PUBLIC HEARING

WHITES POINT QUARRY AND MARINE TERMINAL PROJECT

JOINT REVIEW PANEL

V O L U M E 5

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

PLACE HEARD: Digby, Nova Scotia

DATE HEARD: Thursday, June 21, 2007

PRESENTERS:
-Environment Canada
Allan Hanson/Maria Dober/Gary Lines
-Nova Scotia Environment and Labour
Kim MacNeil/Bob Petrie/Bruce Arthur/John Drage/Andrew Murphy/Barb Ryden/Darlene Fenton Scott Lister/Darrell Taylor
-Natural Resources of Canada
Mr. Andrew McAllister
-Partnership of the Sustainable Development of Digby Neck and Islands Society
Mr. Kemp Stanton/Ms. Lisa Mitchell

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Per: Hélène Boudreau-Laforge, CCR

Digby, Nova Scotia

--- Upon resuming on Thursday, June 21, 2007, at 9:00 a.m.

THE CHAIRPERSON: Ladies and gentlemen, we would like to bring the meeting to order please.

For those of you who are new to this session, I would like to introduce the Panel. On my left is Jill Grant, who is a professional planner. On my right is Gunter Muecke, who is an earth scientist. And I am Robert Fournier, the Chairman, and I'm an oceanographer by training.

A couple of comments for people who are new to this session is that we have been identifying the fact that headsets are available for those individuals who find the acoustics less than desirable.

The headsets are there of course in case we have French or English presentations, and so there is simultaneous translation. The headsets sometimes help a great deal simply hearing.

Also, I need to bring to your attention the fact that the schedule is being revised every day, and if you wish a revised schedule, the Secretariat can in fact provide it to you.

Before we turn to our presenters this morning, I need to make a comment about the undertakings.

There are no undertakings that are due

today. There is one outstanding undertaking that was requested for yesterday, but we have agreed to a later date. And yesterday we had several additional undertakings, which I will briefly go through.

The first was an undertaking to Bilcon of Nova Scotia to provide a drawing illustrating the location of blasts at the extremities of the property illustrating the 500-metre and 2,500-metre safety zones, and the 500-metre observation zone centred on the loading arm of the marine terminal. That was number 26.

Number 27 was directed to Transport Canada, to clarify the regulatory requirements for the release of bilge water from a bulk carrier while on port and engaged in the loading of material.

Number 28, Transport Canada again, to clarify if ballast water exchange required by regulation results in 100 percent exchange.

Number 29, Fisheries and Oceans Canada, to provide, following collaboration with Environment Canada, an assessment of the ecological risks associated with the ammonia residuals resulting from blasting and episodic and control releases from the Project's settling ponds.

Number 30, also to Fisheries and Oceans Canada, to provide the value of the lobster fishery in the Project area relative to other areas in the Province.

Number 31, also to Fisheries and Oceans Canada, to provide a listing of the SARA protected species, the potential effects on each, whether or not effects are likely, adverse, mitigable and whether or not a SARA permit will be required.

All of these are requested for the 29th of June.

One other item of business, and that is Mr. Buxton, in reference to something that occurred yesterday, your blaster identified the number of... Well he said one pound, or 0.4 kilograms per tonne of explosive was required in the blasting process, and that we are anticipating 80,000 tonnes required each biweekly period.

According to our calculations, that works out to 32 tonnes of explosives. So 32 tonnes of explosives required biweekly in order to generate 80,000 tonnes of rock.

According to the CLC records, Bilcon is on record as saying that the amount of explosives required would be 7.5 tonnes, so we have a disparity between 32 tonnes and 7.5 tonnes.

We have an undertaking for you, and that is would you clarify the amount of explosive that is required per blast? Would you clarify the amount required per tonne, that is the total per blast, meaning the biweekly

amount? Would you clarify the amount required to produce a tonne of rock? Can you confirm that you will be blasting once every two-week period? And could you identify the total amount of explosives that will be required in that two-week period?

So the amount required per blast, the amount required per tonne, the total amount of explosives required and you to confirm that you will be blasting only once every two weeks.

Can you tell me when that undertaking would be available?

Mr. PAUL BUXTON: We will have that undertaking completed by Tuesday.

THE CHAIRPERSON: Tuesday? And one other thing, we want the undertaking done in metric, all metric. No English units.

Dr. GUNTER MUECKE: Mr. Buxton, perhaps I could add to that. The figure... The only figure we have at the moment regarding the charge per hole is the one that has been mentioned in the initial blast, and that is 45 kilograms per hose.

If we take the 32 tonnes that we are looking at here, the number of shot holes that would have to be used would be in the order of 600, 700, so perhaps in the same undertaking, could we get an idea as to whether these

figures are what you have in mind or how they differ from what I just mentioned, that is to say the charge per hole and the number of holes required per blast?

Mr. PAUL BUXTON: Thank you. I will add that to the list, thank you.

THE CHAIRPERSON: Thank you. Now we will move forward into our agenda for this morning. We have with us Environment Canada, four individuals.

Could I get you all to identify yourselves, your name and your affiliation within Environment Canada, if possible.

If you have a name which is difficult to spell or unusual in any way, would you please spell it out? It's for the benefit of the transcription process.

Mr. ALLAN HANSON: Allan Hanson, a Wildlife Biologist, Canadian Wildlife Service, Environment Canada.

Ms. MARIA DOBER: Maria Dober, and that's DEPARTMENT-o-b-e-r; I'm a Regional Director for Environmental Protection Operations, Environment Canada, in Halifax.

Mr. GARY LINES: Gary Lines, and that's L-i-n-e-s. I am a Climate Change Meteorologist with the Meteorological Survey of Canada Branch, Environment Canada.

Mr. BARRY JEFFREY: Barry Jeffrey, I'm

with the Environmental Assessment Program for Environment Canada for the Atlantic region.

THE CHAIRPERSON: I believe you have a presentation for us?

Ms. MARIA DOBLER: Yes, we do.

THE CHAIRPERSON: Thank you.

PRESENTATION BY ENVIRONMENT CANADA - VARIOUS INDIVIDUALS

Ms. MARIA DOBLER: First of all, I would like to thank the Panel for the opportunity to participate in these public hearings with respect to this Whites Point Quarry and Marine Terminal.

You've met the representatives that we have here today. I would like you to be aware that there are a number of other people within Environment Canada who have participated in the review of this Environmental Impact Statement.

While they are not here today, we will try and answer any questions related to their specific areas of expertise.

If that is not possible, we do commit to bringing back to you information related to specific questions prior to the close of the hearings.

I'd like to start this morning by describing our role in the Panel Review for this Project.

For this proposed quarry project,

Environment Canada is participating as an expert federal authority under the Canadian Environmental Assessment Act.

As an expert federal authority, Environment Canada does not have a specific environmental assessment decision in relation to this Project, nor does this Project require any permits or authorizations that would be issued by Environment Canada.

However, as an exert federal authority, Environment Canada is in possession of knowledge and information in a number of areas that are pertinent to this Project.

Our knowledge and information is based on the Department's authorities under federal legislations. Some examples that are directly relevant to this review include the **Department of Environment Act**, the **Migratory Birds Convention Act** and the **Fisheries Act**.

The **Department of Environment Act** gives Environment Canada the responsibility to gather and interpret climatological and environmental quality data.

The **Migratory Birds Convention Act** gives us the authority to enforce general prohibitions against taking, disturbing, destroying or otherwise harming birds, their nests and their eggs.

Certain sections of the **Fisheries Act** give Environment Canada authority to enforce general

prohibitions against the deposit of deleterious substances into waters frequented by fish.

The overall governance of environmental issues is generally shared with several other federal and provincial departments.

Some examples of this are highlighted: The protection of birds is shared between Environment Canada and the provinces.

Environment Canada, Fisheries and Oceans Canada and Parks Canada share a responsibility for the protection and recovery of species listed under the **Species at Risk Act**.

The Federal Government also cooperates with provinces under the Accord for the Protection of Species at Risk.

Responsibilities for protection of water and air quality are generally shared with the provinces.

As an expert federal authority, Environment Canada has reviewed the Environmental Impact Statement and the responses to information requests which has been prepared by the Proponent.

As a federal authority, our role in this process is to identify issues, ask questions and make recommendations for the consideration of the Panel.

Based on the invitation from the Panel

to participate in these hearings and report on our findings, Environment Canada prepared a written submission focussed on specific climate, wildlife and environmental quality issues where we believe that further clarification should be provided.

For each of these issues, recommendations have been provided for consideration by the Panel where additional analysis or actions could be taken to further reduce the uncertainty and potential adverse environmental effects.

The Department has filed its written submission with the Panel Secretariat, and I now believe that it is posted on the Panel Review Website.

Our presentation here today is based on that submission.

Through the course of this presentation, I will focus on each of the three key issues that we have identified, and I will highlight the recommendations that we have made on these issues.

The first of the three issues that I will be speaking to relates to how effects of the environment on the Project have been considered by the Proponent.

As stated, Environment Canada has relevant expertise on climatological conditions.

In a coastal marine environment, important factors to be considered in assessing effects of the environment on a project include winds, precipitation, fog, wave action and storm surge.

The extremes and variability of these factors and the influence of climate change merit particular attention in minimizing the risks of accidents and malfunctions which can have consequences for valued ecosystem components such as wildlife and environmental quality.

While the specifics of future climate variability are uncertain, climate scientists do know, as a result of running a series of global climate models and analysing the results, that climate variability will increase.

This means that relying solely on the change and the mean value of any climate variable will not provide a complete picture unless you also consider the change in future frequency and intensity of extremes.

Environment Canada can provide limited data sets specific to the Annapolis Valley. The specific site is in Greenwood, Nova Scotia.

On projected temperature change, in degree Celsius, and precipitation change in percent, monthly, annually and seasonally, for the three tri-decades

leading through the next 100 years.

Environment Canada can also provide limited information on extreme climate events such as extreme rainfall by duration, 24-hour, 3-day, 5-day, and its projected change of frequency into the future.

We are also able to provide assistance in interpreting values projected by global climate models as they relate to the specifics of this Project.

In the review of this particular Project, Environment Canada has described how climate conditions could affect blasting activities, the sediment retention ponds and the marine terminal.

The Proponent has indicated that: "No blasting will be permitted if there is a thermal atmospheric inversion or a low cloud cover or fog conditions".

Environment Canada has conducted an analysis of the likely frequency and duration of periods when blasting would not be possible based on the Proponent's criteria and using available climate data.

Based on our analysis, Environment Canada believes the Proponent may be underestimating the number of days when weather conditions would not allow blasting.

While we have not offered a specific recommendation in this matter, it would be prudent for the

Proponent to reconsider the available climatological data and recalculate the likely number of days that blasting could not take place.

In the design of sediment retention ponds, Environment Canada encourages the use of the daily rainfall data set available for the years 1870 to 2006 in the calculation of the 24-hour 100-year return period rainfall event.

Environment Canada calculations using this long-term data set yield a predicted rainfall amount of about 150 millimetres, compared to the amount of approximately 125 millimetres calculated by the Proponent using the 1971 to 1996 data set.

When applying meteorological information to the design of infrastructure such as the retention ponds, the Proponent should not rely solely on historical information.

Recent research by Environment Canada as reported in "Water Sector Vulnerability and Adaptation to Climate Change", prepared by JSCI and MSC (2000), has indicated that:

> "...when accounting for the effects of climate change on extreme events such as particularly heavy precipitation, the return period for these events could

reduce by at least a factor of two."

This would result, by the end of the century, in 100-year event amounts becoming 50-year event amounts.

Also with regard to rainfall, the Proponent indicated in its documentation that sediment retention ponds would be designed and constructed to accommodate probable maximum precipitation or PMP events.

However, we were unable to find a PMP analysis in the submitted E.A. documentation.

It would be helpful if the extreme rainfall threshold to which the ponds are to be designed could be confirmed.

The Proponent has indicated that draw down of sediment retention pond water would begin at least 72 hours prior to a forecasted major storm.

However, it's important to note that Environment Canada does not provide a 72-hour warning window.

Severe weather warnings are issued 12 to 24 hours in advance of a predicted event and a worded forecast for rainfall amounts is issued no more than 48 hours in advance.

With respect to potential effects of the environment on the project, Environment Canada encourages

the Proponent to consider appropriate climatological factors and best available data in finalizing sediment retention pond design and to take steps that would help ensure built structures remain effective, during and even after storm events.

In this regard, the Proponent is further encouraged to ensure that the inspection plan for sediment retention ponds take storm events into consideration.

Sea-Level Rise is also an important consideration in project planning and design.

The recently released Inter-governmental Panel on climate change (working group 1) full report includes an update of the global range for Sea-Level Rise by 2100.

These updated predictions reflect current scientific knowledge and in understanding that thermal expansion and land ice melt are likely the dominant factors leading to Sea-Level Rise.

Based on this most recent information, Environment Canada has updated the Sea-Level Rise factor that it encourages proponents to incorporate into the planning and design of Atlantic Canada developments.

Based on average projections for Sea-Level Rise, combined with subsidence of the land mass, an average relative Seal-Level Rise of approximately 30

centimetres by the year 2050 is estimated for Atlantic Canada.

Therefore, we would encourage the Proponent to incorporate a total relative Sea-Level Rise of approximately 30 centimetres into project planning and design.

The marine environment within the project area is highly dynamic.

In the E.A. documentation, Environment Canada looked for characterization of environmental conditions that would influence the integrity and operation of the marine terminal.

The Proponent has described a reasonable procedure for developing a detailed analysis of the marine environment.

Overall however, the Proponent appears to suggest that oceanographic conditions at the project site do not pose any particular engineering challenges for the design and operation of the proposed marine terminal.

Information available to Environment Canada suggests that these conditions could pose considerable difficulty.

The Department has conducted a preliminary analysis of the frequency distribution of wave heights in the Bay of Fundy and wind speeds at coastal

stations which may be helpful to a fuller understanding of this issue.

I'll summarize those results now, but they are described in more detail in the Department's written submission.

Environment Canada understands that typical operating limits for ships berthing and loading at the marine terminal may be around a significant wave height of 1.5 metres.

Available wave data shows that significant wave heights in the area reach and exceed two metres, approximately 17 percent of the time on an annual basis.

Looking more closely at December, January and February, months where wind and waves are generally higher, we found that significant wave height over 1.5 metres occurred more than half of the time. The peek significant wave height was 9.6 metres.

In addition, during those same winter months, waves frequently had longer wave periods, that is the time between waves tended to be longer.

The longer wave periods have the potential to amplify the wave-response movement of the Panamax-size ships that are proposed for use in this Project.

The Proponent has also indicated that the wind and wave data comes from a grid point in the middle of the Bay of Fundy and does not necessarily represent conditions specifically at Whites Point.

However, the water between the grid point and the proposed locations of the mooring dolphins remain quite deep, so waves could retain much of their original energy.

Wind data from Brier Island during winter months showed winds frequently exceeding 20 knots, and sometimes exceeding 35 knots.

It also showed that winds during the winter are predominantly from the west, northwest and the north. As a result, there would be no sheltering from the land at the marine terminal.

This preliminary analysis of winds and waves alone suggests that additional investigation of site conditions is warranted during the project-planning stage.

Further analysis of available information would reveal the potential frequency at which operating thresholds could be exceeded at the Project location.

The analysis would also highlight implications for Project design and operation, as well as highlight steps needed to reduce the risks of environmental

emergencies.

Environment Canada identifies in its written submission some specific considerations and data sources that can be accessed by the Proponent in conducting these analysis.

Environment Canada encourages the Proponent to conduct this further analysis of environmental conditions expected at the Project site, including a consideration of appropriate climatological factors and best available data, and to identify any important implications for design and operation of coastal infrastructure.

The second of the three key issues I am highlighting today relates to wildlife, and in particular migratory birds.

Environment Canada is responsible for delivering on Canada's obligations for the conservation of migratory birds through administration of the **Migratory Birds Convention Act** and its associated regulations.

The **Migratory Birds Convention Act** applies directly to the protection of migratory birds, including their nests and eggs, while habitats are generally managed under the authority of provincial or territorial governments.

The proposed Project has the potential to affect migratory birds. It is incumbent upon the

Proponent to identify the best approach to complying with the **Migratory Birds Convention Act** based on the specifics of this Project.

In support of the Panel Review, Environment Canada has provided information and identified some management considerations related to potential interactions of migratory birds with blasting activities, project lighting, accidents and spills and clearing of vegetation.

Many birds use the northern coastal waters of Digby Neck, and this is reflected in the results of a Winter Fieldwork conducted by the Proponent.

In the absence of guidelines for blasting activities on-land and protection of waterbirds, the Proponent proposes the use of a guideline that is used to protect pinnipeds, such as seals.

Based on this approach, if waterbirds are sighted within 170 metres of the blast site, the blast coordinator would be notified and detonation would not take place until birds had moved out of that 170-metre radius.

To minimize potential adverse effects on migratory birds as a result of blasting operations, we recommend that the Proponent implement a series of measures as follows.

The Proponent should implement an

appropriate blasting guideline on a year-round basis for the protection of all groups of migratory birds using the coast, including waterbirds, waterfowls and shorebirds.

Furthermore, the Proponent should, in consultation with Environment Canada, design a monitoring program that allows for detection of potential adverse effects and implementation of timely adaptive management actions.

Should the project should proceed, EC would expect that the Proponent would take the necessary action if its monitoring program detected adverse effects on migratory birds.

Such actions could include revisions to those blasting guidelines.

Bird collisions at lit and floodlit structures have been a growing concern which has been documented for a range of projects. In Atlantic Canada, nocturnal migrants and night-flying sea birds are the birds most at risk of attraction to light.

Attraction to light may result in collision with the lit structures or their support structures, or with other birds.

Environment Canada agrees with the Proponent's proposal to use sensor-activated lighting for security purposes. However, it is recognized that for most

of the year night lighting would be required for early morning hours and in the evening during the operation of the facility.

In its submission, the Department has identified a number of best management practices and additional information sources related to this issue.

The Proponent has indicated that it intends to test the effectiveness of mitigation measures for lighting by conducting monthly monitoring for a period of one year in the vicinity of project structures during bird migration periods and quarry operations.

While Environment Canada agrees that a follow-up program is important to managing this issue, the monthly monitoring as proposed is likely to be of limited value, as many bird carcasses would be scavenged before they are detected.

Therefore, we are suggesting that the Proponent should prepare a detailed plan for minimizing potential adverse interactions between birds and lighting that includes a detailed avian collision monitoring program designed in consultation with Environment Canada.

The monitoring program should concentrate survey efforts on peak spring and fall migration periods, as well as mornings following inclement weather, so as to facilitate the timely detection of adverse effects and

implementation of appropriate mitigation actions.

The Department should be provided with monitoring results in a timely manner, but should be immediately advised, and that would be within 24 hours, of any collisions involving a single species at risk or large numbers of birds, and we would consider that to be anything greater than 10 birds.

In our written submission, we have referred to a guidance document that may be helpful in the preparation of a detailed monitoring plan to address this issue.

The risk and significance of uncontrolled releases of hazardous materials interacting with waters and areas frequented by migratory birds has not been fully considered in the information provided by the Proponent. In the case of hydrocarbons, even a small spill could be significant if it reaches avian species at risk, sensitive habitats or large numbers of birds.

The Proponent should develop a spill response plan that addresses spills that may result in oiling of birds and/or sensitive habitats. The plan should include specific measures for keeping birds away from a spill, for dealing with accidents where birds are oiled and/or sensitive habitats are contaminated, and for handling oiled birds.

Another key element of a mitigation plan for the protection of birds is avoidance of certain project activities during the breeding season for migratory birds. One of these project activities is clearing of vegetation. Environment Canada has provided information on best practices related to clearing activities in its written submission.

The Environmental Impact Statement documentation indicates that the Proponent has conducted biophysical surveys. Environment Canada would request that a copy of the 2006 biophysical survey reports be provided.

We would also ask that the Proponent commit to providing the Department with any additional reports regarding the pre or post-construction survey and monitoring work that is conducted for birds, wetlands and terrestrial species.

Should the project proceed, this information will allow the Department to confirm legislative requirements and to provide assistance as appropriate to Federal responsible authorities as well as Provincial agencies in meeting obligations resulting from this environmental assessment process.

The third issue raised by Environment Canada relates to the consideration of potential impacts on environmental quality. As previously indicated, Environment

Canada has expertise related to air quality and water quality that is relevant to this environmental assessment process.

With respect to water quality, Environment Canada administers legislation that would apply to the project if it should proceed.

The Proponent has described several activities that could result in the release of contaminants to water. It is the responsibility of the Proponent to ensure that these activities are managed so as to prevent the release of substances deleterious to fish or harmful to migratory birds.

Environment Canada had requested information regarding the potential for residues of blasting activities to enter water sources and adversely affect water quality. As of yet, this information has not been provided.

We would recommend that the Proponent submit the requested information as well as proposed management measures, as appropriate, so that potential adverse effects can be better understood and appropriate mitigation and follow-up monitoring measures identified.

Should the project proceed, it will be important to develop and implement a water quality monitoring program that would allow verification of compliance with legislative requirements as well as timely

information on changes to water quality within the project area.

Should monitoring identify environmental impacts or demonstrate non-compliance with regulatory requirements, mitigation measures should be implemented as necessary.

Therefore, we recommend that the Proponent develop and implement this water quality monitoring program to confirm the regulatory compliance and facilitate the development and implementation of appropriate adaptive management actions.

The Proponent has also described several activities that would result in releases of contaminants to air. At this time, Environment Canada does not regulate air emissions related to this project.

However, through the Canadian Council of Ministers of the Environment, the Department does cooperate with its provincial and territorial counterparts in investigating applicable best management practices and in setting national standards for certain substances.

For example, the Continuous-Improvement in Keeping-Clean-Areas-Clean principles of the CCME "Canada-Wide Standards for Particulate Matter and Ozone" are pertinent to this proposed project, which is located in an area that is relatively pristine in terms of air quality

conditions.

The Proponent has satisfactorily addressed many of the Environment Canada Information Requests related to the assessment of potential effects on air quality.

However, estimates of contaminate emissions from certain project sources such as heavy equipment and bulk carriers has not yet been provided.

Based on the project description, it is not expected that engine emissions related to the project would contribute significantly to air quality issues.

However, both Environment Canada and the international community recognize that the marine sector is an increasing contributor to air emissions.

The provisions for engine emission estimates for these sources is important to a full accounting of potential adverse effects and is consistent with investigations of the contribution of marine emissions elsewhere in Atlantic Canada and North America as a whole.

In satisfying the EIS guidelines on the assessment of effects on air quality, the Proponent is encouraged to provide engine emission estimates for all project sources influencing air quality.

In this presentation, we have identified issues related to the Departmental mandate and offered

recommendations that we believe merit further attention in the planning and management of the project.

We have also made several references to the need for additional information analysis and follow-up monitoring. In addressing this need, uncertainties can be reduced, impact predictions can be verified and the effectiveness of mitigation measures can be determined.

The information gained can and should be used for the management of unacceptable or unexpected effects of the project.

Environment Canada is of the opinion that, should the project proceed, the Proponent should be in a position to address our recommendations. The Proponent is advised, however, that it is ultimately responsible for compliance with the legislation that Environment Canada administers.

Once again, I would like to thank the Panel for your attention and we would be happy to try and answer any questions that you may have.

THE CHAIRPERSON: Thank you, Ms. Dober. That was very clear.

Jill Grant will begin some questioning.

PRESENTATION BY ENVIRONMENT CANADA - QUESTIONS BY THE PANEL

Dr. JILL GRANT: Thank you very much for that very informative presentation.

We noticed in the earlier material from Environment Canada that one of the other areas that was commented on that you didn't mention today was the need to address principles of sustainable development through the assessment.

I wonder if you might comment on that issue; whether the approaches taken are sufficiently addressing concerns about sustainable development.

Ms. MARIA DOBER: I'll try and answer it briefly, and then I would ask Barry if he had any follow-up.

In terms of the initial information provided by the Proponent, we offered some information sources that the Proponent could access to get some perspectives on issues like sustainable development.

With respect to our Department, we obviously have a leadership role to play in terms of the environmental pillar associated with sustainability, and I think that the submission that we've provided and the information that we've shared here today indicate how we would do that with respect to looking at environmental predictions with respect to environmental protection and with respect to ecosystem sustainability.

So from those aspects, that is where our Department sees sustainable development issues coming with respect to this project in specific.

Do you have anything further?

Mr. BARRY JEFFREY: Yeah. I guess that pretty much captures it.

We certainly offered some materials that we thought could be helpful to the Proponent in addressing some of the broader principles that have been put down by the Panel as it related to precaution and ecosystem approach. some of these were third-party materials, but nevertheless could be instructive.

And as Maria pointed out, as well, as a team, as a Department, we certainly had those principles in mind as we approached the various issues such as migratory birds and the precautionary approach that could be taken in protecting that species.

So that would be perhaps the way we focussed our efforts when it came to the sustainability principles that were identified.

Dr. JILL GRANT: And how would you characterize the assessment provided in terms of whether it addresses those principles, sustainable development precautionary principles?

The Environment Impact Statement provided, does it do that?

Mr. BARRY JEFFREY: Well, in terms of our specific mandate of responsibilities, I've focussed again, I

guess, on those very specific things where we think the environmental management effort could be enhanced to better address ideas of precaution and sustainability.

And perhaps maybe we could talk some specific examples on migratory birds or climate.

Mr. ALLAN HANSON: From a wildlife perspective, one of the approaches we take to sustainable development is a mitigation sequence of avoidance of impacts, minimization of impacts, and compensation for any residual impacts.

And to a large extent, that's what the plan for monitoring is trying to accomplish with regard to coastal birds.

Dr. JILL GRANT: Thank you. Just to find my next question here.

You made some comments in your presentation about the scientific information that was provided in the assessment not being adequate to determine some of the effects, and we're wondering whether you see it as adequate for effective adaptive management.

Is the baseline information that's provided adequate for effective adaptive management?

Ms. MARIA DOBER: We have indicated that we think that there is additional information that the Proponent can provide an additional analysis that should be

conducted.

We believe that, with what has already been provided, this should help in identifying or reducing some of the uncertainties, verifying some of the predictions and then allowing the Proponent to manage the project in a way that can respond to issues that arise throughout the life of the project.

Mr. ALLAN HANSON: From a migratory bird perspective, we feel that the information provided by the Proponent is adequate to allow us to establish the baseline conditions on site, but we have proposed additional monitoring to be carried out in the future to allow us to understand the impacts of land-based blasting on coastal birds.

And from an adaptive management approach, we would take that new information and revise the guidelines for blasting.

The reason why we do not know the effects of blasting on those coastal birds is that information is not contained in the literature. We have different species at different distances from the shore. We have them on top of the water; we have them under the water.

We have questions with regard to the intensity of the blast and how much of that sound would be removed by the buffer and how much attenuation there would

be over distance.

So from an adaptive management approach, we take a precautionary approach. We make our decisions based on the best available information, and we constantly strive to have new information to revise our guidelines.

Dr. JILL GRANT: While we're on the topic of migratory birds, can you give us an idea of how important this area is as a fly-away for migratory birds?

Mr. ALLAN HANSON: The peninsula Digby Neck in total is a natural migration corridor for birds travelling north and south. The specific 120-hectare site, in and of itself, is not overly important, but it is part of that connectivity.

And with regard to the importance of a specific site, Brier Island, for example, would be more important because it's the land terminus or the first point of land, so birds will congregate there versus the rest of Digby Neck, where they're just moving through during migration.

Dr. JILL GRANT: And are you able to give us an idea of when birds are migrating through? Are they migrating over land, over water, how close to the shore?

Is there any kind of generalizations that we should understand about that?

Mr. ALLAN HANSON: With regard to bird

migration, it's very specific to the individual species and, to some degree, weather conditions, so there's no general answer to that question.

Dr. JILL GRANT: In your presentation, you talked quite a bit about coastal conditions and the concerns about whether there's adequate information provided.

Can you give us an idea of the conditions in the summer?

You talked quite a bit about winter conditions, and the project proposes that there won't be ships coming in during the worst of those conditions, but when you give the averages, we're wondering what the implications are for the times when the ship is likely to be coming in, which is during the fall, summer, spring period.

So what are the extremes there that would be, of issue?

Mr. GARY LINES: In connection with the spring and summer months, certainly we're looking at less values than we focussed on in the submission. We did focus on the winter months. If the Proponent wants even more detail on that, we can provide it. I don't have it at my fingertips this morning.

The conditions, however, tend to be less as far as wave height, on average, and typically wind speed,

as well, so we can certainly provide that. We've noted in the submission data sets that they can be used to actually get all of those conditions for those.

The main reason we focussed on the winter months was to try to build a sense of what the total condition is like across that area and to not discount severe conditions simply because it happens to fall in the months that they may not be operating, so we just wanted to make sure that that was covered in the submission.

Dr. JILL GRANT: Thank you.

You spoke about the sediment ponds and concern about the capacity for which they would be designed and, in discussions the other day, it was quite clear that the ponds would be kept at the level necessary to meet the requirements for operating during a drought year, so they would be kept at the kind of maximal level required for operational purposes, which could mean that in an extreme storm event they will have to flash over.

