valuable site for use in  
17      the future for other uses.

18                      Can reclamation be done? Well, it is  
19      done. It is done in Nova Scotia right now. It has been  
20      done successfully. This is basically a surface coal  
21      mine in Westville on the left-hand side in 1996, and in  
22      1998 basically reclaimed, not mature yet but you can get  
23      an idea of what can be done with sites such as this.

24                      Here is a site in Michigan which was a  
25      clay pit, kiln dust piles, stone quarries, et cetera,

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

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

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

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

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

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

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

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

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

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

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

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

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1 We keep the water on-site for the high rate thickener  
2 tank and through the series of sediment ponds.

3 The storm water will be managed. It is  
4 significant to us. We need that storm water in the wash  
5 process.

6 Also, we will have a controlled  
7 discharge point when it is necessary, and it will be  
8 very infrequent into the Bay of Fundy.

9 The planning process: The roles and  
10 responsibilities to the people on-site will require the  
11 development of environmental protection plans,  
12 monitoring plans, environmental inspections, quality  
13 assurance, quality control, environmental audits,  
14 contingency and emergency response planning, training  
15 and education of our own people and communication and  
16 reporting.

17 What are the objectives of monitoring?

18 Well, to ensure proper operation of all the various  
19 processes going on at the site.

20 It assists us in verifying the effects  
21 predictions that we have made. It will confirm the  
22 effectiveness of mitigation measures, or in fact it will  
23 determine the need for new or revised mitigation  
24 measures.

25 Other examples are on-site vegetation

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1 and flora, on-site bird communities, underwater noise  
2 levels. Now this monitoring will continue.

3 Compliance monitoring. The Nova Scotia  
4 Department of Environment and Labour has standards and  
5 they have guidelines. This is compliance monitoring.

6 So the noise levels at the property  
7 boundary, the ground vibration (the nearest structure  
8 off-site), dust levels, they're all basically governed  
9 by the threshold levels set out by the Nova Scotia  
10 Department of Environment and Labour.

11 Water discharge, again, is controlled  
12 and standards are set out by the Nova Scotia Department  
13 of Environment and Labour.

14 On-site water well quality and yield.  
15 Well clearly, we want to make sure that the water that  
16 we are using on-site in our offices and maintenance  
17 facilities meets the standards for Canadian drinking  
18 water.

19 So we get into project planning and  
20 detail design.

21 We developed storm water management  
22 plans, erosion and sediment control plans, a detailed  
23 reclamation plan, a forest management plan, operation  
24 plans for quarrying, processing, loading and terminal  
25 operations. Also health and safety plans for every

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1 segment of the operation on the site. There are  
2 also environmental management plans and very  
3 significantly training plans for everybody that is on  
4 the site.

5 Some of these plans are developed  
6 later, some of these plans have in fact already been  
7 completed.

8 The forest management plan has already  
9 been prepared by a local forest technician. This is  
10 just a part of that forest management plan, and I want  
11 to indicate here that we don't consider our  
12 responsibilities to terminate at the boundary of the  
13 quarry, but we have in fact developed forest management  
14 plans for the properties that we have acquired because  
15 we would like to bring these back into fully productive  
16 forest areas at a later date.

17 So how do we implement these  
18 mechanisms? On-site, there will be an environmental  
19 management team which will be headed by the Operations  
20 Manager. He will be responsible for monitoring. He  
21 will be responsible for arranging for environmental  
22 audits, quality assurance plans, keep complaints records  
23 and an action plan.

24 How were those dealt with? Were they  
25 dealt with satisfactorily, in a reasonable period of

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1 time? Compensation policy also.

2 A Community Liaison Committee will be  
3 established and communication will be maintained with  
4 that committee because we consider it very valuable to  
5 get the feedback from the community.

6 And we will adopt throughout the  
7 management of this project an adaptive management  
8 approach.

9 What do we commit to as a company? We  
10 commit to a local focus. We commit to procuring local  
11 goods and services wherever and whenever possible. We  
12 will hire local workers.

13 There are 65 to 80 jobs during  
14 construction over an 18-month period, 34 direct jobs for  
15 the next 50 years. We will invest in our people. We  
16 will pay family sustaining wages. We will provide a  
17 benefits package. We will train people and re-train  
18 them.

19 It is in the interest of the company to  
20 acquire good people who are attached to the local area,  
21 to train them well and to have them stay with us until  
22 they retire.

23 We do not want to hire people every two  
24 years and have to re-train them every two years.

25 We commit to working with the

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1 communities, to understand community priorities. We  
2 will work closely with the Community Liaison  
3 Committee. We will continue public meetings and  
4 consultation.

5 The original Community Liaison  
6 Committee that was in place in 2002 and 2003 had 15  
7 meetings. We have held a significant number of public  
8 meetings. We have had an open office policy for almost  
9 five years.

10 People can drop in, find out what is  
11 going on, how to apply for jobs and all the other  
12 information that they want. We will maintain that.

13 We will communicate. The monitoring  
14 reports will be transparent. They will be available to  
15 people. We will present the results of environmental  
16 audits, and we're quite prepared to discuss, either  
17 through the CLC or through other discussions, the  
18 options for improvement.

19 We will continue to invest in the  
20 community. We will continue to sponsor health,  
21 education, heritage, sports, youth, seniors and  
22 community organizations.

23 The Claytons and Bilcon considers this  
24 to be a very important part of being in business in a  
25 community.

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1 Safety. We commit to the highest  
2 safety standards. We will put in as we construct things  
3 like catwalks on all the conveyors, computerized  
4 automatic shutdown controls so the plant can be shutdown  
5 independently, state of the art ignition systems, safety  
6 training programs, and because this plant is new, we can  
7 do these things.

8 We will commit to entering into  
9 research partnerships. The Claytons have a history of  
10 doing this and we are well prepared to do it either with  
11 Government or with NGOs to advance the knowledge of  
12 environmental issues.

13 Just to note the state of the art  
14 ignition systems, our vehicles will not be able to be  
15 driven away, stolen, improperly used because only the  
16 right person with the right key, which is computer  
17 controlled, can start that vehicle at a date and time,  
18 and it cannot be started five minutes before that. So  
19 we have security throughout the plant site.

20 Why we think Whites Point Quarry makes  
21 sense? It's economically feasible, and we believe it  
22 has an environmentally sustainable approach.

23 Well-understood proven techniques and a  
24 very simple straightforward operation. This is not a  
25 complex operation. We blast rock, we crush it, we

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1 screen it, we wash it, we ship it.

2 All this will be done with modern  
3 leading edge technologies, and we will comply with all  
4 regulations and all guidelines.

5 We will have a qualified, motivated  
6 workforce. We believe that they exist in this local  
7 area. I may say that at the present time, we have over  
8 450 applications for jobs in our office, and we have not  
9 advertised for any position.

10 The company will have a bias in favour  
11 of local workers, goods and services. We will provide a  
12 safe and healthy workplace.

13 We believe that there will be  
14 significant economic spinoffs in the local area. We  
15 believe this will contribute to a healthy community now  
16 and in the future.

17 If I just note the small picture at the  
18 bottom, those are local young people who got the  
19 impression that Bilcon was not going to hire locally and  
20 were very concerned. They approached us and asked us to  
21 attend a meeting in Little River. Now these are people  
22 local to the quarry area.

23 About 40 people showed up and expressed  
24 their concern that they would be considered for  
25 positions on this quarry site, and we assured them that

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1 they would be given priority.

2 Why does this project make sense?

3 There is a well-established successful ownership. The  
4 company has a strong track record of investing in the  
5 community. There's no taxpayers' money involved in this  
6 project.

7 I think that we have the resilience and  
8 the dedication to establish a quarry which matches the  
9 quality of the people in the local area.

10 Just a little summing up. This will be  
11 a state of the art quarry operation, well-understood  
12 proven technologies. There will be comprehensive  
13 environmental safeguards.

14 We commit to ongoing community  
15 involvement. We commit to disclosure and the  
16 transparency of performance. We will make and continue  
17 to make long-term economic investments, and we believe  
18 that this is a contribution to sustainable  
19 development.

20 Our vision is that this quarry will  
21 represent a good corporate citizen, a state of the art,  
22 environmentally-sensitive operation, a part of what we  
23 hope will become a strong diversified local economy, an  
24 example for habitat creation and re-creation and  
25 conservation, and an example of active support for

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1 research, training and education.

2 Thank you very much.

3 THE CHAIRPERSON: Thank you Mr. Buxton.

4 It will be a moment while we get ourselves in order.

5 You are a little bit ahead of schedule there. Can we

6 turn that thing off? The projector is shining in our

7 eyes. Wonderful, thank you.

8 Thank you Mr. Buxton, that was very

9 clear and very concise, and very informative as well.

10 We will begin the questioning of you and your

11 colleagues, but the questioning that we decided to

12 embark on first will be not specifically to do with this

13 presentation.

14 What we would like to do is touch on a

15 few overriding issues, which will be consistent

16 throughout the entire two weeks, so we will get to the

17 presentation very shortly, but I just wanted to let you

18 know that we would like to discuss four or five things

19 first which we think are fundamental, and these are

20 things which were in the guidelines and which you

21 already addressed.

22 What I would like to do for the moment

23 is start with a discussion of the guidelines themselves.

24 I wonder if you... Do you have a microphone? Yes, you

25 do. Could you tell us what the relevance and the

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1 importance of the guidelines are?

2 And there is a point to this  
3 questioning, but first of all I would like to hear what  
4 you have to say. You received the guidelines from us,  
5 you responded and produced an EIS, and I'd like for you  
6 to verbalize to us what you think those guidelines were  
7 designed for.

8 Mr. PAUL BUXTON: I think they are  
9 designed to set out the parameters over the Project as a  
10 whole, what the Project is, where it is, how it is going  
11 to be conducted, what the environmental effects are and  
12 I think that they probably to some extent came from  
13 standards, questions which are asked in this kind of  
14 context.

15 The physics of the guidelines came from  
16 concerns that were raised in the community, concerns  
17 that were raised elsewhere with respect to this  
18 Project.

19 We saw them as a framework to explain  
20 what we were going to do, why we were going to do it,  
21 what the processes were that we were going to undertake,  
22 what environmental effects would come from those  
23 processes, how we would attempt to mitigate those  
24 effects, how we would monitor the effects, and what the  
25 residual effects would be from this process.

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1                   And that of course includes cumulative  
2 effects as well as the individual effects of specific  
3 activities.

4                   So we saw this as a composite picture  
5 of the project to explain why we need the project, why  
6 it's there, what we're going to do, what the effects  
7 would be, how we would mitigate them, what monitoring we  
8 would carry out, what the residual effects would be.

9                   THE CHAIRPERSON: How do the guidelines  
10 relate to the process we're in right now?

11                  Mr. PAUL BUXTON: I think the guidelines  
12 that are set... In fact the guidelines, these are the  
13 elements that are foreseen to be important and  
14 essentially the subjects which would need to be  
15 discussed in this forum throughout the entire process.

16                  I think it sets the basis, the  
17 guidelines for the entire process, which includes of  
18 course the panel hearings themselves.

19                  THE CHAIRPERSON: What would be your  
20 view of you and your colleagues' adherence to the  
21 guidelines, do you think that you have done a good job  
22 with them?

23                  Mr. PAUL BUXTON: I think that we  
24 struggled with the guidelines Mr. Chair. We did not  
25 find the guidelines easy to follow, which is why we

1       restructured our Environmental Impact Statement as we  
2       structured it.

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

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

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

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

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

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

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

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

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

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

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

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

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1                   So following that, what we would like  
2                   now to do is to talk a little bit about some of the  
3                   guiding principles which we enumerated or identified in  
4                   our guidelines, and those principles were stated early  
5                   on, and they involved several things which you have  
6                   responded to, and things such as traditional knowledge,  
7                   public involvement, sustainable development, the eco-  
8                   system approach and so forth.

9                   These things are cross-cutting issues,  
10                  the turn up throughout the entire process. They turned  
11                  up in your EIS, and they turned up in our guidelines in  
12                  many, many different places, so we need to get some  
13                  clarification and some development of these ideas, and  
14                  so what we would like to do is touch on them in  
15                  msequence to get a sense of common understanding of  
16                  these things.

17                  What we will do is we will turn  
18                  initially to the traditional knowledge and the public  
19                  involvement.

20                  Ms. JILL GRANT: Can you please give us  
21                  an idea of what your understanding is about what  
22                  traditional community knowledge requires in the EIS?

23                  Mr. PAUL BUXTON: The...

24                  Ms. JILL GRANT: The place that's  
25                  traditional in community knowledge, how you see that

1 sitting in terms of the overall contribution of  
2 knowledge to the environmental assessment?

3 It's one of the key principles which is  
4 articulated in the guidelines and in CEAA documents as  
5 well, the requirements to...

6 Mr. PAUL BUXTON: We saw it as an  
7 important element, adding detailed substance to a  
8 scientific look, and I think we made very significant  
9 attempts to gather all of the traditional knowledge that  
10 we could get in the area.

11 As I mentioned in the presentation, we  
12 held I believe 15 Community Consultation Committee  
13 meetings. We held a significant amount of additional  
14 public meetings. We met with groups, we met with  
15 fishermen groups and we conducted an extensive series of  
16 interviews with local people to give us the background  
17 which we call the traditional knowledge.

18 I think that we did in fact gather a  
19 significant volume of information which we found  
20 important to the process to add this knowledge to our  
21 design approach and to our mitigation approach.

22 I'm not sure whether you want me at  
23 this time to sort details of the sort of things that  
24 were picked up along the way, but they certainly had  
25 significance for us and we considered them to be

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1 important.

2 And I think the knowledge, we got into  
3 a three-month exercise in the beginning to find out what  
4 the traditional knowledge was. And this has been  
5 ongoing. We have people stopping into our office on  
6 virtually a daily basis who helped us with things like  
7 fisheries issues, background in the fishery, what used  
8 to be carried out on the site, the use of the site in  
9 the past.

10 And I think that we have developed a  
11 significant traditional knowledge base, and we have used  
12 that knowledge throughout the process.

13 Ms. JILL GRANT: And can you give us an  
14 indication... One of the information requests was about  
15 ocean conditions, and I wonder if you could give us an  
16 idea of how you have tried to incorporate traditional  
17 community knowledge about ocean conditions in things  
18 like the design of the marine terminal?

19 Well first of all, I think I should  
20 make it clear that the marine terminal is not designed.  
21 The conceptual design of the marine terminal is in  
22 place.

23 What we did for example on the source  
24 of information that would be required for us to do a  
25 conceptual design is that we would go to more

1 traditional sources initially. We would go through the  
2 literature to find out what typical wave heights are,  
3 what the currents are, what the winds are, the general  
4 climate, whether there is ice, the number of fog days,  
5 et cetera, et cetera.

6 But we have certainly talked to  
7 fishermen who come in the office to ask about usual  
8 conditions, how they found the conditions in the... Not  
9 just the Whites Cove area, but in the general area of  
10 the fishing lanes, and I think that we have received  
11 some very useful knowledge from these people that use  
12 the waters on a daily basis.

13 But I would like to emphasize again  
14 that there is a far different level of standard required  
15 for a detailed design than there is for a conceptual  
16 design.

17 We have taken this project to a  
18 conceptual design stage so that we know in general terms  
19 what needs to be done.

20 I could not tell you at the present  
21 time whether the pipe piles need to be 42 inches in  
22 diameter or 39 inches in diameter, nor could I tell you  
23 in fact what the thickness of the steel is required for  
24 a pipe pile, but we can determine what the effects of  
25 putting that pipe pile down into water are and how much

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1 habitat is going to be destroyed, et cetera, and whether  
2 or not it will generally affect currents or tides or  
3 marine environment.

4 So I think it should be clear that  
5 virtually all the aspects of this site... The detailed  
6 design has not been done.

7 We would be required to do and we will  
8 do use of consultants' experience, very specific  
9 oceanographic studies, wave studies, wind studies  
10 specific to Whites Cove and its effect on the marine  
11 terminal.

12 But we felt that the information that  
13 we gathered through traditional sources, that is to say  
14 the sources through information and through background  
15 which is available and research, and I think by what we  
16 have heard from local users of the water, that we feel  
17 very secure in our conceptual design.

18 Ms. JILL GRANT: The effects that are  
19 predicted from the conceptual design, do you see the  
20 effects as conceptual too? How do you predict the  
21 effects without some detail of this information on the  
22 marine terminal?

