

NOVA SCOTIA ENVIRONMENTAL ASSESSMENT BOARD  
KELTIC PETROCHEMICAL AND LIQUEFIELD NATURAL GAS FACILITY  
NOVEMBER 2006

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HEARD BEFORE: Dr. Tony Blouin, Chair  
Dr. Ray Cranston, Member  
Ms. Penny Henneberry, Member

PLACE HEARD: Claymore Inn  
136 Church Street  
Antigonish, Nova Scotia

DATE HEARD: Wednesday, November 22, 2006

PROPONENT: Keltic Petrochemical Inc.:  
Mr. Shawn Duncan  
Mr. Kevin Dunn  
Mr. Derek Owen  
Mr. Rob Schonk  
Mr. Glenn Longert  
Ms. Janet Blackadar

INTERVENORS: Assembly of Nova Scotia Mi'kmaq Chiefs  
  
Nova Scotia Department of Environment and Labour  
  
The Concerned Citizens of Lincolnville

RECORDER: Drake Recording Services Limited  
Per: Mark L. Aurini, Commissioner of Oaths

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THE CHAIR - OPENING REMARKS

I want to welcome you to the Provincial Environmental Assessment hearings for the proposed Keltic Petrochemical project. This is a continuation of hearings that have been going on earlier in the week, in Guysborough and Sherbrooke. My name is Tony Blouin. I'm the Chair of the Nova Scotia Environmental Assessment Board, and the Chair for these hearings. On my right is Penny Henneberry, a member of the Assessment Board -- sorry, my left. And on Penny's left is Ray Cranston, also a member of the Board, and we constitute the Panel for these hearings. On my right is Jim Gordon, who is with the Department of Environment and Labour. Jim is the Administrator for the Board. And on Jim's right is Mark Rieksts, who is with Justice. He's the legal advisor to the Board for these hearings. As I mentioned, we are recording, and there will be a full transcript produced at the end of the hearings. We do have the transcript for -- the Monday hearings in Guysborough are available, I believe, at the side table there with other handouts. They're available for viewing. At this point, that's a draft version. It's not the edited transcript, but it

is available, for those who might want to see it. And I believe the transcript for Tuesday will be available tomorrow. Today's will be available Friday and so on, day by day. After the hearings, they will all be finalized, and put as part of the public record, and will be available for viewing in the Department of Environment Library Offices. So, this is a process being conducted under the Provincial Legislation. The members of the Board are volunteers. We are not employees of the Department of Environment. We report only to the Minister of Environment and Labour, and our job at the end of the hearings is to prepare a report for the Minister with our recommendations. The scope of authority for the Panel is that we can advise that a project not go ahead. We can advise that it should go ahead, with whatever conditions we recommend be attached to it. Or we could advise that it go ahead, just as it's described in the assessment report that was submitted to us. The role of the Board and the Panel is strictly advisory. In the end, it's the Provincial Minister of Environment and Labour that must make any decisions regarding the project, and whether it proceeds or not. We just provide advice. As I

mentioned, there are a number of handouts at the side table there. The original assessment report. There are some volumes with questions and answers. We, as a Panel, had prepared a number of questions in advance of the hearings, and provided those to Keltic and their team. We also received a number of questions that were written in to us from various members of the public or from other government departments. We also provided those. So, answers to those presubmitted questions have been provided by Keltic, and they're available there. We've also got a schedule of the hearings. As I mentioned, we've been one day in Guysborough, one day in Sherbrooke, and between now and Saturday, we are here in Antigonish. There is also a Federal Environmental Assessment process that applies to the Keltic project, because it will require some Federal permits. And you'll hear a little more about that in their presentation. I just wanted to say that the two processes are separate and independent, but they are going in parallel, and to the greatest extent possible, the requirements are being coordinated, to avoid duplication of efforts in preparing information and material for the different processes. At the end of

each process, the respective Provincial and Federal Ministers have to make their own independent decisions on their role and their permission for the project. There are no Federal public hearings required under their process for this project, so this is strictly a Provincial hearing. For these hearings, we don't follow, necessarily, the same rules as a court of law, but the regulations do set out some operating principles. The main intention is that this provides a fair and open hearing. It's a chance for the public to express their views and to ask questions and obtain answers about the project. It's intended to be non-confrontational, so we would expect, for instance, no interruption of speakers while they're speaking. The order of speakers is set out in the regulations, so we'll begin -- after my comments, we'll begin with a presentation from the proponent outlining their project. For each of the three locations, we've been doing this. For the first session in each location, we've had them do a longer presentation, about a half hour, which is what you'll hear today, because this is our first session in Antigonish. For the remainder of the week, we'll have a more truncated introduction at