So I wonder what concerns you might have about the mobilization of fine particles in the ponds in those extreme conditions, and you mentioned also about the residuals potential from blasting.

Does your analysis give us any indication of what the potential concerns would be there?

Ms. MARIA DOBER: At this point, we've

asked the Proponent to provide additional information with respect to the blasting residues that might be expected to be retained within the sedimentation ponds, and we don't have that information at our fingertips.

However, should there be an overflow of the sedimentation ponds, yes, it is entirely possible that both particulate matter as well as some of the contaminants in terms of nitrites and potentially ammonia would also be captured within that.

So that is one of the reasons why we've asked for this additional information, so that we can get a better sense of the potential for that to happen and the potential impacts associated with that so that monitoring and mitigation measures can be developed specifically to deal with those issues.

Dr. JILL GRANT: Thank you.

I noticed in your earlier submissions, or perhaps it's in the recent one as well, concerns about decommissioning; whether sufficient information is provided about the decommissioning of the facilities to give sufficient information to determine the effects on a long-term basis.

What's your view on that?

Ms. MARIA DOBER: I think the submission talks about some potential options that are available in

terms of decommissioning and reclaiming the land. We provided that information again as examples of what things might be considered.

It's not an area that Environment Canada would be directly involved in at that stage of the project, but we would be certainly willing to provide any assistance to those agencies that would be involved in that instance.

Dr. JILL GRANT: Thank you.

And I noticed in the earlier submissions from Environment Canada that there were some questions raised about the suitability of this site given the proximity of SARA-listed species and of rare and endangered species on the site. I believe the earlier submission asked why the site be chosen, given the presence of those species in the vicinity.

I wonder if you have any further comment on that.

Mr. ALLAN HANSON: With regard to species listed under SARA that Environment Canada has the mandate for managing, that is restricted to the Harlequin duck, which, during the winter of 2006, two individual birds were seen 200 metres west of the western boundary.

So from an Environment Canada perspective, there is limited impact on species at risk.

The two individuals were seen there, and

there's no indication from our survey data that this is a traditional wintering site.

There are other areas along Digby Neck where you'll have 60 to 80 birds wintering year after year. As well, I would also mention that in Nova Scotia the number of wintering Harlequin ducks ranges from between three to five hundred birds, so the sighting of two individual ducks does not create great cause for concern.

And with regard to provincially-listed species, Environment Canada has supported the recommendation of the Nova Scotia Department of Natural Resources to set aside a conservation buffer area or exclusion zone that would protect those provincial species at risk, the plants.

Dr. JILL GRANT: In the earlier submission, there were some comments as well about concerns about fragmentation of forest habitat.

Do you have any further comment on that?

Mr. ALLAN HANSON: In general, Environment Canada has concerns with regard to the fragmentation of mature forests because there are certain bird species that require large blocks of habitat.

And in discussion with the Proponent and with regard to the information that they provided on the birds that are using the site plus the type of habitats, it's Environment Canada's opinion that there are not... The

classic definition of interior mature forest does not exist on the site.

The stand age is a mean age of 49 years and the species structure is also not there, so we're not concerned about the loss of this forest habitat affecting migratory birds.

Dr. JILL GRANT: Thanks.

And if I might just follow up on the concerns about emissions, air emissions.

Obviously some particular things trigger the response to suggest that we need further information on that, so could you give us an idea of the kinds of concerns that would lead to the advice that we need much more information about the emissions from the heavy equipment and the ship loading?

Ms. MARIA DOBER: I think our submission has indicated that we don't necessarily see a large issue with respect to air quality. What we have recommended, that in order to get a full accounting of the emissions from the project that we would recommend that the emissions from engine sources be analysed and considered.

Part of what Environment Canada is doing within Atlantic Canada is participating in an inventory of emission sources from marine vessels. And certainly, in projects like this, if that full accounting is done, then we

have a much better understanding of what the overall implications may be from vessel traffic in general.

Dr. JILL GRANT: Thank you. Is it okay for me to ask a question of Bilcon?

Mr. Buxton, is the information on the emissions from heavy equipment and this ship as it's idling, as it's loading and unloading, can... Or, sorry, just loading, can you provide that information?

Mr. PAUL BUXTON: Yes. I was just making that note, that we'd be pleased to provide that information.

Dr. JILL GRANT: Can we have a date by when you will be able to give us that information?

Mr. PAUL BUXTON: It would have to be the 29th or 30th. Thank you.

Dr. JILL GRANT: Thank you.

Dr. GUNTER MUECKE: Could I just ask for some clarification of terms, just so that I'm absolutely sure what they mean?

You mentioned peak significant wave height 9.6 metres. What, exactly, is "peak significant wave height"?

Mr. GARY LINES: I might go back to the definition of "significant wave height", which is defined as an average of the highest two-thirds of waves over a period in a particular scenario.

And why that's chosen that way is that's typically the sort of wave and wave energy that marine vessels are in when on the ocean, would experience more.

There's quite a bit of wave action, a lot of mixing of trains of waves, and in our definition we can relate that significant wave height to wind much more easily than trying to account for every single wave value that's out there.

Peak significant wave height is simply the highest value of that group rather than taking an average.

Dr. GUNTER MUECKE: Just to make sure I understand, peak significant wave height means it is possible at that location, at some stage, for a wave to reach that height?

Mr. GARY LINES: That's correct. I might also add that it's not the highest possible wave.

Dr. GUNTER MUECKE: It isn't.

Mr. GARY LINES: Yeah, it's not the maximum wave possible. It's the highest of the one that's most likely to be experienced at that location.

Dr. GUNTER MUECKE: And when you generate that, can you also generate the maximum?

Mr. GARY LINES: There could be a maximum available, yes, although the occurrence of that is a very

small percentage, usually much less than 10 percent of the time that it'd even occur that you'd get the maximum. That's why we tend to stay with the significant wave heights. They're much more frequent.

Dr. GUNTER MUECKE: Yes, okay. I understand that now.

The other, in terms of definition of meteorological terminology, is in terms of forecasts, you say warnings and worded forecasts, versus forecasts. Just for me to be clear, when you refer to the... Maybe I'll tell you what I understand.

Mr. GARY LINES: Yes.

Dr. GUNTER MUECKE: And then you correct me. Is that the 48-hour forecast basically says there's a storm coming, there's going to be a lot of rain, unusual amount of rain. It's a general forecast. Is that correct?

Mr. GARY LINES: That's correct.

Dr. GUNTER MUECKE: And 12 to 24 hours before the event, you will actually predict millimetres of precipitation?

Mr. GARY LINES: Yes. When we refer to a warning, it's if we believe the amounts are going to hit a particular value over a period of time, we'll issue a warning saying this amount over this particular period of time.

We may, through the 48 hours, actually put some amounts on precipitation, and they may not hit the warning level. So we may still put in, to give you a solid example, we've got rain the next two days. We're looking at five to ten millimetres of rain overall. It doesn't hit the warning level, but it enters as an amount. When we hit a certain warning level, that's when we put out those amounts at the warning level.

Dr. GUNTER MUECKE: Thank you. That clarifies it.

You have provided us with wave height, and their probability, particularly for the wintertime period. I assume that this is for current conditions. Is it possible to project these for future conditions? I assume that in climate change that these values will change.

Mr. GARY LINES: Yes. Some research has been done within Environment Canada to look at wave heights over the North Atlantic Basin, and has noted that there is an increase in wave height generally, with climate change.

The value is not significantly high. We're talking, in terms of significant waves, on average possibly half a metre, over the span of the next hundred years or so. So it's not a huge change expected there, over that broad basin.

I'm not aware of any work specific to

the Bay of Fundy relating to that, so if someone was to ask me, "What do you expect with these wave heights over the next while?", I would have to refer back simply to the work in the broader North Atlantic Basin, and would caution people that it may or may not apply directly.

That's the current sort of state of the affairs with understanding where wave heights are going.

Dr. GUNTER MUECKE: So, but just in a generalized sense, at the moment you're saying that at the current time wave height of one and a half metres can be expected 55 percent of the time. With climate change, what you would see is an increase from 55 percent to some other value which is difficult to...

Mr. GARY LINES: More likely, in a general sense, that the 1.5 on average would increase, but I wouldn't see larger than half a metre, based on the research in the North Atlantic Basin.

Dr. GUNTER MUECKE: But that would mean, sorry to belabour the point, but wouldn't that mean that for the 1.5 metre wave the frequency would increase?

Mr. GARY LINES: We...

Dr. GUNTER MUECKE: I mean, the probability of 55 percent.

Mr. GARY LINES: Possibly, but I can't conclusively say that. I'll have to go back and look.

Dr. GUNTER MUECKE: On a different topic, in your submission you indicate that what is variably called the buffer zone or the environmental protection zone of 30 metres proposed by Bilcon may not be sufficient.

Could you give us an indication of the width of the buffer zone that you would like to see?

Mr. ALLAN HANSON: First, let me preface my remarks by saying that the 30-metre buffer zone that oftentimes is applied to water courses and water bodies has been developed specifically in relation to surface run-off, removal of nutrients and sediments, and we don't believe that it's appropriate in all cases for protection of wildlife habitat, so those creatures that require an riparian zone, nor is it appropriate in terms of protecting habitat that's beyond that buffer.

A 30-metre buffer zone is relatively narrow when it comes to protecting this coastal bog, because within 30 metres we have a lot of blow-down.

As well, we are not only dealing with nutrient transport, but we're trying to protect and buffer the conservation area from mobile organisms, et cetera.

So we, Environment Canada, supports Nova Scotia DNR's recommendation that the buffer zone be 100 metres and definitely not 30.

Dr. GUNTER MUECKE: Thank you.

I'm coming back to atmospheric conditions, but sorry about switching back and forth. In your submission you indicate that fog conditions exist over substantial period, particularly in the summer months.

We are still trying to determine, and we haven't received an answer from Bilcon yet, as to what constitutes fog conditions in terms of blasting. So just so I have the information, once we get a Bilcon response, what does, in the context of the percentages that you have given, what would you consider fog conditions, in terms of visibility, obviously, right?

Mr. GARY LINES: Right. In the submission, we provided information as specific to Yarmouth, and we provided percentages based on what we call IFR conditions. That refers to instrument flight rule conditions. It goes back to aviation terminology to determine various ceiling and visibility restrictions for aircraft.

In the case of the percentages, what we typically look at is that for IFR conditions it means cloud ceiling less than 1,000 feet above ground, and a visibility of less than three miles.

Dr. GUNTER MUECKE: Sorry, I missed that. Three miles?

Mr. GARY LINES: Three miles. And the

percentages we provided, just to refer to it, that there were upwards of, in through that summer period, upwards of 157 hours where that condition existed at Yarmouth.

Our concern had to do with the fact that, again going back to what we hear from the Proponent on what conditions are limited that way, it is fairly clear that there are quite a few hour where those conditions exist, and that was the definition that we were using in the submission.

Currently, I think the other related item to do with thermal inversion, or the thing to point out there, is that you've got quite a bit of variability possible. You could have a thermal inversion, yet no fog present, and you could have the other, some of the other conditions happening, as well.

So there's some variability around that, but just to give you an idea of, give the Proponent and the Panel and idea of time, that's how we use the definition.

Dr. JILL GRANT: Just one question to follow up. Does Environment Canada release information on thermal inversions on a daily basis? Could the Proponent somehow find out that information, that a thermal inversion exists that day?

Mr. GARY LINES: There are several possibilities. One is that we do launch radiosonde balloons

and measure the atmosphere twice a day at various locations in Atlantic Canada.

My caution there would be that because the balloon launch is not at Digby Neck and the marine condition that exists along the coastline, you could have quite a bit of a different thermal inversion scenario there than you would have at the actual balloon site that we do regularly.

To actually confirm thermal inversion, there's several ways to do it. Actually, the cheapest way to do it is actually just to launch a radiosonde measure. And that's one possibility for monitoring the situation there.

There are other technological approaches you can use, but that's certainly, from our perspective, the least expensive, if you want to look at it that way.

Dr. GUNTER MUECKE: Coming back to fog conditions.

Mr. GARY LINES: Yes.

Dr. GUNTER MUECKE: Do you have any indications from your data, you're using Yarmouth as your base station?

Mr. GARY LINES: Yes.

Dr. GUNTER MUECKE: In a relative and general sense, is this portion of Digby Neck equivalent to

fog conditions likely to be more severe, less severe, or more frequent or less frequent? Any ideas on that?

Mr. GARY LINES: Typically, the fog conditions are related, especially in the summertime, to ocean temperatures, and consistently, I think the temperature regime is relatively close, but you will have situations where the water can be warmer in the Digby Neck area than in around Yarmouth. It really is quite reliant on sea surface temperature.

To that extent, there could be some variability there, but I think in the long term, not a significant amount. So I do think that Yarmouth is relatively representative of what you can see there.

Dr. GUNTER MUECKE: Thank you very much.

Could I just change over to looking at blasting residues, which you have identified as a concern, which should be addressed?

The Panel has voiced the same concerns, and it's not a question but more of a request that I have here, and that is does Environment Canada have expertise in this field which could assist, in terms of blasting residues, that could assist us in defining what the problem is and how severe the problem could be?

Ms. MARIA DOBER: From an environmental quality perspective, yes, we have expertise that would look

at the toxicity of the contaminants that we would expect to see from blasting residues, so the nitrites and the ammonia, and my understanding is that yesterday, when DFO took an undertaking to come back with information related to the blasting residues, that they had actually indicated that they would work with us to do that.

So we are more than happy to do that.

Dr. GUNTER MUECKE: Thank you.

Dr. JILL GRANT: Just a couple of other questions about the climate change question.

Can you give us an idea of what we would expect in the way of changes to wind speed as a result of climate change, or if we would expect any increase or decrease in fog frequency as a result of climate change?

Mr. GARY LINES: Both those aspects, we haven't engaged recently in research to get specific numbers, either for wind or fog; however, I'll make some general comments around conditions expected with climate change.

And I think this applies generally - in other words, more globally - although it does have a local impact. We are seeing, from the global climate models, the tendency towards a shift in storm tracks, and the terminology is poleward. In relation to us, it would be tracking more to the west of Atlantic Canada.

What that implies is storm tracks and wind systems that indeed could end up funnelling through a basin like Bay of Fundy more dramatically than they have in the past, although that is a bit of speculation on our point at this point. We haven't actually studied that.

But we are looking at some studies that are indicating more frequent storms, and that will have an impact on occurrence of wind, and more intense storms. And in fact, the studies are really pointing to the fact that if there are, indeed, increased storms, that it will actually be the more intense ones that are increasing.

That implies stronger winds. However, as I say, we haven't gone after specific winds and studied that specifically.

In the case of fog, as I say, referring back to a comment I made earlier about the predominant production of fog in the summertime being related to sea surface temperatures, there's still a bit of a question in the scientific community on which way that will go with fog.

Generally, oceans are warming. This his has a general impact on sea surface temperature, but a regional one is still difficult to nail down. In other words, are the temperatures going to raise in the Bay of Fundy? We're not sure.

If they do raise, that could cut down on

the frequency of sea fog, advected sea fog, but again, we have not gone down that road to see specifically how that will impact on fog in the future. But there could indeed be changes, but they could shift either way, on fog.

Dr. JILL GRANT: Thanks. And one last question about the sea birds and the 170-metre exclusion zone.

There's nothing in the Proponent's proposal about what might be done if rafts of sea birds stay in the area for a long time, as they can sometimes, feeding in a particular area. What's your view about scare tactics or other things that might be used to get those birds to move?

Mr. ALLAN HANSON: Under the **Migratory Bird Convention Act**, it's illegal to harass or disturb migratory birds, so they would need to have a permit to purposely scare those birds out of the area.

Dr. GUNTER MUECKE: Coming back to the permit, is that for one time, or is it blanket?

Mr. ALLAN HANSON: The nature of those permits can vary among proponents. For example, we will give scare permits to blueberry growers which would cover an entire season. However, I would liken this scenario to aquiculture, where we have some aquiculture operations that have gone into known areas where sea ducks and coastal birds

have traditionally used, and we've not given scare permits there because the birds were there first.

Dr. GUNTER MUECKE: Which brings me to loons. Could you just outline how important this particular coastal area is in terms of the loon population wintering, and coming back to scare tactics, loons are special, as far as you're concerned. So what is the likelihood of getting permits for that?

Mr. ALLAN HANSON: With regard to birds using the off-shore areas during the, well, actually during the entire year, we have different species at different times of the year, and they're using different parts of that habitat.

So we would want to have minimal impact on those birds. In the submission, they talked about physiological damage, but we would also be concerned about impacting their behaviour, and that's why the monitoring program would be established; to determine what impacts blasting has on those birds, not only inside a 170-metre buffer, but outside of that buffer.

If the noise is not abrupt, the birds may not even react behaviourally to that noise, and in that case, it's not an issue. But we would take the issuance of a permit to scare birds away very seriously. If those birds were using those areas specifically for feeding, then any

time you scare birds away from their favourite feeding areas you're having an impact on the birds.

So we do not issue scare permits very lightly. We have to have a full understanding of the request, the alternatives to that request, and the impacts on the birds.

Dr. GUNTER MUECKE: Thank you. That clarifies it very nicely.

Coming back to the first part of my question, how important is this area in terms of loons wintering?

Mr. ALLAN HANSON: I think the specific location of the quarry is not of critical importance to loons, but the entire shoreline is.

The birds are going to be using the entire coastline, so that's the nature of our concern, would be just birds moving in and out of the area, and that's why we have suggested that additional monitoring take place in the future, to understand the impacts of the activities on the birds.

THE CHAIRPERSON: I just have one question for you. Yesterday, we had a presentation by two women who live close by, and they were referring to their experiences with some geological commercial enterprises close to them.

And I don't think it's overstating it too much to say that there was a sense of despair, or they were distraught. And because the even that had taken place close to their homes was such that it was not behaving the way it was expected to behave.

Now, you've made a very thorough and informative analysis, and presuming from that you make recommendations which we pass on, and this project is approved, then there is the presumption that everything that is agreed to will come about.

I'm coming to the subject of enforcement of regulation.

How do you respond to people, like the two women yesterday? In other words, we do the best we can to evaluate it at the front end, we put in all sorts of recommendations for monitoring and regulation and so forth, and then approval comes forward.

And then there is the expectation that all those rules will be followed, everything will happen the way we expect it to, and according to them, I have no knowledge of whether they're exaggerating or not, and they really weren't criticizing this project directly, it was really an experiential thing.

But what kind of advice do you give to those people? Because there were people sitting in the

audience here who were looking at this project who are against it, and might be willing to agree to it if it was clear that all of this mitigation and so forth was to come about. So some of that responsibility falls on you, your Department that is, and Provincial Departments and so forth.

What kind of advice do you give them, under these circumstances?

Ms. MARIA DOBER: From Environment Canada's perspective, the mitigation measures that are accepted and endorsed throughout this Environmental Assessment process, we would take them very seriously, and those that are related to our mandated areas, we would follow up on a regular basis to ensure that those issues that we had asked to be done, or that monitoring that we had asked to be done, was in fact done.

In terms of actual enforcement, we do have some specific legislative requirements that if the project was to proceed the Proponent would have to comply with those, and there is an Enforcement and Compliance Policy specifically with respect to the **Fisheries Act** - I'm sure there's one with respect to migratory birds, as well - that our enforcement officers use in terms of assigning priorities for their activities in any given year.

And this project, should it proceed, would be, again, added to the list of projects that they

would go and do inspections of on a regular basis, and ensure that the Proponent was complying with our legislation.

So from that perspective, we do take our follow-up very seriously.

THE CHAIRPERSON: What sort of recourse does a citizen have? And assuming that you go and find out that the process is not being conducted in the way that it was anticipated or agreed to, are there penalties, and what are those penalties?

Ms. MARIA DOBER: I'll speak to the enforcement side, and maybe Barry can talk to the EA process side.

Certainly under the legislation citizens have a right to contact our Department in terms of any issues that they believe are in violation of those regulations, and those complaints are taken very seriously, and they're investigated by our enforcement personnel.

With respect to those issues that Governments have agreed to do but are not necessarily enshrined in legislation, I'll ask Barry to speak to that.

Mr. BARRY JEFFREY: Yes, I guess inasmuch as the Government as a whole, Provincial and Federal, will be in the position of responding to the Panel's report and recommendations, certainly, yes, the Government takes it

very seriously and looks at the implementation instruments it has at its disposal to actually ensure that the mitigative measures or monitoring measures that were identified are, in fact, put in place.

There are some instruments, such as the ones that have triggered this Federal assessment in the first place. Fisheries and Oceans and their habitat authorizations, Transport Canada and their navigable waters authorizations, those are two examples of Federal tools and instruments that can be used to help ensure the recommendations that have been put forward and are accepted are also, in fact, implemented.

So conditions could be place on those kinds of permits, as an example.

However, there's other things for which perhaps there is no instrument in legislation that can be readily used to implement the outcome of the Environmental Assessment, and in those cases we've seen examples of where performance agreements, perhaps, were negotiated with a Proponent, or perhaps bonds were put in place to ensure certain matters were handled appropriately, or some other kind of agreement that was negotiated on almost a contractual basis.

I've seen those kinds of scenarios, as well, in other Environmental Assessments where they were

looking to ensure that the measures identified and accepted were implemented, and implemented effectively, with recourses offered if things did not unfold as had been anticipated, based on effects-monitoring results.

THE CHAIRPERSON: Would your Department consider penalties as severe as shutting an operation down until there is conformity? And if you do consider that, does that happen very often?

Ms. MARIA DOBER: Our Department, the regulations that our Department would apply to this project don't require permits. There are prohibitions. I'm not sure that gives us the ability to actually shut a facility down.

There are certain aspects of the facility, for example if there are emissions or effluents from the sediment retention ponds, that it takes some period of time to resolve, then that particular aspect of the project we can have some influence on, and that may, in turn, influence the entire project.

But in terms of actually shutting a project down, that is not within the bounds of our legislation for this project.

THE CHAIRPERSON: Thank you.

Mr. Buxton, over to you.

Mr. PAUL BUXTON: Thank you, Mr. Chair.

PRESENTATION BY ENVIRONMENT CANADA - QUESTIONS BY THE PROPONENT

Just first of all, perhaps a little clarification. You noted in your presentation that we had said somewhere in our document that we would not clear vegetation between May 1st and August the 31st. I think that is correct; in one instance we did.

In all other instances, we said we would not clear in any nesting season, and I want to make it clear that we do not intend to clear in any nesting season. That date got in there inadvertently, in one of our tables, but that the intent is very clear; that we will find out specifically what the entire nesting season is for the area, and we will not clear in that time.

Also, a point of clarification with respect to environmental preservation zones. In our discussions yesterday with NSDNR, we were specifically talking about hundred-metre zones in the coastal zone area. Is that what you were referring to today?

Mr. ALLAN HANSON: Yes, it was.

Mr. PAUL BUXTON: Thank you. With respect to blasting residues, the Panel has asked us for an undertaking, and we have something, I believe, put together on that, which is due in fairly shortly.

And just one last comment with respect

to... You had some observations with respect to the environmental design and operational considerations for sediment retention ponds. I just sort of wanted to make the point here that I think that at the beginning of our process we were concerned and had as a priority the storage of water for our wash process, and our concern, in fact, was much more geared to the retention of water and providing sufficient surface water and being able to store it in order to carry out our wash process.

We did go on from there and look at the possibilities of various significant storms of 100-year return and what that would do, would it over to, et cetera.

But I would like to make the point, and there will be a further undertaking, there is one under way at the moment that the Panel has asked for, and that contains a little bit more information, and perhaps I could ask you to have a look at that as well when it comes in.

But the catchment area is 143 hectares that involves the sort of retention ponds. 64 hectares of that is actually above the quarry. It is fresh water, it's clean water.

That flows down through the site, as it always has, and that has been part of our calculations with respect to retention for our operation but, in fact, if we got into or a severe storm were predicted, it has always

been our intention to bypass the water, that clean water from outside the quarry, straight into the Bay. It would not go into any part of the operation.

So I think that when our undertaking comes in to the Panel that may shed a little bit different light on the capacity of the sediment retention ponds to retain the water.

--- Pause

Mr. PAUL BUXTON: That's fine. Thank you very much, Mr. Chair.

THE CHAIRPERSON: Thank you, Mr. Buxton.

Now we'll turn to the audience, but first, are there any Government interventions, Federal or Provincial, that would bring a question forward? If not, are there any individuals?

Mr. Morsches and Mr. Marcocchio. Ms. Peach, did I see your hand go up.

PRESENTATION BY ENVIRONMENT CANADA - QUESTIONS BY THE PUBLIC

Ms. JUDY PEACH: Yes, Mr. Chair.

Mr. BOB MORSCHES: Doctor, concerning the weather, which the Environment Canada mentioned today, about three times a day I get the weather, about the only weather you can get in this area along Digby Neck down to Brier Island is from Digby and then one from Brier Island.

However, let's say they predict a partly

cloudy day and winds are rather calm.

Well, what happens about two hours later, along the coast, let's say, from Sandy Cove to Whale Cove, which is past Whites Cove, going all the way down to Brier Island, you end up with fog. Then you have heavy winds and very heavy rain.

That's two hours after you get a prediction for the day.

I have information that along the Digby Neck down along Long Island and Brier Island is very susceptible to immediate climate change, and you never know about it because you got the...

THE CHAIRPERSON: Mr. Morsches, this is heading towards a question, is it?

Mr. BOB MORSCHES: I'm sorry?

THE CHAIRPERSON: This is going towards a question?

Mr. BOB MORSCHES: Yes, it is.

THE CHAIRPERSON: Okay.

Mr. BOB MORSCHES: It's a point that I would let you know that there's going to be a discussion by Mr. John Scott, who takes the weather daily at Sandy Cove, and he will be presenting on Saturday at 1300 a little bit about this dramatic weather change along Digby Neck.

THE CHAIRPERSON: So there was no

question.

Mr. BOB MORSCHES: Pardon, sir?

THE CHAIRPERSON: I was looking for a question, but one never surfaced.

Mr. BOB MORSCHES: No, I just wanted to inform the Chair.

THE CHAIRPERSON: Okay. Thank you very much.

Mr. Marcocchio.

Mr. BRUNO MARCOCCHIO: Thank you, Mr. Chair. Bruno Marcocchio of the Sierra Club of Canada.

Just to clarify a question that the Panel put to Environment Canada about the capacity for enforcement and the concern that residents had, I wonder if Environment Canada would both discuss with us here and undertake to provide to the Panel a record of the prosecutions and convictions for **Fisheries Act** violations over, let's say, the last 10 or 15 year period.

Ms. MARIA DOBER: We don't have that information with us today, but I'm sure that that's something that we can provide to the Panel.

Mr. BRUNO MARCOCCHIO: Thank you very much.

THE CHAIRPERSON: Ms. Peach. Ms. Dober, how long do you think that would be?

Ms. MARIA DOBER: We'll get it to the Panel before the close of the hearings.

THE CHAIRPERSON: So the 29th, perhaps?

Ms. MARIA DOBER: Sure.

THE CHAIRPERSON: 29th is going to be a busy, busy day.

So could you restate that, Mr. Marcocchio, so I get it right? The number of...?

Mr. BRUNO MARCOCCHIO: Prosecutions and convictions for violations of the **Fisheries Act** which Environment Canada is charged to enforce.

I wonder, while we're here, if Environment Canada might talk about their enforcement capacity and the number of people they have doing enforcement in the region.

Ms. MARIA DOBER: If I could just clarify first what time period you're looking for these records for.

Mr. BRUNO MARCOCCHIO: I'm sorry. Let's say the last 15 years.

Ms. MARIA DOBER: 15 years? Okay.

In terms of our capacity with respect to enforcement, enforcement is one of the priorities of this Government and, in fact, the Department is increasing its capacity, both on the environmental quality side as well as on the wildlife enforcement side.

I don't have the exact numbers with me, but we can certainly provide those as well.

THE CHAIRPERSON: Thank you, Mr. Marcocchio. Ms. Peach, then Mr. Mullin.

Ms. JUDY PEACH: I understand that Environment Canada's boss and one of the people that the Panel would be making recommendations to would be the Environment Minister of Canada.

If you were asked to make recommendations to your ultimate boss, the Environment Minister of Canada, on this project, sort of if you were doing the Panel's job just within the areas of expertise, you know, your own areas of expertise, do you feel confident in the amount of information provided by the Proponent in the EIS and their responses as well as the level of understanding you think the Proponent has of the site, the climactic conditions of the site, the sensitivity of the site?

Would you feel confident that you could make a recommendation to approve the project with conditions that you felt could be enforced?

Would you feel confident in an approval recommendation?

Ms. MARIA DOBER: I think it's important to understand that our role here within this particular

process, we don't have a decision-making role with respect to this particular project.

I think that in our submission it's clear that, should the Proponent provide the additional analysis and information that we have asked for and commit to a monitoring, mitigation and follow-up program, that the position of the Department would be that any environmental impacts could be mitigated with that additional information and that monitoring program.