23 Mr. PAUL BUXTON: Well, I think that the  
24 conceptual design is not just the statement that we  
25 would require pipe piles, much more goes into it than

1 that.

2 We have been consulting a very  
3 experienced marine terminal designer who is here today,  
4 and who could answer very specific questions, who has  
5 built these marine terminals. In fact, he built one  
6 very recently which has just become operational.

7 It is really not a question that the  
8 pipe pile is 50 feet in diameter. We know in general  
9 terms what it is.

10 It may vary. The thickness of the  
11 steel may vary slightly. We know what the bottom is, we  
12 know that we don't have to deal with thick sediments  
13 because we have the visual evidence of that, so we do  
14 have a very extensive amount of knowledge.

15 When I say that we have only done a  
16 conceptual design, this is a fairly technical and  
17 sophisticated point.

18 But I believe that we have sufficient  
19 information and that the sizing that you saw on the  
20 cross-section of the marine terminal is adequate to  
21 determine what the effects may be, and we know that by  
22 the construction of the marine terminal, we will destroy  
23 fish habitat.

24 We completed the necessary  
25 documentation for the Department of Fisheries and

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1 Oceans. We have had extensive discussions with the  
2 Department of Fisheries and Oceans with respect to the  
3 compensation of that habitat.

4 If we can be precise to the square  
5 metre at the present time as to the extent of the  
6 compensation? The answer is no. But the general  
7 principles are there and we came to an agreement with  
8 DFO with respect to the type of compensation, to the  
9 amount of compensation which is legislated, three  
10 times of the habitat which we destroy must be  
11 compensated.

12 So whether it's 200 metres or 205  
13 metres, that will be determined in the final  
14 compensation plans when the detailed design is done.

15 Ms. JILL GRANT: Thank you. I wanted to  
16 ask a quick question about public involvement, which is  
17 another one of the principles that's articulated in the  
18 guidelines and to ask whether you had seen the kind of  
19 participation programs that you have used as offering  
20 meaningful opportunities for the community to express  
21 its views and have them taken into account?

22 Mr. PAUL BUXTON: I believe we have done  
23 so. I believe we have done this for five years. We  
24 have encouraged people to make contact with us, either  
25 in formal groups, or in the Community Liaison



1 Committee.

2 They could come into our office at  
3 anytime. We have had an office which I am in every day  
4 and I would say that certainly in the last year, we have  
5 had five or six people a day come into our office to  
6 inquire about the Project itself, some element of the  
7 Project, the opportunities for jobs, et cetera.

8 We have made ourselves I believe fully  
9 available. We have sent newsletters to the public in  
10 the general area, and I think the level of communication  
11 has been extensive.

12 I don't believe that anybody could say  
13 that they have not had the opportunity to bring their  
14 concerns to our attention.

15 Mr. GUNTER MUECKE: You just said that  
16 you have been gathering local knowledge for some period  
17 of time, including knowledge on the local conditions,  
18 oceanic or ocean conditions where the terminal is going  
19 to be located.

20 Now I am somewhat puzzled by the fact  
21 that we have repeatedly asked to be provided with some  
22 information on local conditions and it has never been  
23 supplied to us. Could you explain?

24 Mr. PAUL BUXTON: I don't believe that  
25 that accurately reflects what is in the EIS. I think

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1 that the current conditions, and we will have a marine  
2 geologist here on Wednesday that you can ask the  
3 specific question to, but the current conditions in the  
4 area are quite well known.

5 The wave conditions in the area, in  
6 that area of the Bay of Fundy, are quite well known.  
7 The wind conditions are quite well known.

8 Now we recognize that we are in a very  
9 specific position and we may get a horrible combination  
10 of wind and wave which may cause to make adjustments to  
11 a detailed design, but one could argue at this point  
12 whether an eight metre wave is more or hugely more  
13 significant than a 7.8 metre wave.

14 We think that the information which we  
15 have to have is sufficient for us to go to a conceptual  
16 design stage.

17 We do recognize that we will need more  
18 information but this information that we need in a  
19 detailed design stage is obtained at very significant  
20 cost over a period of time, and we do not think that it  
21 adds anything to the conceptual design which we have put  
22 forward.

23 I can't... We have problems  
24 understanding or perhaps I have problems understanding  
25 why we would need to go to the detailed design stage,

1 which is what I appear to be hearing, i.e. the contract  
2 package stage, with the specifications and the detailed  
3 designs to address the concerns of environmental  
4 effects.

5 Mr. GUNTER MUECKE: Perhaps you are  
6 misunderstanding me. What I am saying is that it is of  
7 concern to the Panel to know what the local conditions  
8 are for the site that you have in mind.

9 We are well aware of the fact that  
10 general conditions in the Bay of Fundy have been studied  
11 and are known, but when it comes to the local  
12 conditions, if you consulted community knowledge, local  
13 knowledge, we haven't seen it.

14 And you have said that you have some  
15 information, and we have been asking for it.

16 Mr. PAUL BUXTON: The traditional  
17 knowledge that was gathered, I think that we did remark  
18 on that in the Environmental Impact Statement. We  
19 certainly had nothing from any local fisherman or local  
20 user of the water that would believe us to be wrong in  
21 our conceptual designs.

22 THE CHAIRPERSON: One of the things that  
23 has struggled us for some time is that there is a view  
24 offered by you that you have consulted with the  
25 community, you have had open houses, and as you have

1       said your door is opened, and that you attempted to  
2       interface with community members in order to extract  
3       knowledge.

4                       Mr. PAUL BUXTON: Yes.

5                       THE CHAIRPERSON: But when you look at  
6       the responses that have emerged from the community in  
7       response to the EIS, they are almost universally  
8       negative. And in your side, they are almost universally  
9       positive.

10                      The community members say: AWe haven't  
11       been consulted. The CLC has not worked very well. We  
12       know a great deal about ocean conditions off the coast  
13       because we have been fishing here for hundreds of years.  
14       We haven't really been consulted. Questions may have  
15       been asked, but it was not a true consultative  
16       process.≅

17                      The reason why this concerns us is that  
18       it is the cornerstone of the TIA Process. The TIA  
19       Process says that traditional knowledge and public  
20       involvement are the cornerstone of any project, working  
21       with the community, engaging the community in a  
22       meaningful discussion long term.

23                      So there clearly is a disparity, a  
24       disparity which is difficult for us to comprehend  
25       because on one side we are hearing very positive, on the

1 other side we're hearing very negative, and there seems  
2 to be no middle ground.

3 So I would ask that you reflect on that  
4 for a moment and tell us why that would be the case, why  
5 would there be such a disparity between what you think  
6 is the perfect process or that you seem to think is a  
7 process that has been perfectly executed and on the  
8 other side, the negative side, which seems to be just  
9 the opposite. It just strikes us as unusual.

10 Mr. PAUL BUXTON: I believe there is an  
11 explanation to this. I believe that anybody that  
12 genuinely wanted to know what the Project was about and  
13 how they could be involved in it and influence it, that  
14 is in its various parts, whether you were concerned  
15 about noise, dust or any of the other issues, that the  
16 opportunities were there, and I think those people came  
17 in to see us, and I believe that they got the  
18 information that they were looking for.

19 I believe that those people that from a  
20 philosophical perspective did not want to see this  
21 Project did not consult with us and in fact chose not to  
22 consult with us.

23 We can't force people to consult with  
24 us. The opportunities were there. I think we provided  
25 them continuously over a five-year period.

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1                   And those people that really did want  
2                   to know what we were doing about the elements of concern  
3                   came in to talk to us. Those that in fact did not want  
4                   to know about the elements of the project itself or the  
5                   specific elements of concern, but who opposed the  
6                   project from a philosophical perspective, and it is  
7                   certainly their prerogative, did not consult us and did  
8                   not want to consult us or be part of any type of  
9                   consultative process. And you know, I think that that  
10                  has continued for five years.

11                 THE CHAIRPERSON: Are you suggesting  
12                 that the burden of responsibility for engagement rests  
13                 with the public?

14                 Mr. PAUL BUXTON: I did not. What I do  
15                 say is that if we provide the opportunity and people  
16                 chose not to take that opportunity, we cannot drag  
17                 people into meetings. We cannot force them to come and  
18                 talk to us or if we set up specific meetings to discuss  
19                 and people do not come, we cannot make them come. Both  
20                 sides must be willing to discuss.

21                 THE CHAIRPERSON: The burden of  
22                 responsibility I think rests with the Proponent and it  
23                 seems to me given the prominent nature that traditional  
24                 knowledge and public involvement has in the TIA Process,  
25                 it would seem to me as well that this is something which

1 should have been pursued more vigorously, or do you feel  
2 that you have pursued it as vigorously as you possibly  
3 can?

4 Mr. PAUL BUXTON: I fail to see how we  
5 could have pursued it more vigorously. We have made  
6 ourselves available on numerous occasions...

7 THE CHAIRPERSON: But you seem to be  
8 saying that you had an open door policy.

9 Mr. PAUL BUXTON: Yes.

10 THE CHAIRPERSON: But I'm thinking about  
11 workshops, I'm thinking about public engagement, I'm  
12 thinking about documents presented, walking people  
13 around the site. In other words...

14 Mr. PAUL BUXTON: We have done all these  
15 things. We did site tours.

16 THE CHAIRPERSON: Then why do we get  
17 these negative responses?

18 Mr. PAUL BUXTON: We did site tours. It  
19 has been a difficult process for us to engage in. I  
20 have talked to literally thousands of people in the past  
21 five years on a personal basis.

22 I think that we have taken every step  
23 in those years. I don't think anyone can genuinely say  
24 that they did not have their opportunity to make their  
25 views known to us throughout that process.

1 THE CHAIRPERSON: I think we will draw  
2 that line of questioning to a close. I'd like to move  
3 us on to something...

4 Mr. GUNTER MUECKE: You just stated in  
5 your presentation that the CLC was suspended in 2003,  
6 that is a couple of years ago now. Could you provide us  
7 information on why the CLC was suspended?

8 Mr. PAUL BUXTON: If I said it had been  
9 suspended, I misspoke. I don't believe that I did.  
10 However, there has not been any meetings for over two  
11 years.

12 Mr. GUNTER MUECKE: Sorry, you said  
13 something else about 2003, is it 2007?

14 Mr. PAUL BUXTON: Yes. If you ask the  
15 specific question, I will give you the specific answer.  
16 The CLC was a difficult proposition to set up.

17 With my knowledge of people in the  
18 local area and people that I have worked with on Digby  
19 Neck, and I recall that the responsibility of  
20 establishing the CLC lies with the Proponent and we did  
21 originally under instruction from the Nova Scotia  
22 Department of Environment and Labour.

23 I talked to about ten people who I  
24 thought were appropriate sort of people. They were  
25 fishermen, they were whale-watch operators, they were



1 people who had worked in the area that I had personal  
2 knowledge of. They were agreed to serve on the CLC.

3                   Within three weeks, I was down to three  
4 members and I called the people and they told me that  
5 they could not serve, that they had decided not to serve  
6 on the CLC.

7                   We did go ahead with the small number  
8 and it was added to over the next year or so, until I  
9 believe there were seven or eight members.

10                  There was the Chair who was running a  
11 local business, in fact a gas station and a convenience  
12 store in Centreville. The local lady was of great  
13 interest I think in the local area, and certainly, to my  
14 knowledge, not a committed supporter nor opponent to the  
15 project, and she was felt to be a very neutral sort of  
16 Chair.

17                  The purpose of the CLC was for us to  
18 enable the flow of information from the public and from  
19 the Proponent in both directions, and we were  
20 disappointed that we had so few people representing the  
21 local community.

22                  The Chair continued to sit as Chair  
23 through the 14 or 15 meetings, until we got into the  
24 more formal stage of this process, into the Panel  
25 process. She then declined to call any further

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1 meetings.

2 She will be making a presentation to  
3 the Panel, and I believe it's on June the 26<sup>th</sup>, and  
4 perhaps it would be more appropriate that the Panel asks  
5 her specifically why she did not want to hold anymore  
6 hearings or meetings of the CLC Committee.

7 Mr. GUNTER MUECKE: Thank you.

8 THE CHAIRPERSON: As I said, I think we  
9 will terminate this line of questioning but there is  
10 just one further thing I wanted to raise, and that is  
11 that I wonder why it is that the 400 individuals that  
12 you have on record as wanting jobs in this project were  
13 not available for consultation or public involvement?

14 Mr. PAUL BUXTON: At this meeting?

15 THE CHAIRPERSON: No, I mean in the  
16 public consultation processes in the community. You  
17 have made the suggestion that you have 400 people on  
18 record as wanting jobs emanating from this project.

19 Well those 400 people are potential  
20 candidates for consultation, are they not?

21 Mr. PAUL BUXTON: Oh, absolutely. And  
22 in the recent past, we have held two meetings on-site.  
23 I think there were 23, 24 at the first meeting, 40 out  
24 of the second meeting, and they come in on a regular  
25 basis to consult with us.

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1 THE CHAIRPERSON: Thank you Mr. Buxton.  
2 Mr. Buxton, we were going to break at noontime. It is  
3 11:55. Before we get into a different topic, I think  
4 this is probably a reasonable time to break. We will be  
5 coming back at 1:00, okay?

6 Mr. PAUL BUXTON: Sounds good.

7 THE CHAIRPERSON: I will see you at that  
8 time. Thank you all.

9 --- Lunch recess at 11:55 a.m.

10 --- Upon resuming at 1:00 p.m.

11 THE CHAIRPERSON: Ladies and gentlemen,  
12 could I ask you to take your seats please? Thank you.  
13 I have been handed two or three housekeeping things  
14 which you should be aware of.

15 First of all, we have been having some  
16 problems with the sound this morning, and I'm told that  
17 they are working on improving the sound.

18 The second thing is that there are  
19 headsets available and the headsets provide service in  
20 English and French. Also, if anyone in the room is  
21 hearing impaired in any way or has reduced hearing, I'm  
22 told the headsets help so that they amplify the sound,  
23 so that someone could consider using that. It is  
24 available for that.

25 And then the third item which I should

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1 bring to your attention is that there was a schedule  
2 passed out this morning that suggested that Bilcon would  
3 not be making an environmental assessment presentation  
4 on Monday. That is incorrect.

5 The revised schedule, the one that  
6 should have been put together showed that Monday  
7 morning, Bilcon will in fact be making an environmental  
8 assessment presentation. It was inadvertently left off  
9 the list.

10 Okay. So maybe we can continue now.  
11 Mr. Buxton, we're going to continue with a couple more  
12 of these things which are the central pillars of the  
13 CEAA environmental assessment process because as I said  
14 before, we believe that they run and extend entirely  
15 throughout the entire process, so we want them clarified  
16 at the front end so that when we refer to them later on,  
17 they will be clear in all of our minds.

18 The first two dealt with traditional  
19 knowledge and public consultation. Now we move into the  
20 subject of sustainable development, and sustainable  
21 development is a phrase which is widely used, but what  
22 we would like is to know...

23 First of all, you can define it for us,  
24 what your understanding, what Bilcon's understanding of  
25 sustainable development is, what it means.

1                   Mr. PAUL BUXTON: Thank you Mr.  
2 Chairman. I would like to ask Mr. Uwe Wittkugel to  
3 speak on the issue of sustainable development. He has  
4 been assisting with this element throughout this process  
5 or at least for the last couple of years, and Mr. Uwe  
6 Wittkugel, would you kindly respond?

7                   Mr. U. WITTKUGEL: Sustained development  
8 is defined by the Canadian Environment Assessment Agency  
9 as development that meets the needs of the present  
10 without compromising the ability of future generations  
11 to meet their own needs.

12                   That is the definition that Bilcon  
13 agrees with, and yes, one of the principles that the  
14 guidelines ask for is the sustainable development  
15 principles to be followed by the environmental  
16 assessment.

17                   We do think that that has been done.  
18 The environmental assessment as a planning crew itself  
19 is a tool that does tend to achieve sustainable  
20 development.

21                   An environmental assessment is always  
22 trying to balance economic development with  
23 environmental protection, and it's at the core of what  
24 the environmental assessment tried to achieve.

25                   So the fact that we followed an

1 environmental assessment is already an attempt to  
2 implement this project with a sustainable development  
3 approach.

4 So far, in so much as the overall  
5 understanding of sustainable development, the guidelines  
6 also identified I think five points that characterize  
7 sustainable development or that relate directly to a  
8 sustainable development.