the beginning of each session, on the project. Following the Keltic presentation, there will be an opportunity for questions from the audience, if you have any questions for Keltic. And at that point, I'd ask you to confine yourself just specifically to direct questions regarding the project. We will have time at the end for a more open forum, if you want to make a statement, voice an issue or concern, or have a more broad question answered, that's the time for that. And in all cases, if you're asking a question, to ask a direct question to me, as the Chair. I'll determine who is best able to answer that. We want to avoid having debates starting between audience members and the proponent or other speakers directly. The regulations do require that anyone who's giving substantial testimony to the Panel be sworn in before they do so. So, that would apply to the proponent's group. They've all been sworn in, except, I believe, one. You have one new member today, who we will swear in the oaths. They've all -- the others have taken, still apply. For the intervenors, who will make presentations, that also applies. You will need to be sworn in. But for any member of the audience who just



wants to stand up and voice a concern, or ask a question, that does not apply. You don't need to be sworn in. When you are asking a question, or making a statement, again, I'd emphasize, please use the microphone. That's for recording purposes, so that we get your comments or question on the record, and on the transcript. And when you come to a microphone, please identify yourself by name, and just the general area in which you live. And we are trying to keep a record of anyone who speaks, so before the end of the session, we've got our administrative support, Carol, on the side there, in the yellow scarf. Please just make sure that Carol has got your name, and that we've got it spelled correctly. So, at this point, I'm going to ask Keltic to come forward and -- do you want to swear that additional person in now, or ---

MR. GORDON

Yeah.

THE CHAIR

Okay. Maybe -- whoever it is that needs to be sworn in, we'll get that done, and then we'll get you to do your presentation, please?

MR. DUNCAN

Yeah, we have one member, a substitution for Mr. Purvis, from Stone & Webster, who had to leave town. So, if you could swear in Glenn Longert from Stone & Webster as well, please.

MR. GLENN LONGERT, (Sworn)

MR. SHAWN DUNCAN, (Previously Sworn)

MR. KEVIN DUNN, (Previously Sworn)

MR. DEREK OWEN, (Previously Sworn)

MR. ROB SCHONK, (Previously Sworn)

MS. JANET BLACKADAR, (Previously Sworn)

THE CHAIR

Okay. Go ahead, please.

KELTIC PETROCHEMICAL INC. - PRESENTATION

MR. SHAWN DUNCAN - PRESENTER

Thank you, Mr. Chair, Board Members, members of the audience. My name is Shawn Duncan. I'm from AMEC Earth & Environmental. I'm here today representing Keltic -- the Keltic project, Keltic Petrochemicals, as well as Maple LNG. As mentioned, we have a brief overview presentation. The presentation is broken into some parts. Really, the objective is to give you an overview of what the project really consists of. Talk -- we're going to talk a little bit about EIAs, or

Environmental Impact Assessments, how do we conduct Environmental Impact Assessments. We're going to evaluate and talk a little bit about the things that we did evaluate in the Environmental Impact Assessment document, and the conclusions of that document. And as well, we're going to talk a little bit about the additional permits and regulations that would apply to the project, as well, as it moves forward, towards development. So, what is the Keltic project? The Keltic project is what we term as world class facilities. These are facilities that will be developed that will operate on a global market basis. It consists of two major components. First of all, it's a -- it will receive liquid natural gas, or LNG, for regasification. In other words, we're going to turn the liquid natural gas into a natural gas product. This complex is expected to have 1 billion cubic -- 1 billion cubic feet of output, which is expandable up to 2, with the current design. Associated with the liquid natural gas, there's a integrated petrochemical complex. This complex will use the liquids that are in the natural gas itself, not only from the LNG, but also from the Sable facilities, which are adjacent to the

project. This -- they will be using those liquids to produce two products, polypropylene and polyethylene, which will be used as base products for the production of plastics. So, where is the Keltic project located, and its components? I apologize for the figure. It's probably hard to read from the back, but we do have hard copy handouts with the figure in it, that represent these slides, as well. But essentially, we have a number of components to the project. As I indicated, we have a petrochemical complex, which will consist of the facilities on site. It -- associated with this petrochemical complex is a marine terminal. This marine terminal will be used for storage and transportation of the end product. The liquid natural gas facilities, which will be adjacent to the petrochemical facilities, will have storage tanks, as well as the regasification facilities there. As well, associated with the liquid natural gas, there will be a marine terminal for off loading of natural gas supply ships. Associated with the project, there is also the need for power requirements. There's currently proposed a cogeneration power plant on site. As well, process water will be required for the petrochemical