Ms. JUDY PEACH: Can I ask a follow-up?

So do you feel that within the Panel's time constraints, which I believe is 90 days after the end of this hearing, do you feel they are in a position to make... I'm just wondering if there should be more time allotted in some way because there seems to be a lot of information missing.

So are you pretty confident that the Panel can make an accurate decision or recommendation in that time period?

Ms. MARIA DOBER: That's something that the Panel will have to decide. I mean, I can't speak for their ability to do that in that time period.

THE CHAIRPERSON: Thank you. Mr. Mullin, and then I think I saw Sister Barbara's hand go up.

Mr. DON MULLIN: My question was

sufficiently covered by Mr. Marcocchio.

THE CHAIRPERSON: Okay. Is Sister Barbara here? Okay. There she is.

SISTER BARBARA: Good morning, and thank you very much for your presentation. I found it most informative.

I just wondered if Environment Canada is aware that Bilcon of Nova Scotia is a US-based company.

Ms. MARIA DOBER: Yes, we are. That information was in the documentation.

SISTER BARBARA: And do your rules apply to outside companies, as well?

Ms. MARIA DOBER: Our regulations would apply to the activities that are taking place within Canadian jurisdiction.

SISTER BARBARA: Great. I just wanted to further say that about 30 years ago we had a very bad storm in Nova Scotia. Perhaps some of you know about it, the Groundhog Day storm.

And I, at the time, worked for the Federal Public Works, and we had a lot of damage done in Digby Neck and Islands. We have a lot of wharves and breakwaters that were washed away, and also a boat that was moored in St. Mary's Bay ended up on the other side of Digby Neck Highway 217 in a marsh and stayed there for quite a

time.

And that was not a very severe storm, but there was still a lot of damage.

And given that the storms are getting more severe and the hurricanes are intensifying and we have storms on Digby Neck year round, winter storms go from December to May.

We've had storms in May, and now we're on hurricane season from June 'til November.

Given the fact that the ice is melting and the waters are warming, I wonder if someone could provide an educated guess as to what damage a Category 5 hurricane similar to the one that struck New Orleans a few years ago would have on the residents of Digby Neck should it suffer a direct hit, as Digby Neck is only two miles wide.

Does anyone hazard a guess what damage it would do in 2007?

Mr. GARY LINES: Maybe I can speak to that with a little bit of detail, recognizing the fact that Nova Scotia certainly has experienced land-falling hurricanes before, most recently with Hurricane Juan through the Halifax area.

We have some sense of the amount of damage that certainly that category of hurricane would do

across the province, and particularly as it relates to the marine climate storm surge.

Just to refer back to the Groundhog Day storm briefly, looking at a scenario there where the storm tracked to the west of the Bay of Fundy, and just to make the quick comment that that's not an uncommon occurrence.

The uncommonness of the Groundhog Day storm had to do with the strength of it and the fact that the intensity of it really did create a storm surge situation, which I think was what the main damage was from.

The amount of storm surge in that case was about 1.5 metres above the tidal level, and I would guess at this point, although there's been documentation to support this, that that was the main driver for damaging a lot of the wharves and moving boats and so on.

With the case of a storm similar to Hurricane Juan, that was a Category 3 once it hit the coastline. We did look at storm surges in that scenario in about the same range, so it is not unreasonable to assume that that kind of a storm surge event could happen again.

As well, the fact that, yes, with climate change we're looking at potentially having tropical features be more intense, meaning generally that the peak wind value would be higher, which also implies potentially a higher storm surge scenario.

Certainly the kind of damage that we could see out of that type of a feature through that area would certainly be at the same level that we've experienced before with the Groundhog Day storm and may even be more intense.

THE CHAIRPERSON: Thank you.

SISTER BARBARA: Just another question.

THE CHAIRPERSON: Is this a follow-up, Sister Barbara?

SISTER BARBARA: Mmm-hmm.

What would be the impact on the residents of Digby Neck and Islands if it were hit by the Category 5 hurricane in 2058, the life expectancy of the proposed White Point Rock Quarry and Marine Terminal when the land mass is now exposed to the elements as basalt rock has been shipped to the US?

Could you comment on that?

Mr. GARY LINES: It would be a little difficult to comment on it because, again, I'd have to speculate on what the actual land mass would actually look like as to the scenario coming from the marine environment.

Just to suffice to say that with those factors, with climate change, more intense features, potentially higher storm surge scenarios that any kind of coastal infrastructure would obviously be at risk and the

extent of that, however, would be based on what kind of coastal infrastructure and how the land was actually oriented at that time.

SISTER BARBARA: Thank you very much.

THE CHAIRPERSON: Thank you. Any other questions from registered participants?

Mr. Stanton.

Mr. KEMP STANTON: Yes. Just a quick question.

You mentioned that sea level may rise 30 centimetres. How would this impact the width of the preservation zone at the site?

Mr. GARY LINES: I, at this point, would suggest that representatives from Natural Resources Canada might be able to answer that a little more correctly because it refers to topographical information that I don't have at hand.

However, I think in applying that, if we look at the 30 centimetres, I would add the comment that we're talking about permanent sea level rise and that, on top of that, if we look at sort of weather and storm information, you would then have to sort of add more intense storms and then wave action and so on so, again, deferring back to the fact that you'd actually have to look at the topographic situation to apply it correctly.

THE CHAIRPERSON: Thank you. Ms. Mitchell, did I see your hand go up?

Ms. LISA MITCHELL: Hi. My question is regarding the information on...

THE CHAIRPERSON: You are Lisa Mitchell?

Ms. LISA MITCHELL: Yes, I am. Sorry. Lisa Mitchell.

THE CHAIRPERSON: Yeah, just for the transcript.

Ms. LISA MITCHELL: Sure. With the Partnership.

My question is on the information on the impacts of blasting on coastal seabirds. I believe that it was... That you talked about the fact that there isn't a whole lot of information, scientific information, on that and that, through this project, there could be some monitoring that might then lead through, I presume, an adaptive management program that could see changes or enhancements to blasting guidelines that could be used for this project and perhaps for others.

I was wondering if you could a little bit more or perhaps an example of what some of those changes might be.

I'm just trying to understand a little better what it might mean to the Proponent if it was

determined that there were significant impacts of blasting on coastal birds.

Mr. ALLAN HANSON: There's a couple of issues here with regard to blasting, one being the time of the year.

And in their submission, the Proponent has indicated that they won't be blasting during, quote unquote, the winter months. And if we knew better what period of time that is, then we would know which birds would be in the area related to when a blast may occur.

With regard to guidelines, what we would envisage is that if birds are being disturbed during a blast outside of the 170-metre buffer zone, then that buffer zone could be expanded so they couldn't blast when birds were in that area.

And under that scenario, we would give a permit for them to gently move the birds out of the area. Oftentimes what we'll do is use a boat to gently herd birds out of an area.

And in that case, we would look at the impacts of the birds being exposed to the blast versus being mildly disturbed and pushed out of the area. But that's the sort of activity that we would envisage.

The other thing that is unclear to us is the actual noise amounts. Perhaps they could increase the

amount of blasting mats.

The other thing that a question arises to us with regard to the impacts of blasting noise is whether or not there would be background noise.

If there's a moderate amount of background noise, then the impact of the blast noise would be less to those birds, so those are the sorts of things that we would want to work with the Proponent in terms of our monitoring program so we could have an adaptive management approach.

Ms. LISA MITCHELL: Okay. Just a quick follow-up, or just a clarification.

So if I understand correctly, one of the key means, perhaps, of addressing the impacts on the birds would be to try and remove the birds. Is that correct?

Mr. ALLAN HANSON: It wouldn't be to remove the birds. It would be to make sure that the birds are at a distance from the blast site so that they would not be disturbed by the noise.

Ms. LISA MITCHELL: Okay. So creating their buffer zone. Okay. Thank you.

THE CHAIRPERSON: Thank you, Ms. Mitchell.

I think we have time maybe for one or two more questions. Mr. Moir, I think, first, and then that

gentleman right there.

Sorry. Just a moment. The lady with the green sweater, perhaps. And if we have... We'll see.

Mr. ANDY MOIR: Andy Moir. Just a very quick follow-up to that last answer.

Who is actually going to be there from Environment Canada while we're waiting for this blast to happen to determine if the birds are being gently nudged along, or who is actually... Or is it going to be the company that's going to be in charge of gently nudging the birds along?

Mr. ALLAN HANSON: The actual individuals from Environment Canada would have to be determined, but with regard to monitoring activities, Environment Canada wants to develop these monitoring programs in consultation with the Proponent so that we have a good understanding of what monitoring activities are actually being done, both in theory and in practice.

THE CHAIRPERSON: Okay. We have two more questions. The woman right behind Andy Moir.

Please identify yourself.

Ms. CAROL LITTLETON: My name is Carol Littleton, and I am a registered participant.

THE CHAIRPERSON: I'm sorry. Thank you.

Ms. CAROL LITTLETON: Like the two women

yesterday, I am quite sceptical and worried about enforcement activities.

As a taxpayer, I'm also worried about the extra costs to the taxpayers if all this examination of the mitigation required and the monitoring is carried out. It seems to me that it's going to be quite a costly thing.

And my question is, is it ever possible to pass on some of those extra costs to the company?

Mr. ALLAN HANSON: With regard to the monitoring for coastal birds and land birds on site, that monitoring will be done by the Proponent or their designates, and Environment Canada will be providing expertise in working in consultation with them.

So we, within Environment Canada, will not be doing that monitoring per se, but we will be reviewing the monitoring program and that way, when we get the results back, we will have full faith in those results.

With regard to enforcement, I would just like to add that the enforcement of the **Migratory Bird Convention Act** and the **Species at Risk Act** is ongoing, and it's the Proponent's responsibility to adhere to those Regulations.

And with regard to reporting perceived violations, we encourage members of the general public to call the 1-800 Environmental Emergencies Reporting Line if

they ever see activities that they believe to be in violation of those Acts.

Ms. CAROL LITTLETON: Thank you.

The second question is, is Environment Canada the body that sets up and maintains weather stations in Nova Scotia?

Mr. GARY LINES: Yes, that's correct.

Ms. CAROL LITTLETON: Can you explain to me why so many weather stations were closed down in the last few years so that there are now very large intervals between the stations?

I recently set up a weather station of my own in Annapolis Royal because the weather forecasts that we get in the area come from Greenwood, which has an entirely different situation, and so far monitoring of temperatures, wind speeds, just about everything about the forecasts is completely useless and does not correspond.

My station was set up by a meteorologist, so I do have confidence that my data is quite good, and it is on the internet and available for anybody.

Mr. GARY LINES: In reference to the monitoring network, yes, over the past period, I'd say the past 10 or 15 years, there have certainly been changes to the monitoring network, both the number and the type of monitoring that we do.

It is basically driven by two items. One is how much we actually can afford to run in this country as far as monitoring, and that's across the entire country, not just in one province or one region, as well as our confidence in being able to accurately monitor the atmosphere to support the programs that we run at Environment Canada, predominantly our weather forecasting service.

It has been determined that if you couple those two together, we have the monitoring network we have now.

Would we all like to see more monitoring sites in Canada? I'm sure.

What it ultimately comes down to is can we continue to support the weather service that we have with the monitoring that we have and, actually, at this point we can.

But like yourself, I'm also a taxpayer and, yes, I would love to see more monitoring done in this country, but it does come down to balancing the two things of how much service we can provide and how much money we can afford for the networks.

Ms. CAROL LITTLETON: Thank you very much.

THE CHAIRPERSON: Thank you, Ms.

Littleton. And the final question.

Are you a registered participant?

Mr. WILLIAM LANG: Yes, I am, sir.

THE CHAIRPERSON: Good.

Mr. WILLIAM LANG: William Lang, Green Party of Nova Scotia, L-a-n-g.

My question follows along with the enforcement and penalties. I heard Environment Canada refer to themselves as Federal authority on enforcement, regulations and mitigation measures, and I heard them refer that they wouldn't have the authority to shut the plant down, but I was just confused.

I actually didn't hear any references to penalties, and if you could just describe penalties for failure to meet regulations.

Ms. MARIA DOBER: There are a variety of penalties that are available to the Department under our various pieces of legislation, and I don't have those pieces of legislation here with me today, but we can certainly provide that information if the Panel would like to have it.

THE CHAIRPERSON: Sure.

Mr. ALLAN HANSON: And as a point of clarification, in a general sense under the **Migratory Bird Convention Act** and the **Species at Risk Act** Environment Canada enforcement officers do have the ability to shut down

an operation that's resulting in a violation of those Acts.

Mr. WILLIAM LANG: Thank you very much.

THE CHAIRPERSON: Mr. Lang, you're asking for legislation. Be more specific for me so that I can get it down on paper.

Mr. WILLIAM LANG: For the actual penalties that will be incurred by the Proponent if they fail to meet regulations.

THE CHAIRPERSON: Thank you.

Ms. MARIA DOBER: I would like to point out that the penalties are ultimately decided by the Courts, but there is a range that they are able to enforce.

Mr. WILLIAM LANG: So we're talking about fines and...

Ms. MARIA DOBER: Yes.

Mr. WILLIAM LANG: Okay. Thank you.

THE CHAIRPERSON: Okay. I think Dr. Muecke has one more question.

Dr. GUNTER MUECKE: Actually, two.

You referred the Proponent to an enlarged database in terms of rainfall statistics and you mentioned the 1870 to 2006 database, which is more comprehensive and results in different predictions in terms of 100-year storms.

Of importance also in terms of storage

in the sediment ponds is the rainfall during drought years, and so my question is, is it possible or is the information available in the database as to the worst 100-year drought?

Mr. GARY LINES: I would actually have to look for that 'cause I actually, honestly, have not been asked that question before.

However, I would strongly suspect it is there 'cause basically the database handles annual precipitation and it would indicate the dry years as well as the wet ones.

Dr. GUNTER MUECKE: Could I ask you for that information?

Mr. GARY LINES: As an undertaking?

Dr. GUNTER MUECKE: Yes, lease.

Mr. GARY LINES: Yeah, we can do that. Yes.

Dr. GUNTER MUECKE: Another concern of ours is, obviously, the release of pollutants, particularly hydrocarbons.

And in your submission, you indicated that even lower amounts of release can have considerable impact on migratory birds, seabirds, et cetera.

Now, when it comes to mitigating spills along the coastline, one of the important things is the characteristic of the coastline itself, obviously, in terms

of clean-up; how efficiently and quickly one can clean up these spills. And that requires information on the physical characteristics, the biological characteristics, of the shoreline; not only at the site but obviously because of the spreading of the pollutant in the adjacent areas.

Does Environment Canada feel comfortable with the level of information that has been provided in the EIS regarding these shoreline characteristics, and do you feel that it is at a level which would allow efficient and quick remediation if a spill should occur?

Ms. MARIA DOBER: There were no issues raised by our emergency specialists who reviewed the documentation.

What I would like to indicate to the Panel is that our Department does follow a process called Shoreline Characterization Assessment Techniques whenever there is a spill, and they actually go out and do look at the area and determine the likelihood of where a spill will end up, and what the shoreline characteristics are, so that that will facilitate the types of cleanup that they can do.

And that's done in conjunction with a whole variety of different agencies involved in emergency response.

THE CHAIRPERSON: Okay, then. Mr. Buxton, I'm asking if you have any additional questions

because of Dr. Muecke's additional questions. You're okay?

Mr. PAUL BUXTON: No, thank you, Mr. Chair.

THE CHAIRPERSON: Okay. We will terminate this session now and we'll take a 15-minute break, but I'd like to thank Environment Canada for a very, very useful presentation. Thank you all.

--- Recess at 11:02 a.m.

--- Upon resuming at 11:20 a.m.

THE CHAIRPERSON: Ladies and gentlemen, could I ask you all to identify yourself with your name, your affiliation and to spell your name if it's the least bit problematic for the transcriber to get it?

Mr. KIM MacNEIL: Kim MacNeil, Director of Environmental and Natural Areas, Management and Protection Division, Department of Environment and Labour.

Mr. BOB PETRIE: My name is Bob Petrie. I'm the Regional Manager of the Environmental Monitoring and Compliance Division for the western region, and it's P-e-t-r-i-e.

Mr. BRUCE ARTHUR: I'm Bruce Arthur, District Manager for the Yarmouth office of Environmental Monitoring and Compliance Division.

Mr. ANDREW MURPHY: I am Andrew Murphy, I'm Manager of the Air Quality Branch for the Department of

Environment and Labour, the ENAM Division

Ms. BARB RYDEN: Barb Ryden, Supervisor of Air Monitoring and Reporting, Air Quality Branch.

Ms. DARLENE FENTON: Darlene Fenton, I'm the Regional Manager for the Central region of ENC.

Mr. SCOTT LISTER: Scott Lister, L-i-s-t-e-r, Regional Hydrogeologist, Kentville office.

Mr. DARRELL TAYLOR: Darrell Taylor, Environmental Analyst, Water and Wastewater Branch, ENAM Division, Halifax.

Mr. JOHN DRAGE: John Drage, and the last name is spelled D-r-a-g-e. I'm a hydrogeologist with Nova Scotia Environment and Labour, in the Halifax office.

THE CHAIRPERSON: Okay. Thank you all, now I believe you have a presentation for us?

PRESENTATION BY THE NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR - VARIOUS PRESENTERS

Mr. KIM MacNEIL: I'd like to begin the presentation by thanking the Panel for the opportunity to present today and to begin, I would like to discuss briefly the mission of the Department of Environment and Labour.

The mission is to protect and promote the health and safety and people, and the protection of property.

It's done through the Public Safety and

the Occupational Health and Safety divisions to protect and promote healthy environment, employment rights and consumer interests and public confidence in pension services and in the alcohol and game sectors.

Part of the Department's mandate is that we are the lead provincial department for environmental protection and management.

We develop regulations, policies guidelines and programs. We oversee environmental monitoring networks, manage databases and information, as well as providing professional advice to the public and government, as well as monitoring for compliance.

The Department is also the lead agency for Occupational Health and Safety, as well as Public Safety.

However, today's presentation will deal exclusively with the environment side of the Department.

Within the Department, there are two environmental divisions, one is the Environmental of Natural Areas Management Division, and the other is the Environmental Monitoring and Compliance Division.

Myself and Mr. Petrie today are going to briefly review some functions of these two divisions within the Department of Environment, before we get into the formal presentation.

The Environmental and Natural Areas Management Division or ENAM as it's known, consists of six branches, which are: Environmental Assessment; Protected Areas Branch...

We have 33 wilderness areas and 15 nature reserves, as well as other protected areas across the Province.

There's also Air Quality, which is a very active and growing branch. Then there's a Waste-Resource Management Branch, which deals mostly with solid waste.

We have a pollution prevention branch, which deals with hazardous substances, and we have a Water Resource Management Branch, that deals with surface water, groundwater, drinking water as well as wastewater.

Mr. BOB PETRIE: The Environmental Monitoring and Compliance Division are responsible for the majority of field operations relating to environmental protection for the Department.

We do this through a network of local offices in the regions. In the western region, we have three district offices, the closest one for this Project being based in Yarmouth. We also have offices in Bridgewater and Kentville, who look after their assigned areas.

Our primary activities in the Monitoring and Compliance Division consists of firstly evaluating applications for approval of proposed projects under the Part V approval process in the **Environment Act**.

We also conduct the inspection and monitoring of those approvals, when they become operational of course.

We conduct enforcement activities and also respond to public issues, complaints and inquiries, and basically serve as a local service point for the Department's programs and services.

Mr. KIM MacNEIL: Next, I would like to discuss the steps and review process for our own Department. To begin with, we review the Environmental Impact Statement and provide comments to the Panel, which has already been done.

I guess I would like to note that this presentation is a brief review of the work that we have done thus far on the application that's before the Panel, and full written comments that detail specific issues have already been provided.

After the comments are provided to the Panel, the Panel would make their decision to reject or approve with conditions.

The Minister responds to that Panel

report, and if the E.A. is approved, the terms and conditions of the release are prepared.

The next step, again if the E.A. is approved, there would be a second detailed review of the proposal under the Part V of the **Environment Act**, and this is commonly known as the Industrial Approval.

So it's a secondary approval process, and should the E.A. be approved following that Industrial Approval, should the Industrial Approval make its way through, there is a compliance monitoring with inspections that would take place and be the responsibility of the Department.

Now I'd like to review the comments provided by three of the branches within the Environmental and Natural Areas Management Division, the first report being from the Water and Wastewater Branch.

As previously stated, they are responsible for groundwater, surface water, drinking water and wastewater.

The main potential impacts on drinking water and groundwater include reduced groundwater levels that can potentially affect nearby wells, and blasting that can cause changes in the amount of water the well produces and can result in temporary siltation of nearby wells.

These effects can be managed through

groundwater and water well monitoring plans, as well as contingency plans to address impact to any water well.

The main potential impacts on surface water include siltation of watercourses and marine waters, and reduced flows in watercourses that could impact any aquatic life.

These potential impacts could be managed through mitigation measures such as sedimentation ponds, and following guidance on the erosion and sedimentation control and on Pit and Quarry Development Guidelines that the Department has.

Surface water monitoring plans for the quality and quantity would be also developed. Also, contingency plans for spills and upset conditions would be required.

And I believe that the Department will provide additional detailed comments on this topic tomorrow, we are scheduled.

The next comments are from the Air Quality Branch.

They are responsible for the management and protection of outdoor air quality. They look after the air quality regulations and the pollutants regulated under those regulations.

They also operate a provincial air

monitoring network and in a lot of air issues, they provide engineering expertise for any industrial approvals from the Environmental Monitoring and Compliance Division.

The Proponent, from an air quality perspective, would be required to summarize predicted air emissions, as well as noise level and predict the impact of these emissions.

The Proponent would also be required to submit a monitoring plan, and then develop a management plan based on predicted impacts and monitoring.

Now, some of this work would be done at the environmental assessment stage, but other aspects are done during the industrial approval stage, should we get to that point.

The third and final branch to comment on the Environmental Impact Statement is the Pollution-Prevention Branch.

They're responsible for pollution-prevention initiatives, as well as well as green procurement.

They look after reduction of toxic substances as well as the management of contaminated sites, dangerous goods, hazardous wastes, pesticides and pests, and industrial emergency response planning.

Their comments have been that the

storage of fuels and other petroleum products must meet the petroleum management regulations, that the storage and handling of dangerous goods and waste dangerous goods must meet the dangerous goods management regulations, and that the facility must have an emergency response plan to deal with releases of these substances.

Thank you. I'm going to... Bob is going to continue with the rest of the presentation.

Mr. BOB PETRIE: I will give a brief overview again of our division and how it operates in a bit more detail on the monitoring and compliance side.

The monitoring and compliance division is organized in a network of 12 district offices, which I mentioned three are located in this area.

Across the province, we have approximately 80 inspectors and conduct anywhere from 10,000 to 12,000 inspections annually on facilities that we regulate.

A number of core programs occupy the bulk of our time and effort in this division.

Our core programs include drinking water management; drinking water safety; as well as wastewater management, both from on-site sewage as well as municipal wastewater.

Solid waste as well as contaminated site

management are other core programs we administer.

We also have a very large role in public health management and mental health, again going back on our mandate and drinking water and sewage management.

Most applicable to this situation is that we are the monitor and the regulator for industrial activities in this area, which can range to anything from the aggregates industry to more industrial-manufacturing type of industries.

We mentioned earlier that following an environmental assessment process, should a Proponent successfully complete that, they go on to what we call the Part V approval or the industrial approval, which is evaluated in our division using local engineering staff as well as local hydrogeologists and technical staff.

This approval process is a very technical review looking at the core environmental issues of the facility.

Our application... In our application process, we would require typically detail that may not have been needed in the environmental assessment process, right down to the specific design specifications, for example if something were I guess described conceptually in the E.A. process, we would look at that and at the level of design engineering in the industrial approval process.

Typically, the information we require during this evaluation includes process description and engineering plans; as well as project-specific environmental management plans; descriptions of all wastes, emissions and potential adverse effects; monitoring and mitigation plans; exceedance response protocols and contingency plans; as well as rehabilitation plans.

This application process can also, as needed, involve consultation with other federal and provincial agencies on specific items where we may require input or expertise.

Historically, this division has had some historical involvement in this project, which I'll give a brief overview of.

Initially, we became involved in this project back in 2002, when the Proponent came forward first with an application for an industrial approval for a 3.9-hectare quarry, beneath the threshold for an environmental assessment.

At that time, that proposal did meet the requirements of our Pit and Quarry Guidelines and the approval process, and an approval was issued.

As part of that approval, we did require the Proponent to form a Community Liaison Committee and conduct public information efforts during the initial phase

of that, the objective being mainly to require a mechanism for information exchanged and dissemination, both between the public and the Proponent on this issue.

Other significant facets of our historical involvement have included the investigation of siltation reports from the site, which did not result in any further action.

The review of a specific blasting plan for this site in consultation with Fisheries and Oceans Canada...

That issue being mainly centred around the potential impacts of blast repercussions on marine mammals, Fisheries and Oceans Canada was the primary reviewer of that.

Towards 2003, 2004, we did receive notification that there was an ownership change, and the original approval was issued to a company called Nova Stone, however the rights to the property were transferred to Bilcon, and there was no transfer the approval to Bilcon at that time, no need for that.

In October 2004, the Part V approval for the site was cancelled because the entity, the company that it was originally issued to, no longer had authorization to the property.

The issues that the EMC division

highlighted reflect also the issues identified by the ENM division.

In summary, these would be effects of the site or of the operation on groundwater; local drinking water wells and wastewater from the site, both in terms of discharges from the sedimentation ponds; as well as any on-site sanitary wastewater that might require management from the facility buildings; erosion and sedimentation issues; air quality and blasting issues requiring management.

These issues are typically addressed in conditions of approval that we would issue consistent with our Pit and Quarry Guidelines.

There are other... In addition to the Part V industrial approval, there are other potential approvals that the Proponent may need to obtain from our division.

As I mentioned, the issue of how the on-site sanitary wastewater will be treated, whether that is in a small plant or through an on-site sewage disposal system, would require a review and approval from our division.

Also, the ultimate decommissioning of the Project infrastructure and long-term site monitoring and maintenance activities would have to meet with our approval as well.

Depending on the nature of water use at

the site, an approval for water storage or withdrawal may also be required.

In addition to that and as part of the Part V approval process, our Pit and Quarry guidelines and conditions of approval require that if blasting is to be conducted within 800 metres of residences off site, then permission is required from those residence owners in order to do this, and the 800-metre clearance is a standard requirement for quarries in Nova Scotia.

In addition, the division would also be seeking more information on existing drinking water quality in the area from domestic wells in support of obtaining good baselines on the quality of drinking water in those wells before activity is commenced.

That summarizes the issues identified by the EMC division and the ENM division, and thank you for this take. I will take questions.

PRESENTATION BY NOVA SCOTIA ENVIRONMENT AND LABOUR - QUESTIONS BY THE PANEL

THE CHAIRPERSON: Thank you very much. We do have a few questions here, and I have a feeling that questions are going to run through lunch.

So I'd like to take you back with an historical question for the moment which is could you tell us in more details about the complaints that were related to

the siltation of the 4-hectare quarry, and how Environment and Labour dealt with it?

Mr. BOB PETRIE: I can tell you what I recall from that time. The complaints I believe originated during periods of heavy precipitation, heavy rainfall.

THE CHAIRPERSON: I'll get you to pull that closer to you.

Mr. BOB PETRIE: Certainly. How is that? Okay.

They occurred during heavy precipitation runoff periods. We investigated jointly with Fisheries and Oceans Canada. Our staff is based in Yarmouth, and Fisheries and Oceans does have a local office so whenever it makes sense, we can get assistance from that on issues that we have in common.

At those times, our inspectors, our federal inspectors were unable to verify any exceedance of suspended solids concentrations.

It was acknowledged that there was a high volume of run off during those periods, but no incidences of release of substances causing an adverse effect was confirmed.

THE CHAIRPERSON: Simply siltation?

Mr. BOB PETRIE: Well, siltation would be a substance potentially causing an adverse effect, however

we didn't... We weren't able to verify or obtain any evidence that indicated siltation in excess of the levels we would want to see.

Dr. GUNTER MUECKE: And what time period was involved between your inspection and the supposed incident?

Mr. BOB PETRIE: I don't have this information with me at this time.

THE CHAIRPERSON: Were there any other complaints or indications of non-compliance from that particular operation?

Mr. BOB PETRIE: Generally speaking, we would often receive concerns expressed from the public in this area about the operation.

As I recall at this moment, these were the only incidences where there was alleged non-compliance so...

Dr. GUNTER MUECKE: Thank you.

THE CHAIRPERSON: You're involved... Your Department was involved in the creation of the CLC in association with this Project.

What exactly was your involvement over and above of dictating that it should in fact be formed? Did you oversee it in any way? Did you participate in it or...?

Mr. BOB PETRIE: No. Our main objective in requiring the CLC was to ensure that there was a vehicle for information exchange and the communication of questions and answers about the project in both directions, for the community and the Proponent.