9 We agree with those five points and  
10 basically they involve effects on biological diversity.  
11 It is an item that needs to be addressed and assessed.

12 The capacity of renewable resources,  
13 they should meet the needs of future generations as per  
14 the definition of the Canadian Environmental Assessment  
15 Agency.

16 The preservation of the ecosystem  
17 integrity is another important component, also a  
18 consideration that this environmental assessment took  
19 into account.

20 The fourth point is the right of future  
21 generations to sustainable use of renewable resources.  
22 Again, we feel an item that has been considered in the  
23 contents of the environmental assessment.

24 The last criteria I think the  
25 guidelines state is the attainment of doable and

1 equitable social and economic benefits. Another  
2 characteristic of sustainable development.

3 We also think that this Project can be  
4 characterized as doing exactly that, trying to achieve  
5 this balance.

6 THE CHAIRPERSON: All right. Could you  
7 explain to us how your project will contribute to a  
8 sustainable development in Digby Neck, this area?

9 Mr. UWE WITTKUGEL: Again, I'd like to  
10 use the criteria that was set up in the guidelines. I  
11 think it's even explicitly stated that:

12 You will evaluate the Project and  
13 its contribution to sustainability  
14 on the basis of key criteria.≡

15 The first one is does it make a  
16 positive contribution to attainment of ecological and  
17 community sustainability?

18 An example, Paul Buxton indicated this  
19 morning the environmental protections. The environment  
20 protections will ensure that a plant protected under  
21 various legislation will remain within the site of  
22 boundaries.

23 Rare fishes protected under Federal and  
24 Provincial legislation will remain on site and will be  
25 protected by that protection zone.

1                   That's one example on how  
2                   sustainability will be achieved as far as biological  
3                   diversity is concerned. I picked the example of plant  
4                   life.

5                   Community sustainability now.  
6                   Stabilizing the economy we consider is a factor of  
7                   sustainability. We believe diversity is a factor of  
8                   sustainability.

9                   By introducing a new long term economic  
10                  opportunity, we are contributing to the economic  
11                  sustainability of the community, so that's the second  
12                  example for making a positive contribution to obtaining  
13                  ecological and community sustainability.

14                  The second area was listed as the  
15                  enhancement of positive effects.

16                  Yes, definitely this Project is  
17                  attempting to not only mitigate adverse effects, but  
18                  wherever positive effects are identified, we want to  
19                  enhance them and maximize the benefits.

20                  It became clear in this presentation  
21                  this morning that Bilcon thinks locally when it comes to  
22                  procurement of services and goods.

23                  There will be a procurement policy  
24                  implemented that does exactly that. It puts emphasis on  
25                  local employment and procurement of goods to the extent

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1 that they are available in the local community.

2 So that is an example for enhancement  
3 in the socio-economic environment. That is also an  
4 example for enhancement in the ecological environment.

5 I'd like to go again back to the  
6 presentation of this morning. We learned that Bilcon  
7 already has started to enhance the diversity of the  
8 forest communities surrounding the Project site.

9 On its own property, it has established  
10 a forest management plan. It is now in the process of  
11 implemented that. That is a clear enhancement of  
12 biological diversity and ecosystem integrity around the  
13 site.

14 There will be similar efforts spent on  
15 the site itself. The incremental reclamation, we  
16 learned about that, will take place and will not just  
17 establish any type of habitats, but it will aim at a  
18 neo-natural condition that will take advantage of the  
19 new site conditions.

20 There are many examples around where  
21 quarries have been rehabilitated to conditions that  
22 actually exceed the pre-quarrying conditions as far as  
23 biological diversity is concerned, particularly in this  
24 context, this landscape context where for example  
25 wetlands are not very frequent features.

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1                   Quite to the opposite, fresh water  
2 wetlands are a rare feature along this landscape.

3                   This Project will enhance that  
4 situation and will introduce new wetlands. There's  
5 already during the Project operation an artificial  
6 wetland that Paul Buxton pointed out will be already in  
7 place.

8                   Once the project is completed, the  
9 wetlands will be available for establishing new fresh  
10 water wetland habitat and open waters which will benefit  
11 a number of plant and birds species and also mammals,  
12 I'm thinking with the basin in particular.

13                   And that was the aspect of enhancing  
14 positive effects. So I think we can state clearly that  
15 the project intends to do exactly that in the ecological  
16 environment but also in the human environment.

17                   Not the last one, but another aspect  
18 that you listed as a criteria is the strengthening of  
19 local and regional capacities and opportunities to  
20 achieve sustainability.

21                   Yes, I think the project also  
22 contributes to that.

23                   THE CHAIRPERSON: Could you be more  
24 specific about that because I think until now you have  
25 talked principally about environmental issues.

1 Mr. UWE WITTKUGEL: But...

2 THE CHAIRPERSON: We're equally  
3 concerned about economic and social as well, and as far  
4 as enhancing sustainability in the long term in an  
5 economical social sense.

6 Mr. UWE WITTKUGEL: Yes.

7 THE CHAIRPERSON: Does the Project have  
8 a role in that?

9 Mr. UWE WITTKUGEL: Yeah, I thought that  
10 I mentioned that. I said that there will be enhancing  
11 in the ecological environment but also enhancement in  
12 the human environment.

13 In the human environment, I mentioned  
14 diversity of the local economy, I mentioned emphasis on  
15 local procurement of goods and services, so yes, there  
16 is clearly an enhancement of the human environment as  
17 well.

18 Now capacity building, do we enhance  
19 that? We think, yes, by involving the community and by  
20 providing transparency as far as the project development  
21 and operation are concerned.

22 We are offering a tool that will  
23 promote involvement and participation in decision  
24 making. Earlier again in the presentation it was  
25 mentioned that the opportunities for improving the

1 performance of the Project will be discussed in the  
2 context of the CLC.

3 This is clearly something where we see  
4 the community will be enabled to participate in this  
5 Project and will be able to review its environment  
6 performance and participate in the enhancement of its  
7 performance if there is a reason or a need for an  
8 improvement.

9 So those are the examples for  
10 strengthening the local and regional capacities.

11 You could go maybe now another step  
12 further and think about indirect effects that definitely  
13 will strengthen local capacities.

14 I am just simply thinking about issues  
15 such as tax contributions. The tax contribution will  
16 definitely enable the municipality to enhance public  
17 infrastructure or use it for whatever purposes is  
18 needed.

19 But the influx of additional tax monies  
20 will certainly strengthen local capacity in whatever  
21 direction the municipality sees it required.

22 Does it answer your question related to  
23 socio-economic benefits and contributions?

24 THE CHAIRPERSON: Yes, in a sense it  
25 does. I mean, your project is not sustainable, it's

1 finite. It will run for 50 years and it will terminate.

2 This is the way it's designed at the moment.

3 So I guess what we were looking for was  
4 some indication that the project would in fact enhance  
5 sustainability within the community in some way. Now  
6 you have outlined some things, but it's all very general  
7 to us.

8 I guess what I would be interested in  
9 knowing is that... Something that you have not  
10 identified for us is that we need to encourage  
11 sustainability in the community.

12 There is no project here. The Project  
13 arrives. The Project brings with it tax dollars, it  
14 brings with it employment, it brings with it new things  
15 and so forth, and as long as the Project is here, the  
16 community benefits.

17 But at some point, the Project will  
18 disappear, it will reach its finite end. Is there any  
19 way that you can assess or monitor or describe of  
20 measure the impact?

21 In other words, how do you know what  
22 you're saying will happen? How do you measure it? What  
23 are the metrics that you would use, is there any  
24 indication of that?

25 Because you're making the argument that

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1 it will happen, which is fine, but it then advances the  
2 response: AHow do you know it will happen? What is the  
3 way in which you can measure these things?≡

4 Yes, we think we can measure these  
5 things and they would all relate to the various factors  
6 that I talked about.

7 For example, the key to ecological  
8 sustainability is diversity, so there will be monitoring  
9 in place for in particular rare species.

10 Rare species indicate perfectly rare  
11 habitat conditions. By monitoring that and documenting  
12 for the public, including the CLC, that these plants  
13 remain in place, we will have documentation of  
14 achieving...

15 Sorry, I thought this interference was  
16 related to your microphone, but maybe it was not.

17 So we think there's a measuring stick  
18 or an indicator that allows to measure the  
19 sustainability in the environment sector for biological  
20 diversity, whether we have achieved this or not.

21 Similar items could be mentioned for  
22 the human environment for example. A measuring stick  
23 simply would be how many employees indeed have now been,  
24 after a year or two, employed. What training programs  
25 has Bilcon run through? How many of these employees

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1 were indeed local or perhaps coming in from somewhere?

2 These are all tiny little indications  
3 for whether that sustainability under these various  
4 aspects has been achieved or not.

5 There is not one cover-it-all measuring  
6 stick that can tell you: AYes, we are on level nine on a  
7 sustainability scale.≡

8 These are the factors that we see would  
9 be useable, feasible, measurable and could answer the  
10 question: "Are we indeed achieving sustainability or at  
11 least contribution to it or not?"

12 Ms. JILL GRANT: I just wanted to ask  
13 about the decommissioning and reclamation phase, what  
14 are the durable economic and social contributions for a  
15 sustainable development at that stage?

16 Mr. UWE WITTKUGEL: Yeah, and Mr. Chair  
17 you had mentioned the long term perspective as well, so  
18 maybe a couple of words on that.

19 Certainly, it's very difficult to  
20 predict from this point on what will happen 50 years  
21 down the road. We have no good understanding of where  
22 this community will be 50 years down the road, and the  
23 role in the quarry within the local economy and its  
24 importance, significance, is way beyond what we can  
25 predict at this point.

1                   We have to base our judgement on the  
2                   current conditions and we can design or process in an  
3                   operation that attempts to achieve or contribute to the  
4                   local sustainable economy.

5                   So 50 years down the road, what will  
6                   that reclamation concept contribute to the community? I  
7                   don't know. It will depend on what the needs at that  
8                   time are, you see?

9                   I see many, many opportunities attached  
10                  to this quarry, and it ranges from total preservation  
11                  and to perhaps even such things as active recreation.

12                  There are throughout the world examples  
13                  of quarries doing exactly that, and very successfully.  
14                  When you take the conservation aspect, you can ask  
15                  yourself: AWhat do we want to create here? Do we want  
16                  to the Acadian forest to take over again or do we want  
17                  to perhaps promote grasslands species?

18                  Grasslands species at the moment are  
19                  facing a dramatic decline. Perhaps in 50 years, that  
20                  will have continued and we will feel the Acadian forest  
21                  has been phased in sufficiently and let's focus on  
22                  grasslands species, bird species in particular.

23                  So it would not make sense to define  
24                  already at this point a fairly detailed level of what we  
25                  want to do and achieve in 50 years.



1                   Instead, Bilcon in its project  
2 description has outlined the process, how will we go  
3 about it, and that includes consideration exactly as  
4 these things I just mentioned.

5                   What is the status of the community?  
6 What are the preferences? Of course, the locals, the  
7 public will have to and should have a say in that as  
8 well.

9                   What is the economic situation? What  
10 is the pressure on land views? They are all factors  
11 that will have to be taken into account.

12                   The opportunities as I said, they can  
13 range from one extreme to the other extreme. How this  
14 will be addressed in 50 years I think is beyond what we  
15 can and should say at this point.

16                   Mr. GUNTER MUECKE: From your discussion  
17 so far, and focussing again on the socio-economic, it  
18 seems to me when you talk about socio-economic, it's  
19 largely economic, and I see it in a broader context.

20                   That quality of life, enjoyment of the  
21 land around you and so on are part of that equation in  
22 terms of socio-economics.

23                   And so I guess my question would be in  
24 terms of sustainability, how does the project add to the  
25 sustainability in terms of the quality and enjoyment of

1 life for people in this area?

2 Mr. UWE WITTKUGEL: I'm a human  
3 environment specialist. We have a specialist coming in  
4 on Monday, a week from now, Susan Sherk. She has  
5 conducted the social impact assessment.

6 But from my perspective in a few words,  
7 a number of things contribute to a quality of life and I  
8 would think that the economy and your job situation,  
9 your income situation, is a very important component.

10 Other components for example are  
11 aesthetics, other components are natural environment  
12 diversity, opportunities to enjoy nature, et cetera.  
13 All those aspects play into the quality of life.

14 We think that there are no significant  
15 adverse effects on those factors. Other factors, there  
16 may even be a beneficial aspect.

17 As I mentioned, the opportunities that  
18 come with reclamation may add such features as  
19 recreation, perhaps even tourism, even the operation of  
20 the facility could offer a point of interest for local  
21 and regional recreation and tourism as well.

22 There are many examples again out in  
23 the world where industrial or commercial undertakings  
24 have been turned into a destination and experience where  
25 people can learn about the use of the environment,

1 reclamation processes, et cetera.

2 I see there are many opportunities that  
3 will either directly or indirectly relate to quality of  
4 life. Otherwise, how is quality of life defined? You  
5 have to grab or determine some of these contributing  
6 factors, and we have done that and seen that we, as I  
7 said, either not cause significant adverse effects or  
8 perhaps even contribute in a beneficial way.

9 THE CHAIRPERSON: Okay.

10 Mr. PAUL BUXTON: Could I Mr. Chairman  
11 just make a contribution again stating quite clearly  
12 that I'm not an expert in socio-economics. Susan Sherk  
13 will be along to discuss these issues.

14 I think that very significantly, Digby  
15 County and Digby Neck has suffered a very significant  
16 decline of population, and it's very significant, and it  
17 tends to be in the 19 to 39 year old age cohort.

18 When we get loss of population, a lot  
19 of things happen. We tend to lose services, we tend to  
20 lose for example medical services, which are in  
21 difficult state in Digby.

22 Population drops, we lose doctors. The  
23 Ferry service between Saint John and Digby is under  
24 threat. These are significant population losses there  
25 in the order of 18 to 20 per cent in Anapolis and Digby

1 counties over the past 20 years.

2 I just don't have the figure at hand,  
3 but I believe that the population of Digby Neck, we  
4 don't have them for 2006 but I believe that I am correct  
5 in saying that between 1981 and 2001, there was greater  
6 than a 30 per cent decline in population.

7 Certainly, when you have a decline of  
8 that severity in population, and particularly in the  
9 working-age cohort, the 19 to 39 year old, I think this  
10 is significant.

11 Class sizes have dropped very  
12 significantly. The Sandy Cove School I believe was  
13 built for 180 people. It now, I believe, has 47  
14 students.

15 So we lose our services, we lose our  
16 educational facilities, we cannot be able to keep up our  
17 medical facilities.

18 The people between the ages of 19 to 39  
19 tend to be the people who operate the volunteer fire  
20 services, the emergency response organizations, and if  
21 they leave the area and they are leaving the area, and  
22 in significant numbers, they are going out West to work,  
23 not out of choice, but out of necessity.

24 And I would say again as I mentioned in  
25 the project description that if we look at rural Nova

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1 Scotia, I think we are a typical example here, but the  
2 fishery has suffered a significant decline. The  
3 forestry has suffered a significant decline.

4 The Weymouth Saw Mill closed, 75 jobs  
5 at the saw mill, probably 200 to 300 jobs in the woods.  
6 Agriculture, apart from the mink industry, is virtually  
7 non-existent today.

8 The tourism industry for the past two  
9 years has undergone a significant decline, nothing to do  
10 with our efforts in this area but a high Canadian dollar  
11 and also other factors.

12 I think that unless we can introduce  
13 some diversity in this area, we are in economic trouble  
14 in this area at the moment.

15 Not only have we lost primary jobs, but  
16 for example a number of years ago the Britex  
17 manufacturing plant just outside Bridgetown closed. The  
18 Shorewood Manufacturing plant very recently closed last  
19 year, 230 jobs gone in the area.

20 We have suffered very significant job  
21 losses. We have had some gains. We have a call centre  
22 in Cornwallis and other fine industries in Cornwallis,  
23 but generally speaking we have suffered a significant  
24 population decline and a significant economic decline in  
25 this area.

1                   While we don't pretend that 34 jobs is  
2 going to solve that issue, it clearly won't, but there  
3 will be spinoff jobs, and I think it's the sort of thing  
4 that is going to be necessary in the future.

5                   We are not going to have major high-  
6 tech industries in Digby. We simply don't have the  
7 personnel to staff them. It would not make any sense  
8 for them to come. So we have to deal with what we have  
9 here.