complex. This process is currently being -- the water for this process is currently being proposed to come from Meadow Lake. There is an impoundment there, and we'll talk a little bit about that, as we go through the slides. A little bit of a brief history on the companies involved, the two main proponents. Keltic Petrochemical is a private company. It was incorporated March, 2000, and is headquartered in Halifax, established for the development of this petrochemical project that we're here to talk about. The original concept was utilize the liquids from the natural gas at the Sable complex, where those -- where there is natural gas, and the liquids associated. Subsequent to that, there has been -- to look at a world class facility in terms of working on global markets, additional supply is required. That will come both from future offshore developments, but also there -- it was determined that there was need for additional gas supply. And that is where the liquid natural gas consideration became part of the project. As part of that liquid natural gas supply, Maple LNG Limited acquired the LNG portion of the project, in March of 2006. Maple LNG Limited is owned by two companies. A

majority shareholder is 4Gas North America, as well as Suntera Canada. 4Gas is a company that developed and operates LNG terminals worldwide. Terminals that are comparable to the one that is being developed here, or proposed here, are the Dragon LNG terminal, which is being developed in Wales. This facility is under construction, and is expected to be in operation by 2007. 4Gas is also developing the LionGas LNG facility in Rotterdam. This facility is expected to become in operation by 2009. As well, they're evaluating and going into planning for Le Verdon LNG facilities in France. And these facilities are expected to be in operation by 2011. In addition to the main -- two main proponents of the project, there are a number of other partners involved. There -- and these partners, there's a strong technical capability that was brought in for this project from an international market for this -- for these skill sets. These partners come from the United States, as well as from Europe, from the Netherlands, as well as from Russia, where these industries are well established. In addition to this international expertise, there are a number of local companies and experts who are involved with the

project, as well. These companies bring a strength of -- a technical strength to the project for these types of developments, but also bring a lot of local knowledge to -- of developments in this area, and how these projects are brought forward. So, I'm going to go briefly over the components of the project, and just give you some examples of what they look like, and the various elements associated with them. First of all, with the LNG terminal, as I mentioned, there is a marine facility. This marine facility will accommodate ships coming in with liquid natural gas. It will accommodate ships up to 250 cubic meters in capacity. It also -- the facilities also have storage tanks on site, on land. There currently propose to be 162,000 -- or 162,500 cubic meter size tanks, but this is expandable up to six tanks, as well. This is where we would double the capacity from 1 billion cubic feet to 2 billion cubic feet per day. Some examples, some pictures there. These are the pictures from the Dragon LNG terminal in Wales, pictures of the tanks that are under construction, as well as the unloading terminal. Just briefly on LNG safety. We'll talk probably a bit more on that as well. But, in general, LNG is -- has

got decades long safety record. These -- it's new here in Nova Scotia, but these type of facilities are operated around the world. And they've got a long and -- a long history of safe operations in the transportation, storage and regasification of this type of material. These type of terminals are operated near populated areas, for over 40 years, without a single serious safety incident occurring. As mentioned, these -- there's -- these developments are being evaluated for places such as Rotterdam, and are currently in operations in places such as Boston Harbour. These facilities have strict design and operation safety standards, which are applied worldwide, and they're subject to independent third party review and inspection, for all aspects of the LNG, the construction and operation of these facilities. On the petrochemical side, there are a number of components to that, but primarily there's going to be an ethylene cracker. There will be high density, linear low and low density polyethylene plants, as well as polypropylene plants. There's a picture here, I believe it's Joffre, Alberta, which shows a typical cracking furnace, the type of facility that is



envisioned for this site, as well. The production of polyethylene and polypropylene leads to a number of end products that are manufactured from these sources of materials. These products range, in our everyday lives, are from -- from automobile parts to construction materials, including roofing and tiles. A number of consumer products: films, toys, the plastic bag that -- you know, that milk comes in. These are the type of products that are produced, as well, as medical devices that are used, packaging materials, as well as textiles, carpets and clothing. Here are a couple of more examples of what a petrochemical complex would look like, here, as proposed, in Goldboro. This is a low linear density, and a high density reactor, as well as another conceptual drawing or layout of a plant design. Here's an example of a polypropylene reactor on the left, and here are the kind of storage tanks that are being proposed to be constructed on the site, as well. As I mentioned, the facility will require a fair amount of power. Instead of being reliant on Nova Scotia Power, and taking power off the grid there, it's proposed that power will be generated on site using a cogeneration facility. This cogeneration facility will

use the natural gas that's coming ashore, and produce electricity. As a byproduct of that electricity production, there is also heat and steam produced. This heat and steam will be used in the process as well, for heating of buildings, as well as steam used in the actual process of the petrochemicals. Also associated with the end product, there's a transportation logistics issue or need. This is primarily the use of the marine -- the Terminal Wharf. The Terminal Wharf will have a number of storage silos. The product will be shipped to market, both by road and by sea. The silos will use to be -- will be used to store the pellets, and then transferred to containers for, as I mentioned, either shipping by sea or by road. Associated with any large complex such as this, there's a number of utilities that will be required. We talked about the power, but also water supply and treatment. Water is going to be used or required for the process, as well as for drinking water, things of that nature. There's going to be a number of underground infrastructures: piping, storm water management facilities. Also, there's going to be waste water treatment required on site. A water treatment plant