While we attended some CLC meetings, we did not serve as the Chair or as the manager of that committee.

THE CHAIRPERSON: Do you in general or would you have done specifically any sort of monitoring of the quality or functionality of the CLC?

Is it doing what you hoped that it would do, that sort of thing?

Mr. BOB PETRIE: Well...

THE CHAIRPERSON: Or once it's created, to you simply back off and let it run?

Mr. BOB PETRIE: Well, we... No, I wouldn't characterize it that way. We do... We would get...

For the meetings that we did not attend, we would get regular copies of the minutes of those meetings, and we would stay in communication with the Chair of that Committee from time to time.

I think in any CLC, and we do have CLCs on other projects, but we wanted to serve the function for

which it was designed.

Whether or not it's actually achieving what we want it to is sometimes a subjective question and difficult to measure.

Dr. GUNTER MUECKE: The CLC is supposed to involve all stakeholders. Does the Department see itself as a stakeholder?

Mr. BOB PETRIE: Certainly. Well as a regulator I guess would be our role. Yes.

Dr. GUNTER MUECKE: Then can you explain why... I mean you previously said that departmental representatives were present at times, but were not part of the CLC. Could you explain?

Mr. BOB PETRIE: Well sometimes, as I recall, the CLC would meet on very specific issues, which may or may not involve the mandate of the EMC division.

Again, while we stayed in touch with what was happening at the CLC, it wasn't always necessary for us to be present.

Again, we wanted to make sure that information was flowing from the company to the public, and vice-versa, and that was our primary objective.

Dr. JILL GRANT: Do you see the CLC as a representative body for the community and what mechanisms are there for those who sit on the CLC to get information

beyond themselves, to some wider public?

Mr. BOB PETRIE: Pardon me? How would the CLC communicate---

Dr. JILL GRANT: Yes.

Mr. BOB PETRIE: ---to the broader public?

Dr. JILL GRANT: Yes.

Mr. BOB PETRIE: Okay.

Dr. JILL GRANT: How does that happen? What's the mechanism?

Mr. BOB PETRIE: Generally how a CLC functions is actually determined by the committee itself, and any methods that they would use to communicate or give information to the broader public would be agreed to by the Committee.

Dr. JILL GRANT: So it varies then from CLC to CLC in terms of...

Mr. BOB PETRIE: I would say that's the methods used.

Dr. JILL GRANT: Yeah.

Mr. BOB PETRIE: That would be a fair statement.

Dr. JILL GRANT: How would you characterize the effectiveness of the CLC that was in place on the 4-hectare quarry in this case?

Mr. BOB PETRIE: Given that the Project was in a phase where it was not in an environmental assessment process and not in a formal public consultation process, you know, I believe that information about the Project was exchanged.

I guess that's a difficult question to answer, how effective it was, and that may be better left to the company and the community to judge.

THE CHAIRPERSON: If you were overseeing a number of projects and they all had their equivalent of CLCs, would your Department be able to qualify them? Would you have information that would tell you whether a CLC was functional or dysfunctional or marginally useful or socially impacted in the sense that it was unable to carry out its activities?

Would you know that? Would that kind of information become available to you?

Mr. BOB PETRIE: I guess that type of information wouldn't be gathered or collated on a provincial basis if I could put it that way.

As an example, I might be familiar with any CLCs that are operating within my area and through general communication with my colleagues in other areas, I might get an impression, but the information I think that would answer the question that you asked isn't collected or

collated in that way.

THE CHAIRPERSON: In other words, if you sat in on the meetings, you would make observations and carry them back to your Department, but other than that there would be no process?

Mr. BOB PETRIE: H'm.

THE CHAIRPERSON: That's correct, yeah. Change of topics slightly. One of the things that concerns the community here is what has been referred to as quarry drift, which is that Bilcon owns a certain property which is now under review for the development of a marine quarry, but it also has additional property or properties, and one... For example, one large piece of land adjacent to the present quarry.

It's been suggested, there are rumours suggesting that eventually Bilcon will expand into this other property.

Now the question is what would prevent that from happening, if anything?

If the environmental review process... This Panel makes a recommendation, the Project goes forward and at some point, it decides it wants to expand its quarry, what would it prevent it from doing that?

Is there anything to prevent it from doing that? Is there a process involved?

Mr. BOB PETRIE: I'll just make an initial comment that any expansion of an approved undertaking beyond that which was contemplated in the environmental assessment for the approval would require subsequent approval.

THE CHAIRPERSON: Would that approval be ministerial approval, would it be in-house approval, would it be a full scale public transparent regulatory process? At what level would that occur?

Mr. BOB PETRIE: The Minister of Environment would make a decision on the size or the change of the operation, and based on that, we would make a decision to the extent of the consultation.

But, if it was decided that the operation was a significant expansion, then the Minister has the right to require a full environmental assessment.

THE CHAIRPERSON: So let me give you a hypothetical.

Mr. BOB PETRIE: Yes.

THE CHAIRPERSON: The quarry is 150 hectares, and there's a piece of property of 30 hectares adjacent to it, the request to be made, the approval could be done by the Minister with advice from his staff, and then three or four years later, another 20 or 30 hectares could go through the same process?

In the sense that it could simply increase in size because the size is small but cumulatively, it could be a large size over 25 years or 30 years.

Is that a reasonable or is that a farfetched scenario?

Mr. BOB PETRIE: Well, under the environmental assessment regulations, one of the factors that the Minister of Environment and Labour considers in the environmental assessment decisions is the planned and existing land use in the area of the undertaking, which is essentially cumulative effects development.

Well I think in this case, the Panel could make recommendations to the Minister with respect to the cumulative effects element of this particular project, and the Minister takes that into consideration in his decision about any project.

THE CHAIRPERSON: If the Panel had simply dissolved at the end of its advice to the Minister and five years later, individuals might not be there or in other words...

And also, the information would be five years out of date and environmental assessment and regulations would have moved on, so that asking the Panel for advice at that point might not be a useful exercise.

Essentially the process you're

describing is the Minister would be faced with a request, he would on the basis of factors decide whether in fact he could decide by himself, with advice from his staff, whether it would go out to some kind of review, and the degree of review could vary in a number of ways.

But presumably, it wouldn't be a joint review, it would be an internal Nova Scotia review?

Mr. BOB PETRIE: Not necessarily. That would be the Minister's decision. I can give you an example of a facility just recently in metro area that changed slightly the chemicals that it was dealing with.

In the original environmental assessment, they were given a particular approval to do a particular type of work.

That work changed, and if the work changes significantly or the type of chemicals that they're dealing with changes, then a new environmental assessment is required.

THE CHAIRPERSON: For a quarry, which has a given product and doesn't change what it does but simply changes its size, that's much more predictable and much less problematic I would guess, thereby reducing the need for the complicated assessment, would you think?

Mr. BOB PETRIE: Well, I guess it would be a judgement of the significance of that expansion.

THE CHAIRPERSON: H'm. Gunter?

Dr. GUNTER MUECKE: I have experience with quarry expansions, and my understanding is it's not exactly rare that once a quarry has been established, that it asks for expansion and how they have been dealt with and...

I think that I am aware, but not details, of some of these expansions in Nova Scotia.

Dr. JILL GRANT: I have a question.

Dr. GUNTER MUECKE: Sorry, I mean that as a question. How have you dealt with them in the past I mean?

Mr. BOB PETRIE: Again, when faced with an expansion, and I guess it depends on where you're starting from because if there was a smaller quarry beneath the E.A. threshold, we would be looking at whether that expansion from beneath the thresholds would put it above the threshold and trigger an E.A.

If it was a project that had previously gone through an E.A., again we would go back and look at the assumptions that were in place and the nature and scope of the project as it was proposed during the initial E.A., and if it was judged to be a significant deviation or expansion or change from what was originally contemplated, then we would proceed through an E.A. process.

Dr. GUNTER MUECKE: Okay. I want to go from the hypothetical to the real, okay? Has a quarry, which has gone through the environmental assessment process, provincial... I'm not aware of any federal.

But has any quarry like that been granted an extension and how was it handled in that specific case, as opposed to the hypothetical?

Mr. BOB PETRIE: To answer that to any degree of certainty, I would have to go back and check records on this.

I can only speak anecdotally for the projects I know of in my region, and we would be willing to take that on as an undertaking, to provide that.

Dr. GUNTER MUECKE: Thanks. So let me be specific as to what I'm looking for. So I'm looking for any quarries, okay, in Nova Scotia, that have undergone an environmental assessment on a provincial scale, I realize, and that have asked for an expansion after the approval, and I would like to know how that approval was obtained.

Dr. JILL GRANT: Thank you. I have a couple of questions. The first one is around inspections. You mentioned that you have 80 inspectors doing about 12,000 inspections a year, so you're quite very busy obviously with a lot of inspections.

I wonder if you could give us an idea of

how often major industrial enterprises like this would be inspected and whether it would be...whether the inspection would be announced in advance, or is it just a surprise visit or what exactly happens?

Mr. BOB PETRIE: Most of our inspections are scheduled internally, but not announced to the site operator in advance, unless there is some need to do so in order to make arrangements for site access or safety requirements.

So if it was deemed that in order to do the inspection, we needed to gain access to a secure area or make certain specific safety arrangements, it might be necessary to announce ourselves ahead of time, but it is our practice to not announce ourselves or...

You know, to try and obtain basically representative conditions when we do our inspection, given the restrictions that we're under.

The frequency of the inspections, when the project is approved, it would basically be placed on an inspection schedule that frequency could vary.

You know, for a very low risk conventional project, it might only be once a year or so. For a project which is in its initial phases of construction and start up and before it has gone into a routine operational phase, we would want to conduct frequent

inspections.

That would be I guess based on what is happening at the site at the time.

It would be our practice once an approval is issued shortly thereafter to meet with the Proponent, go through all the terms and conditions to make sure that they understand them and know how to implement them, and then basically conduct a compliance inspection, probably within the first month after startup.

Again, that inspection frequency can change.

If there are I guess emerging issues at the site that need inspection or if there were complaints and concerns phoned in from the public, then we would respond with an inspection in an "adoc" fashion.

Dr. JILL GRANT: Thanks. I have a couple of questions around the bog, the coastal bog here.

Mr. BOB PETRIE: H'm.

Dr. JILL GRANT: The Project proposes to change the nature of the drainage into the coastal bog. It's described in the assessment as an "unconfined distributed flow" coming into the bog at this point in time, and the Project proposes to change it to a confined pipe that would be feeding the bog.

I'm interested in your thoughts about

the effects of that change in the drainage to the bog and what effects it may have.

Mr. DARRELL TAYLOR: Perhaps I could speak to that to some degree.

The coastal bog as proposed would be modified to some extent from current wetlands on the site and flows that have been gathered from the site would be directed to that bog.

Mitigation measures would be expected in terms of sedimentation ponds prior to releases to that bog, and therefore expectations of removal of erodable materials, settling of those materials and potentially, if needed, treatment in that sedimentation pond to mitigate impacts to the coastal bog.

Is that addressing your question?

Dr. JILL GRANT: Actually, I think you're looking at an earlier description of the project proposal. Recent changes to the project description no longer have the flow going through the bog as its final element, and now the watershed above the road is being directed into the bog through a pipe underneath the sediment pond.

So it's quite a change in the flow that is currently going there on the site. Perhaps you haven't seen the revisions to the project description?

Mr. DARRELL TAYLOR: I believe I did see

those proposed changes in the document. To be quite frank, I'm not sure that I fully comprehended what was being proposed.

There appeared to be flows going in two directions, and there was some management through some control structures.

I sat in on conversations during this hearing and I still have somewhat an unclear understanding of what is being proposed in that respect.

Dr. JILL GRANT: I can understand that. We're having some difficulties with this too.

Would it be your understanding that if drainage to a bog changes in this way from an unconfined flow of cross-land from a large area to a point source coming in from a pipe, that there would be an effect on the bog?

Mr. DARRELL TAYLOR: Hypothetically saying, I would say there could be. It would depend on the amount of land which was being drained higher in the watershed and what the velocity of those flows would be also.

Mr. BOB PETRIE: I might just add to that that our Department does have a policy on wetland alterations, which if an alteration is proposed, it would need to be evaluated I guess for the level of impacts to

that wetland.

There is a provision in this policy to allow for either mitigation or compensation of the loss of wetland function that can't be mitigated, and that would be an option potentially available to us.

Dr. JILL GRANT: I want to ask you also about the constructed wetland that is proposed as part of the project.

The flows coming out of the sediment ponds are going through 500 metres or linear area, and I'm wondering about your thoughts about the effectiveness of that kind of a feature to treat the water coming out of the sediment ponds, whether you have had a chance to evaluate the potential effectiveness of that given the high variability and the water flow?

There are periods of time where there's going to be no flow because water is being stored, and other periods where they may be high flow because of storms.

I'd like your comments on the effectiveness of that feature.

Mr. BOB PETRIE: Likely the effectiveness and the detailed design of wastewater treatment features is something that we would need to conduct a detailed evaluation of in the Part V approval process, and they would need to demonstrate to us quantitatively and through design

that the wastewater treatment system on site can meet the objectives of the approval in suspended solids concentrations.

Dr. GUNTER MUECKE: Could I come briefly back to inspections? But before I do that, I've been told I should obtain a date from you regarding the undertaking we have?

Obviously, we would like to have this before the Panel...

Mr. BOB PETRIE: We can certainly have it before the Panel closes.

Dr. GUNTER MUECKE: Okay. So that's a... The 28th?

THE CHAIRPERSON: The Panel will close on Saturday the 30th of June.

Mr. BOB PETRIE: Okay.

THE CHAIRPERSON: The 29th is a possibility. Sooner would be better, but if that's all you can manage... The 29th?

Mr. BOB PETRIE: We can do the 29th, yes. Okay.

Dr. GUNTER MUECKE: And just so we finish off on inspections at least for the time being, you said your inspectors don't announce themselves.

Mr. BOB PETRIE: H'm.

Dr. GUNTER MUECKE: Generally speaking... Now you inspect many things, but when it comes to quarries, quarry operations involve blasting and so isn't it almost a taking that for quarry inspections, you have to announce yourself beforehand?

Because you might show up and they're in the blasting mode?

Mr. BOB PETRIE: For safety reasons, I wouldn't want our inspectors showing up unannounced in the middle of a blast obviously.

While I'm not an authority on blasting safety per se, I would presume that if we happened to show up unannounced and a blast was proposed or eminent, that the company would have appropriate notifications and safety measures and prohibitions against unauthorized entry in place at that time, so that persons couldn't just happen upon the site and be heard.

But you know, I guess I would say that depending on the type of blasting schedule that they have and how much certainty there is to that, we may or may not need to announce ourselves on a given occasion, you are right.

Dr. GUNTER MUECKE: To continue with inspections, and I'm talking not about labour and safety, okay, because as you said that is a different division

altogether.

You do have a large coastal quarry in your jurisdiction, okay, the Canso quarry. Can you provide us the inspection record that you have for that quarry, let's say over the last five years?

Mr. BOB PETRIE: That isn't information that I have with me. That is something that we would have to take on as an undertaking.

Dr. GUNTER MUECKE: Could you please provide us with a date again?

Mr. BOB PETRIE: Okay. The 29th?

Dr. GUNTER MUECKE: Yes.

THE CHAIRPERSON: I think we're at lunchtime right now, and what I would like to do is I would like to break until 1:10.

We will continue questioning at that time, and that we will be followed by Natural Resources Canada, plus a couple of others.

So unfortunately, we have fallen behind once again, but... Okay. So we'll see you back here at 1:10.

--- Recess at 12:11 p.m.

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

THE CHAIRPERSON: Ladies and gentlemen, we'd like to resume now.

PRESENTATION OF DEPARTMENT OF ENVIRONMENT AND LABOUR - QUESTIONS BY THE PANEL

Gentlemen, I wonder if we could start the afternoon session by asking you to explain, in a bit more detail, the Part V approval process?

Mr. KIM MacNEIL: Before we go there, I'm just wondering if I could clarify a point that I---

THE CHAIRPERSON: Yes, certainly.

Mr. KIM MacNEIL: ---probably didn't make effectively this morning. I didn't mean to suggest... It was regarding the expansion of the quarry. I didn't mean to suggest that we would contact the Panel in 15 years to see if the expansion was appropriate.

What I guess was respectfully suggesting to the Panel is that they can make that recommendation to the Minister that the footprint that is outlined in the Environment Impact Statement is the footprint of the operation, and any expansion beyond that point could require a full Joint Panel Environmental Assessment.

THE CHAIRPERSON: Thank you for that clarification. That makes a lot more sense, yes.

Part V approval process?

Mr. BOB PETRIE: The Part V approval process, when we enter into that, and if it is in a post-ENVIRONMENTAL ASSESSMENT context, generally our belief going

into that is that if it's successfully concluded in ENVIRONMENTAL ASSESSMENT that conceptually, you know, the Project is capable of meeting the standards that we wanted to, subject to detailed design and compliance with conditions.

Administratively, it consists of an application that needs to be filed with us, as well as the submission of detailed engineering drawings of key features of the site; for example, the sedimentation ponds, as well as blasting procedures, confirmation of the consent of dwellings within 80 metres, as well as any, you know, monitoring, and mitigation or contingency plans.

The Part V approval itself, and this is done at a local level, primarily using the resources of our local engineers, as well as our local hydro-geologists on any ground or surface water issues.

The approval itself, once issued, will consist of a number of terms and conditions which will address all of the, I guess, key environmental effect components, whether it's surface water discharge, airborne particulate, blasts, vibration and air concussion, as well as the requirement to submit a rehabilitation plan to us within a certain period of time. The Part V approval is also where the requirement for the rehabilitation bond is typically enforced.

The terms and conditions of these approvals are enforceable, and by that, I mean in the Environment Act, it states that a breach of a term and condition of an approval is an offence under the Act, so even if it were a requirement that wasn't in regulation, but it was in the approval, if a company, you know, fails to satisfy that, then it is an enforceable provision that we can act on.

Following the issuance of, you know, of the Part V approval, as I mentioned earlier, facility is placed on an inspection schedule and we discussed that. I'll just see if there's any other details about the approval process that I might have overlooked.

--- Pause

And just a couple other observations. There is an administrative fee that goes with the approval process, but another key feature is that Part V approvals are valid for a maximum of ten years, after which they need to be renewed.

THE CHAIRPERSON: I'm sure you heard the exchange this morning between us and Environment Canada when we asked about follow-up monitoring, and enforcement, and so forth, and I use as an example the two ladies who were here yesterday afternoon.

I'll ask you the same question. What

can you tell the assembled group with regard to a project such as this; a project which has been... We recommend approval, it goes through your Part V process, it gets underway. There are a whole series, a big long list of constraints, and mitigations, and so forth, and down the road, they're violated, and subtly perhaps or some maybe flagrantly, it's hard to say.

But what encouragement or what support can the assembled individuals get from this and the realization that they, let's say for the worst case scenario, they've got a project they don't want, but they grudgingly accept it on the belief that the Province will look after them; will look after the process for them.

How often would it be monitored, if it is monitored and it's found to be wanting? If it is wanting, is there a penalty? Can that penalty shut the project down? Does it enforce a fine? What's involved in this?

Mr. BOB PETRIE: In the enforcement of an approval, and again, you know, the inspection frequency would probably be set once the approval is issued.

Early on in the lifespan of the Project, I think during construction and startup, we would want to pay more attention to it than a facility, for instance, that had been operating for a long period of time, and had

established a predictable track record. We might not audit a facility like that as often as a newer facility without a track record.

We have a compliance and enforcement framework that we follow when we come across violations. On the staffing side of it, our staff are appointed as Special Constables, and are able to initiate Summary Offence Tickets, or long-form prosecutions.

In addition to that, we also have assigned to the region what we call a Compliance and Inspection Co-ordinator who is an enforcement specialist who acts in support of the inspectors on legal and investigative matters.

When it comes to how we would handle violations, when we become aware of a violation either through our own auditing, or by a report from the public, the first step that we would take is to undertake an investigation, and basically look for basically evidence to support that or not.

If a violation is confirmed, we have a number of options to address that, and those range, at the simplest end of the scale, from a warning ticket to a Summary Offence Ticket to what we call long-form prosecutions. We also have available Ministerial Orders. If specific remedial work needs to be compelled of a person,

that's where a Ministerial Order would be used.

The approval may also be suspended temporarily, or revoked permanently for non-compliance depending on the circumstances. The factors that go into that decision making range...

I'll back up a little bit.

You know, these recourses are subject to the due diligence provisions of the **Environment Act**, so if a person demonstrates that they took all reasonable measures to prevent an offence from occurring, then that defence is available to them.

When we are weighing what type of response to use, we would look at the track record of the company; whether this was a first violation or a repeat violation; whether it was something that they did knowingly or unknowingly; whether or not damage occurred as a result of the violation; or it could be a violation of what I'll call an administrative portion of the approval; for instance, failing to submit a report or a plan on time. And those types of factors would get weighed into what type of a response we would use, whether it was a warning or a full-on prosecution.

THE CHAIRPERSON: How often do you revoke a Part V approval? How often has it happened? Can you identify? Once in the last five years, or ten times in the

last five years, or...?

Mr. BOB PETRIE: I can only speak anecdotally to situations that I'm personally familiar with, without going back and doing a more comprehensive survey.

I do know that we have suspended a Part V approval for non-compliance and, as well, there has been a revocation of such an approval within the past five years.

THE CHAIRPERSON: So if we had to categorize it qualitatively, we would say it's a rare occurrence but it does happen?

Mr. BOB PETRIE: Well, yeah, and I guess the response that is selected I guess would depend on what you're trying to achieve with the response. You know, if that is deterrence or if a proponent has demonstrated a repeated inability or unwillingness to comply, that may be an appropriate circumstance for revocation or suspension.

More commonly, you know, we've laid a number of prosecutions and charges every year. Some of them are related to approvals and some are not, and I don't have the breakdown to differentiate right now.

THE CHAIRPERSON: I'd like to move to another topic.

Bilcon has said that they would meet the standards in the Pit and Quarry Guidelines. Could you inform us what those Guidelines are, and how they rate to

the approvals? Could stricter parameters be required than the Pit and Quarry Guidelines? Do you think they're sufficient, and is there a possibility that you're going to be improving these?

Mr. BOB PETRIE: I'll address the first portion of that question. Then I might refer the second portion on the future of the Guidelines to my colleague, Ms. Fenton.

The Pit and Quarry Guidelines are basically the technical standards that we apply to Part V approvals, and I guess it is, you know, the benchmark by which we judge whether a facility should be approved or not. If it's obvious that they can't meet these Guidelines, it wouldn't be approved.

The Guidelines detail or discuss issues ranging from clearance distances to different features, whether it be a home, or a water course, or something of that nature. They also detail liquid effluent as well as airborne particulate discharge requirements, sound and blasting, ground vibration limits, and also discuss security and rehabilitation requirements.

Those Guidelines are used as the basis for drafting the terms and conditions of the approval. I believe the legislation allows us to, if circumstances warrant, if an area was deemed more sensitive to impact, we

have the authority to require measures stricter than a given set of Guidelines. We would need a reason to do so; a reason that differentiates this situation from another situation.

And I'll just consult on the future of the Guidelines, as you asked.

Ms. DARLENE FENTON: The Pit and Quarry Guidelines, we're currently going through a consultation period related solely to the pit side of the Guideline. We had a pit discussion paper that went out for consultation in October of '05 that took place until February of '06.

We've now taken that information, and are preparing a position paper from the Department side of, point of view from what we heard from the consultation.

We had the consultations from the industry as well as from the public. What we're, what will happen out of that, we will split the Guideline, and we will develop a standard, or a guideline, or a best management practice, or a regulation related to pits, and that after that we will look at the quarry side of things.

We will, in all likelihood, separate the two, and have a separate document for quarries and a separate document for pits.

THE CHAIRPERSON: So for the foreseeable future, the quarry side of the Pit and Quarry Guidelines

will remain in effect? So for the next few years, presumably?

Ms. DARLENE FENTON: That's correct.

THE CHAIRPERSON: Thank you.

Dr. GUNTER MUECKE: Yes, while we're on the Pit and Quarry Guidelines, in the current Guidelines, are there any provisions, or special provisions which apply to coastal quarries?

Mr. BOB PETRIE: No, there's nothing to distinguish coastal quarries in these Guidelines.

Dr. GUNTER MUECKE: In the future Guidelines, is there any consideration at the present time regarding coastal quarries?

Ms. DARLENE FENTON: I think what we'll do... The recommendation from staff to senior management will be the same process that we use for the pit discussion side of the Pit and Quarry Guidelines. We will do the same for the quarry piece.

So after we finish with the pit side of these Guidelines, we'll go for public consultation on the quarry side, as well. That will be the recommendation. So, you know, that may be a possibility in the future. I'm not sure.

Dr. GUNTER MUECKE: If I understand you right, you're saying at the present time in the future

Guidelines, there are no special considerations for coastal quarries, but they may appear if, during that process, they are identified? Is that correct?

Mr. BOB PETRIE: Yes, I think that issues that are addressed in future versions of the Quarry Guidelines would be raised during the consultative process.

That may include coastal issues. We don't know yet.

Dr. JILL GRANT: Could I just ask you for clarification?

You indicated that, as part of the approvals permit, you would be requesting written permission or indication of written consent from property owners within 800 metres.

Is that 800 metres from the property boundary, or 800 metres from which of the blast sites because there would be blast sites through the course of the project? And just for clarification, can you tell us what that means?

Mr. BOB PETRIE: That is 800 metres measured from the foundation or the base of a structure to the working face of the quarry.

Dr. JILL GRANT: At which point in time 'cause the working face is going to be moving? So you're just going to require it for the first working face at the

first portion? Is that correct?

Mr. BOB PETRIE: We would look at that from the final working face.

Dr. JILL GRANT: From the final working face.

Mr. BOB PETRIE: Yes.

Dr. JILL GRANT: Thank you.

THE CHAIRPERSON: Does the Department require all residences within 800 metres to provide a waiver?

Mr. BOB PETRIE: Not if they are owned by the Proponent.

THE CHAIRPERSON: Other than that, all individual domestic houses would require a waiver.

Mr. BOB PETRIE: Dwellings, yes.

THE CHAIRPERSON: Yes. Does Environment and Labour work with DFO regarding blasting requirements in the marine environment?

Mr. BOB PETRIE: Typically, our management of blasting activities in most quarry approvals is, you know, limited to our own involvement.

I think early on in the lifespan of the original approval here a particular unknown or concern was expressed in relation, you know, to blasting and the jurisdiction of DFO, so in the issuance of that approval it,

you know, reflected their concerns.

But in most quarry approvals, I guess what I would say is when we issue an approval, you know, we are open to consultation with other agencies, and if a particular concern is expressed that intersects between the mandates of the two agencies, we will, I guess, try and work together on that.

But that would be looked at on a case-by-case basis.

THE CHAIRPERSON: In general, it's a decision made independently with advice and a rare occasion when actually it's a collaborative decision.

Would that be fair?

Mr. BOB PETRIE: The concept of working collaboratively with these other agencies is not a rare occasion.

THE CHAIRPERSON: I meant collaborative decision making. In other words, the two of you would get together and decide on something, and it would become policy or become adopted by both organizations simultaneously.

It's a higher degree of collaboration than simply consultation.

Mr. BOB PETRIE: You know, again, where possible, we would collaborate.

However, you know, if a decision needed

to be made and, for example, a proposal met all of the requirements of Provincial or Environment and Labour's legislation but there were still outstanding issues in another agency's mandate, we might still issue that approval.

Our approvals don't override, you know, the mandate of another agency.

During the process, you know, we often try to provide an opportunity to collaborate. That doesn't necessarily mean that our approval would be projected solely on the basis of issues that were in another agency's mandate.

THE CHAIRPERSON: Could we turn to surface water for a moment?

Your presentation identified two potential impacts to surface water. Could you elaborate on these?

And are the proposed mitigation measures suggested by the Proponent adequate?

Mr. BOB PETRIE: The primary issues of concern relating to surface water are erosion and sedimentation.

The final determination as to whether they could satisfactorily meet those objectives, we wouldn't make a final determination on that until after we'd seen the

detailed design in the Part 5 approval process.

THE CHAIRPERSON: I see. So the mitigation would wait until then. Your decision vis a vis mitigation would wait until Part 5.

Your decision with regard to the adequacy of mitigation would wait until Part 5. Is that correct?

Mr. BOB PETRIE: Yeah. The adequacy of the specific measures, yes.

Dr. GUNTER MUECKE: In terms of surface water, one of the concerns that has been raised is with respect to explosive residues. And I was wondering whether that was a concern to your Department.

Mr. BOB PETRIE: And just before I ask Mr. Arthur to answer that, just a follow-up to the previous question, that in the Part 5 approval there would be specified discharge limits for suspended solids as well.

Mr. BRUCE ARTHUR: In terms of blasting residue, it hasn't been an issue that we've dealt with to any great extent.