10                  I have also pointed out at least one  
11 other positive feature, it's that there's no doubt that  
12 we're going to have to upgrade the power line to the  
13 site.

14                  People who live on the Neck and the  
15 Islands will complain I think about the quality of power  
16 service to the Neck and Islands.

17                  We think that since we will to pay for  
18 it at our expense, an upgraded line at least as far as  
19 Little River, it will be a major economic advantage in  
20 the area.

21                  I hope that we can certainly expand on  
22 this when we have our expert here in socio-economics a  
23 week on Monday.

24                  THE CHAIRPERSON: Thank you. I think we  
25 will move on to the next topic and the next topic we

1 have is the eco-system approach.

2 Again, maybe we will make the similar  
3 request that we made a moment ago, which was explain  
4 what it means and your conceptualization of the  
5 ecosystem approach, in a conceptual sense, yes, but also  
6 at a practical sense, you know?

7 In other words, how has it been applied  
8 in the EIS? Where does it surface? Give us an example  
9 of how it has been woven into the fabric of the EIS?

10 Mr. PAUL BUXTON: I'd like to ask Mr.  
11 Uwe Wittkugel to respond to that please Mr. Chairman.

12 Mr. UWE WITTKUGEL: The very simple  
13 definition is that in an ecosystem, everything is linked  
14 with everything else.

15 The guidelines are giving a little bit  
16 more sophisticated definition similar to the sustainable  
17 approach, planning approach and are outlining  
18 characteristics of what is an ecosystem approach.

19 An ecosystem approach in principle is  
20 one that acknowledges the complexity of environmental  
21 components.

22 The environmental assessment is  
23 sometimes a bit deceiving. It breaks everything down in  
24 what we call environmental components, and it may lead  
25 to this perception that everything is dealt with sort in

1 isolation.

2 I mean we deal with air, we deal with  
3 noise, we deal with flora, fauna, et cetera, when in  
4 fact in reality these components are interrelated, and  
5 that's what the criteria or the characteristics in the  
6 guidelines express.

7 They are essentially seen as... They  
8 are interconnections, they are links, and there are  
9 repercussions.

10 To give you some examples of the  
11 interconnections between physical, biological and  
12 oceanic environments, it is important to recognize that  
13 these entities do not exist in isolation, particularly  
14 with the flow of water that we have.

15 It will all end up in the Bay of Fundy.  
16 If the water takes its course down the hill, it will end  
17 up in the Bay of Fundy. So those are essential  
18 considerations to take into account.

19 We have to make sure that water does  
20 not go into the Bay of Fundy untreated or uncontrolled.  
21 The Project has taken that into account and is actually  
22 using a piping system which basically operates without  
23 discharging any waters.

24 Nevertheless, Paul mentioned that it  
25 may happen and that if so, there's water that will have

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1 to be released and in that case, there is a concern.  
2 What does this water do perhaps to the receiving  
3 environment? Well that's the ecosystem approach  
4 thinking.

5 We are dealing with a terrestrial  
6 situation. There's a runoff in this situation and it  
7 may end up in the marine environment. It may have  
8 contaminants in it and what will the contaminants do to  
9 the water quality? The water quality is only a  
10 pathway.

11 So it very much links this whole  
12 concept of ecosystem approaches and pathways, which  
13 means that there is a link between a component of the  
14 terrestrial environment in my example and the component  
15 in the marine environment.

16 Periwinkles may take up contaminants  
17 that are washed into the Bay of Fundy. That is an  
18 example. The environmental assessment has taken that  
19 into account. The Project operation has taken that into  
20 account, the Project design has taken that into account.

21 Another example perhaps would be links  
22 between the terrestrial and the coastal and the oceanic  
23 environment.

24 Again, these terms are all fairly  
25 closely related with... I will just give a few other

1 examples of what considerations were taken into account  
2 that relate to the ecosystem approach rather than  
3 sticking to the individual...

4 THE CHAIRPERSON: We would be interested  
5 to know how the ecosystem approach has been used in the  
6 EIS in order to assess impacts for example.

7 Mr. UWE WITTKUGEL: Yes.

8 THE CHAIRPERSON: And what if we would  
9 take an example of rare plants for example? Has the  
10 ecosystem approach been employed in any way? Can you  
11 give that as an example?

12 Mr. UWE WITTKUGEL: I will be talking  
13 about that on Monday in a bit more detail when we are  
14 dealing with the environmental assessment, but I'm more  
15 than happy to jump into that now.

16 The keyword here is pathways. When you  
17 assess effects, you have to consider pathways, and to me  
18 that is sort of the essence of the ecosystem approach.  
19 You're not just looking at something in isolation, you  
20 look at how is this feature or component of the  
21 environment linked to other components and other  
22 pathways in between that could affect this feature.

23 So typically there are direct effects.  
24 Let's say there is a rare plant and you trample on it,  
25 that's a direct effect.

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

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

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

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

19                   Mr. UWE WITTKUGEL: Yes.

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

25                   I look at your rare plants for example,

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

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

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

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

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

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

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

1 the watershed is required to sustain the coastal bog.

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

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

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

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

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

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

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

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

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

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

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

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

25                   That's a system that Bilcon suggests to

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

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

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

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

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

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1 analyse the situation.

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

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

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

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

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

25 THE CHAIRPERSON: With respect, that

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

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

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

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

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

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

1 think...

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

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

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

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

17 So in using the precautionary approach  
18 in that case and using our monitoring results in  
19 association with guidelines or thresholds that exist, we  
20 think the precautionary approach and the mitigation and  
21 the adaptive management all work hand in hand.

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

1 the case of the impact statements?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

15 THE CHAIRPERSON: Thank you.

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

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

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

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

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

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

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

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

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

1 potentially more frequently.

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

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

13 Mr. UWE WITTKUGEL: I would like to  
14 point out that the coming... Not this Monday but the  
15 28<sup>th</sup> I think, the 26<sup>th</sup>, there will be an expert with a  
16 team. He is a risk assessor and we have not undertaken  
17 a formal risk assessment, but it's sort of a precursor  
18 of an assessment of the risk that may be faced, and I  
19 think he's the right person to give a more elaborate  
20 answer on this.

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

25 Ms. JILL GRANT: One of the elements of

1 the precautionary principle that is spelled out in the  
2 guidelines is a requirement for verifiable scientific  
3 information, and I wonder if you might comment on the  
4 adequacy of some of the baseline information provided in  
5 the environmental assessment as to whether it provides  
6 enough information to satisfy that?

7 Mr. UWE WITTKUGEL: There's definitely  
8 component dependence in some aspects. There's little  
9 information available, particularly when you think about  
10 such things as cumulative effects. There's little  
11 information on the other projects that you may want to  
12 take into account, so you are stuck with what is  
13 available, publically available basically.

14 Whereas the other aspects, when it  
15 comes to the national environment for example, I think  
16 we have excellent data and we have records from the  
17 Minister of National Resources complimenting us exactly  
18 on that, that the inventory was exceptionally thorough  
19 and the qualification of those people who were involved  
20 in it was excellent.

21 So it depends which part of the  
22 assessment you're referring to. In general, I would say  
23 yes, we have very good data, and scientifically acquired  
24 data that allow for the most part an adequate assessment  
25 of the potential effects.



1                   Mr. PAUL BUXTON: I could please ask Mr.  
2                   Kern to elaborate a little on some of the baseline  
3                   information that has been gathered to round that answer  
4                   out a little.

5                   Mr. DAVID KERN: The baseline data was  
6                   all gathered by scientists in the profession, whether it  
7                   is copper analysis, the soil analysis or... They were  
8                   all done by recognized laboratories by standard  
9                   procedure.

10                   The data that Bilcon gathered as  
11                   baseline data in the marine environment was all done  
12                   according to scientific standards, whether it was vital  
13                   planking, contamination of bottom sediments, we feel we  
14                   have a very good baseline, scientifically sustainable  
15                   baseline data that we have gathered over almost five  
16                   years with the Project.

17                   So we have a temporal aspect to a great  
18                   deal of the baseline data as well. It is not point in  
19                   time data. Much of it is over time.

20                   THE CHAIRPERSON: I think we will break  
21                   off on this topic for the moment, but on Monday we will  
22                   come back and talk about baseline data again, okay? It  
23                   will be more in keeping with the topic that you will be  
24                   presenting at that time anyway.

25                   I would like to move us along and we

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1 are going to move to a different topic. But before I  
2 do, I have a question for you Mr. Buxton. Is anybody  
3 from the Clayton companies here? Is anybody from the  
4 Clayton companies intending to be here throughout these  
5 hearings?

6 Mr. PAUL BUXTON: No, they're not. No,  
7 I am representing Bilcon of Nova Scotia at these  
8 hearings.

9 THE CHAIRPERSON: Thank you. So over to  
10 you.

11 Ms. JILL GRANT: Perhaps you might  
12 explain to us a little bit about what the nature of  
13 being a subsidiary of Bilcon of Delaware implies? Give  
14 us a better...

15 You talked a little bit about the  
16 corporate structure, but it's not entire clear to us so  
17 perhaps you might just clarify that a bit?

18 Mr. PAUL BUXTON: I'm not quite sure  
19 what you're driving at, but let me give it a try.

20 Clearly this particular proposal came  
21 from the Clayton Group, because they have the  
22 requirement for the material in their current  
23 operations.

24 Bilcon of Nova Scotia is a separate  
25 company. It is registered in the province of Nova

1 Scotia and the decisions made with respect to this  
2 project are made in Nova Scotia to this point.

3                   Upon the completion of this process,  
4 through construction and operation, the decisions will  
5 be made in Nova Scotia, not by me at that stage, but by  
6 Mr. Wall who is the Operations Manager.

7                   So while the funding certainly will  
8 come from a parent company and the product will go to  
9 the parent company, all decisions with respect to  
10 hiring, sourcing and the decisions being made with  
11 respect to any aspect of the quarry are being made here  
12 in Nova Scotia.

13                   Up to this point in time, it's by  
14 myself and in the next stage of the process, they will  
15 be made by Mr. Wall. Does that answer your question?

16                   Ms. JILL GRANT: I think so. I think  
17 so.

18                   Mr. PAUL BUXTON: Okay.

19                   Ms. JILL GRANT: And can you explain to  
20 us what experience Bilcon of Nova Scotia and its various  
21 parent companies have in aggregate mining?

22                   Mr. PAUL BUXTON: My understanding is  
23 that they have significant experience in sand. They  
24 operate three sand pits in New Jersey. They also  
25 operate a fairly major dredging operation which actually

1 dredges New York Harbour and the aggregates are landed.

2 To my knowledge, they have little  
3 experience as a corporate entity with coarse aggregate  
4 mining.

5 So does that answer your question  
6 satisfactorily?

7 Ms. JILL GRANT: Yes, thank you. And  
8 one other question.

9 Mr. PAUL BUXTON: Yes.

10 Ms. JILL GRANT: In the environmental  
11 assessment impact statement, it indicates that Clayton  
12 has no major environmental violations.

13 Can you indicate what environmental  
14 violations there might have been that were not major  
15 violations?

16 Mr. PAUL BUXTON: Yes, I believe I can.  
17 And let me first of all give you a little sort of scope  
18 of their operations.

19 They operate, and I think I'm correct  
20 in saying this, something like 25 to 30 concrete plants.

21 They have 550 concrete trucks on the road, and about  
22 300 other vehicles. They operate major block plants,  
23 and et cetera.

24 During the operation of these  
25 facilities by a staff of over 850 people, one always

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1 gets the odd callous person who fills minor amounts of  
2 gasoline carelessly filling a vehicle, et cetera.

3 That is to my certain knowledge the  
4 extent of so called Aenvironmental violations. They  
5 are violations, in fact one must report these things and  
6 they do report them and hence, they get report cards.

7 But in terms of what I would call a  
8 major violation, i.e. a corporate act, a deliberate  
9 failure to follow regulations and compliance procedures,  
10 no, they do not have.

11 THE CHAIRPERSON: Does Clayton have any  
12 other additional international interest? I realize  
13 they're involved in something in New Brunswick, but  
14 aside from that are they involved in anything else  
15 internationally?

16 Mr. PAUL BUXTON: The involvement in New  
17 Brunswick is extremely peripheral if I could put it that  
18 way. The Bayside Quarry is operated by other than  
19 Clayton interests, however the Claytons have a marketing  
20 distribution on Brooklyn Sand and Gravel, which operates  
21 out of New York, and a fair amount of the quantity of  
22 material from Bayside goes to New York.

23 In that operation, Clayton is a 50 per  
24 cent partner and is the managing partner. So while they  
25 distribute a portion of the product from Bayside, they

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1 have no corporate ownership interest in Bayside.

2 THE CHAIRPERSON: So it's correct to say  
3 that this would be their first international operation  
4 in which they will be starting it up and running it, is  
5 that correct?

6 Mr. PAUL BUXTON: That is correct.

7 MR. GUNTER MUECKE: One of the  
8 requirements in the Panel mandate is that it looks at  
9 the alternatives to and alternate needs of the  
10 corporation that you are proposing.

11 So I would like to address first of all  
12 alternate locations and from the environment impact  
13 statement, there is some indication as to why alternate  
14 sites on the Canadian Atlantic Coast were rejected, but  
15 there's no indication as to why the Eastern Coast of the  
16 U.S. was not considered.

17 New England and so on would place the  
18 quarry much closer to Clayton operations.

19 Mr. PAUL BUXTON: Yes, much closer  
20 geographically but not much closer from the perspective  
21 of shipping.

22 The most important reason why a project  
23 like this becomes viable is because of the cost of  
24 shipping versus the cost of moving rock by road, and if  
25 I can bring that into a little bit of perspective, it

1 would be fairly reasonable to assume that moving rock by  
2 road in New Jersey or New York or perhaps any of the  
3 north-eastern United States a distance of perhaps a  
4 distance of 40 to 50 miles by truck is the equivalent of  
5 shipping it from the Bay of Fundy by sea.

6 And so the crucial factor here is the  
7 convergence of a supply of high-quality rock right by  
8 the seashore where it can actually be loaded onto a  
9 ship.

10 The minute you start moving this  
11 material... So if you go five, eight miles inland, it  
12 does not sound like very much, but you have to create a  
13 stockpile inland, you have to load it in a truck, you  
14 have to drive that truck, dump it, create another  
15 stockpile, and then pick it up again and put it onto a  
16 conveyor.

17 When you look at this factor, you can  
18 very quickly discard... And they were discarded. We  
19 looked at it fairly extensively in terms of numbers, but  
20 we came to the conclusion that they are simply not  
21 economically viable.

22 This sort of quarry operation...  
23 And we showed two this morning, one is the Sechelt, one  
24 in Vancouver Island but with the Orca project which has  
25 just been commissioned...

1                   And perhaps I could refer you to the  
2 Porcupine Mountain Aulds Cove Project by the Canso  
3 Causeway.

4                   There you see the rock absolutely by  
5 the shoreline, and that is a given economically. You  
6 can't... You could find places. There are certainly  
7 mines in New York, also some quarries in New York,  
8 Pennsylvania and indeed in New Jersey, but now you're  
9 talking about moving it by road, and if one goes on the  
10 Hudson River where there is plentiful rock, you're  
11 talking about bringing it by barge, by a 5,000-ton  
12 barge, and the economics simply go away.

13                   So just to sort of add to that,  
14 aggregate rock is a low value mineral. Nickels and  
15 dimes on the price make a significant cost effect.

16                   If we were talking perhaps about gypsum  
17 as we do here in Nova Scotia, it could be transported by  
18 train before it goes on the ship loader.

19                   You can't do that with aggregate rock  
20 unless it is an absolute necessity, that there is no  
21 alternative to that.

22                   And of course in some parts of the  
23 United States, I'm certainly aware that it may have to  
24 be shipped by train after it comes off the ship 200 or  
25 300 miles, but there's no alternative to that and they



1 have to pay the cost at the other end.

2 But clearly from our perspective, we  
3 have to have a source of high-quality rock right on the  
4 sea where it can be directly loaded onto a vessel.

5 Mr. GUNTER MUECKE: Thank you Mr.  
6 Buxton. I realize the economics of aggregate and road  
7 versus ocean transport but I don't think you have quite  
8 answered the question I asked because there is a  
9 coastline on the Bay of Fundy which is in the U.S.,  
10 Maine being an example.