You know, I understand the concern about ammonia levels and what not, and we would have terms and conditions within the Part 5 approval that would address that if that was identified as an issue through this ENVIRONMENTAL ASSESSMENT process.

Dr. GUNTER MUECKE: Well, going back again to monitoring that you have proposed in other quarries, is the monitoring of nitrogen compounds a requirement at any of the existing Nova Scotia quarries?

Mr. BOB PETRIE: No. Monitoring of those compounds is not a typical requirement.

Dr. GUNTER MUECKE: So you really have no idea whether it's an issue or not.

Mr. BOB PETRIE: I guess whether it's an issue would be based on a, you know, literature review or some research. It wouldn't be based on experience one way or the other in Nova Scotia.

And to my knowledge, we haven't come across any incidents in an ad hoc fashion where it was an issue.

THE CHAIRPERSON: It hasn't been raised in Porcupine Mountain, which is the other marine quarry?

I mean, they're doing blasting. They're adjacent to the ocean. I don't know, but I presume they're using the same explosives, so they're producing large quantities of residue.

Mr. BOB PETRIE: I honestly don't know whether it's been an issue in Porcupine Mountain. That's something we could undertake to follow up on for you.

THE CHAIRPERSON: Okay. Yes.

In reviewing the EIS, does the Department consider that the information provided is sufficient, that you have enough information to determine the water supply and demand?

There will be an ongoing commercial need for water, and is the supply adequate and do you have enough information to make that judgment?

--- Pause

THE CHAIRPERSON: While they're engaging in discussion, this is a formal undertaking we're asking you for now vis à vis the residue.

--- Pause

Mr. BOB PETRIE: The adequacy of the water... And you were referring to surface water withdrawal?

THE CHAIRPERSON: Yes.

Mr. BOB PETRIE: Yes. That is something that we would do further evaluation of during the Part 5 approval process to ensure that the proposed water budget was sustainable.

THE CHAIRPERSON: Where exactly does your Department's responsibility lie with regard to discharge into the marine environment?

Accepting the fact that there are other institutions, organizations, jurisdictions, at what point do

you kind of draw the line? Up until what point are you responsible?

Mr. BOB PETRIE: I would say our responsibility is at the compliance point of the approval in meeting the discharge limits.

And by that, I mean any adverse effects that result from a discharge into marine waters from an on-land facility, we would probably not be able to pursue from an adverse effect point of view. However, it would be a violation of the discharge requirements of the approval.

THE CHAIRPERSON: So determination would be made by DFO and then you would come into it in terms of enforcement?

Mr. BOB PETRIE: Normally when these incidents occur, it's not uncommon for DFO and ourselves to undertake a joint investigation. That happens quite commonly.

Then, once the investigation's complete, you know, we'll usually make a determination on which agency should go forward, and how.

And again, the situation you described, if there was an exceedance(sic) of the discharge limits... Well, to use an example, if there was an exceedance(sic) of the discharge limits but no adverse effect in the marine environment, it could still be viewed as an offense under

our legislation and under the approval, but something that DFO may not be able to act upon.

However, if there were adverse effects in the marine environment, that isn't something that we would be able to address.

Dr. JILL GRANT: Could I just ask a follow-up about the previous question?

You were asked whether there's enough information to determine the water budget on the site, and my recollection of reading the staff report from the Department indicated there were concerns about the information available on the water budget.

Obviously, for us charged to determine what the effects of this project are, whether the effects are adverse or not, we need to have a certain amount of information. And you're telling me, well, it'll be decided after we make our decision you'll regulate that.

So I'm just a little concerned to know the answer to the question that Dr. Fournier answered(sic) about is there enough information here about the water budget, about the water effects, to say what those effects are and what your advice to us on that is.

Mr. BOB PETRIE: Just referring to the comments from the Department, and I understand we have further questions about ground water issues and, you know,

those will be discussed in more detail during tomorrow's session, so I believe that's where most of the questions lie is surrounding ground water.

THE CHAIRPERSON: Perhaps, rather than continuing on in this line, what I'll do is I've got some additional questions with regard to water, but perhaps I'll save those until tomorrow.

How does the Department handle public complaints with regard to dust and noise, which I presume are among the most common complaints from citizens?

What action do you take?

Mr. BOB PETRIE: Generally speaking, we would look to ascertain whether any violation of the approval had occurred.

In the situation surrounding a dust complaint, there are provisions... In a typical quarry approval, there are provisions to require the Proponent to monitor for noise and for dust, and there are limits established in the approval for those parameters.

We would compare and look at any complaints against the information that was coming in from any monitoring that was going on.

If monitoring had not yet been invoked, but we received complaints of, I guess, a sufficient frequency and veracity that indicated that monitoring was

needed, then we would typically activate those conditions and require the Proponent to monitor for noise and dust.

And I'll quality that distinguishing on the noise issue because there's the ongoing operational noise as well as noise from air concussion during blasting, and that air concussion would be monitored on a routine basis.

THE CHAIRPERSON: So you would receive a complaint and then you would immediately have someone investigate and then, depending on the information returned in the investigation, then you would follow a series of protocols.

Mr. BOB PETRIE: Yeah. For instance, you know, if we received a complaint from a neighbour or a series of neighbours, we would go out. We would interview them, talk to them, find out, you know, the details, how bad is it, how frequent.

We would typically look for, you know, observations that, I guess, support the complaints, and if we saw that this was warranted, then we would invoke the Suspended Particulate Monitoring provisions of an approval if they were not already activated to require ongoing monitoring.

And at that point, we could apply the compliance limits.

Dr. JILL GRANT: Just a follow-up on the question of noise.

The proposal indicates that, at times, a ship may have to come in at night, and I presume at times it might have to come in on a Sunday.

Are there any kinds of provisions that would cause you concern about the variability there, that these kinds of things could extend into any time in the week in terms of noise, I'm thinking?

Mr. BOB PETRIE: I guess the issue relating to noise from ships that may be docking at the facility, we would only be looking at noise from sources within the active area of the quarry, and we wouldn't be regulating noise sources from offshore.

Does that answer your question?

Dr. JILL GRANT: Can you tell me who would be regulating the noise from the offshore?

Mr. BOB PETRIE: I don't have that information.

THE CHAIRPERSON: Could we move to the CLC?

I think it's common knowledge that there were some difficulties with regard to the CLC as it existed here, and by that I mean, without taking sides, that there are two opinions as to how it worked.

There are opinions of some people within it and there are people of the Proponent, and we're not making any judgment as to whether one was correct or not. But there was clearly a polarization.

Now, if you were to produce a CLC on the... This project was approved and you were to create a new one or have a role in creating a new one, how should it be organized and run for the greatest effectiveness?

How do you overcome the difficulties that apparently existed before? What are we trying to achieve with the CLC?

--- Pause

Mr. BOB PETRIE: The issue of the CLC is a tricky one.

I guess I'll preface this by saying that we want the CLC to be, as much as possible, a self-driven process and not a top down, you know, Government-managed process. This has have buy-in both from the Proponent and the community and the stakeholders to be functional.

That being said, you know, we're learning about the functioning of these things as we go along, and if it was necessary, I don't think we'd rule out the option of, you know, considering the assistance of professional facilitators or people with expertise in that area to assist in the functioning of a CLC.

THE CHAIRPERSON: Should it be driven by the Proponent? Should it be driven by the community? Should it be cooperatively driven?

Who should choose the members, things like that, are all critical towards eventual utilization.

Mr. BOB PETRIE: I think in the past, the approach that's been taken that this should be a collaborative process, and most CLCs would set their own terms of reference, we have not, you know, dictated the membership, only to say that it needs to be representative of the stakeholders involved.

Pardon me for one second.

--- Pause

Mr. BOB PETRIE: One thing that I could undertake, which is fairly simple to do, is to provide the Panel with a copy of the guidelines we use for the formation of a CLC.

I don't have them with me today, but that would be a...

THE CHAIRPERSON: We have them. They were provided to us in the responses.

But if I'm not mistaken, in that process we were given it was suggested that the Proponent would be the organizer, the creator of the CLC.

And I'm suggesting to you that one side

or the other having a controlling influence is probably debilitating to the process itself. Would you not agree?

Mr. BOB PETRIE: I think the process needs to be reflective of both sides, you know, of the issue. I do agree with that.

Dr. GUNTER MUECKE: You said that, if I understand you right, that you... In terms of influencing the composition of the CLC you expressed interest that all stakeholders be represented, and if you're presented with a CLC that... And there are community concerns about its composition, how would you react to that?

Mr. BOB PETRIE: I think we would need to, you know, take those concerns seriously and assess them. I guess it would depend on the situation as to what level of intervention we might consider.

Again, you know, we want the CLC to be a vehicle for communication and information exchange between the parties, and I think it's... You know, if we see that that's not effectively occurring, then we'd have to consider our options.

But we're dealing with, obviously, many different individuals on a CLC with many different points of view, and it can often be very difficult to successfully balance all of those in a way that's satisfactory to everybody.

Dr. GUNTER MUECKE: Thank you. Just one small follow-up.

Have you run across instances where you have had to intervene?

--- Pause

Mr. BOB PETRIE: Yeah. I don't have any specific examples to provide you with, and I guess it depends on, you know, what we mean by intervention, but I think it's something that, if we were presented with a problem, we would look at that.

I guess the other thing I'd point out is, you know, when we've required these in the past, and they are reflected as a condition of approval, however, I'll be honest and say compliance is more difficult to ascertain when you're trying to evaluate the functioning of a CLC versus whether or not a company is meeting a discharge requirement.

And to assess whether due diligence has been exercised in meeting that requirement is a difficult task.

And I guess, you know, that is another perspective, too, is that you referenced the Proponent having a quasi-leading role in the committee and whether that's appropriate. And I understand the question.

I think that may be an artifact of the

way that it's written in the approval in that we have required the Proponent to form this or set this up, and that may be misconstrued as the Proponent trying to drive the agenda, which is not what it's for.

THE CHAIRPERSON: So despite the wording, philosophically, you don't... What you're saying is, philosophically, it's got to be a shared relationship in which both parties are getting something out of this relationship as opposed to being driven by the interests of one party.

Mr. BOB PETRIE: Yes. You don't want a situation where it's simply, you know, one side calling the meetings, setting the agenda and conveying the information in a one-way fashion. That's not what we want to achieve.

THE CHAIRPERSON: Okay. We're being driven by time, unfortunately, and we're going to have to terminate the Panel's questions at this point.

So I think what we're going to do is turn to Mr. Buxton and find out whether he has any questions for you.

PRESENTATION BY THE NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR - QUESTIONS BY THE PROPONENT

Mr. PAUL BUXTON: I wonder if you'd mind, Mr. Chair, if I made a few clarifications as well as questions. I'll try to be very brief.

With respect to the Community Liaison Committee, as you know, and you have the protocol, as it were, from Nova Scotia Department of Environment and Labour, the Proponent is, in fact, required on request by the Department to set up a Liaison Committee.

Certainly we had a difficult time to do that, but nonetheless, one was set up.

Our responsibilities after that are to provide services to the Committee at the request of the Chair. We're required, for example, to provide someone to type their minutes for them.

We're required, if the Chair asks, to provide additional copies of the minutes. The Chair could ask us to put minutes up on a web site, for example.

The Chair could also make a request for the Proponent to bring its consultants forward to the Committee so that the Committee and anybody in attendance could ask questions, and that was done on several occasions.

I don't think, certainly in our case, that the Proponent attempts to drive the process. The Chair calls the meetings, they tell us who they want there, and where to provide a function, or to provide them a meeting room and to provide them with the facility.

So I think the setting up is really where the problem is, because some Committee members felt

that if they sat on the Committee then they were immediately tainted with being in support of the project, whereas if they refused then they were on the other side.

And it was a very difficult process to try to get people who were neutral, and to try to impress on them that their job was simply to act as a conduit for information, to bring concerns to the Proponent, and to get answers back out to the public again. It was a difficult process.

On another point of clarification, with respect to... And unfortunately, we've gone through this a couple of times, but I'd like to make the point again with respect to the constructed wetland and the bog. There never has been a connection between those two in any of our, either in the Environmental Impact Statement or in the revised.

The supply of water to the bog has never been provided via the sediment ponds, and secondly, that the supply of water to the bog in the future, to ensure its good health, basically is in the same small ravine which currently supplies the bog.

So essentially, what we're trying to do is to reproduce the exact conditions that are there.

I would also ask a question now, if I could, of the Department; if they could explain the

difference between guidelines and regulations. There is an act, the **Pits and Quarries Act**, and it does not have regulations, but it has guidelines, and I think it might be useful for us to understand what happens when there are guidelines but not regulations attached to an act.

Mr. BOB PETRIE: Thank you. I guess, simply put, the difference between guidelines and regulations, in one sense, regulations are immediately binding and enforceable, in and of themselves.

Guidelines are generally used in creating specifications of a more technical nature, which don't become enforceable, in and of themselves, unless they become referenced in the body of an approval.

The reason that guidelines are used in many cases, instead of regulations, is that guidelines can be updated more easily when new public policy comes around, or new scientific information becomes available. The process of revising and updating a guideline is much simpler than that of a regulation, which is why they are used in a variety of technical situations.

Mr. PAUL BUXTON: Thank you. That's very clear.

The Panel asked whether, in fact, on projects, it was either possible or even perhaps standard practice to impose conditions which may be more stringent

than as set out in the guidelines, and I would like to ask you whether there is a practice or there are cases of, in fact, less stringent conditions allowed in the operation of a quarry than are in the guidelines.

Mr. BOB PETRIE: Off the top of my head, I won't be able to reference any specific situations. Generally speaking, if one were to use a less stringent specification than what's set in the guideline it would need to be demonstrated that either that section of the guideline didn't apply to the current situation, or that there was some other valid, I guess, scientifically-supported reason that a lesser specification could be used.

However, generally speaking, our guidelines are the baseline, and they're set at certain levels, in many situations, to provide for environmental protection, but also to provide a margin of safety when dealing with an issue.

Mr. PAUL BUXTON: Thank you. I think that that's really what I was getting at; that the guidelines are presumably set there because experience has shown that in the majority of circumstances, by adhering to those guidelines, the particular section that it addresses to addresses the effects of that particular stipulation or guideline.

And I'm just wondering, if I could just

pursue that a little bit further, that if one could demonstrate that, in fact, the conditions or end result or effect met the guidelines, whether the guidelines could then be diminished or indeed increased to take into account that fact.

Mr. BOB PETRIE: I guess that's something we'd have to look at on a case-by-case basis.

Mr. PAUL BUXTON: Thank you very much. And I just would like to make a comment here, if I could, that the Industry Mineral Association of Nova Scotia certainly has been very vocal in its promotion of the adoption of regulations rather than guidelines, which sounds a little odd, but the Industry, in fact, welcomes very specific regulation rather than guidelines, and there have been approaches to the Government through the Department and through approaches to the Government itself, to try to bring in regulations which are very specific, and which in fact apply to all people in the industry.

Guidelines tend to introduce this element of doubt as to whether it applies in this case or this case, and this person has a little bit of better deal than I do.

I just have one more quick one, if I may, Mr. Chair, with respect to the water budget and water supply demand.

I had rather thought that we had satisfied all the questions on that. Certainly more information was requested following our submission of the EIS, and those were addressed in length in our responses, and they specifically dealt with various drought periods and so on.

With the exception of the issue that was raised by Environment Canada this morning with respect to the level of precipitation in extreme periods, which sort of deals perhaps sort of more or less with water supply than perhaps capacity of our system to hold it, and I would just like to perhaps say that if there are issues outstanding with respect to water budget, we are not aware of them, and if they are then we would certainly like to address them immediately.

Thank you.

THE CHAIRPERSON: Thank you, Mr. Buxton.

Now we'll turn to questions from, just a moment, questions from Government, if there are any. If not, then we'll turn to questions from the registered participants.

PRESENTATION BY THE NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR - QUESTIONS FROM THE PUBLIC

What I would suggest, maybe in the process of expediting this, maybe I could ask you to line up

behind the microphone. In other words, that would immediately give us a sense of how many there were, and I think it would make it a bit easier and speed things up a bit.

Now, I have to offer a kind of a... Oh, my goodness. Oh, my, my. Well, okay.

We're very much behind. We will be about an hour and a half behind. Now, that's not a bad thing, but remember, the principal purpose for this process is to inform the Panel. So if the Panel goes on at some length, it's informing itself, and the amount of time being spent on this means that a lot of information is transferring hands.

So I don't want any of you to think that in any way you're being diminished, but it's just part and parcel of the process, okay?

So Mr. Muir. Moir, I'm sorry, I'll get it right. Please.

Mr. ANDY MOIR: I just don't want to be confused with Jamie.

--- Laughter

THE CHAIRPERSON: Go ahead.

Mr. ANDY MOIR: Not that he's a bad person. I just want a point of clarification on, I think I've got this right, this Part Five approval. That is not a

public process. That's basically between the Department and the Proponent. Is that correct?

Mr. BOB PETRIE: In many cases it is, but we have the option to make it a public process if the circumstances necessitate it.

Mr. ANDY MOIR: Could I do a quick follow-up on that? I guess the concern that many of us have is that there seems to be so much information that would come out in the Part Five process of the approval that we believe to be critical to actually determining whether the project should go ahead at all, and I wonder what triggers and how one triggers making sure that the Part Five approval has some sort of public scrutiny as opposed to being an in-house operation.

Mr. BOB PETRIE: Actually, in the case of quarries, some time ago we made the decision that we would open up Part Five approvals for quarries to a public information period.

So I wouldn't see any reason that this would be different.

Mr. ANDY MOIR: Thank you very much.

THE CHAIRPERSON: Thank you. Mr. Mullin?

Mr. DON MULLIN: Don Mullin. I'll try to make my question short. There was a discussion this morning, I believe it was between Dr. Muecke and Mr. Petrie,

and it had to do with the sedimentation complaint of several years ago, and I believe Dr. Muecke asked the question, or perhaps it was Dr. Fournier, in terms of the delay or how long was it before that was investigated.

And I believe the answer was given that we weren't sure. Well, I was involved with that, and I do have the answer, but it's not up to me to give it to the Panel. I wish, I wonder if Mr. Petrie would be prepared to give the Panel some information about that delay.

Mr. BOB PETRIE: If the Panel wishes, I can undertake to find that out and get that information back.

THE CHAIRPERSON: That would be very good, thank you.

Mr. DITTRICK: Yes. This has to do with the CLC, to some degree, and outreach.

How would you characterize the content of the various mailings, such as newsletters from the Proponent to the community? Would they best be characterized as educational outreach or promotion of the project and its acceptance? Did NSDEL in any way monitor the outreach efforts beyond the CLC, and does Department of Environment and Labour have expertise to make such an assessment?

And if this is not the sort of thing

that falls within the jurisdiction of the Environment and Labour, where does it fall?

And I'd also like to make a... Actually ask either the Secretary or the Panel if these mailings are actually, at this point, part of the Panel record, and if they've been submitted by the Proponent to the Panel.

THE CHAIRPERSON: I'm not sure of the answer. Do you know? Perhaps you could ask that question of us later, and we could see if we could get it for you. Alright?

Mr. MARK DITTRICK: But I would also like a response from---

THE CHAIRPERSON: Oh, alright.

Mr. MARK DITTRICK: --- Environment and Labour to my questions about if they have, indeed, seen these materials, and if they have assessed them in any way, how would you characterize them, and does this fit within the framework of what you expect the outreach from the Proponent to be?

Mr. BOB PETRIE: I guess we, I'll say we probably did see much of the, many of the materials that were circulated during the CLC process. I believe we were copied. You know, I can't sit here and say it was a hundred percent. I don't know what we didn't receive.

We did not, I guess, monitor the, or

treat that in an editorial capacity or anything of that nature to monitor the publications or the materials in that sense.

Mr. MARK DITTRICK: Is there a requirement of any sort of veracity from the Department with respect to any of these materials and the content?

Mr. BOB PETRIE: It is, I guess, for the veracity of the materials, anything that is submitted in fulfilment of our requirements, there is a requirement under the Act not to provide false or misleading information.

The materials in this case, during the CLC process, were not scrutinized, you know, in detail in that fashion. We monitored the process to make sure the process was occurring.

Mr. MARK DITTRICK: So even though that was a requirement...

THE CHAIRPERSON: Mr. Dittrick, you've had your question and follow-up.

Mr. MARK DITTRICK: Okay. Okay.

THE CHAIRPERSON: Mr. Mahtab?

Mr. ASHRAF MAHTAB: Thank you, Mr. Chair.

I have a question for the Department. It's about the rehabilitation of the quarry site for the 3.9 hectare permit which was granted in April 2002, and the permit I think was annulled in September 2004.

And I also believe that the Department received a reclamation bond which is four times $6,250, for the four-hectare quarry.

And my question is, did the Department inspect the site to determine or estimate the cost of the rehabilitation, and then has, or when did the Department rehabilitate the site.

--- Pause

Mr. BOB PETRIE: In this case of the 3.9-hectare site I don't recall if the rehabilitation bond was costed out or simply based on the flat rate that was discussed in the guidelines.

As far as rehabilitation of the actual site, when the approval I guess became null and void and revoked because of the change in status of the company, we looked at that, and we looked at the conditions of the approval and the guidelines, and at that point, on the site, the grubbing had occurred, construction of the sedimentation and drainage structures had occurred.

Quarrying had not commenced, and the rehabilitation provisions of an approval do not activate until quarrying commences, and therefore rehabilitation was not required.

Our position in that case was that they are still not permitted to cause adverse effects, and could

be held accountable in that event.

THE CHAIRPERSON: You have a follow-up, Mr. Mahtab?

Mr. ASHRAF MAHTAB: My understanding is that all the disturbance of the site was in preparation for blasting, as soon as the blasting permit had been received. There was no other motivation for removing the grub and making the siltation ponds, et cetera, except for preparing to start the quarrying operation.

The other evidence that I have is the correspondence between DEL and the Proponent about the submission of the amount for the rehabilitation bond.

THE CHAIRPERSON: That's a statement.

Mr. ASHRAF MAHTAB: That's a statement.

THE CHAIRPERSON: Okay. Thank you, Mr. Mahtab.

Ms. Mitchell, are you next?

Mr. PAUL BUXTON: Mr. Chair, could I just add some clarification, here, if I may?

The original bond was, in fact, as required. It was in the amount of $25,000. The Proponent is further required, upon the issuance of the permit, to in fact do calculations and determine how much the cost of rehabilitation would be, and Bilcon did in fact do that calculation, and submitted further funds to the Department

of Environment and Labour, and they still have those funds in their entirety.

THE CHAIRPERSON: Thank you. Next? I'm sorry, I don't remember your name.

Ms. NORA PEACH: My name is Nora Peach. I am a registered participant. Nora, N-Okay.-r-a; P-e-a-c-h.

THE CHAIRPERSON: Thank you.

Ms. NORA PEACH: I remember a public meeting in Sandy Cove in early spring 2002, soon after the community heard about the mega-project, including a marine terminal at White Cove.

The meeting was held, I think, soon after the 3.9-hectare permit was issued by DEL. Mr. Petrie was invited to the public meeting to explain to the public about the quarry. I believe also there was Thomas Wheaton, I think someone from DFO, at that meeting, to give that background.

At this meeting, Mr. Petrie had to ask Mr. Buxton, who was in the audience, to come forward to explain the details of the project. Mr. Petrie, I believe, started to explain, and then he called upon Mr. Buxton to come forward.

How could DEL have issued the permit with so little apparent understanding of the project?

Mr. BOB PETRIE: I don't think we issued the approval with an insufficient understanding of the project, and if Mr. Buxton was called upon in that meeting to provide additional, you know, detail, that's I guess what was deemed appropriate at the time.

But when we issued the approval, the approval package and submission are reviewed by our staff and our engineering staff to ensure that the requirements, the submission requirements of that approval process are met. I don't recall the information item that was, of the subject at the time, but generally speaking, that is how we would do that.

Ms. NORA PEACH: Thank you.

THE CHAIRPERSON: You're welcome. Next, Ms. Peach.

Mr. PAUL BUXTON: Perhaps, Mr. Chairman, if I may, I think we should have a clear understanding here of who the Proponents were at the time.

The four-hectare permit was applied for, and the permit was granted, to Nova Stone Exporters Inc. of Nova Scotia.

THE CHAIRPERSON: Maybe this is a good time to clear up something for me, which is, what is the relationship between Nova Stone Exporters and Bilcon?

Mr. PAUL BUXTON: At this point in time,

there is none.

THE CHAIRPERSON: Are the principals the same? For example, were you involved with that?

Mr. PAUL BUXTON: The principals of Nova Stone are in no way associated with Bilcon of Nova Scotia and never have been, although there was a partnership entered into between Nova Stone and Bilcon of Nova Scotia. That partnership was dissolved, and Bilcon has been the sole Proponent since.

So I think the four-hectare quarry issue is an issue of Nova Stone Exporters Inc. When Bilcon took over the project from Global Quarry Products, it in fact advised the Department of Environment and Labour that it was not assuming the permit and was making no application to assume the permit for the four-hectare quarry, and in fact advised the Department that it was abandoning that permit, and confirmation of that was received from the Department.

THE CHAIRPERSON: Thank you. Ms. Peach?

Ms. JUDITH PEACH: I might also just add that Mr. Buxton is well known in the community for quarry projects dating back even further, and that might give you some clues as to why there's been, why this whole project has been contentious.

There was another project that I understand he was involved with on the other side of the

Neck, but that wasn't my question.

THE CHAIRPERSON: No. Please, your question.

Ms. JUDITH PEACH: Okay.

Mr. PAUL BUXTON: I think, Mr. Chairman, I have to interrupt here, please.

Let me be quite clear about this. It's been said many times before, and I've let it pass, but this is absolutely untrue and I wish to lay it to rest.

At the time that this young lady is referring to, I was acting, on a consulting basis, as Executive Director of the Town of Digby and Municipality Industrial Commission, and in that capacity, I served one or two days a week, depending upon the demands of the job at the time.

I had a request from a group, and that request was to the Industrial Commission, and their proposal was to look at opening a quarry on Eastern Head, which is in the same general area as this, and I reviewed it with the Industrial Commission and suggested that the principals, first of all, make a presentation to the Municipal Council, to see what level of support there may be, and secondly, I suggested to them that it might be very useful to put their proposals to the public.

And if you check the records very

carefully, you will find that that public meeting that was set up that everybody refers to was set up by the Industrial Commission, so that the Silvas, who were the Proponents, could in fact make their views known to the community.

Following that meeting, and I think there were probably well over 200 people there, very clear that this was a very unpopular proposal at the time, it was on Eastern Head, on St. Mary's Bay. And I advised the Silvas that in fact, you know, there would be significant difficulty and public opposition to the project, and I so reported to the Industrial Commission and to the Municipal Councils.

That is the end of that story. That is on record in the Minutes of the Industrial Commission and the Municipal Council, and I wish to have it absolutely put to bed that I personally was not involved in any other quarry project on Digby Neck, other than in an official capacity as Executive Director of an Industrial Commission.

THE CHAIRPERSON: I don't know if it's been put to bed, Mr. Buxton, but it's on the record, and so I think that...

I mean, I'm not trying to...

Mr. PAUL BUXTON: Mr. Chair, if it hasn't been put to bed, I think it needs to be put to bed.

THE CHAIRPERSON: Perhaps.

Mr. PAUL BUXTON: These records are public records, and the Minutes of the Industrial Commission are there, the Chair of the Commission at the time is still available, and I think that this sort of statement should not go unchallenged.

THE CHAIRPERSON: I understand, and I wasn't trying to be facetious, Mr. Buxton. I was just simply saying, I mean, you've done as much as you can at the moment, and both sides have been heard.

Now, please, question.

Ms. JUDITH PEACH: It seems like some members of the public knew that this project, this mega-quarry project, was going to... Or was in the works back in 2002, when it was really just a four-hectare project. Partly because there was a fax from Patterson Exploration of North Carolina that people had access to. So they were aware of a really vague description of a mega-quarry back in the time of the four-hectare quarry.

Given that some people believe part of the purpose of the four-hectare quarry was to obliterate historical and archeological evidence at the site, I'm just wondering when DEL was aware of this larger quarry, the plan for the larger quarry? Any idea of the time frame?

Mr. BOB PETRIE: It's tough to pin down when exactly we became aware of the long-term plans. I

think even with that in mind, under the framework that we have, it was still within, you know, within our framework to permit a 3.9-hectare quarry. Even if there as a possibility that that might, at some point in the future, request an expansion, it met our requirements at the time.

And again, it might've been early on when we realized the Proponent's long-term goals; however, the project that they presented us with at the time was a small-scale project which in no way assumed approval for any subsequent expansions.

THE CHAIRPERSON: Mr. Lang?

Mr. WILLIAM LANG: Mr. Lang, Nova Scotia Green Party. I would like to begin by requesting that the Department of Environment and Labour provide to the Panel the decision-making processes of past quarry creeps in the Province; who made the decision, was it public, was it in-house, or was it Ministerial only.

And a second question would be going back to blast residue. Could anyone from the Department of Environment and Labour comment on the amount of ammonia that it would cause to instigate the development of an algae bloom; that being the by-product of the ammonium nitrate fuel oil explosions.

Mr. BOB PETRIE: I'll just comment on that... If I heard your question correctly, you were

looking for the decision-making process relating to incidents of quarry creep in the past. We can undertake to look into that.

I'm not sure how that information would be able to be retrieved from the current record system, whether it would be tracked as such. It might be difficult to provide it in the way that it's been requested.

THE CHAIRPERSON: Restate that please.

Mr. WILLIAM LANG: When the conversation was referring to increases in quarry size, there was discussion on how those decisions were made, whether they were made by the Minister of Environment, whether they were made by the Minister with dialogue with his staff, or whether they were public.

Was there a public form? Was the public involved in those decisions, to increase the size of already established quarries in the province?

Dr. GUNTER MUECKE: I believe I put in an information request to the Department about that earlier this morning.

THE CHAIRPERSON: And you asked a second question, but you're only allowed a follow-up. Are they checking on this now?

Mr. BOB PETRIE: The amount of ammonia that it would take to cause an algae bloom, and I'll ask our

analyst, Mr. Taylor, to offer some comments there.

Mr. DARRELL TAYLOR: With regards to the amount of ammonia causing an algae bloom, it's my understanding that ammonia would basically be an issue in marine waters primarily, whereas phosphorus is limiting nutrient in fresh waters.

My expertise does not extend to the marine environment, but I could hazard something of a qualifier in terms of... It would be very difficult to say and it would be based on the specifics of a given site.

If one water body was more sensitive than an other, much less ammonia would be required to show an algae bloom.

Beyond that, I'm getting out of my realm of expertise and would have to differ to probably DFO or Environment Canada.

Mr. WILLIAM LANG: Thank you.

Mr. BOB PETRIE: Just as a follow up, I'm sure that would depend on a number of factors such as Ph, and flows and what other nutrients were in the system at the time, so there's a number of factors involved.

THE CHAIRPERSON: Sister Barbara?

SISTER BARBARA: Yes. My name is Sister Barbara, and I'm a resident of Digby Neck, in Rossway. My question as well is on ammonia nitrate.

I just wondered, is that considered a hazardous waste?

Should an accident happen, say a truck overturns and loses all its cargo, would it be a health risk to humans? Because these trucks will go right by my driveway.

Mr. BOB PETRIE: I guess if you're talking about raw ammonium nitrate kind of in bulk form, it would be considered a dangerous good, as it is an explosive. Yes.

SISTER BARBARA: I guess that answers my question. It is a hazardous waste?

Mr. BOB PETRIE: Well at that point, it's not... If it's... At that point, it's not a waste, it's a...

SISTER BARBARA: No, it's raw.

Mr. BOB PETRIE: It's a product, it's a material.

SISTER BARBARA: Yes.

Mr. BOB PETRIE: And it would be categorized as an explosive, however, as with many materials, if a spill happens or it's upset in the wrong place in the wrong environment, you can have adverse environmental consequences as well.

THE CHAIRPERSON: Sister Barbara,

ammonium nitrate is fertilizer.

SISTER BARBARA: Oh, is that all it is? Fertilizer?

THE CHAIRPERSON: Well I mean, it's commonly used as fertilizer.

SISTER BARBARA: I see.

THE CHAIRPERSON: And it's a mixture of fertilizer and fuel oil that gives it its explosive capacity.

SISTER BARBARA: I see, okay.

THE CHAIRPERSON: So when it gets shipped... We were discussing this the other day, and correct me if I'm wrong, but I believe that if they are shipped in components, that is that they don't put them together.

SISTER BARBARA: Okay.

THE CHAIRPERSON: So it would be as if a truckload of fertilizer overturned.

SISTER BARBARA: That's it?

THE CHAIRPERSON: Dangerous perhaps, because it can be toxic, but nevertheless, it's still a relatively common good.

SISTER BARBARA: Thank you Doctor.

THE CHAIRPERSON: Okay. Ms. Mitchell?

I think I'm going to terminate questions

after Ms. Mitchell. We've only had one cycle, and I know, but we're two and a half hours behind, so I have to make this judgement.

Ms. Mitchell?

Ms. LISA MITCHELL: Thank you. Lisa Mitchell, for the Partnership.

From what I heard, I think I'm clear that the Pitt and Quarry Guidelines are probably still going to be undergoing some reevaluation and perhaps changes if in fact this Project goes forward and receives an industrial approval.

Could you comment on how the Proponent's industrial approval, if they receive one ultimately, would reflect changes to the Pitt and Quarry Guidelines, if they came in after the approval was received?

Mr. BOB PETRIE: Generally speaking, the **Environment Act**... Once an approval is issued, the **Environment Act** allows an approval to be amended under certain circumstances.

The question I guess of whether or not it would be amended to stay totally up to date with new and existing guidelines, I think at the time we would have to look at what the nature of those changes were, and whether there was a reason to amend this approval and/or are there process improvements that could be put in place over a

period of time.

While we have the authority to amend approvals when there's a reason, we're not able to do that arbitrarily, you know? We have to have a valid reason for doing so.

Ms. LISA MITCHELL: And not a follow up, but just a quick clarification, I think Mr. Petrie what you are saying is that amendments to the Pitt and Quarry Guidelines might not necessarily be a reason for a change, it's not an automatic reason for a change?

Mr. BOB PETRIE: It wouldn't necessarily be an automatic update of the approval, no.

Ms. LISA MITCHELL: Thank you.

THE CHAIRPERSON: Okay. This draws to a close the participation of the Nova Scotia Department of Environment and Labour.

I would like to thank you all ladies and gentlemen for participating. It's been extremely informative to us.

We will now adjourn for 15 minutes, and we will resume with NRCan, Natural Resources Canada.

--- Recess at 2:37 p.m.

--- Upon resuming at 2:53 p.m.

THE CHAIRPERSON: Ladies and gentlemen, we will resume now.

We will begin with a presentation by Andrew McAllister from Natural Resources Canada, NRCan. Okay.

Mr. ANDREW McALLISTER: Thank you Mr. Chair. Please prepare to be blinded.

PRESENTATION BY NATURAL RESOURCES CANADA - Mr. ANDREW McALLISTER

Mr. ANDREW McALLISTER: Mr. Chair, Panel members, ladies and gentlemen, first of all I would like to thank you for the opportunity to present at these public hearings.

My name is Andrew McAllister, I am a Senior Environmental Assessment Officer with Natural Resources Canada, or NRCan for short, based out of Ottawa.

I'm responsible for coordinating the NRCan review of the Environmental Impact Statement and supporting documentation, as well as NRCan's participation in this Joint Review process.

My presentation will introduce NRCan to the Panel and is to provide a summary of our involvement in this environmental review and of our comments provided to the Panel.

What I am presenting is based on NRCan's written submission of June 12, 2007 and is currently on the registry.

Briefly, our mandate and role first. NRCan is an economic science-based federal department with a mandate to promote sustainable development and responsible use of Canada's mineral, energy and forestry resources and to develop an understanding of Canada's land mass.

The Department also conducts research and technical surveys to assess Canada's resources. More specifically relevant to this review, NRCan also conducts environmental geo-science research and terrestrial in marine settings.

NRCan's role in relation to this Project is relatively limited. NRCan has no regulatory or decision-making responsibilities for this Project.

As such, NRCan's involvement in the Joint Environmental Review process stems from its obligations under the **Canadian Environmental Assessment Act** through which NRCan has determined that it was a federal authority in possession of specialist's information or knowledge relevant to the Project.

Therefore, in the context of this Review, NRCan's role is to provide technical and scientific expertise within the limits of its mandate.

The two experts of NRCan that have participated in this Review include the CANMET Mining and Mineral Sciences Laboratories and the Geological Survey of

Canada.

The CANMET Group was engaged as a result of the request made by the Joint Review Panel to NRCan for expertise on the aqueous geochemistry of waste rocks.

This request was made shortly after the notice for these public hearings was announced.

The Geological Survey of Canada was engaged much earlier in the process and have reviewed the Environmental Impact Statement or EIS for short.

These experts provided comments on three general topic areas; Marine environments and processes, hydrogeology and seismicity.

We filed our comments with the Panel on August 3rd, 2006 and the Proponent provided a response to our comments in February of 2007.

Upon review of these responses, the experts have indicated that most of our responses or sorry, most of the responses provided by the Proponent were satisfactory.

However, our experts identified two topic areas where there remained some issues where more clarification was needed.

They are, as mentioned, the Marine environment and processes, which will be the focus of this presentation, with respect to specific issues and

recommendations, and hydrogeology.

NRCan will be presenting in tomorrow's thematic session, at the request of the Panel, on this topic, and I will be accompanied by Dr. Miroslav Nastev from the Geological Survey of Canada, who conducted this review on behalf of NRCan.

Lastly, with respect to that last bullet on that slide, seismicity, NRCan's expert was satisfied with the seismic hazard information that was provided in the EIS, and no further information was required.

With regards to the aqueous geochemistry, information requests were made by the Joint Review Panel to the Proponent on the aqueous geochemistry of copper in the basalt due to concerns of leaching into overlying waters which could then migrate to groundwater or intertidal zones.

Specifically, further information was sought on the leaching and chemistry of copper and on copper impacts on marine life.

Dr. John Kwong, a senior environmental scientist from NRCan's CANMET Mining and Mineral Sciences Laboratory reviewed the EIS and supporting documentation at the request of the Joint Review Panel in this area.

Although the amount of geochemical data presented in the EIS is sparse, it is doubtful if more data

would be necessary to determine if copper leaching from the waste rock is a potential concern.

In the first place, a high copper concentration of basalt does not necessarily corelate with its leachability.

Generally speaking, the form (such as sparingly soluble sulfides or readily soluble weathering products) in which copper occurs in the basalt has more influence on its leachability than its concentration.

This is clearly demonstrated by the results of the four samples subjected to the leach test that the Proponent provided in response to the information request from the Panel on leaching.

NRCan would tend to agree with the Proponent that their proposed monthly monitoring of basalt copper in the water of the sediment ponds would be sufficient to detect the mobilization of contained copper in the basalt, should it occur.

With respect to the impacts on marine life, it is important to note that NRCan's expertise is related to the process by which copper in the basalt is mobilized and becomes bioavailable.

NRCan does not have expertise in the uptake of metals and marine life.

On this matter, local environmental

conditions such as the availability of complexing agents and water hardness can greatly affect the ecotoxicity of copper.

Previous work that Dr. Kwong was involved with investigated mine tailings enriched in copper (up to an order of magnitude greater than that in the basalt at Digby Neck) that ended up in the marine environment. Minimum impact on the local biota was observed.

Given the relatively low copper concentration in the crushed basalt, the low copper leachability in seawater, the small volume of material that may end up in the marine environment and the relatively high energy setting of the marine terminal site, serious ecological impact from the copper is not expected to result from accidental discharges of processed basalt near the project site.

Further, the proposed mitigation measures that the Proponent has identified in its response to the Panel on the potential effects of copper on marine life dealing with the leachability are satisfactory, should mobilization be identified.

NRCan also recommends, should the situation arise, that a more thorough characterization be undertaken of the basalt to be quarried and additional management measures be developed, such as the copper rich portion being separated for proper disposal.

The experts in the Geological Survey of Canada who were involved in our review on this particular topic, marine environments and processes, were Dr. Bob Taylor, Michael Li, Brian Todd and John Shaw.

With our remaining issues being the impacts of the terminal on the shoreline and backshore, extreme wave run-up and sea level rise.

The remainder of this presentation will examine these in a bit more detail.

As the first statement says, there's minimal effect of the terminal structures on the shoreline that are anticipated as most of those structures are located on bedrock and the responses by the Proponent on the marine issues of scaring and sedimentation on the structures that NRCan raised were satisfactory to our Department.

Little sediment is available to accumulate and tidal currents would be sufficiently strong to mobilize any sediment but insufficient to scar around the pilings.

The one gap that we want to highlight and one that we have captured in this second point, there was new evidence presented on the impacts of these proposed structures on wave dynamics on the shores of Whites Cove and its immediate backshore.

Actually, the cover of the EIS certainly

illustrates Whites Cove quite well. It is one of the only non-bedrock areas and it appears to be a coarse sediment beach.

Now it's important to note that the Whites Cove Beach is aligned with waves out of the west. The proposed terminal structures are to the east, which will only impact waves from the north and east.

But no information is presented on whether this proposed structure would impact wave patterns on the White Coves Beach, and potentially focus waves on a new part of the shore.

As such, a recommendation to the Joint Review Panel in this matter is that any further information derived from modelling these inshore wave propagation and impacts on the shoreline stability during the terminal design stage should be factored into environmental protection as appropriate against any increased wave run-up and shoreline changes.

Wave modelling would certainly allow that alteration of wave pattern to be more fully examined and could provide locations of any anticipated wave energy and impacts on the shore resulting from wave run-up.

Keeping on the wave run-up theme, our initial concern in this matter was the landward limit of the extreme wave run-up during storms and their impact on

planned infrastructure.

Again, I should have scanned a copy of the EIS, because a picture is a 1,000 words.

The covers clearly shows, for part of the area at least, the tree line, which certainly illustrates wave run-up locations.

It's certainly not clear however in the Whites Cove area.

However, the Proponent has stated that land based components of the quarry infrastructure will be located above the 10-metre contour elevation and above the coastal flood plain.

However, the flood plain has not been defined and furthermore, a couple of natural sediment ponds exist at and just below the 10-metre contour as demonstrated in the figure in their EIS.

It is unknown if they are subject to present-day flooding or run-up.

Our recommendation on this matter is that the definition of the coastal flood plain should be clarified, and we recommend that it should include the present limit of extreme wave run-up, which is one or two metres, and these are extreme values for the area of the Bay of Fundy.

On a topic that was discussed earlier

today by Environment Canada, and one in which we support their observations and conclusions, sea level rise, the issue around this particular matter is there was a report put out by the Intergovernmental Panel Committee on climate change that the Proponent has cited, and we just want to put a cautionary approach to this.

The estimation used has not considered several important factors, primarily the local shoreline subsidence in Nova Scotia.

As well, there is certainly uncertainty around the concept of global ice sheet dynamics.

As well, observed global sea level changes being greater than past predicted in model changes.

Broadly speaking, there is insufficient information at present to predict precisely a 50-year projected sea level in general.

As a result, sea level rise could be much higher than what the Proponent has estimated.

Our recommendation to the Panel is in line with that of Environment Canada, to incorporate uncertainties, the Proponent should use in their design plans a sea level rise of at least 30 centimetres in 50 years.

As new information becomes available, as the science evolves and is refined, design plans could be

better constrained regarding sea level rise.

And we raise this again. We are advocating a precautionary approach to this matter, given the uncertainties associated with these estimates.

In summary, NRCan believes that the issues we have presented to the Panel can largely be addressed through appropriate measures during the design stage of the Project, should it proceed.

I would be please to respond to any questions, however I am not the subject-matter expert on what has been presented.

I will attempt to answer them to the best of my abilities. Should that not be possible, NRCan, at the Panel's direction, will do undertakings and provide those responses back to the Panel prior to the close of the hearings.

Thank you.

THE CHAIRPERSON: Thank you Mr. McAllister. Gunter, you're going to start up?

PRESENTATION BY NATURAL RESOURCES CANADA - QUESTIONS BY THE PANEL

Dr. GUNTER MUECKE: Thank you for your very clear exposition. I have a couple of questions, and we may as well start with the copper content of the basalts now.

Mr. ANDREW McALLISTER: Okay.

Dr. GUNTER MUECKE: The report that you have submitted to us only partly addresses our concerns and perhaps we didn't express our concerns adequately for a complete response.

The information that has been provided covers the exposure of the basalts and the fines in the settling ponds, and in terms of the marine environment, I was quite aware that of course marine tailings disposal has taken place.

Perhaps our bigger concern, and perhaps we could ask whether this has been addressed yet, is that the basalt fines from the processing will be used in part for soil conditioning, soils which will be used as a cover during the remediation process.

I put it to you that copper mobilization under those conditions, different pHs, different or high organic content if organics are mixed in, is quite different from the marine environment or the environment that exists in the settling ponds.

Could you respond to that?

Mr. ANDREW McALLISTER: That would be a matter that I, myself, wouldn't be able to address to the Panel. I don't have the technical expertise, however as I mentioned earlier, I can take this question back to the

expert and get you a response prior to the closure of the hearings, if the Panel so chooses.

Dr. GUNTER MUECKE: I think that would be very helpful, to have an undertaking to that effect, and so I better phrase it so you can put it to them.

Okay. So it is how will copper mobility from the basalt, fines, be affected if the material is used in soil production involving organics?

What is the copper mobility under those pH conditions, and is it of concern?

Mr. ANDREW McALLISTER: Okay.

Dr. GUNTER MUECKE: One of the things that would come into play at that stage is how much of basalt fines will be incorporated obviously into the soils, and maybe I will ask...

That's a question I haven't asked of Bilcon yet, so maybe Mr. Buxton can clarify that.

Mr. PAUL BUXTON: I'm sorry, I missed the first part of your question Dr. Muecke.

Dr. GUNTER MUECKE: In the production of the reclamation soils, which involves using basalt fines, right?

Mr. PAUL BUXTON: Yes.

Dr. GUNTER MUECKE: How much of the soil that will be used consists, approximately, of basalt fines

as opposed to other materials that you may mix in, any ideas?

Mr. PAUL BUXTON: I don't believe that we have specifically looked at that, but I think that what we would want to do is an agricultural expert look at that and advise us as to what an appropriate mix would be in order to achieve the growth of the specific plants that we intend to put in various areas of the site.

And it may be different in different areas of the site, depending what it is we're trying to create there.

Dr. GUNTER MUECKE: Okay. So in terms of the question I put to you, I have to leave it in very general terms because we do not know the mixing ratio at this stage.

THE CHAIRPERSON: Mr. McAllister, at what date do you think you could deliver this to us? I need to put a date down here.

Mr. ANDREW McALLISTER: The June 29th date or earlier is feasible from NRCan's perspective.

Dr. GUNTER MUECKE: Another question I really have is in its first response to the EIS, NRCan raised a number of questions which involved the extreme conditions that may occur at this coast in terms of wave height, et cetera.

Mr. ANDREW McALLISTER: H'm.

Dr. GUNTER MUECKE: And I was somewhat puzzled because in its latest submission, NRCan indicated that these concerns have been met by Bilcon in their response, and when I look at the response, there is actually no concrete data there.

So this is more a comment than a request. How do you respond... How does the response by Bilcon to those concerns... How is that response by Bilcon meeting the previous concerns that NRCan has expressed in that area?

Mr. ANDREW McALLISTER: I would... I guess I'll attempt to answer that in generalities.

With respect to the comments by the GC Atlantic experts, there were satisfactory responses on a number of the original issues that we had raised.

I mentioned the sedimentation, I mentioned the scouring, and there were some other minor things that we had raised.

What we have brought forth to the Panel are those, I think, more closely related to some of those things that you have just brought up on, the extreme weather conditions and...

This is largely what this presentation over the remaining issues that we have are built around,

namely the landward limit of extreme wave run-up, sea level rise, wave propagation, those sorts of things.

So I think as I mentioned, responses have been given that are satisfactory, and NRCan has these remaining issues I think that still fall within those weather and extreme weather event parameters that you are looking for.

Dr. GUNTER MUECKE: Okay. So maybe it was just unfortunate wording in the response, is that what you are saying?

Mr. ANDREW McALLISTER: Well, I would say that I think our concluding remarks... As we said, a lot of things were satisfactory, and we believe that the remaining issues that we have can be addressed through measures through the design phase.

Dr. GUNTER MUECKE: What role does NRCan play in terms of emergency planning and response, and what I have in mind here is...

And I have asked this previously of Environment Canada, but in order to be responsive to possible accidents and spills, it is necessary to have a good grasp of the nature of the coastline, the nature of the sediments, and not only at the site itself but in the immediate vicinity.

So my question is, is NRCan satisfied

that the Proponent has provided enough information on that for quick and efficient responses to any oil spills, et cetera?

Mr. ANDREW McALLISTER: I thank you for that question. First off, I would preface it by saying NRCan doesn't have any decision-making role in emergency planning and response.

That topic in itself, we briefly touched upon it in an earlier submission. I'm just putting it out that it is... The coastline was such that certainly emergency response planning was an important consideration.

Typically what we can do in these sorts of things as emergency planning response unfolds, NRCan is certainly available to provide its expertise on these manners as these measures evolve.

With respect to what we're here for, the level of information that was in the EIS, I don't think NRCan in its submission was looking or within its mandate providing comments on whether it was sufficient for emergency planning or not.

It was largely focussing-in on the marine processes and environment.

Dr. GUNTER MUECKE: So you're saying we cannot look to NRCan for answers to that?

Mr. ANDREW McALLISTER: For emergency

planning and response, I think that we could look to NRCan... You mentioned about building baseline information and those sorts of things.

Dr. GUNTER MUECKE: Yes.

Mr. ANDREW McALLISTER: And NRCan does have information and research and science that if requested, they would certainly be able to provide that to such an endeavour.

Dr. GUNTER MUECKE: Okay. Thank you.

Dr. JILL GRANT: I'd like to follow up on the question of emergency response because in the earlier submission from NRCan, the issue of the potential for aggregate spills in the water, either from some problem with the conveyor or problems with loading, was raised, and I don't know that there was any comment in it in the submissions.

I'm just wondering whether you could give us an idea of the effects of potential spills in the receiving waters and in the near-shore environment and what effects there would be of trying to remove those spills, should one occur as an accident during the Project?

Mr. ANDREW McALLISTER: I guess first off, the question if I understand correct is seeking our views on what would occur in the event of a malfunction and accident in which there was basalts that entered into the

marine environment.

Given the scope of our review, I don't... I keep looking through our earlier comments as to exactly where that was derived from, but at least initially, I don't think that we would be in a position, or at least myself, to be able to indicate what those effects would be, and I wonder if...

Certainly some of those effects may be in areas that are outside of NRCan's mandate, for example effects on fish habitat, or effects such as things viewed as deleterious substances under the **Fisheries Act**, which could be under Environment Canada's purvey.

So that is how I guess I would qualify that, and I guess if you would want further information in that regard, I can go back to our commentary and provide you with further information with respect to what they were getting at, that expert.

Dr. JILL GRANT: That may be enough already, thank you.

Mr. ANDREW McALLISTER: Okay.

Dr. JILL GRANT: The other question I have is a bit more general, and that is what NRCan's position would be on the role of non-renewable resources in a sustainable development approach?

Mr. ANDREW McALLISTER: Well first of

all, I realize it's a general question and I may be giving you a project-specific answer, but NRCan, its role in this Project, as we stated we have no regulatory or decision-making role.

We are contributing expertise to the environmental assessment process, and the environmental assessment is a means of integrating environmental factors into planning and decision-making processes in a manner that promotes sustainable development, and that's what we view as our linkage or our contribution as far as stable development perspective.

Broadly speaking, the... I don't myself have any departmental position on that matter, and I don't know if we have one.

We certainly are participating in this process as an expert authority, in a process that we feel has an objective of sustainable development.

THE CHAIRPERSON: Okay. I think that's the end of the questions for now. We also realize that we will have another opportunity tomorrow during the hydrogeology section, so we now turn to Mr. Buxton.

PRESENTATION BY ENVIRONMENT CANADA - COMMENTS BY THE PROPONENT

Mr. PAUL BUXTON: I have no questions Mr. Chairman, but perhaps two comments if I may.

Dr. Grant asked about aggregate spills, and I think we did make an attempt to cover that in the EIS as much as...

First of all, I think we noted that all parts of this operation are computer controlled and can be shutdown instantly, so if something goes wrong with the operation, a button is pushed and the conveyor stops.

Typically on conveyor systems, there is a minor amount of spillage. This facility will have spillage trays along the entire ship loader so that if there is anything that inadvertently spills off the conveyor, it will not get into the marine waters.

Secondly, if I could just make a comment on the emergency response plan, the intent really of an environmental assessment is to establish whether or not an emergency response plan is required, and I think that we have made it very clear in the EIS that we believe one is required, and all the details of such a plan will be provided at a later date.

So I think we've already established the need for a plan, and we have stated that clearly, and we will be required to produce an emergency-response plan.

But I have no questions, thank you very much Mr. Chair.

THE CHAIRPERSON: Thank you Mr. Buxton.

Now we turn to the audience. Are there any questions arising from the audience? Mr. Stanton. If there are others planning, would you please line up like before, as before?

PRESENTATION BY NATURAL RESOURCES CANADA - QUESTIONS BY THE PUBLIC

Mr. KEMP STANTON: You determined the likely pH levels of the water. In piles of stored rock, they are bound to have some blasting residue in them after they have been crushed, and if there's nitrogen there, it may make nitro gas, and after weeks of storage, how would you determine the pH balance, in order to determine how much copper would be leached out?

Mr. ANDREW McALLISTER: I myself wouldn't be able to answer that question. I'm not a geo-chemist. We can certainly take that question at the Panel's direction and get an answer if required.

Dr. GUNTER MUECKE: I think you... And it's not my place perhaps to do this, but it has been indicated that the aggregate will be washed, and that should be kept in mind when asking this question, and Mr. Stanton, if I can slightly reformulate that question, it would be: "Would you anticipate pH changes in the washed aggregate and how would that affect the copper leaching?"

Is that a fair reformulation Mr.

Stanton?

Mr. KEMP STANTON: Also, I was thinking that they are going to be reusing a lot of this water, so after they wash the rock with it once and suspend the nitrogen in it, then they'll wash the rock with it again, and again.

Dr. GUNTER MUECKE: That's a very good point Mr. Stanton. Yeah, so we would like to have some clarification on that.

THE CHAIRPERSON: You formulate an undertaking then.

Dr. GUNTER MUECKE: So the undertaking would be, as Mr. Stanton mentioned, what will be the role of explosive residues in the pile in terms of the changing the Ph, and I would add Eh environment, and how would that affect copper leaching.

THE CHAIRPERSON: Mr. McAllister, we'll put the same date down, the 29th. Sooner is better, but no later than, okay?

Mr. ANDREW McALLISTER: Okay. I just want... I don't want to speak for the expert, but the first part of that question dealt with explosive residues, so we'll have to...

If he does not necessarily that expertise on that side, we may need to collaborate with

another department that does have that.

Dr. GUNTER MUECKE: H'm.

THE CHAIRPERSON: Sister Barbara?

SISTER BARBARA: I'm Sister Barbara and I'm in Digby Neck, at Rossway.

Given the current size of the proposed mega-quarry, in your expert opinion, do you think there's enough basalt rock to keep the Whites Point Rock Quarry and Marine Terminal operating until the year 2057, or would a larger quarry be required during the 50-life expectancy of the Project? Would you be able to comment on that?

Mr. ANDREW McALLISTER: No, I wouldn't. In NRCan's review of this Project, we were an expert Federal Department and we looked in the areas of hydrogeology, marine environments and processes, seismicity and the aqueous geochemistry of waste rock. We did not look into the area that you have posed your question on.

SISTER BARBARA: Mm-hm. So you have no idea how much rock will be going from that site?

Mr. ANDREW McALLISTER: In the context of your question, no, I don't.

SISTER BARBARA: No. Thank you.

THE CHAIRPERSON: Okay. If there are no further questions, we'll ask Mr. McAllister to step down, with thanks.

And we'll move to the next presentation which is Lisa Mitchell from the Partnership.

Thank you, Mr. McAllister.

PRESENTATION BY THE PARTNERSHIP FOR THE SUSTAINABLE DEVELOPMENT OF DIGBY NECK AND ISLANDS SOCIETY - Ms. LISA MITCHELL:

Ms. LISA MITCHELL: I just caught a glimpse of Mr. McAllister's two-day old baby that he left behind in Ottawa to come here, so... It was on his computer screen.

THE CHAIRPERSON: That's known as commitment.

Ms. LISA MITCHELL: (Laughing) It sure is.

Thank you very much, Mr. Chair and Panel Members. My name is Lisa Mitchell, and I am with the Partnership for the Sustainable Development of Digby Neck and Islands Society. Can I sit further?

Almost five years ago, I was contacted by a woman from Sandy Cove who expressed concern about a mega-quarry that was proposed for a coastal area near her home. She said there was to be some type of Environmental Assessment, and she and her neighbours were confused, and they were very concerned. They needed help, and they wondered if I could assist.

I hesitated. As an environmental lawyer, my forte was writing legislation and working with farmers in the Annapolis Valley on environmental management plans. It was not about assessing the impacts of quarries.

I did agree to assist the community group that became known as the Partnership, or the Society, and I've come to know a group of people who are intelligent and compassionate citizens committed to the long-term sustainability of this region. Their commitment goes far beyond what one reporter described as an NIMBY, or "Not in my Backyard" issue. Their backyard is the Bay of Fundy, and their commitment is to the broad community of species, both human and non-human, that make up and is supported by the Bay of Fundy ecosystem.

All of these people are more than capable of sharing their knowledge of this area, and the impacts that may result from the proposed Project. I'm not before you to speak on their behalf.