11 And to my knowledge, there are rock  
12 types which are for aggregate mining. So perhaps just  
13 to answer my question as to why Nova Scotia as opposed  
14 to the U.S. coast?

15 Mr. PAUL BUXTON: I'm not sure that I  
16 can answer that in full. What I can say is that a study  
17 was made of the quality of rock, and there were  
18 differences in the quality of rock.

19 If for example one has the choice  
20 between granites and basalts, one would chose basalts by  
21 a very large margin because they are far less abrasive  
22 to machinery and basically they produce a high-quality  
23 rock at a cheaper price.

24 So if we were looking at an area or  
25 different areas where we could find basalt rock as

1       opposed to granite, then we would certainly concentrate  
2       first of all on the basalts and see whether there were  
3       any opportunities in that area, deep water and all the  
4       other aspects that I talked about in the project  
5       description, that we have sufficient land base and so  
6       on.

7                       And I would think that the primary  
8       reason that the coast of Maine was... I won't say  
9       totally discounted, but because of the quality of rock.  
10      Certainly the basalts here are highly desirable.

11                      They have been identified by the Nova  
12      Scotia Department of Natural Resources as highly  
13      desirable, and really once you have built the ship  
14      loader and you put the material onboard the ship,  
15      perhaps 100, 150 miles extra carriage really does not  
16      increase the price that much.

17                      So we would certainly, over the length  
18      of the Project that we're contemplating here, 50 years,  
19      far sooner take a higher quality aggregate in a basalt  
20      formation than perhaps 100 miles closer to its  
21      destination with a lower quality granite rock.

22                      And I might add too that the quality of  
23      the rock is of extreme importance. There are very high  
24      standards and very specific standards for the rock that  
25      can be used in New York or in New Jersey on concrete

1 projects.

2 The government standards defines the  
3 abrasiveness of the rock and as a geologist, you would  
4 understand the various hardness and so on that are  
5 measured.

6 This rock is a very high-quality rock,  
7 there's no doubt about it, and we would certainly have  
8 focussed fairly quickly on basalt formation.

9 Mr. GUNTER MUECKE: Okay. Thank you for  
10 that. And so what you are saying is that the  
11 transportation costs and the quality of the rock were  
12 the main determinants in locating where you are at the  
13 present time.

14 I guess one of the questions I would  
15 have is how much was the decision influenced by the  
16 coastal management strategies of states and provinces  
17 and environmental regulations?

18 Mr. PAUL BUXTON: I don't believe there  
19 was any influence at all. Coastal management is in  
20 place as you know in New Brunswick for example, and it  
21 is basically up to the Committee, the Planning Committee  
22 of each coastal zone to basically set its standards.

23 It does not necessarily prohibit  
24 quarrying. It might in some areas, but it may not in  
25 others.

1 I think if it came into force at all,  
2 which I don't recall, it would have been long after the  
3 shipping routes, deep water, high-quality rock, the  
4 available large parcel of land, the relative Aspacity≅  
5 of residences in the area, so a creation of minimum  
6 disturbance.

7 And certainly we were well aware right  
8 from the beginning of this project that once one got  
9 into shipping, then we would certainly be getting into  
10 the elements of the whale population in the Bay of  
11 Fundy, and it was of great significance to us that we  
12 could bring a shipment to Whites Cove without going  
13 through the North Atlantic Right Whale Conservation  
14 Area.

15 So I don't think there was even the  
16 tenth of 1 per cent element in terms of lack of coastal  
17 planning or lack of zoning in Digby County for example.  
18 I don't think it had any effect at all to answer.

19 Mr. GUNTER MUECKE: Okay. And I have  
20 one more question. There are a number of coastal  
21 quarries in Atlantic Canada. So one of the alternates  
22 which was open to Bilcon would have been to acquire an  
23 existing quarry. Now was there any attempt made to do  
24 this?

25 Mr. PAUL BUXTON: Apart from I think

1 some very preliminary discussion with respect to  
2 Bayside, which commenced and terminated very quickly, I  
3 have no knowledge whatsoever of any attempt by Bilcon to  
4 take-over an existing quarry.

5 We did look again fairly quickly at a  
6 quarry in Cape Breton and determined that for a  
7 significant number of reasons, the quality of rock,  
8 water depth, that it really did not suit our purposes  
9 and would not be an economic proposition to us.

10 Apart from those two, no there were no  
11 other attempts to negotiate with another company.

12 Mr. GUNTER MUECKE: Thank you.

13 THE CHAIRPERSON: I think we will take a  
14 break now for 15 minutes.

15 --- Recess at 2:30 p.m.

16 --- Upon resuming at 2:50 p.m.

17 THE CHAIRPERSON: Okay. We will  
18 resume. Mr. Buxton, I understand you have a comment to  
19 make? We can't hear you. Hello? Thank you. Mr.  
20 Buxton?

21 Mr. PAUL BUXTON: If I may Mr. Chairman,  
22 we do have a couple of experts here today who  
23 specifically have come, one from Vancouver, to help our  
24 understanding of for example terminal construction and  
25 aspects of the terminal, and we did specifically bring

1       them in today to talk about the elements of the  
2       Project.

3                       I just would like to make the point  
4       that they are here today and can perhaps add to the  
5       content of the proceedings, because they are the experts  
6       in these matters. Thank you.

7                       THE CHAIRPERSON: Thank you.

8                       Ms. JILL GRANT: Just to follow-up on  
9       the discussion we were having just before the break  
10      about the regulatory context and whether that played any  
11      role in the choice of the site, I just want to draw your  
12      attention to the minutes of the CLC from the 25<sup>th</sup> of  
13      September, 2002. In those minutes, there's a note that  
14      says:

15                      AMr. Wall noted as difficult as it  
16                      is to get a permit in Nova Scotia,  
17                      it is truly not of magnitude and  
18                      is different from the States.≡

19                      I wonder if you could clarify what this  
20      implied?

21                      Mr. PAUL BUXTON: I think that there's  
22      certainly some evidence that some of the sites, and I  
23      would not profess to be an expert, but where it has  
24      perhaps reached the stage of impossibility to get a  
25      permit.

1 I certainly don't profess to be an  
2 expert in permitting of any facility in the United  
3 States. I do believe, which would add credence to the  
4 comment Mr. Wall made, that a quarry has not been  
5 permitted in New Jersey since 1965.

6 Their supply of rock is probably...  
7 Some of the quarries which are now in existence are  
8 perhaps down to 10 to 12 years of supply left.

9 When they close, then that supply will  
10 not come onto the market in New Jersey, and in fact  
11 virtually all the rock into New Jersey will have to come  
12 from New York, Pennsylvania or be imported by boat.

13 So I don't think that there was any  
14 broad context in that in a general sense in the United  
15 States, or at least I can't add to it, but certainly  
16 with respect to New Jersey there is some substance in  
17 that, in that it would be a very difficult if not  
18 impossible situation to get a permit for a quarry in New  
19 Jersey.

20 Ms. JILL GRANT: Just a couple of  
21 questions around the property. Given that the  
22 production is anticipated to go for 50 years, can you  
23 explain to us why you have a 90-year lease on the  
24 property?

25 Mr. PAUL BUXTON: I think I negotiated

1 the lease, and in all lease arrangements there is a  
2 significant advantage to get the longest possible period  
3 that one can get.

4 Certainly, we are not contemplating  
5 being there for more than 50 years because there is only  
6 a 50-year supply of rock on the site, but let us suppose  
7 that there was some sort of...

8 I don't know, perhaps a huge economic  
9 decline, major recession, some sort of event at a place  
10 during the life of the quarry that meant that the  
11 shipping became difficult, that in fact production had  
12 to be reduced for a certain amount of time, we have a  
13 capital investment in the Project and it just simply  
14 makes good business sense to extend a lease period  
15 beyond the very specific period which you are dealing  
16 with.

17 So I don't think there's anything  
18 contemplated, but certainly it's very difficult to  
19 predict what would happen over the next 50-year period,  
20 and it's just simply a good business decision to get  
21 some leeway on that lease.

22 Ms. JILL GRANT: And the buffer, what  
23 are called buffer properties that have been purchased by  
24 Bilcon of Delaware in the vicinity of the Project, there  
25 are a number of different kinds of uses that are



1 suggested for those properties in the EIS, buffer  
2 habitat areas.

3 What prevents that from eventually  
4 becoming added to the quarry project site?

5 Mr. PAUL BUXTON: I think what primarily  
6 would prevent it is the Project footprint, and we have  
7 sufficient rock on the existing site to satisfy the  
8 demand for a 50-year period, so there's no reason for us  
9 to go outside the footprint.

10 We have taken the position for a number  
11 of reasons that if land becomes available, i.e. is put  
12 on the market, and it is adjacent to us, then we will  
13 compete for that land to increase our buffer stretch.

14 If somebody in the immediately local  
15 area may feel that perhaps they want to leave the  
16 area... In one particular case, there was a medical  
17 emergency, they required money very quickly, and we were  
18 able to consummate a sale with them very quickly.

19 If somebody perhaps felt that they did  
20 not want to live next door to a proposed quarry and we  
21 felt that it was in a zone of influence close to the  
22 quarry, then we would negotiate with them.

23 Generally speaking, we have either  
24 acquired property that has come onto the market or  
25 people have come into the office has it has happened in

1 the recent past, and offered their properties to us, and  
2 because we felt that they were in the zone of  
3 influence...

4 For example if they had drilled wells,  
5 which we will deal with under hydrogeology, we would buy  
6 their properties.

7 The last two were negotiated outside of  
8 real estate companies. People approached us close to  
9 the property. We suggested that they get an appraisal  
10 of their property, and I believe that we have certainly  
11 paid them full and a fair market value for their  
12 property.

13 As to the use of the land, we consider  
14 it an advantage to have a buffer that we can control,  
15 additional preservation areas around the quarry  
16 property. It prevents problems in the future where  
17 people might want to build and then sort of say: AWell,  
18 now that there's a quarry here... We had not noticed  
19 that there was a quarry here...≡

20 We have no intention of employing that  
21 land other than as buffer strips. We have made the  
22 statement that if the local community wants to come to  
23 us and approach us for perhaps other uses of the lands,  
24 we would contemplate that.

25 At the present time, in accordance with

1 the forest management plan, we have allowed some local  
2 people access to our property to cut winter firewood at  
3 no cost, provided that they did it within the zone set  
4 out by our forester.

5 So further than that, I... Does that  
6 answer your question?

7 Ms. JILL GRANT: Yes, thank you.

8 Mr. PAUL BUXTON: Okay.

9 Ms. JILL GRANT: And can you just  
10 clarify for us what the setback agreement is that you  
11 showed us on the map?

12 Mr. PAUL BUXTON: There are actually two  
13 setback agreements. One is for a house, and  
14 unfortunately the house lot is so small that it scarcely  
15 shows up, but it's actually on the intersection of the  
16 Whites Cove Road and Highway 217.

17 I think that you're referring to the  
18 larger parcel of land. That large parcel of land is  
19 owned by the same people that own the quarry property.  
20 As part of the negotiation for a lease, we wanted to  
21 ensure that houses were not built along the Highway 217,  
22 and that again could be in any way affected by the  
23 quarry property.

24 So we have a setback agreement with  
25 them so that essentially anybody purchasing that

1 property in the future would clearly have on their deed  
2 this setback arrangement, and they could not come back  
3 later and say: AWe did not know it was there.≡

4 Mr. GUNTER MUECKE: Mr. Buxton, if  
5 Bilcon intends to use what's called the buffer zone,  
6 okay, purely for the purpose of separating itself from  
7 neighbours as you have just so outlined, and not for  
8 extension of the quarry, which you also just stated,  
9 what would be Bilcon's position regarding putting that  
10 land under stewardship by an organization such as the  
11 Canadian Nature Trust?

12 Mr. PAUL BUXTON: I'm not sure that I  
13 can answer that question off the top of my head.  
14 Certainly if any organization wants to make an approach  
15 to us, I certainly think we would give it a lot of  
16 consideration.

17 Mr. GUNTER MUECKE: Thank you.

18 Mr. GUNTER MUECKE: Okay. Let's then  
19 move on to the existing Whites Cove Road. Could you  
20 update us on the status of the road with respect to  
21 usage by Bilcon and any negotiations with the Nova  
22 Scotia Department of Transport?

23 Mr. PAUL BUXTON: I'm sorry, I missed  
24 the two words, the existing rights-of-way did you say or  
25 the road, the existing road, the Whites Cove Road?

1 Mr. GUNTER MUECKE: Yes.

2 Mr. PAUL BUXTON: The Whites Cove Road,  
3 my understanding is it's an abandoned road, so the  
4 Department of Transportation, Public Works Provincial,  
5 does not maintain the road and has not maintained the  
6 Road.

7 We I think have a primary option, which  
8 is to use the Whites Cove Road, for access to the quarry  
9 site.

10 If that were the case, because it's  
11 still a provincial road, then it will run through the  
12 site to the Bay of Fundy and access the Bay of Fundy, in  
13 which case we would fence off the road for safety  
14 reasons and it would just simply be as it is today.

15 The second option for us is to create a  
16 new access road, perhaps with better grade on it, for  
17 access to the quarry property. The Whites Cove Road  
18 then would simply remain as it is.

19 If we use the Whites Cove Road for  
20 access to the quarry property, we have said that we  
21 would need to widen the road and pave the road to keep  
22 down dust on the neighbouring properties, and of course  
23 that would have to be done in accordance with the  
24 guidelines set up by the Department of Transportation of  
25 Public Works, and at our expense.

1                   Mr. GUNTER MUECKE: Coming back to part  
2 of my original question, what is the state of... Is  
3 Bilcon negotiating with the Nova Scotia Department of  
4 Transport on this matter?

5                   Mr. PAUL BUXTON: Not at this time, no.

6                   Mr. GUNTER MUECKE: And if it remains  
7 provincial property, how will it affect the viability of  
8 the quarry operations?

9                   What you're dealing with is basically  
10 two separate entities separated by what will in the  
11 future become a pedestal on which the road sits.

12                   Mr. PAUL BUXTON: Well, it would  
13 certainly be an impediment, there's no question about  
14 that, and certainly as you know, we did make application  
15 to acquire the Whites Cove Road, and it was denied by  
16 the Department of Public Works, Transportation and  
17 Public Works.

18                   If that situation stays as it is, then  
19 of course we will live with it and we have designed  
20 around it, and we feel that we can accommodate it.

21                   One of the biggest problems that we  
22 have at the present time with the Whites Cove Road is  
23 that the surface material is eroding and has been  
24 eroding certainly since we have had any contact with the  
25 site, and all those eroded materials are going down onto

1 the beach and into the Bay of Fundy.

2 We have in fact used our own men and  
3 equipment and materials to try to correct that situation  
4 because we are led to believe that there's nothing in  
5 the maintenance budget for the Department of  
6 Transportation to do anything about it.

7 It is difficult to do anything about  
8 that water without using a portion of the quarry  
9 property. We have allowed the Department of  
10 Transportation to dig trenches into our property to  
11 divert some of the storm water which currently goes down  
12 Whites Cove Road and is producing a significant amount  
13 of eroded materials onto the beach and into the Bay of  
14 Fundy.

15 We would certainly like that situation  
16 to be solved one way or the other. If we own the road,  
17 then we would be responsible and clearly we would be  
18 prepared to pay for it.

19 If we do not own the road, then I don't  
20 think that we want to have the Department of Fisheries  
21 and Oceans down every two weeks saying that it's  
22 material from the quarry site. And this has happened in  
23 the past.

24 So certainly, we do need to deal with  
25 the issue of the Whites Cove Road with the Department of

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1 Transportation and Public Works.

2 We can live with it, it would be an  
3 impediment, but certainly the question of erosion off  
4 the road is going to have to be dealt with.

5 THE CHAIRPERSON: Mr. Buxton, the  
6 proposal you have to leave the road on a pedestal and  
7 dividing the quarry in half, is it your assumption that  
8 the road would continue to be owned by the Province and  
9 that individuals could enter one end, walk down the road  
10 between the two fences high above the quarry, end up on  
11 the beach and walk along the beach?

12 Mr. PAUL BUXTON: Yes, that would be the  
13 intent.

14 THE CHAIRPERSON: Well, would that not  
15 be... Wouldn't your insurance and others get incredibly  
16 nervous about that in the sense that you have got heavy  
17 equipment, big ships, lots of activity, blasting, and  
18 then you have got people wandering down to have a  
19 picnic?

20 Mr. PAUL BUXTON: Well, they would not  
21 be able to access the quarry site. The Whites Cove Road  
22 stops short... It does not go all the way through the  
23 site, it turns the corner at the bottom if you would  
24 like, and goes partway along the beach, and then stops,  
25 and that area would be fenced off.



1                   They would still be able to get access  
2 to the beach, but to no part of the quarry property.

3                   THE CHAIRPERSON: Where I live, when  
4 they do blasting, they either cover it with mats or they  
5 move everybody out of the way, so people walking down  
6 that road on a blasting day, I mean what would you do?

7                   I presume you would have to police the  
8 road, but then that would not be your responsibility,  
9 right?

10                  Mr. PAUL BUXTON: Yes, essentially when  
11 a blast takes place, there would be a patrol if you  
12 would like at the top of the road to prevent people  
13 going down. This is rather like when blasting takes  
14 place along Highway 101. The traffic is stopped, the  
15 blast goes off, the road is cleared, and then the road  
16 is opened again.

17                  And yes, we would have to make  
18 arrangements for temporarily clearing the area or  
19 notifying people to ensure that there is no one down  
20 there at the time of the blast.

21                  THE CHAIRPERSON: I mean, the  
22 interspersing of the general public on an industrial  
23 site like that so closely together, it looks like it's  
24 fraught with difficulties, but okay.

25                  Mr. PAUL BUXTON: I think I will comment

1 on that. Certainly, we have seen the odd person walk  
2 down there over the past five years. I think our  
3 traditional knowledge interviews showed that the use of  
4 the site is certainly considerably less than it was  
5 let's say 40 or 50 years ago.

6 Certainly, it's a four-wheeler route.  
7 They use that for access to a beach pathway, which goes  
8 a considerable distance.

9 But certainly since we have been on the  
10 site, it's not widely used. I don't think you would see  
11 30 or 40 people down there in the course of the year.

12 Mr. GUNTER MUECKE: Okay. I think we  
13 will move on to the construction phase of the project,  
14 and during the construction phase it is proposed to have  
15 the rock that is generated be the platform construction  
16 for the plant for instance, and excavation of the  
17 sediment ponds.

18 That in turn becomes stockpiled, and  
19 you have provided us with calculations of the amount of  
20 volume, the volume that this has generated and that it  
21 would require through stockpiles, am I correct in that?

22 Mr. PAUL BUXTON: Yes, it's certainly I  
23 don't think possible to get it all on our primary  
24 stockpile at the bottom. Some of it will have to go up  
25 on top of the hill into one of the bermed areas.

1                   Mr. GUNTER MUECKE: Okay. So prior to  
2 putting the material into the bermed area, will that  
3 area have to be levelled?

4                   Mr. PAUL BUXTON: Yes, I think we did  
5 make clear that both bermed areas, the sediment disposal  
6 area and the organic disposal area, would be levelled,  
7 because we don't want any possibility of this material  
8 slumping and putting pressure on the front berms. So  
9 they will be, generally speaking, levelled areas.

10                  Mr. GUNTER MUECKE: Okay. If they are  
11 levelled areas, that means removing basalt, right? And  
12 my question is that involves blasting, and according to  
13 regulations, you have to be 800 metres from the nearest  
14 residence and the area that you're talking about now, at  
15 least from the latest map that we have, which is map  
16 number two, it shows the 800-metre setback and these  
17 areas...

18                  The second stockpiled area, the bermed  
19 area, falls within that 800-metre limit. Could you  
20 explain to me how this can be accomplished?

21                  Mr. PAUL BUXTON: Yes. I think you  
22 would get, and I believe the panel has visited the site,  
23 and as you approach the site from where the planned  
24 maintenance area is, there is what would appear to be,  
25 without taking level shots on it, a fairly significant

1 and large level area.

2 It's in fact not quite levelled, but it  
3 is a significant area and in fact, it then raises up a  
4 little bit. There's almost a natural dyke there on the  
5 north side already in place.

6 There are two ways that you can level  
7 ground. One is that you can remove material from one  
8 end and level it in that manner, by blasting as you have  
9 suggested.

10 The other method is of course to fill  
11 the other end, and one thing that we have in over  
12 abundance since the beginning of the quarry project is  
13 rock, is blasted rock from the process area.

14 So I don't believe that it would take  
15 very much to level the area that we're contemplating for  
16 the storage of this rock, and if in fact we cannot find  
17 a piece of levelled ground large enough, then we will  
18 level it with the rock that we are bringing up from  
19 below, and in fact create a level ground by filling with  
20 coarse rock rather than blasting at the other end.

21 Mr. GUNTER MUECKE: But that seems to  
22 contradict what you said earlier that the  
23 stockpile...that you cannot have a stockpile on sloping  
24 ground.

25 If you are filling, it's the same as

1 stockpiling, you're just increasing the depths of the  
2 pile. I have a bit of a difficulty with that.

3 Mr. PAUL BUXTON: Well, I think there's  
4 a very significant difference in talking about something  
5 on the overburden material, which is a till material,  
6 and talking about something of a carefully prepared fill  
7 with coarse crushed rock material.

8 I would not contemplate any difficulty  
9 whatsoever in establishing a safe environment.

10 Mr. GUNTER MUECKE: Getting back to the  
11 stockpile that you propose in the area of what is the  
12 future sediment pond six I believe.

13 In your proposal, the material would be  
14 piled to a height of 40 metres. I find it hard to  
15 visualize how one can produce a rock pile with those  
16 dimensions.

17 Mr. PAUL BUXTON: Well, I will point  
18 out, perhaps as some sort of comparison, the stockpile  
19 of crush material that we showed you this morning in the  
20 conceptual plans.

21 The base of that is at a 10-metre  
22 level. The platform itself, the process platform is at  
23 30 metres, so we have 20 metres below the platform and  
24 we will undoubtedly have 20 metres above the platform,  
25 so this is fairly standard. And that is for fairly fine

1 crushed material.

2 What we're talking about in the area of  
3 sediment pond number five is in fact coarse crushed rock  
4 as it comes off the blast, and this can stand at a very  
5 significant angle.

6 Mr. GUNTER MUECKE: I'm being simplistic  
7 here, but I mean how do you get the stuff on top of the  
8 pile?

9 Mr. PAUL BUXTON: You get it on top of  
10 the pile either with loaders or later on with a  
11 bulldozer.

12 Mr. GUNTER MUECKE: You're on level  
13 ground and you're piling, your loader does not get up to  
14 40 metres. Do you have to have some sort of ramp?

15 Mr. PAUL BUXTON: Oh yes. Yes. It  
16 would go up a ramp and be pushed off the end, yes. All  
17 three sides, until you created a pile.

18 Mr. GUNTER MUECKE: The second storage  
19 area, it's... The elevation... If you take the  
20 elevation of that location and add 40 metres, how does  
21 the height then compare to the crust of the other  
22 location?

23 Mr. PAUL BUXTON: I don't think that we  
24 suggested that if we take the material higher up, that  
25 we would need to go 40 metres. The intent is to put as

1 much material as we can where settlement pond five is  
2 because it is considerably closer to the crusher  
3 operations.

4                   However, on top of the hill, we have a  
5 significant amount of area which is simply not going to  
6 be used for a significant period of time except for the  
7 storage of organic materials, so we simply would not  
8 need to go very high at that point.

9                   Ms. JILL GRANT: I might ask a couple of  
10 questions about the marine terminal at this point. What  
11 kinds of activities have to go on on the land part of a  
12 site to construct a marine terminal?

13                   Mr. PAUL BUXTON: I'm going to refer  
14 this question to Carlos.

15                   Mr. CARLOS JOHANSEN: Could I have that  
16 question again please?

17                   Ms. JILL GRANT: Can you tell me what  
18 kinds of construction activities have to go on the land  
19 part of the site to facilitate the construction of the  
20 marine terminal?

21                   Mr. CARLOS JOHANSEN: The answer to that  
22 one is very little of any. A marine construction is  
23 usually self-contained. It comes with cranes and barges  
24 all afloat, and materials on the barges, and very...

25                   The only thing I foresee of what you

1 might call marine construction which would take place  
2 off the land would be the very first supports, to access  
3 the trusts, and they would be built from the landside,  
4 and actually that would be a very small activity. You  
5 probably would not even notice it because it's a very  
6 humble structure. It's just a couple of columns every  
7 100 feet or so.

8 But in terms of activity on land, there  
9 does not need to be any, unless somebody... But there  
10 is no need for it at all.

11 The concrete will be pre-cast. These  
12 things are very self-contained. Materials all come on  
13 barges, so nothing would be... There's no need to truck  
14 anything on the site if that is what you were thinking  
15 about.

16 Ms. JILL GRANT: Well, the question  
17 comes because obviously the conveyor has to go over the  
18 environment preservation zone, so the question is  
19 related to whether there are construction activities  
20 that might jeopardize the environmental preservation  
21 zone, people going back and forth across it?

22 Mr. CARLOS JOHANSEN: Well, it would be  
23 in everybody's interest to reduce that amount of  
24 traffic, if any, to the minimum.

25 You can launch a thrust from the water



1 so that you could cross it in the air. I'd have to look  
2 at the details as to the exact distances we have to  
3 cover, but I know that the last one we did, we launched  
4 about 600 feet of thrust to avoid a tidal area, which we  
5 had been asked not to work on, and we never as much as  
6 walked on it after we put in the columns, and the  
7 columns were put in at low tide with special  
8 dispensations from the Minister from the Department of  
9 Fisheries and Oceans, and we were asked to remove every  
10 rock that might be in the way, and then after put it all  
11 back.

12 So in fact, every rock was put back  
13 manually so no, there are ways of doing these things  
14 with very little impact, and these days after all it's  
15 2007, we don't have a thousand people running around.  
16 It would be a very small labour force.

17 Ms. JILL GRANT: Thank you. And another  
18 question about the marine terminal and conveyor is about  
19 where the observation station is.

20 There was discussion about an  
21 observation station, but none of the journals indicate  
22 where that would be.

23 Mr. PAUL BUXTON: Perhaps I could handle  
24 that one. It will be pretty high up on the marine  
25 terminal. I don't think that we can access... We don't

1 have the projector up at the moment, but if you perhaps  
2 ask that question, if you would not mind, on Wednesday  
3 when we will again have it up, and I'm quite sure that  
4 the other questions with respect to observers, I'd be  
5 very pleased to show all our cross-section where we  
6 expect the observer to be. Would that be all right?

7 THE CHAIRPERSON: Are you referring to  
8 Monday or...

9 Mr. PAUL BUXTON: It's actually  
10 Wednesday, it's the marine. We have marine all day  
11 Wednesday and we will certainly be bringing up that  
12 cross-section again, and we will be discussing  
13 observation generally, and I think in some detail.

14 Ms. JILL GRANT: Okay. But I would like  
15 an undertaking that you are going to give us that detail  
16 at that time.

17 The other question that would be  
18 related to that is how the observer gets there, to the  
19 observation station, along the terminals. Perhaps you  
20 will have those details at that time too?

21 Mr. PAUL BUXTON: Yes, we will deal with  
22 that issue at the same time.

23 Mr. GUNTER MUECKE: Okay. I would like  
24 to come back to the 800-metre setback from residences,  
25 in terms of blasting.

1                   We were provided the property map and  
2                   the 800-metre setback that is shown on that is still  
3                   valid?

4                   Mr. PAUL BUXTON: I wonder whether you  
5                   could... Map number what?

6                   Mr. GUNTER MUECKE: Number two.

7                   Mr. PAUL BUXTON: Okay.

8                   Mr. GUNTER MUECKE: It shows... It's  
9                   called: AProperty map≅, and it shows the 800-metre  
10                  setback.

11                  Mr. PAUL BUXTON: Yes.

12                  Mr. GUNTER MUECKE: Is that line valid?

13                  Mr. PAUL BUXTON: It is not quite valid  
14                  at the present time and the reason for that is that  
15                  property number 14... Can you locate property number  
16                  14? It is just off to the right-hand side of the Whites  
17                  Cove Road.

18                  Mr. GUNTER MUECKE: Yes.

19                  Mr. PAUL BUXTON: And if you were to  
20                  look at the three arcs if you would like which are  
21                  shown, the middle arc there was a distance from property  
22                  number 14.

23                  Mr. GUNTER MUECKE: Correct.

24                  Mr. PAUL BUXTON: And property number 14  
25                  is now in the ownership of Bilcon. I would also refer

1 you to the left-hand arc where we have one setback  
2 agreement and the purchase of a number of properties, 2  
3 and 3 and so on, and that left-hand arc would need to be  
4 modified somewhat.

5 The right-hand arc stays where it is.  
6 Does that help?

7 Mr. GUNTER MUECKE: Yes.

8 Mr. PAUL BUXTON: The centre arc is no  
9 longer correct because we own property number 14.

10 Mr. GUNTER MUECKE: I understand. Would  
11 it be possible before the end of the session to have a  
12 modified map?

13 Mr. PAUL BUXTON: Yes, we can do that.

14 Mr. GUNTER MUECKE: Because the central  
15 question on my mind here is if Bilcon is not able to  
16 obtain permissions from the remaining property owners, a  
17 substantial portion of your property holding, a  
18 substantial portion of the resource would not be  
19 accessible to you, and my question then is if that state  
20 persists, will the quarry be viable?

21 Mr. PAUL BUXTON: We believe so. Yes,  
22 if setback agreements or the acquisition of properties  
23 did not take place prior to contemplating construction  
24 date, we would continue with the Project.

25 Mr. GUNTER MUECKE: Could you provide us

1 the volume of the material that would need... If the  
2 present boundary does not change, how much volume you  
3 would lose relative to the amount that would be still be  
4 minable?

5 Mr. PAUL BUXTON: I think we could  
6 produce that before the end of the hearings, yes.

7 Mr. GUNTER MUECKE: Okay.

8 THE CHAIRPERSON: Mr. Buxton, could you  
9 give us a date? We're going to consider that an  
10 undertaking for you, but we need to pin it down. Do you  
11 have any reasonable idea of when we could get that?

12 Mr. PAUL BUXTON: I think that by virtue  
13 of the fact that most of us, most of our experts will be  
14 here much of next week, I would appreciate that being  
15 the second week.

16 THE CHAIRPERSON: Early in the week,  
17 later in the week?

18 Mr. PAUL BUXTON: If we could have it...  
19 We do appear on Monday, so if we could do that on  
20 Wednesday of the second week?

21 THE CHAIRPERSON: Okay.

22 Mr. PAUL BUXTON: Thank you.

23 THE CHAIRPERSON: Thank you.

24 Mr. GUNTER MUECKE: Okay. If we could  
25 go on from the construction phase to the actual

1 operational phase now.

2 Mr. PAUL BUXTON: Yes.

3 Mr. GUNTER MUECKE: One of the  
4 limitations of the land operation that has been  
5 identified and that you have outlined in your proposal  
6 is that since the contact between the upper flow unit  
7 and the middle flow unit probably constitutes the main  
8 aquifer on the property, that that contact will not be  
9 breached, that is to say that a cap of upper flow  
10 material will always remain on the middle flow, is that  
11 correct?

12 Mr. PAUL BUXTON: Yes. And that is in  
13 there for two reasons. One is that we certainly believe  
14 that the major flow of water lies at the boundary of the  
15 middle flow unit and the upper flow unit, and I think we  
16 will be certainly dealing with that next Friday under  
17 the day on hydrogeology.

18 There's a second reason for that, and  
19 that is that the quality of rock in the middle flow unit  
20 is poor. It is very poor rock, and remembering that we  
21 have to adhere to very strict specifications for the  
22 quality of rock which is exported; it would be very  
23 detrimental to our operation if we broke into the middle  
24 flow unit and got that material contaminating the high-  
25 quality rock that we want to export.

1                   So certainly, we do not want to go into  
2                   the middle flow unit.

3                   Mr. GUNTER MUECKE: So understanding  
4                   those reasons, my question is how you can avoid  
5                   breaching that contact because how well can that contact  
6                   be defined?

7                   After all, you do not see that contact  
8                   on the property. It is hidden by the upper flow. How  
9                   well have you defined this contact? Because in order  
10                  not to breach it, you will have to know where it is, is  
11                  that right?