My role over the past four years has been as a facilitator. I've tried to connect the community members to other organizations, such as the Sierra Club, the Clean Annapolis River Project, the Canadian Parks and Wilderness Society, the Ecology Action Centre and the Council of Canadians. All of these groups are represented at these hearings.

I've also worked to link the community to experts who can provide support and substance to their concerns.

My presentation this afternoon is intended to serve as an outline. It is to provide you with a framework of some of the key areas that our experts, whether their knowledge is derived from academic study or traditional experience, will bring forward over the next seven days.

The Proponent says that communities on Digby Neck are dying. Our presenters will show that Digby Neck is not a series of communities at the brink of death that can only be saved by a quarry. There are many strong, small-scale economies and resource-based industries that have and can continue to provide term sustainability for this region.

Many of the community members, including Marilyn Stanton and Danny Mills, will speak to this, as well as experts, including Dr. Michael Corbett, Janet Larkman, the former Executive Director of the Western Valley Development Authority, Miss Linda Pannozzo from Genuine Progress Index will also come to address some of these issues in the context of the full-cost accounting method that their organization uses.

The Proponent says that the impacts on

tourism will not be significant, because primarily the quarry cannot be seen from the highway. Tourism in this area is not entirely centred on Highway 217. It depends very much on the pristine nature of the local environment, and the view from the water.

Judith Cabrita, the former Executive Director of the Tourism Industry of Nova Scotia, and Ann Goddard, who has been co-owner of the Mountain Gap Inn in Smith's Cove for over 30 years, will speak to this concern.

It is the Proponent's position that the long-term impacts on lobster, the fishery and the local ecology will be insignificant. Mr. Kemp Stanton, you all know, will speak from generations of experience working on and near the Bay of Fundy, and he will articulate the uncertainty that exists around the negative impacts on the species that support both his livelihood, and the diversity of the Bay.

Andy Sharpe, from the Clean Annapolis River Project, will provide a detailed analysis of a number of potential impacts from this Project, including visual impacts, impacts on tourism, terrestrial plant species at risk, and others that the Proponent has said will be insignificant. Andy's presentation will challenge the Proponent's studies, and counter their arguments, demonstrating that there are many significant adverse

affects from this Project that will not be mitigated.

The Proponent has applied adaptive management as their primary response to any uncertainty in the Project impacts, including ones that may result in irreversible damage. Put simply, they will monitor and they will adapt. In the 140 references to this theory, they give very little substance to support the effectiveness of their approach.

Dr. Peter Dunker (ph) will be presenting to the Panel on adaptive management with an analysis of the validity of the Proponent's approach.

In a similar way, the Proponent has cited the precautionary principle, whenever they invoke any measure that goes beyond regulatory requirements. We've asked Dr. David VanderZwaag to speak to the role of the precautionary principle, particularly in the context of endangered species.

We've also asked Dr. Mike Stokesbury to provide input on the critical state of the inner Bay of Fundy Atlantic salmon, and it's habitat to demonstrate the significant risk that exists where there is any human influence near waters used by that species.

The Review Panel has indicated that it will consider whether the Project will make a positive, overall contribution to sustainability. Dr. Robert Gibson

and Dr. Meinhard Doelle will speak to the role of sustainability appraisal in the context of Environmental Impact Assessment.

Their presentations will demonstrate that the Proponent's Proposal does not contribute positively to the long-term sustainability of this region.

The onus to provide evidence that proves that this Project will not cause significant adverse effects to the environment and will contribute in a positive way to the sustainability of this region is on the Proponent.

The Environmental Impact Statement says that there will be no significant adverse effects. It is our position that the Proponent has not brought forward the verifiable evidence necessary to support that conclusion. We trust that our experts will be able to speak to this effectively.

The pervasive theme for our presenters over the next seven days is that of uncertainty. There is uncertainty around many of the potential impacts of this Proposal. Will blasting near the coast cause marine mammals to leave the area? Will an already stressed lobster fishery reach a tipping point if there is a polluting event from the site?

How will the terrestrial species on the site respond to the changes in their environment? Will one

of the vessels strike a whale?

In some instances such as the subtle impacts of blasting on marine mammals and invertebrates, the science itself appears to be uncertain. In other instances, such as the impacts on species like the Harlequin duck, the uncertainty stems from the lack of scientific rigour in the Proponent's own studies.

In yet other circumstances such as the potential for ship strikes with whales, the Proponent's Plans for mitigation create uncertainty. Looking across the surface of the ocean with binoculars to determine if there are any whales present reminds me of a quote from the late Dr. Carl Sagan:

"Absence of evidence is not evidence of absence".

Is it the uncertainty, particularly when the uncertainty is coupled with the risk of irreversible damage, that makes this Project unacceptable at this time, in this location, and with this Proponent. In fact, I would argue that the risk for adverse environmental effects from this Project may be magnified, because the Proponent has already demonstrated that they are unable or unwilling to meet minimum requirements as in the EIS Guidelines.

This does not bode well for the environment, when the Proponent is operating in a Province

that uses self-regulation as its primary means of compliance with environmental laws. Mitigation is not effective if it is not in effect.

The many community members and other concerned citizens in Nova Scotia who have committed their time, their energy and their own money to participate in this process over the past four years are concerned that Review Panels do not reject projects, but only try to minimize the impacts of those projects.

Yet in the face of that cynicism, they have wholeheartedly jumped into this long, gruelling, complex process. They have asked, and I have told them that there is no law that prevents a Review Panel from recommending rejection of a project.

I expect that none of us who sit in these seats envy the task ahead of you as a Review Panel. I hope that the efforts we have taken to bring forward experts from both the academic and traditional arenas will at least assist you in your evaluation of the Proposal.

It seems that it is human nature to underestimate our negative impact on the world we inhabit. We have dammed our rivers, cutting off migration routes for fish; we've filled our harbours with sewage; we've cleared out forests, eliminating entire ecosystems in one pass; we've sprayed toxic substances into our air, contributing to

the destruction of species and causing negative impacts on our own health; we over-use, we over-consume, and we generally overestimate our ability to control, manage and repair the environment.

As a society, we no longer have the privilege of consuming our natural resources in a way that completely disrespects their inherent value and our debt to future generations. As Carl Safener reminds us in his book, "Song for a Blue Ocean", the economy is a wholly-owned subsidiary of the environment. Thank you.

THE CHAIRPERSON: Thank you, Ms. Mitchell.

--- Pause - Applause

PARTNERSHIP FOR THE SUSTAINABLE DEVELOPMENT OF DIGBY NECK AND ISLANDS SOCIETY - Ms. LISA MITCHELL - QUESTIONS BY THE PANEL:

Dr. JILL GRANT: Ms. Mitchell, how would you define what it takes to take an ecosystem approach in a project like this, and can you give us your ideas of what would have been required to, to take that kind of an approach?

Ms. LISA MITCHELL: I think that primarily it means that the Proponent had to recognize from the onset of the Project that there is an interconnectedness between all aspects of the Project and the ecosystem that

it's impacting, and I couldn't explain to you specifically how you would carry this out, but the need to ensure that whenever one is assessing the impacts, or the potential impacts on the Project, that they're not, that you're not separating the various components from the ecosystem.

But yet, as I think was raised the other day, the concept of recognizing that there are direct impacts and there are indirect impacts, and those indirect impacts generally result from impacts on other aspects of the supporting ecosystem for each valued environmental component.

Dr. JILL GRANT: Thank you. And my other question is around the CLC. I wonder if the Partnership has been involved at all in the process of participation through this. Were any of the Partnership members involved in the CLC, and whether there is any comment on that?

Ms. LISA MITCHELL: Unfortunately, Dr. Grant, I'm not the person to answer that because my involvement with the Partnership has not involved, in any way, a connection to the CLC, given that I'm not a community member. I live in Grand Pre.

THE CHAIRPERSON: Ms. Mitchell, I'd be interested to know a little bit more about the Partnership. When was it formed?

Ms. LISA MITCHELL: The Partnership came

together, I believe it was in 2002, shortly after they became aware, or shortly after the community became aware that there was a proposal for a 3.9-hectare quarry.

THE CHAIRPERSON: Is it fair to characterize it as a response to the quarry? It's a organization with a mission, more or less. Am I over-characterizing it?

Ms. LISA MITCHELL: I think it's very fair to say that the Partnership developed as a response to the quarry proposal. I think that they have tried to expand their focus to include broader considerations, but that is their primary concern.

THE CHAIRPERSON: How many members are there in the Partnership? How do you establish membership?

Ms. LISA MITCHELL: Again, I'm not necessarily sure I'm the right person to answer that question, given that I'm a consultant to the Partnership, but I believe, at last calculation, that there were somewhere in the order of 3- to 400 members, and those people become members simply by purchasing a membership, recognizing that they support the goals of the Partnership.

Other people who are very active in the Partnership are a smaller group of perhaps maybe 30 to 40 people.

THE CHAIRPERSON: Where would the

membership come from? What are the origins of the people? Are we talking about only from the Neck and Islands? Are we talking about Americans who vacation here? What is the cross-section of the membership?

Ms. LISA MITCHELL: I believe that the membership is very broad. It would include a lot of people. Probably the bulk of the membership is based in the region, in this particular, but certainly there are members across Nova Scotia, and there would be some members from the United States, as well, particularly those that are seasonal residents here, but may reside part of the time in the U.S., and there may be a few others, as well, but I'm not sure of the details on that.

THE CHAIRPERSON: Do you have any idea how many adults there are in Digby Neck and the Islands, and what percentage of that, of your membership that represents?

Ms. LISA MITCHELL: Did you ask how many adults there are?

THE CHAIRPERSON: Well, I mean, I'm trying to get some sense of how broadly embracive this is. Is this a small splinter group? Is this a major group? I have no sense of that.

Ms. LISA MITCHELL: Would you allow me to call on one of the community members that is more directly involved with the membership, rather than myself as a

consultant, to provide you with that information, because I certainly think we could provide you with lots of detailed information on the actual makeup of the Partnership, who is involved, how many, where they come from.

THE CHAIRPERSON: Maybe we could just take that as an undertaking, where---

Ms. LISA MITCHELL: Certainly.

THE CHAIRPERSON: ---you and your colleagues could put this information down for our benefit. I'd be interested to know, do you hold regular meetings, and if you do, what the attendance at those meetings is. How would you...

Well, I've already asked you how you'd characterize your organization, so it's a goal-specific organization which is really directed at...

Well, is it fair to say it's directed at combatting this quarry, or maintaining a way of life? I mean, how would you... I don't want to put words in your mouth. I'd prefer you to do that. And how is it funded?

Ms. LISA MITCHELL: Primarily it is funded out of fund raisers by the individuals, so they do, you know, an annual lobster dinner whereby local fishermen provide lobster for free. They do auctions and so forth at those dinners to raise money.

THE CHAIRPERSON: Okay. Could I ask you

to take an undertaking, return that information to us? You've got a sense of the questions I'm interested in.

I'm trying to get an understanding of the Partnership. It obviously plays a prominent role in these activities, and so I'm from Halifax, and it's just a name to me at the moment, okay?

Ms. LISA MITCHELL: Absolutely.

THE CHAIRPERSON: Okay. Do I have any questions? No? Okay. Mr. Buxton?

Mr. PAUL BUXTON: I have no questions, thank you, Mr. Chair.

THE CHAIRPERSON: I'm going to ask the audience, but judging by the applause, everybody there is familiar with it, so are there any questions? No, I'd be surprised if there were. Correct? Okay. Thank you, Ms. Mitchell.

Ms. LISA MITCHELL: Thank you.

THE CHAIRPERSON: The next person is Kemp Stanton, please.

--- Long pause

PRESENTATION BY THE PARTNERSHIP FOR THE SUSTAINABLE DEVELOPMENT OF DIGBY NECK AND ISLANDS SOCIETY - Mr. KEMP STANTON:

THE CHAIRPERSON: Mr. Stanton, any time you're ready.

Mr. KEMP STANTON: Sorry about this. We only really need one graphic.

I'm supposed to be presenting on traditional knowledge, and I'll try to do my best.

THE CHAIRPERSON: Can I get you to pull your mike in?

Mr. KEMP STANTON: The fisheries in the area influenced and most affected by the quarry would basically be lobstering, herring seining, herring wares, set nets for herring, hand-lining, long-lining, cod nets, draggers, scallop and fish, urchin divers and draggers, beach harvesters, dulse, rockweed, periwinkles, the like. Possibly more in the future. We may have welts, snails, razor clam markets. We don't know what we might be after within 50 years.

I should mention that some of these vessels are mobile; some while they're fishing; some are fixed; and others are a combination of both. So we have a wide variety of boats and manoeuverability issues with them.

Tides, winds and currents, often they greatly influence their maneuverability, and the exactness with which they control the positioning of the boat, or their gear. In other words, they can't always put their gear or their boat exactly where they want, when they're fishing.

There seems to be little certainty as to the uses the Terminal may be put to, besides loading basalt. The lease, I believe, allows for the import or export movement of other goods on and off the site. I, however, will limit my comments mostly to the Marine Terminal and the movement of aggregates.

Even with present ship sizes the way they are at the Terminal, loaded, and at low water, there's very little clearance between the bottom of the ship and its sides, and the rocky bottom of the ocean at that Terminal, when they're laying there. And that's an uneven bottom, and from my experience of fishing there over 40 years, I think there are boulders in that area.

I can't get my graphics yet, but there are to be moorings for the ships. They'll have buoys, chains and ropes. This doesn't seem to be recognized by the DFO as using up space on the bottom of the ocean. They only considered the Terminal, itself; not the 60 to 80-tonne blocks that may be required to hold the ships there.

There are supposed to be intermediate buoys and ropes that have to have some type of block on the bottom to hold them. I'm not quite sure. We expect them to be at the 500-metre mark, to mark out the safety zone for marine mammals.

There's also to be buoys, chains, ropes

and blocks at 2,500 metres, and these will have to be rather substantial so they do not go under water in the strength of the tide, and to be able to be seen clearly at a distance of 2,500 metres when the tide's running, anything under six foot in length, and probably six feet around in anything but clear conditions would not, in my opinion, be able to be seen.

As fishermen, we will have to keep our gear clear of these, and according to the maps I've been able to find from Bilcon, this will extend for 7.5 kilometres along the coastline, and will extend off to 2,500 metres. It takes in a lot of our fishing area for entanglement purposes.

There will be a ship coming in and going out, and from my experience, sometimes it will have to come in from up the shore according to tide and wind conditions. Sometimes it'll come in from down shore.

Sometimes, if the weather hasn't quite cleared enough yet or the sea conditions haven't quite cleared enough yet, it may have to jog back and forth, waiting for conditions to improve.

There may be tugs which, while the ship is there, if it's poor conditions, they will have to wait in the area and may jog back and forth, also seriously interfering with my gear.

There will be a work boat that sometimes will be criss-crossing the area looking for whales or marine mammals and maybe doing maintenance on all these buoys. That'll be going through my gear.

And the time of blasting and the time of ship arrivals is not dependable because of sea conditions and because of fog conditions, so I will not know whether I can operate in that area or not.

And we, as fishermen, will have to deal with these difficulties while working in bad weather, strong tides, poor visibility, and at the convenience of the Proponent.

He decides when the ships come in. He decides when to blast. He decides when he moves buoys, not us.

This is added to all the activities. already taking place in that vicinity.

Around coves and points in this area, when the tide is running, even though there is little wind, the water is seldom still. The water travelling at high speed over uneven bottom in these areas, the currents may change their flow within a few feet.

You can have 180 degree turnabout in the tide just because of the turbulence and the eddies in this area.

With trap buoys partly submerged in these conditions, spotting harbour porpoise at anything more than 200 metres is... If I was looking for them, I would consider it almost impossible to see them.

Weather prediction is more unreliable than normal in our area. We very often receive weather predictions that are off by 60 to 80 percent over a short period of time just because of the difficulty of predicting weather when cold masses and warm masses of water are meeting in the area.

Fog moves in quickly. Only a minor change in the wind can bring fog that is filling the St. Mary's Bay over the hill and, within 5 to 10 minutes, you can't see 40 feet, so it's unreliable.

It's unpredictable because if you can't depend on the weather forecast for wind, you don't know when the fog will be coming.

Swell and fairly severe swell can appear, not from local conditions, but from conditions in the Atlantic. There doesn't have to be any wind. If there's been a storm in the Atlantic, all of a sudden you will notice a swell building with no predictability to it.

This will render ships and blast schedules unreliable. Even if they have a fairly good idea what the weather's predicting, it's hard to predict the

swell along with it.

With all these obstacles and uncertainties, we can continue operations, but it wouldn't make economic sense if I'm dealing with all these obstructions, I'm dealing with times I can't go there, I'm losing a lot of gear because once my gear gets wound up in these big buoys, I can't lift it. I have to just give up on it.

There is some existing documentation, mostly on commercial and endangered species, in the Bay of Fundy. Some commercial, some not, have never been studied properly, it at all, and especially locally.

It isn't always predictable that the creature you think is in the Bay of Fundy will be there because the warmer Bay, St. Mary's Bay, is so close. You can't generalize as to what will be in our area necessarily by what is in the rest of the Bay.

Even lobster, which is exceedingly important, has never really been studied as far as blast effects goes. Herring. I heard one of your experts say that light would attract it.

Yes, it will, but only for a short time, and if a light comes on quickly, the herring will move so fast that you'll just see scales left in the water. They're damaging themselves.

Light may attract them for a short period, but eventually they will leave the area, and it will be a long time before they come back.

Nobody knows what we call sand fleas just what you get in a trap when you haul it up. It's eaten the bait and it drops on your washboard and it's all less than an inch long.

Nobody has studied it to see what effects this may have or may not have on them.

Snails, mussels and a majority of plants have never been studied for what effects this will have. Just mostly what people notice most.

The majority of plants, and especially not the ecosystem as a whole, are understood at all. You may have a small idea, but complexity makes it... We aren't that smart.

Examples of on land searches made to locate endangered plants, one totally unexpected. Did they look in the ocean to see what marine species might be there that just were totally unexpected?

The Proponent seems to be fixated on the land. He does not understand or pay enough attention to our ocean environment, we think.

Since we know so little about what creatures inhabit the area, their densities, whether or not

they're in decline, their relationships with one another as a whole and the consequences of changes to any one of these connections, we would think that the precautionary principle should say do no harm.

If you don't know what you're doing may do harm, don't do it.

Past experience has shown the local people, and particularly fishermen, to mistrust Government promises, Regulations, agreements and enforcements in the extreme. We don't believe anything they say any more.

We were told that the Digby Wharf would be sold off to a private group and that it would be kept up and that everything would be wonderful. It's a regular disaster now for fishermen. Go down and look at the wharf. It is not maintained.

Less than a year ago, there was a drilling operation and a pipeline that was abandoned. The junk was left in place on the bottom.

The agreement when that project started was all materials were to be removed from the bottom of the ocean, but the Government unilaterally let the Proponent out of that agreement and agreed that they wouldn't remove the junk.

We were told that when we voted no to Sunday shopping, we thought that was a democratic thing, but

now there's Sunday shopping. We didn't vote for it, but they told us it wouldn't happen if we voted against it. It did.

DEL could find no sediment pond guidelines when we asked them when they were building their sediment pond and we didn't think it was being done properly. We asked DEL to provide us with guidelines on that.

We were told that there was only one copy in Nova Scotia, and it took them two months to find it. For people that are supposed to be regulating these things, one copy of the guidelines in Nova Scotia and six months even to locate it, or two months to locate it, was ridiculous. It was an insult.

I'm sort of rushing through this, and I'll try to make... I didn't get this one quite right.

The first indication we had that there was a quarry on the way in my village, anyway, and we are the closest fishing village to this quarry. Not exactly. That may not be exactly right.

To get to the quarry site, it is the shortest distance to get there from our fishing village. You'd have to go across land to get there shorter.

The first indications that we had that there was a quarry coming was when Gordon Baltzer, who was

our MLA at the time and Minister of Fisheries, we asked him to come down and please support us in having our wharf repaired.

He informed us that we didn't need repairs on our wharf because we would be able to lay our boats to the new terminal that was going in at Whites Cove. That's the first indication that we had, any of this.

It was disappointing to know and to find out later that this isn't a wharf. He had misunderstood the whole thing. You can't lay small boats to it or any amount of small boats, and especially in bad weather.

He had just misinterpreted the whole thing, but he was our MLA and he was also, at the time, Minister of Economic Development.

This is getting into attitude, so we never really got informed. Then, when we went to the CLC meetings, and we did attend some of, not the first, but some of the later CLC meetings, and they had an archaeologist there. And we questioned him about the village that used to be at the site.

And his response was, he told us that no one of any historical significance had ever lived there and nothing of any historical significance had ever taken place there.

And we thought there had been, so we

asked and he said it's a fishing village just like thousands of other fishing villages all around Nova Scotia. There was nothing special about it.

When asked why he did not consult local people about what might be there or what might have took place there, we were told he didn't because we were likely to lie to him. We were not likely to tell him the truth. He had to have empirical knowledge in order to make a determination.

I didn't really think that was a good use of traditional knowledge, but I'm only a fisherman.

I was invited to Bilcon's office. I can't remember the date, but it was in the early stage. And I wasn't directly invited by Bilcon. They called a group of fishermen, and there was supposed to be six to seven fishermen at a meeting, so I went.

And I waited outside the office for an hour and 10 minutes, and none of the other fishermen showed up. They said it was bad weather or bad planning, or some didn't arrive.

And the only people there were three Bilcon employees, and I decided it wasn't advisable for me to go in with three Bilcon employees and talk to them because I already knew that they had started a lawsuit against a lady for something she said and that they had

started a lawsuit against the newspaper for something they said.

So for my own protection, I just did not feel comfortable being alone in a room with three other people that were prone to thinking about lawsuits.

And still, sometimes, when I'm out in public and talk about this, anything I say, I usually say, "I believe" first so that I'm sure, or fairly sure, that I can't be sued.

Another item that sort of I heard Mr. Buxton say, and if I'm correct... I may not be.

I looked into it three different times, and I think the first test blast that they planned at the original 3.9-hectare site was to have very close to 50,000 pound of explosives in the ground and it was to be exploded in 1,000 pound charges, not 45 as recommended by the experts.

It seemed massive. It seemed unadvisable. From my point of view, not being in the blasting community or anything, I just looked at it as stuffing a trailer truckload of explosives in the ground, and even though there may be a delay between the blasts, I think if you blast with 45 kilograms of explosives it has a small effect.

If you have 80 delays, it doesn't have

80 times the effect, but it has more. For them to say that they're going to blast once every two weeks and then find... Or up to 80 separate explosions, I can't... I haven't got the education to be able to evaluate it, but it doesn't seem to me reasonable that one blast of 45 kilograms would be the same effect on creatures in the water as 80 blasts. I may be wrong.

And finally, in conclusion, I believe right now that, in the past five years, we've been treated as well by the Proponent as we can ever expect to be treated. He has wanted something from us.

If once he gets the permit, what type of treatment can local fishermen and can local people expect? I don't know. It may be good.

But his need for a permit sort of guaranteed somewhat good treatment, and I don't think we received it.

Fishermen seem to be required to move aside when they're blasting, and they seem to be being told that when there's a ship coming in, we have no right to be in the way. We get out of the way and, at their convenience, we go back and we get on with our work.

This doesn't make sense to me because if they had a quarry going and I was a fisherman and I come to the area and I set my traps and I said, "Look, I'll move out

when it's convenient for me to let you blast and I'll move my traps out of here and I'll not fish in the area when it's convenient, you know, when it's convenient for me I'll let your ship come in."

We were there first. We've been there for 250 years. And to just been told now I have to move aside, I may have to... If my predictions are right and I know that if this 2,500 metre zone with buoys is correct, 80 percent of my traps that make my living will be within that area.

And with the tugs and the ships and the work boats and the buoys and the uncertainties, I doubt very much that I can make a living there any more.

Why are not considered as the nearest receptors? When they talk about the nearest receptors, the nearest people that can hear anything from that quarry, I fish within 100 yards of the shore there, but they go to the houses out in Little River.

Am I not human? And I have not heard yet... I've heard you say not allowed to blast within this distance of a waterbird, this distance of a whale, this distance of everything except me.

If I'm there in my boat, nobody has yet told me how far I have to vacate the area or whether they are allowed to blast within 100 metres of me. Nobody has

informed me of this yet.

And one last word, and I'll give it up. From my point of view, and this came from my grandfather, and he was a smart man.

He said, "You'll come to people all through your life", he said, "and they're going to be a lot smarter than you. No doubt." "But", he said, "a smart person can do anything. A wise person knows whether he should or not."

Thank you.

--- Applause

THE CHAIRPERSON: Mr. Stanton, you didn't show your slide. Were you going to show us a slide?

Mr. KEMP STANTON: He couldn't bring it up. Basically what I needed was the map to show where the buoys were, and it would have...

THE CHAIRPERSON: At some later time, if you have it, maybe you could bring it up and we would appreciate seeing it or, if it could be... oh, is this it?

Mr. KEMP STANTON: Yeah. That is a copy.

Mr. BOB MORSCHES: Doctor, I made those recently and I put them on a PC to verify that they would work, and they did there, but on this PC they did not.

THE CHAIRPERSON: Well, we have...

Mr. BOB MORSCHES: But you have the hard

copies---

THE CHAIRPERSON: That's fine.

Mr. BOB MORSCHES: ---of that.

THE CHAIRPERSON: I hadn't looked at it.

Mr. BOB MORSCHES: And that's a cartographic map there. It's just not a suggestion.

THE CHAIRPERSON: All right.

Mr. BOB MORSCHES: All those measurements are accurate and his buoys are exactly where he normally places them.

THE CHAIRPERSON: All right. Thank you very much. We'll look those over later.

PARTNERSHIP FOR THE SUSTAINABLE DEVELOPMENT OF DIGBY NECK AND ISLANDS SOCIETY - Mr. KEMP STANTON - QUESTIONS BY THE PANEL:

THE CHAIRPERSON: Mr. Stanton, I have a couple of questions for you.

You've lived in this community all your life---

Mr. KEMP STANTON: Yes.

THE CHAIRPERSON: ---and you've fished here all your life, all your working life.

Mr. KEMP STANTON: 95 percent of the fishing I've done has been within five miles of Whites Cove.

THE CHAIRPERSON: Okay. So you're as

familiar with Whites Cove as any other fisherman in this environment.

Mr. KEMP STANTON: The only other person I know of that knows more is my father, still fishes with me at 83, and he's fished there all his life.

THE CHAIRPERSON: And you said that 80 percent of the traps that you set are set in that general area around Whites Cove.

Mr. KEMP STANTON: You see the outermost ring on the map that you have, they would be. 80 percent of them would be in that area.

THE CHAIRPERSON: I see. What are the tidal currents like off Whites Cove? How fast are they running under the extreme conditions?

Mr. KEMP STANTON: The most extreme conditions---

THE CHAIRPERSON: Two knots?

Mr. KEMP STANTON: ---three knots.

THE CHAIRPERSON: Two to three.

Mr. KEMP STANTON: I would think I was very safe in saying three knots.

THE CHAIRPERSON: Okay. And what about the sea conditions there if you had to characterize the environment in the broadest sense of the word?

You've sat in on all these sessions and

you know we're discussing the weather and the ship arrival and all of that. If you had to characterize what the environment would be like, I mean, it's generally a prevailing wind from the west to the northwest, right, and then you've got a fast tide.

In your words, how would you describe it?

Mr. KEMP STANTON: It's changeable. We have about 40 words for the different state of the sea, and they're all there at one time or another.

You get a short swell, you get a chop, you get a long swell. But at Whites Cove itself, about the only rougher place as far as water goes in that area would be down at the mouth of Petit Passage because of the tide coming up over, especially against the wind.

It piles up the sea and the sea tends to break there. Even when there isn't breaking sea in most of the other areas, the tide piles up and the eddies created by the tide going around the point pushes back against itself.

So it's a confused sea state, at best.

THE CHAIRPERSON: I know the word confused.

Now, you get swells coming in from the Atlantic. They come in around and they actually enter in and you can feel them coming, can you? That's what I heard

you say, was it?

Mr. KEMP STANTON: What comes from the open Atlantic, usually you don't feel it in a small boat in that area.

It's such a long swell that even on a day when we call it greasy smooth, you look in on the shore and the swell is piling up and piling up, but you get no sensation of moving in your boat because it's so long.

THE CHAIRPERSON: That's because it's a long wavelength.

Mr. KEMP STANTON: That's right.

THE CHAIRPERSON: I heard you say that you participated in the CLCs. Did you participate in all of them or some of them, or what percentage did you participate in?

Mr. KEMP STANTON: I don't really know how many took place.

THE CHAIRPERSON: Half of them, a third of them?

Mr. KEMP STANTON: I would say I took part in maybe four. If I said four, I may be lying, so I think I'm safe in saying four.

THE CHAIRPERSON: How would you characterize the process itself? How did it work?