12                  Mr. PAUL BUXTON: Yes. You're quite  
13                  right in saying that there is no contact between the two  
14                  flow units on the property, but there is contact between  
15                  the two flow units just east of the topographic  
16                  division, and in fact that line of demarcation is very  
17                  easy to see and we have mapped it and surveyed it.

18                  Now certainly I can't, but professional  
19                  geologists can, and the mapping was done with the  
20                  assistance of the Department of Natural Resources  
21                  (Provincial), so we do know where it is.

22                  There is in fact... When I'm shown it,  
23                  there is in fact a very significant difference in the  
24                  qualities of the rock.

25                  However, when this rock in the upper

1 flow unit is being obtained, we will be drilling holes  
2 into the rock in order to blast, and we will be able to  
3 tell when or if we have penetrated the middle flow unit,  
4 where we don't want to be.

5 We have at the moment four bore holes  
6 on the site, and we have six monitoring wells which were  
7 drilled in the area. So it is not as if we don't know  
8 where it is in general terms.

9 We certainly don't know within three or  
10 four feet, but we do know where it is in general terms,  
11 and we will carry out additional bore holes on the site  
12 to further delineate where it is so that we're not over  
13 blasting, so that we don't get contaminated rock in our  
14 process operation.

15 Mr. GUNTER MUECKE: Okay. In terms of  
16 the present existing data that you have, it is only...  
17 And you can correct me there, I think it's two wells,  
18 okay, that you have drilled and which you can actually  
19 pinpoint the contact, so it's very limited data at the  
20 moment.

21 There has been work done on the upper  
22 flow/middle flow contact at Phinney's Cove, which is  
23 about 40 kilometres from here, and it has been shown  
24 that the topography of that contact is at up to 7 metres  
25 on a 300-metre distance, so it is not a flat sheet of



1 basalt necessarily, it can have considerable  
2 topography.

3 So my question is when you drill into  
4 this considerable topography, how will the drillers know  
5 that they have penetrated the contact?

6 Mr. PAUL BUXTON: I can't speak for the  
7 drillers. They generally are very well aware of the  
8 geology in the area. They drill wells there all the  
9 time.

10 We would not rely on a driller; in fact  
11 we intend to do our own drilling on site. In fact, we  
12 would have professionals on-site to do this kind of  
13 delineation before we went very far in the process.

14 As I say, it's a very significant issue  
15 to us if we got into the middle flow unit, because of  
16 the contamination of the high-quality rock that we want  
17 to get out.

18 So this is certainly something that we  
19 would be doing ourselves with professionals on-site,  
20 delineating precisely where it is.

21 Mr. GUNTER MUECKE: What sort of  
22 drilling are you proposing here, are these core?

23 Mr. PAUL BUXTON: It would be core  
24 drilling, yes.

25 Mr. GUNTER MUECKE: And for the

1       blasting, you do not do core drilling, do you?

2                   Mr. PAUL BUXTON: No, but we would do  
3       this kind of core drilling on the site to delineate  
4       precisely where this product is. We can't afford, as I  
5       have said, to get middle flow unit material.

6                   The upper flow unit is in some areas,  
7       we can't say for certain all over the site, but perhaps  
8       the bottom five to ten metres of the upper flow unit is  
9       fractured, and fairly significantly fractured.

10                   That gives us a good idea when you're  
11       drilling that you're suddenly getting into a different  
12       kind of formation. So there is a forewarning before we  
13       get into the middle flow unit.

14                   Mr. GUNTER MUECKE: If that forewarning  
15       does not provide the information and you accidentally  
16       blast and expose the middle flow unit, what remedial  
17       action do you have in mind?

18                   Mr. PAUL BUXTON: I think that this is  
19       an issue perhaps we will deal with more thoroughly next  
20       Friday, but I will answer it I think partially today.

21                   We do not see the exposure of the  
22       middle flow unit as a particularly negative activity.  
23       We don't want to do it, and we also believe that the  
24       major groundwater flow lies very close to that boundary,  
25       and we do not want to interfere with the groundwater.

1                   So I would say that we would take great  
2                   care that we in fact do not for a number of reasons, but  
3                   if we inadvertently did, I don't see that... And our  
4                   hydrogeologists do not see that as a major issue with  
5                   respect to the flow of water.

6                   The groundwater recharges on the other  
7                   side of the mountain, on the east side. We are now  
8                   blasting on the west side of the mountain.

9                   Essentially, from the contact to the  
10                  middle flow unit and the upper flow unit and possibly  
11                  all the way back to the contact of the middle flow unit  
12                  with the lower flow unit, the flow of water is towards  
13                  the Bay of Fundy, so simply impacting a small area of  
14                  middle flow unit would have no effect really whatsoever  
15                  on the ground water geology in that area.

16                  Mr. GUNTER MUECKE: And like you said,  
17                  we will probably discuss that during the hydrogeology  
18                  section. And I guess you just said that through core  
19                  drilling, you will be delineating the nature of the  
20                  contact and the topography on it.

21                  I think an interesting exercise would  
22                  be, and maybe you could provide us with that  
23                  information, but would be using the topography that is  
24                  found at Phinney Mountain Creek of seven metres over a  
25                  distance of 300 metres, one could sit down and look at

1 the property and say: AHow many cohort holes will it  
2 need to define the contact?≅

3 Because seven metres to 300 metres and  
4 taking the dimensions of the quarry means that you will  
5 have to drill a very substantial number of cohort holes  
6 in order to delineate the contact, and it should be  
7 possible to calculate how many will actually be  
8 required, and I would be very interested to hear what  
9 those numbers are.

10 Mr. PAUL BUXTON: Yes, I would observe  
11 that the quarrying will take place over a 50-year so one  
12 would not go... We would not go on-site in the first  
13 couple of years and contemplate identifying everything  
14 on the entire site.

15 We do know from bore holes or  
16 monitoring well holes 2 and 3 and bore hole number one,  
17 we know where the contact is in those.

18 You're right, we don't know where it is  
19 over every part of the site, but we know that we have  
20 very substantial depths of overflow units in that area,  
21 and certainly the prospect of us getting the sufficient  
22 quantity of rock from the site by worrying about whether  
23 we are 1 metre or 2 metres from the middle flow unit I  
24 don't think is really a significant issue, but I will  
25 certainly see if one of our geologists can come up with

1 that kind of number.

2 Mr. GUNTER MUECKE: We are not looking  
3 at how many bore holes total, but basically what sort of  
4 spacing would you need in order to define a seven metre  
5 topography over 300 metres.

6 Ms. JILL GRANT: I have a question about  
7 the disposal areas, the rock storage and so on, and one  
8 of the parts to the information request indicated that  
9 if you need to ship rip rap, you would use a portable  
10 crushing or crushing plant.

11 I'm presuming that that would be  
12 enclosed, but perhaps you could tell us a little bit  
13 more about it. There was not much detail provided.

14 Mr. PAUL BUXTON: Yes, I don't think  
15 it's really any possibility at all. I don't believe  
16 that we would give that much of a possibility.

17 There is sufficient storage on-site,  
18 it's much more convenient for us to have it. It was an  
19 option that there be a demand for rip rap somewhere and  
20 that we could get it off the site without having to  
21 store it and then bring it back down again, but the odds  
22 on that happening I think are very remote.

23 And you're right, to bring in a  
24 temporary crusher and doing all the enclosures and all  
25 that sort of thing I don't think would be very much a

1       worthy effort, unless it were absolutely vital that we  
2       did that.

3                       Ms. JILL GRANT: I will ask another  
4       question about construction activities on the site.  
5       What kinds of risks are likely to occur from the  
6       construction activities to the environmental  
7       preservation zones and how do you propose to manage  
8       those activities?

9                       Mr. PAUL BUXTON: We don't anticipate  
10      any activity in those areas. There is one potential  
11      area that we will have to be particularly careful with,  
12      and you have already raised that issue with us, and that  
13      is where the ship loader crosses the environmental  
14      preservation zone as it goes out towards the marine  
15      terminal.

16                      The piles are about 100 feet apart, so  
17      we will need to be careful that we don't interfere with  
18      the environmental preservation zone in that area.

19                      Other than that, they will be set aside  
20      on day one and we would not contemplate going into those  
21      preservation zones at all except perhaps to do something  
22      in the nature of woodwork, as advised by a forester, a  
23      professional forester.

24                      Mr. GUNTER MUECKE: Since you have just  
25      touched on the environmental preservation zone, in

1 places in the Environmental Impact Statement, a  
2 containment berm is mentioned, and I haven't been able  
3 to locate it on any of the maps and one of my questions  
4 is where will it be, what will be its extent and will  
5 that encroach into the environmental protection zone?

6 Mr. PAUL BUXTON: There are a number of  
7 containment berms. For example, I would call... The  
8 berms around the sediment retention ponds would be  
9 containment berms.

10 There will be containment berms around  
11 the organic sediment storage area, around the organic  
12 and sediment storage areas. So there will be a  
13 significant amount of containment berms. That is not  
14 contemplated to be in the preservation zone.

15 Mr. GUNTER MUECKE: Maybe I was  
16 misreading it, but I got the impression that in addition  
17 to the berms around the sediment ponds, that there would  
18 be additional protection by a containment berm.

19 That is the impression I got in the  
20 section on accidents and malfunctions. I got the wrong  
21 impression?

22 Mr. PAUL BUXTON: No, you did not. It  
23 is part of the containment berm system for the organic  
24 and the sediment control areas. So we have the actual  
25 containment area, which will have a berm around it.

1                   Further down the slope, there will be  
2 another containment berm, and I suspect that that's what  
3 you're referring to.

4                   Mr. GUNTER MUECKE: Okay. That makes it  
5 a bit clearer. And the same is true for the sediment  
6 ponds, the six sediment ponds? They will have an  
7 additional containment berm?

8                   Mr. PAUL BUXTON: No.

9                   Mr. GUNTER MUECKE: No?

10                  Mr. PAUL BUXTON: No, because  
11 essentially they contain water, and obviously we don't  
12 have slip or slide or that kind of pressure from water,  
13 and they will be designed... The existing containment  
14 berms will be designed to contain the water pressure  
15 which is contemplated.

16                  If the water level rises, then it will  
17 go into the next pond down rather than increase the  
18 pressure on the containment walls.

19                  Mr. GUNTER MUECKE: In the sediment  
20 storage area, you propose to have two sediments I  
21 believe, and the fines from the washing operations will  
22 be pumped into these areas, and they will be used for  
23 reclamation and production and so on.

24                  There seems to be no drainage provided  
25 for the sediment storage area, and given that in Nova



1 Scotia, precipitation exceeds evaporation, I am somewhat  
2 puzzled as to why it is no drainage is provided for  
3 those areas?

4 Mr. PAUL BUXTON: First of all, the berm  
5 around these areas will be on all those four sides,  
6 which means that the rainfall that comes into these  
7 containment areas will only arise from the area of the  
8 contained areas themselves.

9 They are not open banks. There will  
10 not be water from other parts of the watershed entering  
11 into these containment areas.

12 Secondly, the water content of the  
13 sludge if you like, which is pumped out, is quite high,  
14 but this material dries relatively quickly and  
15 surprisingly, one can drive a truck on this stuff in  
16 about two weeks.

17 Now to deal with the rainfall itself  
18 which falls actually inside these containment berms, we  
19 would anticipate that the front berm and part of the  
20 side berm, and maybe all of the side berm when we do the  
21 detailed design, would have as part of its core a  
22 barrier material which would trap any sediments that  
23 came out of these areas and would allow water to pass  
24 through, but that any sediment would be contained.

25 And the same thing would happen with

1 the safety containment berm if you would like, so that  
2 we get basically a double operation if you like with  
3 barrier material.

4 Mr. GUNTER MUECKE: Perhaps we could  
5 move on to the sediment ponds themselves and their  
6 proposed depth of four metres.

7 Mr. PAUL BUXTON: Sorry?

8 Mr. GUNTER MUECKE: Perhaps we could go  
9 on to the sediment ponds now and their proposed depths  
10 of four metres.

11 Could you clarify to us how the four-  
12 metre depths, given the runoff from the property that  
13 these sediment ponds will have to handle, how these  
14 structures can handle the 100-year 24-hour event,  
15 precipitation even, how they handle the 100-year maximum  
16 5-day event and how climate change considerations will  
17 change the values that are necessary in terms of depths  
18 in the sediment ponds to accommodate the extra water.

19 I guess what I would like to see is  
20 maybe somebody who has the knowledge to basically put a  
21 chart up for us to see what each component is and what  
22 it adds up to.

23 Mr. PAUL BUXTON: I'm going to pass this  
24 question over to David Strajt who carried out all this  
25 work for us. How quickly we can get drawings up on the

1 screen, I'm not sure, but we could certainly start to  
2 answer the question in a verbal sense and then look for  
3 other information. Mr. Strajt?

4 Mr. DAVID STRAJT: So the sediment ponds  
5 have... There's a multiple use for the sediment ponds.  
6 They need to treat the runoff to remove sediment.  
7 Bilcon would also like to use the ponds for process  
8 water make-up and as you mentioned, the ponds need to be  
9 able to handle flood flows as well.

10 So we looked at the amount or the  
11 volumes that are required for each of those purposes and  
12 based on the proposed surface area for the ponds that  
13 Bilcon has set aside, we could come up with a depth.

14 And so it is a balance, it is sort of a  
15 competing use. I guess I can get into some numbers  
16 first. We looked at average requirement during  
17 operations, average requirements for supply, and that  
18 came out to be 0.9 metres of depth would be required in  
19 each pond, over each of the ponds.

20 For our 24-hour 100-year flood, runoff  
21 from the entire catchment above the site came up to be  
22 1.9 metres. So 1.9 and 0.9 is 2.8, so there was still  
23 volume remaining in that situation.

24 We also looked at a five-day, 100-year  
25 volume, again from the entire catchment above the ponds,

1 and that came out to be 2.8 metres of equivalent depth.

2 So again, 2.8 and 0.9 will give you  
3 3.7, so you still have one foot, essentially one-foot  
4 freeboard in that situation.

5 Mr. GUNTER MUECKE: Yeah, but what you  
6 have just quoted us is based upon an average of 0.9  
7 metres. That's the year average required for the  
8 operation.

9 However, because of seasonal  
10 variations, that number has to be considerably larger at  
11 times in order to get through the dry seasons and can be  
12 smaller at other times, is that correct?

13 Mr. DAVID STRAJT: Well that number,  
14 0.9, represents the cumulative sum over an average dry  
15 season. You would need 0.9 metres of depth to get you  
16 through an average dry season.

17 So normally, before the dry season  
18 there is a surplus of water, but typically between June  
19 or July through October, typically your dry season, so  
20 cumulatively we add it up, the volume required over an  
21 average dry season and 0.9 metres is what would get you  
22 to the end of that dry season, and then come October or  
23 November again...

24 So the 0.9 is cumulative. It's not an  
25 average requirement over the year, it's the amount of

1 storage required to satisfy demand over that two or  
2 three-month period.

3 Mr. GUNTER MUECKE: The figures you have  
4 provided are for historic data, the 24-hour and the  
5 five-day events. With climate change, we can expect  
6 these numbers to increase. How does that change the  
7 picture of this?

8 Mr. DAVID STRAJT: Again, there is a  
9 trade off. You know, normally these 100-year and five-  
10 day events are... You know, they are infrequent events,  
11 they occur by definition once every 100 years, but the  
12 risk of occurrence can be calculated as well, so you  
13 might have a situation where you would have to...

14 You would not have as much available  
15 for storage for a short amount of time, because you  
16 would need to make room for an anticipated 100-year  
17 storm or a five-day storm, so for a short period of  
18 time, there might be a situation where your flood  
19 storage will cut into your supply storage, and my  
20 understanding is that for short periods of time, Bilcon  
21 is prepared to not wash aggregate and ship unwashed  
22 aggregate.

23 It's an inconvenience, but it's  
24 something that Bilcon is prepared to do.

25 Mr. GUNTER MUECKE: So these unusual

1 events, there will have to be a release in order to be  
2 able to accommodate?

3 Mr. DAVID STRAJT: There may have to be  
4 a release depending on what time of year it is, what  
5 level the ponds are at. You know, worse case scenario,  
6 if the ponds are at maximum storage level and an  
7 anticipated 100-year storm is on its way, then there may  
8 need to be some draw down to make room for that storm.

9 Mr. GUNTER MUECKE: So can you give us  
10 in any of the worst case scenarios what amount of  
11 drawdown may be needed and which berms are involved?

12 Mr. DAVID STRAJT: I would have to do  
13 some number crunching. I could give you that... I  
14 don't have it off-hand here, but I can provide that for  
15 you.

16 Mr. GUNTER MUECKE: So could we put  
17 that on the list? Okay. Somewhere along the line I  
18 picked up that the storage required at times will have  
19 to be two and a half metres and not 0.9 metres, and that  
20 two and a half metres was in the assessment report.  
21 What does that two and a half metres refer to, do you  
22 know?

23 Mr. DAVID STRAJT: Yeah. That two and a  
24 half, that would be a request to look at what the amount  
25 of storage would be in a drought situation, so we looked

1 at a drought year during the period of record, and so  
2 during that worse case scenario, if you wanted to get  
3 through a drought year, you would need 2.4 metres of  
4 storage during that dry period.

5 Mr. GUNTER MUECKE: Okay. So what you  
6 are saying is that if you're looking at 4 metres, we can  
7 accommodate for nine years. But if you encounter a  
8 drought year, it would mean that not sufficient water  
9 would be available, is that correct?

10 Mr. DAVID STRAJT: Well again, it  
11 depends on how you operate your ponds. You can operate  
12 them to have as much storage as you need. You can set  
13 your outflow levels to contain as much water as you  
14 anticipate that you need, and then lower it down if you  
15 don't anticipate you will need as much storage, so you  
16 can...

17 It all comes down to how the outlet is  
18 designed and how you operate and whether or not you  
19 increase your source for a short period of time or not.

20 Mr. GUNTER MUECKE: Which brings us back  
21 to worse case scenarios. If you have decided to use  
22 maximum storage and you are hit by a storm, a 100-year  
23 storm, then there's a problem; and you are going to  
24 provide us with some numbers on that.

25 Ms. JILL GRANT: In one of the

1 documents, I think you had indicated that a major storm  
2 event could raise 5,000 to 10,000 gallons per minute, of  
3 water, is that correct?

4 Mr. DAVID STRAJT: I believe Bilcon had  
5 made some preliminary calculations on the leases.

6 Ms. JILL GRANT: One of the questions is  
7 that just given that not many of us are very accurate at  
8 predicting the weather for the summer ahead, and even  
9 the farmers' almanac is not always perfect, am I right  
10 in presuming that Bilcon will need to always presume  
11 that they will be heading into a drought, and therefore  
12 keep the ponds at 2.5 metres?

13 Mr. PAUL BUXTON: I guess that's an  
14 operational question. I think that it is of significant  
15 importance to us that we wash the rock. I think I have  
16 made that clear.

17 It is not crucial to the extent that we  
18 would close the operation, but it is a very important  
19 part of the process, so we would want to generally  
20 speaking ensure that we had sufficient wash water.

21 One of the points that I would like to  
22 make here is that we do not see overflow from these  
23 ponds as a major issue.

24 All the water from our watershed  
25 currently goes out of the natural ground and into the



1 Bay of Fundy. We did background analysis of that water  
2 and typically the water from the natural watershed  
3 contains in the order of 14 mg per kilogram or 14 parts  
4 a million.

5 In the installation of the small  
6 settling pond that is there now and the settling ponds  
7 that will be there in the future, with good maintenance  
8 of those ponds, cleaning out the base and good  
9 maintenance procedures, we would not anticipate an  
10 overflow producing anymore than 2 or 3 parts per  
11 million.

12 And this was our experience over three  
13 years of testing of the existing settling pond. So in  
14 fact, the settling pond can act as a cleaning agent.

15 Remember that on this site, the vast  
16 amount of the fines are being taken out from the wash  
17 cycle and they are going out to the sediment retention  
18 ponds.

19 The fines that we're talking about  
20 going into the ponds are the fines off the road and  
21 there are certainly some, that's why the sediment ponds  
22 are there, but it is nothing like the volume that we  
23 will take out in the wash cycle.

24 And again, the first pond, pond number  
25 five, will have forebays in it, and the idea of the

1 forebays is to quicken the settlement of the sediment in  
2 the first pond.

3 We would anticipate and we would want  
4 that water to be essentially clean by the time it  
5 reaches pond number one.

6 If we have an overflow situation, we do  
7 not see this as a serious event. First of all, we see  
8 very low levels in the water as it goes out. It will  
9 then go out through the constructed wetland, and we will  
10 carry out continuous monitoring of any outflows from the  
11 system.

12 Frankly, I think we're more concerned  
13 about retaining enough water on the site than we are  
14 about overflow situations.

15 Now that is not to say that just  
16 because we say it's a one in a 100 year storm that you  
17 can't get a 100-year storm on Monday and one on Tuesday,  
18 it can happen, and we believe that we can handle that  
19 situation.

20 And I would just like to comment here,  
21 and I think we may make this comment further on in the  
22 process.

23 But generally speaking, we have tried  
24 to design with the parameters and thresholds which are  
25 generally set out under the guidelines under the Pits

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1 and Quarries Act.

2 Typically, one designs for a 100-year,  
3 24-hour event. That is not to say that we cannot raise  
4 those berms to contain in any normal situation a 100-  
5 year, five-day maximum event. But that is not typically  
6 designed. And we would see no particular imperative on  
7 the site to design into that level.

8 We did consider that. We were asked to  
9 consider that and we did consider that and provided the  
10 information, but typically we would design for a 100-  
11 year and 24-hour event.

12 Ms. JILL GRANT: A couple of follow-up  
13 questions on the constructed wetland. In a situation  
14 where you're storing water during the summer because  
15 your volume... I'm presuming there's no water going  
16 into constructed wetland, is that the case?

17 Mr. PAUL BUXTON: Yes, that would  
18 typically be the case. Yes. And so the water level in  
19 the constructed wetland would vary.

20 Ms. JILL GRANT: And during the release  
21 of 5,000 to 10,000 gallons per minute, if that's  
22 required to draw down quickly, what anticipated effect  
23 would there be on the constructed wetland handling that  
24 volume?

25 Mr. PAUL BUXTON: I think the assumption

1 there is that we would in fact try to draw down  
2 sufficient water in the sediment ponds for a 100-year,  
3 five-day events. That may not necessarily be true.

4 And I think that we would, over time,  
5 develop a fairly sophisticated approach to this kind of  
6 situation.

7 As I said, if that water comes, if we  
8 do get that sort of event when we're at maximum  
9 capacity, I think we will do somewhat of a balance, that  
10 we would release some water from the ponds and some  
11 water would just simply come through with a natural  
12 storm event.

13 I don't think that we meant to give the  
14 impression that if a storm were forecast, that we would  
15 attempt to pump out that quantity of water simply in  
16 order to contain that storm event. We would see no  
17 necessity in doing that.

18 Ms. JILL GRANT: You're talking in your  
19 assessment document about an outflow structure that  
20 could be used to stop flow. I wonder if you could  
21 explain what that is about and what would happen if you  
22 did in fact stop the flow?

23 Mr. PAUL BUXTON: No, the outflow  
24 structure is not in any way, shape or form to stop the  
25 flow going out. The outflow structure is a constructed

1 concrete structure which enables us to do two things,  
2 one is to measure the flow that is going out and  
3 secondly, in order to take samples from precisely the  
4 same place and precisely the same conditions so that are  
5 samples means something from month to month.

6 Mr. GUNTER MUECKE: You're talking about  
7 a constructed wetland along the coast, and I guess I  
8 find it difficult to visualize how you can have sudden  
9 release rates of that magnitude, and 5,000 gallons per  
10 minute has been mentioned in the report, and the  
11 wetlands basically surviving this event.

12 Would it not result in... Having a  
13 release rate of that magnitude, what does it mean in  
14 terms of velocity of water flow through that wetland?

15 At the moment, we have cross-section of  
16 the wetland, but no indication of dimensions, so it's  
17 hard to visualize what sort of flow rates would result  
18 and what the possible effect of that rapid flow would be  
19 on the wetland.

20 Mr. PAUL BUXTON: Well, I will pass the  
21 question shortly back to Mr. Kern behind me who designed  
22 the constructive wetland, but I want to make a couple of  
23 points here.

24 In the calculation of the water  
25 quantities coming down into the ponds, we have assumed

1 the worst case scenario, i.e. that the ground is  
2 saturated before a 100-year storm event starts, so in  
3 other words we get a fairly instant flash off that is a  
4 very significant proportion in measure.

5 Secondly, the ground as it is now, the  
6 natural state of the site as it is now, handles that  
7 runoff that comes down.

8 There is a natural wetland just to the  
9 west of the existing sediment pond, and in extreme wet  
10 weather now, that amount of water comes out of that  
11 watershed and goes into the Bay of Fundy carrying a  
12 fairly significant load.

13 The next thing I think to remember is  
14 that this is not a totally open site. One of the  
15 advantages of incremental reclamation and incremental  
16 opening of the quarry is that we do not have the whole  
17 quarry site open at the same time, so we have a fairly  
18 small portion of the site opened at any one time.

19 Now any open area of the quarry  
20 increases the runoff velocity, and there's a fairly  
21 well-known formula that one can calculate runoff and of  
22 course the surface is of significance, whether the water  
23 penetrates or whether it flashes off as in a parking  
24 lot.

25 So yes, in some way, we will be

1 increasing it because some parts of the quarry will be  
2 opened. But the entire site is not opened so we're not  
3 talking here of a totally open area with a very fast  
4 flash off as you would get in a parking lot for  
5 example.

6 So I think that we would try to  
7 maintain a balance. If we were at a fairly high level  
8 because we anticipated a drought and we also predicted a  
9 100-year and 24-hour event or a five-day event, I think  
10 we would do two things really.

11 One, we would do some pumping down to  
12 increase the capacity and try to get a more stable flow  
13 when the flood arrived, but we would be content to  
14 contemplate some of the water going out after it has  
15 gone through the five ponds, and the wetland, and out  
16 into the Bay of Fundy as it does today.

17 And we would not see increasing the  
18 amount of material above the levels prescribed by the  
19 Nova Scotia Department of Environment and Labour; in  
20 fact we are not allowed to.

21 Mr. GUNTER MUECKE: And the effect on  
22 the wetlands?

23 Mr. PAUL BUXTON: Sorry, thank you for  
24 reminding me. Mr. Kern, would you comment please on the  
25 wetland, the constructed wetland?

1                   Mr. DAVID KERN: The discharge of a  
2 major storm event is on a very infrequent basis. The  
3 length of the constructed wetland is approximately 500  
4 metres. It has check dams similar to a highway road  
5 ditch or that a Highway 101 road ditch would have within  
6 the constructed wetland, it's a part of it.

7                   It would vary in width and depth, and I  
8 believe that question was answered in our revised  
9 project description, verbally, in some detail.

10                  Mr. GUNTER MUECKE: Any ideas of... I  
11 mean, what sort of velocities are we talking about? I  
12 mean, you can have check dams and everything, but if you  
13 are releasing large amounts of water, the cross-section  
14 areas of wetland is of importance in determining  
15 velocities.

16                  What are the dimensions? We have never  
17 seen any actual numbers.

18                  Mr. DAVID KERN: The length is 500  
19 metres. The side slopes are... The side slopes vary  
20 from 1.5 horizontal to 1 vertical, to 4 horizontal to 1  
21 vertical, so this isn't...

22                  It isn't intended to be a constructed  
23 channel. It's intended to create different depths,  
24 widths, shallow water, deep water, ponding water for  
25 habitat enhancement purposes, and we have done no



1 estimate of velocities going through the constructed  
2 wetland.

3 Ms. JILL GRANT: In terms of the  
4 sediment retention, my understanding is that pond five  
5 will not be in operation until after the first five  
6 years, is that correct?

7 Mr. PAUL BUXTON: No, not quite, but it  
8 will be constructed immediately. The product which is  
9 on that site is crushed, so it will be a priority to  
10 construct, but we will have to remove that material  
11 first and then that pond will immediately go into being.  
12 It will be constructed.

13 I can't say whether that will be the  
14 second year, but that would be my... That would be my  
15 guess.

16 Ms. JILL GRANT: So during that time  
17 when that is not in operation, there won't be a sediment  
18 forebay to try to trap sediment, is that correct? So  
19 the first several years of operations, the sediments  
20 will be going in the other ponds?

21 Mr. PAUL BUXTON: Not necessarily.  
22 Sediment forebays are very easy to construct. They are  
23 not elaborate things. They're a bit like a wheel which  
24 one puts across the sediment pond, and one could easily  
25 be put across sediment pond number four.

1                   Ms. JILL GRANT: And can you give us  
2                   some indication of what proportion of the sediments are  
3                   likely to fall out in the forebay when this forebay is  
4                   constructed?

5                   Mr. PAUL BUXTON: I would certainly hope  
6                   that we would retain at least 90 per cent of the  
7                   sediments in the forebay. That would certainly be the  
8                   intent, because we have the opportunity to easily clean  
9                   it out there, and take it into proper storage.

10                  So the less that goes into the other  
11                  ponds, the better, and we would certainly try for that  
12                  kind of percentage.

13                  Ms. JILL GRANT: Okay. Thank you. And  
14                  I am curious about when the fines are going to be  
15                  removed from the ponds because in different documents,  
16                  different things are said.

17                  In one of the documents, in section  
18                  9.2.1, page 43, it says they will be removed in winter  
19                  when there is low biological productivity in the pond.

20                  In another document though, it says  
21                  they are going to be removed during the dry season.

22                  So I'm curious about that because it  
23                  seems that that would be the time when storage of water  
24                  is important, so I'm not sure that that implies the  
25                  level of that pond would actually be lower.

1                   And then in other places, it says the  
2                   sediments will be removed four times a year to maintain  
3                   capacity; that's in the supplement to the I.R.

4                   So can you please clarify for us when  
5                   the sediments are going to be removed?

6                   Mr. PAUL BUXTON: Yes. I think one of  
7                   the confusion that was created, and it was entirely our  
8                   fault, was that we tried to make a descriptive perhaps  
9                   analysis of the capacity of the ponds, and what we  
10                  assumed was that the sediment would be contained equally  
11                  in all the ponds.

12                  We thought that this would make a good  
13                  visual image over the course of a season, and so we  
14                  described the sediment ponds with a layer of sediment  
15                  across the bottom so that it would be somewhat easier to  
16                  calculate the capacity of the tons in these storm  
17                  events, and unfortunately I think that that not a very  
18                  good idea because I think it created some confusion.

19                  It is not the intent to let the  
20                  sediment accumulate in all the ponds, and that's why we  
21                  have this forebay. I think that the answer to your  
22                  question is really an operational one. It would really  
23                  depend on what was going on in the quarry at a  
24                  particular time.

25                  If we're under construction, if we're

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1 doing something new, opening up new areas, then I would  
2 expect a higher accumulation of sediment, and we would  
3 have to then clear the forebay on a more frequent  
4 basis.

5                   Once we got into a productive mode and  
6 we were not stripping top soil for example, the area was  
7 relatively clean, then the cleaning of the forebay would  
8 be more infrequent.

9                   I think the intent was to indicate that  
10 we would clear the forebay obviously when it is required  
11 and so that if we had a flood condition, less material  
12 might be lost, but also with some sensitivity to the  
13 seasons and to what is going on biologically in the  
14 area.

15                   Ms. JILL GRANT: And what effect will  
16 clearing out the sediments from the ponds have on the  
17 habitat capacity, the habitat that is trying to create  
18 in the ponds?

19                   Mr. PAUL BUXTON: I would say very  
20 little, because it will be fairly short-lived. There  
21 will be some turbidity in the water, clearly when this  
22 is being taken out.

23                   One of the things about basalt rock is  
24 that it is at the high specific gravity, and its  
25 particulate matter is quite dense and settles out

1 relatively quickly so that perhaps there would be some  
2 disturbance over a short period of time, but we don't  
3 think that it would have any significant effect as you  
4 say on the habitat that is probably trying to establish  
5 itself, even while we're using the ponds.

6 THE CHAIRPERSON: Okay. We have come to  
7 the end of this particular topic, and the original  
8 stated closing time for today would be 4:30. It is  
9 4:25, so we will avail ourselves of the break in the  
10 subject matter and break for today.

11 We will see you all again on Monday  
12 morning, 9:00.

13 Mr. PAUL BUXTON: Thank you.

14 --- Whereupon the matter was adjourned at 4:25 p.m. to  
15 resume on Monday, June 18, 2007, at 9:00 a.m.