You've heard us, again, we're trying to

understand how that worked, and I think you're the first person we've spoken to, aside from the Proponent, who was actually in the meeting knowingly, that we know that you were there.

How would you characterize it?

Mr. KEMP STANTON: It was unfriendly, the atmosphere from the beginning. You would expect that.

But as we... There's a word in all these documents that just make us unmanageable, and it's "insignificant". And after about the first 30, 40 times we heard that word, it became more and more confrontational.

THE CHAIRPERSON: How...

Mr. KEMP STANTON: It wasn't necessarily the Proponent, maybe, because every effect that... The definition of "insignificant" was anything that happened in the local area, and we just took that as meaning that, well, if we were in the local area, we were insignificant, too.

THE CHAIRPERSON: You mean like in reference to people's employment or the way they lived, or...?

I don't understand.

Mr. KEMP STANTON: Well, nothing of any historical significance ever took place at Whites Cove.

THE CHAIRPERSON: Oh, I see.

Mr. KEMP STANTON: We believe that

fishermen and their lives are significant. It was just like every other fishing village in Nova Scotia. Thousands of others, as if, well, they're all like. They're just fishermen.

And from being treated that way all our lives by many people, especially experts, we may not have given them enough leeway, but many times when we would ask for an expert or ask for information, "We will get back to you on that."

And very seldom did we seem to get the information, from our point of view.

THE CHAIRPERSON: Was the CLC used as a way of obtaining traditional knowledge? Did that kind of give and take on within the CLC?

For example, I've just asked you questions about the tides and about the swells and about the sea state and about the productivity. Did that kind of information get transferred in there?

Mr. KEMP STANTON: None of those questions were ever asked of me. I can't... Or any other fisherman while I was at the meetings.

Now, what went on while I wasn't at the meetings, I can't really comment on. But it would have... Their attitude seemed to be that if they... Or our attitude was if they wanted some information, if Bilcon wanted some

information on that area, we aren't dangerous.

They could have come down on the wharf and talked to a bunch of us fishermen, and they may have got a little more... Like we may have stretched things a little bit for them, but they could have got a fairly good idea of what we thought would go on in the area.

We really don't believe that over a 50-year period you can bring ships in of that size without destroying at least one of them.

THE CHAIRPERSON: In document, the Environmental Impact Statement, there is a section that deals with the physical environment and the sea and so forth.

Is there any way of gauging, are you able to gauge, what the input from traditional knowledge might be into that section? Somebody contributed, presumably, but do you have any way of gauging it for us?

Mr. KEMP STANTON: I don't see, really, very much information there that's specific to the area.

They never went out and put a fine mesh trap down there and brought it back up and said here's what lives on the bottom. It's mostly regional, seems to me to be mostly gathered from regional sources and kind of, well, that's probably there, or maybe...

You know, we have different tide

conditions, different water temperatures, different mixtures, and if you're going to have a ship there, and all this blasting, you should really know exactly what, or pretty what is there, and in what proportions, because once you bring one of those ships in and she scours the bottom in the area, and any contaminants that the copper bothers may be caused.

There is high levels of copper in the water in that area. Not prohibitively high, but from what I... I've done a lot of research since this project, and copper tends to settle into the bottom sediment, and if every week you're stirring up that sediment from the bottom, you may be increasing the concentrations of copper, and from a simplistic point of view, my point of view, I use copper paint on the bottom of the boat to kill sea life.

It sounds dangerous to me. Whether it is or not.

THE CHAIRPERSON: Just a moment. Okay. I think I've exhausted my questions. Dr. Grant will ask you some.

Dr. JILL GRANT: Mr. Stanton, you indicated that you and your father fished these waters off Whites Cove. Are there other fishermen who fish off this area, as well?

You indicated that you and your father

fished these waters, and are there other fishermen who are fishing these waters off Whites Cove?

Mr. KEMP STANTON: Yeah. Usually there's three other boats that fishermen, as intensely probably as I do.

Now, the boats are getting bigger and they're going further, so probably at no time would most of them have any more than 45 to 50 percent of their gear in that area, and they tend to, when lobster is abundant in St. Mary's Bay, they move the traps around there. When they thin out there, they move them back into our area.

And some of them would be off to the 80, 90 fathom mark, and in the spring they tend to come in 30 fathom or closer, and the lobsters come into within two fathom of the shore. So it's a fluid situation.

Dr. JILL GRANT: Can you give us an idea of how often you would be checking your traps in those areas, if you're setting traps in those waters? How frequently would you be going into the waters to check them?

Mr. KEMP STANTON: For the first month of the season, I would like to be able to do it every day, weather permitting.

After that, the frequency goes down, and maybe during January I might only get out three times, maybe four, during January, because that water is so cold that the

lobsters aren't moving, and it isn't worth my while.

It's all a product of how well the lobsters are moving, how many lobsters there is, when the water gets warmer and lobsters tend to move on the shore, we usually haul. More often in the spring, it'll get up to maybe three times a week, maybe every two days, dependent on how the fishings go.

Dr. JILL GRANT: If a ship was coming in, and that delayed you from checking your traps when you wanted to be checking them fairly often, what would the implications of that be? What would the effect of delays for you to be able to get to your traps mean for you?

Mr. KEMP STANTON: As far as the ship coming in and going out, it's going to disturb me for a short period of time, and I'll have to move out of the area.

But we only have two hours to two hours and a half to work on our off-shore traps, and then the tide push them under. So if it's during that two and a half hours, I don't get those traps hauled that day.

But if the terminal goes in, and that stuff goes in, if I was fishing there right now and they put the terminal there, it would be on top of three or four of my traps. I'll have to move the traps away from that, so when the ship comes in eight to nine traps would be physically covered by the ship and the terminal.

And so if it comes in from above, if it comes in from below, it's variable, but it's going to be a major disturbance, and it makes me move... We have a system, we can haul traps in one place at one time of tide, and we can haul traps in another place at another time of tide, and if when you should be there hauling traps you can't be, then you don't get them hauled that day.

Dr. JILL GRANT: Thank you.

One of the maps provided by the Proponent shows sediment, two sediment banks around an area of boulders, and this is in the area that the ship may be coming in over.

I wonder whether you think there would be any effect from the ship coming over those sediment banks. Is ship turbulence likely to make the bottom turn up? Is that going to present a problem for fishing in that area?

Mr. KEMP STANTON: Yes. I don't know, I researched this as much as I could. In some circumstances, a prop wash from a ship that's making a violent maneuver can roll 10-tonne boulders over bottom. That's extreme.

But this area, from the EIS they seem to think that sand is an unproductive habitat. We find it not so in the extreme. If I put a trap overboard on bedrock, I expect to come back in four days and the bait will still be

in that trap. There may be some lobsters in it, but the bait will still be there.

If I put a trap overboard on sand bottom, and come back in three hours, the bait is gone. Something small is there in the sand that can come out of the sand, eat the bait, and when you hold up the bait bag a whole lot of these little critters dump out.

The only way I can describe it is I've heard that in Africa if you took and weighed the weight of all the mammals you would come up with a weight much less than if you weighed all the ants in Africa. I think there's an awful lot of small stuff.

And a lot of this stuff on bottom is not sand. When it comes up in our gear and in our traps, it's crushed shell. Maybe it may be laying over sand, but there's all kinds of shells, razor clams, mussel, anything at all. It's a veneer over the sand, I would say.

Dr. JILL GRANT: In the Environmental Impact Statement, it suggests that discussions have been held with lobster fishermen from this study area. Are you aware of discussions?

I know you said you did not attend a meeting. Have the other fishermen in the area been discussing compensation? Is there something happening there?

Mr. KEMP STANTON: I believe that, not positive, but I believe Roger Tidd, who used to fish from our village, may have talked with the Proponent. He no longer owns a lobster license, he's out of the business.

And I believe that those fishermen from Little River, I can't quite think of his name now, but he fished urchins, and he lobster fished, and he I think had long talks with the Proponent.

Dr. JILL GRANT: But you have not discussed compensation with the Proponent at all, yourself?

Mr. KEMP STANTON: It's hard for us to even consider compensation, especially yet, because we're hoping that it doesn't go ahead. But if the Proponent goes by regulations, he does not have to compensate us for any of our gear that's lost. Well, my gear especially.

Because in order for us to be compensated by a tug or anything like that, we have to have our gear marked with a radar reflector, and unless it is marked by a radar reflector, it is considered that the boat that interferes with it may not be able to see it.

So we can claim no compensation unless we have a radar detector to mark our gear, and it's not feasible to fish single and double traps on a line because the buoy that would be needed would drag your traps away.

Dr. GUNTER MUECKE: Yes, you just

mentioned that, and I'd just like to get a bit of context here, is do you fish with single traps, or you have trawls of traps?

Mr. KEMP STANTON: Probably 80 percent of what I fish is singles. Maybe 10 percent is doubles, and another 10 percent, the last 10 percent, I fish on trawls.

So it depends on how smooth the bottom is and how far off you're going to go. A single trap lots of times will just skid back and forth, and if you put more on, you have better chance of holding it in one place.

Dr. GUNTER MUECKE: So when you put traps further off shore, where it's perhaps calmer, you put them on trawls, is that right?

Mr. KEMP STANTON: You'd put them on trawls basically so the tide wouldn't be able to carry them away, and that they... It isn't, nothing to do with the smoothness of the surface. It's the bottom they're sitting on.

Dr. GUNTER MUECKE: Yes. Okay.

Mr. KEMP STANTON: And it's, fishing with my father, if I had chosen another crew, I might've put out a few more trawls, but my father is getting old, he's 83 years old, he fishes with me every day, and I just don't feel safe using that type of gear.

So being an independent fisherman, I can

make that choice, and I can choose to fish where I can take him with me.

Dr. GUNTER MUECKE: I was wondering, have you ever had any experience with prop wash from large ships coming into the area that you have laid your trawls?

Mr. KEMP STANTON: Not really. I have seen a 70-foot vessel aground, and seen the absolute... It's amazing the size rocks that they can roll over when they try to get off the shore.

But far as large ships maneuvering around our traps, no, we've never had any large ships in that close among our traps.

Dr. GUNTER MUECKE: You have no direct experience with that. What about other fishermen that you know, would they have experience with that?

Mr. KEMP STANTON: I doubt it very much. Large ships very, very seldom, on the shore like we have, ever come... You know, they want to stay off, away from the shore.

If the ship comes in, you must remember that it is not only that ship. If conditions are poor, I think probably it may be being assisted or towed by one or maybe two tugs, and it will be using bow thrusters.

There will be extreme amounts of turbulence if that happens.

Dr. GUNTER MUECKE: Well, I just want to get an idea how much of a problem that may be. Do trawls sometimes get dislodged and tangled?

Mr. KEMP STANTON: Yeah. On full tides, I don't if you know what I'm talking about, but on full tides lots of times our traps will be moved along the bottom, sometimes up to half a mile, if the bottom if fairly smooth, especially if there's sand. And that's a three-knot tide.

I would suspect that behind a ship heavily loaded, trying to leave under control, you may get a speed of at least 15, 18, 20 knots of water movement behind it. So it definitely will move traps a fair distance.

Dr. GUNTER MUECKE: I guess but I want to get an idea of if traps tumble as a result of prop wash, let's say, how much work is involved in disentangling them? I've never done it, so I...

Mr. KEMP STANTON: Depends on how many you get in a bunch. If you get 25 traps wound together, you're in trouble, especially with a small boat like mine.

If you've got four or five traps, as long as you haven't got to worry about if you... If I tried to lift that bunch of traps, and I drifted down on one of the bigger buoys that had a block of cement on them that I couldn't lift, I would become entangled in the whole thing,

and I'd lose the whole bunch.

And that's one of our problems, because these buoys don't exactly stay still, the big ones like they will have. They have to have quite a bit of slack rope or slack cable in order to stay at the surface.

So they're going to move, say, 200 yards. In fog conditions, and when I'm setting the gear, and it goes a little bit further and winds up around that, I will not get that trap back. Maybe when they pick the buoys up to do maintenance on them, which may have to happen twice a year, I might get it back then.

But once you get that buoy spread off from the other one, then it tends to entangle others in the close proximity.

Dr. GUNTER MUECKE: Maybe it's not a fair question, but in terms of lobster catchers, the area that you're in, how productive is it with respect to lobster relative to other areas of the coast? Like I said, this may be not a question you can answer, or would want to answer, but would you characterize it as particularly rich or average in terms of lobster catches?

Mr. KEMP STANTON: It's not particularly rich, but when lobsters get scarce everywheres else it's a low base line. When lobsters are played out in St. Mary's Bay, and they aren't getting hardly anything, then bring

them around where we are. And they won't get a lot of lobster, but they'll get some lobster every day.

I'm one of the old-fashioned people. I stick to one place, and if there's lobster there, I do good. If there isn't lobster there, I do bad.

Dr. GUNTER MUECKE: I very much appreciate that.

Dr. JILL GRANT: One quick question about the visibility of marine animals from a boat. You're out there as a fisherman on a regular basis. How technically feasible do you feel the strategy is that the Proponent offers for being able to identify marine mammals from a work boat?

Mr. KEMP STANTON: I very much doubt you would be able to... You might be able to tell that there was a whale there, on a really clear day, at 2500 metres.

Chances of identifying it by species are almost nil. On average day, without too much swell, and if you are lucky, you may, some hundred and fifty to a thousand metres, maybe you might be able to identify by species, but that's the larger whales. If it was a minke or if it happened to be a fin whale, you would have almost no chance. They tend to travel large distances underwater without being seen from the surface, and they're fast.

THE CHAIRPERSON: Mr. Buxton? Oh.

Dr. GUNTER MUECKE: Just one last question, Mr. Stanton, that I sort of left out.

In terms of, you refer to bottom tide and the habitat of lobster. When you set your traps, do you have preferred locations where you, from experience, know that you're going to get a better catch relative to others, and do you think that is related to the kind of bottom that you're dealing with?

Mr. KEMP STANTON: It's hard to say. Lobsters are unpredictable, or we'd catch them all in one year.

Sometimes, I think they're feeding on different things. When a female has eggs or is about to have eggs, especially in the spring when the water warms up, she tends to move to the shore. We believe, since a lobster can't make its own shell material, she may be after mussels and things like that. That's the way they build new shell material. They eat other shellfish.

When the large females move to the shore, usually the smaller lobsters move off. They're terrible cannibals.

So this year I can set gear in one place and do really, really good the first day. Next year, I set them in the same place and maybe not. It's probably a function of what the lobster needs at that time, and what

the temperature is at that time.

At lower temperatures, I think lobsters only need to eat about once every month, or once every month and a half. So they may sit right next to your trap for two weeks and never go in because they don't need to eat.

Dr. GUNTER MUECKE: I get the impression that finding lobster is an art and not a science.

Mr. KEMP STANTON: There's some that are better at it than others, but there's no guarantees.

THE CHAIRPERSON: Mr. Buxton?

PARTNERSHIP FOR THE SUSTAINABLE DEVELOPMENT OF DIGBY NECK AND ISLANDS SOCIETY - Mr. KEMP STANTON - QUESTIONS BY THE PROPONENT:

Mr. PAUL BUXTON: Thank you, Mr. Chairman.

Mr. Stanton, you've talked about boulders on the bottom and the fine sediment on the bottom in the area of the terminal. Yesterday, we showed a map showing the results of the side scan sonar that was done by Canadian Seabed Research.

Do you have any faith in that mapping at all?

Mr. KEMP STANTON: In general, it probably does give you contours. But I, in the last two years, I've had three divers overboard in that area to see

what was on the bottom. For this project, especially.

And not being a diver myself, I trusted what they said when the come up, and they said it was boulders.

Mr. PAUL BUXTON: The side scan sonar that was done, if you had thought that that was wrong, why didn't you ask the question to the people that did the work that were here yesterday? You were here yesterday?

Mr. KEMP STANTON: Yeah, but I only usually get one question, and I have to use it strategically. You get to ask several questions and make several comments, but I'm limited. I only get one crack at the can.

--- Applause

Mr. PAUL BUXTON: Talking about CLC Minutes, because it leads to another... Or CLC Meetings, because it leads to another subject, you in fact attended two meetings, one where ballast water was discussed, and one where the archaeologist was present, and you noted that.

I'm just wondering whether you still are of the opinion that there was a village at Whites Cove?

Mr. KEMP STANTON: Yes. I'm of that opinion because my uncle was a Hersey, Clarence Hersey, and he was born at Whites Cove, and he told me, and his daughter told me, that his grandmother was buried at Whites Cove, and

that there were crosses at Whites Cove, white crosses.

Now, I don't know whether there was, but being my relatives, and having no special reason to lie to me, I believed them when they said yes, there was a village at Whites Cove.

Mr. PAUL BUXTON: But isn't it interesting that the archaeologist found no evidence, an historian who is the Chair of the History Department at Acadia University found no evidence, there's no evidence in the Deeds. We have identified the Hersey house, and it's clearly set out in our documents.

But I'm puzzled as to where the evidence comes from, since it doesn't exist anywhere in the records.

Mr. KEMP STANTON: I would say it's totally traditional knowledge.

Mr. PAUL BUXTON: Thank you. Are you aware that the archaeologist does not act under instructions from Bilcon, but in fact is permitted, and all his instructions are received from Nova Scotia Museum, and his report goes to Nova Scotia Museum and not to Bilcon, and that that report was accepted by Nova Scotia Museum?

Mr. KEMP STANTON: I don't know what criteria the Nova Scotia Museum uses, but the report that I seen in your EIS said that a certain site was a garbage dump. In the 1960s, I was in that building. It was a

cottage owned by Dickinson, Reverend Dickinson. He had a building named after him in the university in Halifax. And I burned my hand on that stove.

And when I told your archaeologist about that, he said, "Yes, too bad". That was the only comment I got. And I don't know, they may have included that in the report afterwards, but if it wasn't included, then your report that's in Halifax isn't accurate.

Mr. PAUL BUXTON: Are you still convinced that there's 50,000 pounds of blasting powder in the, or blasting agent in the first blast, or is that the figure that is painted on the building next door to Bilcon's office?

Mr. KEMP STANTON: Yes, that's my building, and I went through the material twice, and I asked three other people, including a mining engineer, Mr. Mahtab, and he looked at the material and he assured me I was correct.

So if I'm wrong, I'm wrong. But I thought you put in for a blasting permit, and that's where I derived the material from. I may have misinterpreted it, and if I did, tell me.

Mr. PAUL BUXTON: Well, the math is fairly simple. There were 56 blast holds, and there's 45 pounds per hole. And I'm not a terribly good mathematician,

but that's 2520 pounds, give or take. Certainly isn't 50,000. So maybe you could correct your building.

On a more I think important note, I want to come back to the meeting that Bilcon held with the fishermen to get their traditional knowledge and to discuss the boat coming in.

You recall the evening because you say that you sat out in the car, but you say there were no fishermen in our office.

Mr. KEMP STANTON: Ms. Herron come out, and I asked her when the fishermen would arrive, and she informed me that they would not be there; they had called in, and because of the storm or because of some reason they wouldn't be there. She brought me out some sandwiches. She said, "If you would like to come in, you can". I said, "Is there any other fishermen in there?" She told me no, so I did not.

Mr. PAUL BUXTON: Well, would it surprise you if I told you that Roger Tidd was there, and Bruce, I think it's Bruce Therriault, and I can't remember the name of the third fisherman. Would it surprise you if I said that they were there?

Mr. KEMP STANTON: It would surprise me if you said they were there while I was there, because I went and looked in the door and I didn't see anybody.

Mr. PAUL BUXTON: Well, it's very interesting, because we have minutes of that meeting, as we have minutes of every meeting that was held with anybody, including minutes of the CLC on our record here, and I can assure you that there were fishermen there.

And in fact, a result of the meeting with the fishermen that attended the meetings, that fish in Whites Cove, resulted in the little arrangements that we made by increasing the diameter of the ships' turning circle as it came into dock, which is clearly in the Environmental Impact Statement. That was not made up or devised; it came from information from the fishermen that we consulted that fish in Whites Cove.

Mr. KEMP STANTON: I can't argue with you. I have no knowledge of it. If Ms. Herron would have told me that there were other fishermen in the premises, I would have felt comfortable enough to go in, but I've met you on other occasions, and I was... I guess I may have been on your property. I was asked to leave. I left. I went to the Mataub Scott property. I was told to leave there.

When I went to the middle of the right-of-way to the highway, you screamed at me, and told me to leave. Leave, or you would call the police. So I stood in the middle of the road and told you to call the police,

and I am not comfortable with being screamed at. I really am not. I do not believe I've ever screamed at you.

Mr. PAUL BUXTON: We seem to have different memory tracks, Mr. Stanton.

However, I have a more substantive question. Do fishermen set their traps, and the lobster fishermen, specifically, set their traps in the fishing lanes? Sorry, I'll correct that. In the shipping lanes?

Mr. KEMP STANTON: I believe some of them do, yes. It probably is true to a certain extent. There is a certain amount of gear that you can afford to risk, and some people are more risk-prone than others, but if you put gear in a place like the shipping lanes where you expect a ship to be moving through in a straight direction is one thing; if there's a possibility of a ship coming in, turning possibly with the assistance of tugs, which... It's another.

Mr. PAUL BUXTON: Do fishermen set their lobster traps, lobster fishermen set their lobster traps in the track which the Princess of Acadia takes on every single voyage?

Mr. KEMP STANTON: I would suspect that some of their gear is there. I have no knowledge. I don't fish up that far. That's a different fishing district than I fish in.

Like I say, I don't know what arrangement they may have with the Princess of Acadia as far as compensation. I don't know what their risk, their toleration for risk is. I doubt if they would be people like me that fish their gear in such a concentrated area. I am just a local fisherman. I do not have a big boat. I don't have the capacity to travel far.

Mr. PAUL BUXTON: Yes, thank you. Where could you fish? I understand that you're a traditional fisherman in Whites Cove, and I understand that you've always fished there, but where could you fish? Could you give us the extent of the area which is covered by the license which you hold?

Mr. KEMP STANTON: The license covers from Gulliver's Cove down to somewhere around Shelburne. With a 35-foot boat and fishing in winter months, it would just be unacceptable, foolish and you know, I wouldn't risk my father's life, you know, on a trip that far in the winter, in a small boat like that.

Mr. PAUL BUXTON: I wasn't suggesting that you should. I was just trying to get the extent of the licensed area. So it's from Shelburne all the way around to Centreville. How many miles of coast might that be?

Mr. KEMP STANTON: Have no idea. My father, my grandfather, my great-grandfather and me have

fished that same stretch of shore, five miles long and about a mile, a mile and a half out, and I see no reason to leave my home and my area, because you want rock.

--- Applause

Mr. PAUL BUXTON: This is a little more, a little bit more complex, but bear with me if you can.

Given the fact that the ground fishery certainly in this area is in fairly poor shape, I think you could say, and certainly some difficulty with scallop fishing of late, as a fisherman, do you know the ecosystem sufficiently well to be sure that fishing activities over the long term do not cause irreversible damage?

Mr. KEMP STANTON: Some types of fishing activities do cause irreversible damage. It's no doubt. The damage that is irreversible is miniscule. The damage that is fairly long term from dragging is reversible.

I have been pleasantly surprised that our ecosystem has withstood what we have done to it, and what has been done to it, and the pollutants that's been put in it, but in my opinion, it can't withstand too awful much more, and I have been trying through the fishery groups to convince people to fish less traps, do things the correct...

I think if we give the ecosystem a reasonable chance, and do away with most types of dragging in some areas, it has a very good chance of coming back to

70 to 80 of what it was within maybe two or three decades.

Mr. PAUL BUXTON: Yes, thank you very much. I'm certainly no expert on the subject, but I do note that the Sierra Club feels that bottom-dragging is certainly irreversible damage, and in fact, went to the Supreme Court of Canada to try to have bottom-dragging stopped.

But I have no further questions, Mr. Chair. Thank you.

THE CHAIRPERSON: Ms. Grant is going to ask you another question.

Dr. JILL GRANT: Actually it's a question for Mr. Buxton.

You raised the questions around the archeology on the site. I wonder is your archeologist going to be here on the socioeconomic day?

Mr. PAUL BUXTON: We hadn't planned on it because no comments were received, I think, by anybody on archeological issues, and the archeological report was accepted by Nova Scotia Museum three years ago. So if you feel that... We could try and contact him, if you feel that that's important, but the report itself has been on record for a long time, and essentially, it isn't our report.

It's Nova Scotia Museum's report, and is, you know, a product of his work to Nova Scotia Museum. We paid for it, of course, but we have nothing to do with

the extent or the quality of the work. That's set out by Nova Scotia Museum.

Dr. JILL GRANT: My understanding is that the report has to be presented to the Museum, but that doesn't necessarily make it the Museum's report, and I certainly stand to be corrected on that, but we had asked for an updated CV for the archeologist. The one that we have is dated from 1991, and so we had asked for some updates so we could see what experience the archeologist has in Nova Scotia archeology.

Are you able to provide something that is more recent than 1991?

Mr. PAUL BUXTON: That has been provided, I am told.

Dr. JILL GRANT: Well, respect, the one that we have, the most recent entry in it is from 1991, so...

Mr. PAUL BUXTON: We'll certainly check on that. Certainly, we requested that from the archeologist and it was my understanding that we had it, but we'll certainly check it.

THE CHAIRPERSON: Okay. Any questions from the audience?

Mr. BOB MORSCHES: Doctor, I assisted... Oh, I'm sorry. I thought---

THE CHAIRPERSON: No, no, that's fine.

Mr. BOB MORSCHES: ---you waved to me.

THE CHAIRPERSON: Yeah.

Mr. BOB MORSCHES: I assisted Mr. Stanton with his presentation, and I'm sorry that this computer didn't accept it.

I do have the displays that you have, the Exhibits, which I would be glad to go ahead and give them to Mr. Buxton if he so needs them, which demonstrates the amount of sea life that's in that area.

And the important thing there is the cartographic rendering that I did of the shipping lane, and the buoy layout, not only for Bilcon but also of what Mr. Stanton has. It's a cartographic transfer of a general map that they have in their EIS that I put on a Canadian map, and put the exact locations for all the buoys and the shipping lane.

THE CHAIRPERSON: If you give that information to the Secretariat, then it will go into the Public Record, and everyone has access to it.

Mr. BOB MORSCHES: Aye, sir.

THE CHAIRPERSON: Thank you. Could I line you up again? It just makes it easier for us to see what the activities are. And Mr. Stanton, we'll do our best to get more than one question for the group. I mean, we've

just been pressed for time. That's the only limitation.

PARTNERSHIP FOR THE SUSTAINABLE DEVELOPMENT OF DIGBY NECK AND ISLAND SOCIETY - Mr. KEMP STANTON - QUESTIONS FROM THE PUBLIC:

Ms. JUDY PEACH: Yeah. I would just ask Mr. Stanton what he would consider a village, because I think there might be a little bit of difference between a local definition, and a maybe regional definition.

Mr. KEMP STANTON: As far as I can find out, there probably at one time would have been no more than six families there. Now, in that period, I don't know how many people would live in one house. Probably more than nowadays, but it wasn't just one dwelling, as I understand it.

THE CHAIRPERSON: Thank you.

Mr. BOB MORSCHES: Just a point of clarification regarding something that Paul Buxton said; that the suit, the dragging suit was an action taken by Ecology Action Centre, and the Sierra Legal Defence Fund Canada, and the Sierra Legal Defence Fund Canada and the Sierra Club of Canada have nothing to do with each other. I mean, they're not the same organization, even though we do do things with them on occasion.

THE CHAIRPERSON: Thank you. That clarifies that for us. Any other questions? Please come

forward. Miss Peach, I believe, is it?

Ms. NORA PEACH: Nora, Nora Peach.

THE CHAIRPERSON: Nora Peach. Yes?

Ms. NORA PEACH: Yeah. A few years ago, I helped with a study of the White Cove area, and did a lot... Two of us worked on the deeds, and it seems to me we found quite a lot of evidence that there were people settled there. I don't know if it was year round, but they had houses, they had property, they had animals, they had a field and so on to keep animals, and they had boats and so on.

So there's quite a lot of evidence in the deeds, so that's something I could... I could bring some of that for you, and maps and...

THE CHAIRPERSON: If you have it, that would be good.

Ms. NORA PEACH: But if you're not interested. I don't know whether---

THE CHAIRPERSON: No, no.

Ms. NORA PEACH: ---this is still part of your...

THE CHAIRPERSON: No, that would be interesting. It would be just anoth-...

Ms. NORA PEACH: It makes it simpler without this study, but...

THE CHAIRPERSON: If you could just give it to the Secretariat when you have it,---

Ms. NORA PEACH: Okay.

THE CHAIRPERSON: ---that would be fine.

Ms. NORA PEACH: Right.

THE CHAIRPERSON: Thank you very much. Others? It would appear not.

Okay, then, Mr. Buxton, everybody, we're all... Okay, this brings this session to an end. We'll see you tomorrow at 9:00. Thank you all. Thank you, Mr. Stanton.

--- Whereupon the matter was adjourned at 5:15 p.m. to resume on Friday, June 22, 2007, at 9:00 a.m.