will be built to address process water, storm water, sanitary sewage. As well, the complex will have dedicated fire and security services on site. These will be kept there all the time, and will be able to respond to any situation. As well, as just a general ongoing operations of the facility, there would be roads and property maintenance required, as well. So, the question is, why in Goldboro? There's some question, why would you locate a plant in this locale -- location. I guess, first of all, generally, Nova Scotia is well placed, for a number of reasons. It's located close to LNG supplies worldwide. It's also got advantages by its location with respect to markets for the end product. With respect to the supply of LNG, included a table here, as well, in the handout, but on a global perspective, when we look at the major supply areas for LNG, the shipping distances are much shorter than they would be to -- we used two examples here, Cove Point, in Maryland, as well as Sabine Pass in Texas. When you look at the shipping routes to those three locations, with the exception of Trinidad, almost every location, the Middle East, Africa, Europe, the supplies of this product are much closer by a number of

days, to ship to Nova Scotia. Another incentive, of course, to develop in this area, is existing natural gas infrastructure. As mentioned, the Sable gas is going to be used as a source for the liquids as well. So, it makes sense to have the facility in proximity to the Sable infrastructure. But also, the Maritimes & Northeast infrastructure that it's in place provides transmission capacity for the natural gas. This natural gas that's not used in the processing or in the generation of power will then be sold on markets, and transported to markets here in Nova Scotia for residential and industrial use, as well as the New Brunswick and Northeastern U.S. In addition to these features -- and when Sable was developed a number of years ago, the Municipality had the foresight to realize that with this existing infrastructure, this would encourage other developments in the area. The Municipality set aside the Goldboro Industrial Park around the Sable site, and they zoned the site as heavy industrial, for future development. The industrial park, and the zoning of that park, specifically contemplates oil and gas and petrochemical developments, such as the one being proposed here. The

site currently contains the Sable gas plant, as well as the Maritimes & Northeast pipeline facilities. It also contains corridors for future natural gas projects, such as Deep Panuke. When these resources are developed and brought onshore, this will be where they are -- where landfall will occur, and this is where they will enter market, as well. This location also provides an ice free, deep harbour for the transportation ships to bring LNG, as well as the transportation of product to market. So, I want to get into the Environmental Impact Assessment that was produced for this project, or EIA. First of all, what is an EIA, what is it used for? An EIA is, essentially, a planning tool. The EIA is used to determine how a project will affect the people, the environment, and the economy. EIA is also used by decision makers. It's used by Boards such as this, as well as departments -- various government departments, to determine is -- can the project proceed, does it require additional approvals, things of that nature. So, it allows decision makers to determine what are the effects from the project as well. It also helps the proponent and the engineers redefine, or refine, the

project, if required. For example, if, through the analysis it is determined that there are unacceptable environmental issues associated with the design, the proponent or the design engineers would go back and redo the project, to ensure that those environmental standards are being met. Generally, how does an EIA work? Well, this is just a conceptual model, but if you look at the centre box, we look at an environmental setting. Where is the project to be developed? You know, we need to understand its location, and the things it could interact with. We then look at those interactions. First of all, we look at what kind of interactions could the project have on the environment, but also the reverse. What kind of interactions will the environment have on the project: things such as wind, waves, currents. When we understand all those interactions, we then develop what's called mitigation, or measures, to reduce those impacts or effects. And as I mentioned, we develop a final project, and submit that as part of the assessment. Then we conduct monitoring. Monitoring is a key component, to ensure that our understanding, and our predictions in the EIA, are accurate. EIAs are generally conducted in some

sort of regulatory process. This process that we're currently involved, as the Chair mentioned, is the Provincial Environmental Assessment process under the Nova Scotia Environment Act. This project was specifically designated as a Class 2 undertaking. It was registered with the Province on January 12th, 2005. The Province, then, subsequently developed the terms of reference for the project. These terms of reference is, essentially, kind of like a road map. It tells the proponent and its consultants what kind of issues the agency, or the departments, want to see evaluated. So, it provides assistance in that regard. It's also subject to review by an Environmental Assessment Board, such as the one that's here today. And as part of that Board review, and part of this process, we undertake public hearings, and this is currently what we're involved with. As mentioned, also, by the Chair, there is a Federal environmental process, which is separate from this process. It is proceeding in a parallel fashion, and we're dealing with Federal agencies on that front. But this project was subject to the requirements under the Canadian Environmental Assessment Act, or CEAA. There are a couple of law

list triggers which requires this assessment, and these are associated, really, with the issuance of a permit or approval from a Federal Department. Two Federal Departments have indicated that this would be the case: Department of Fisheries and Oceans Canada, as well as Transport Canada. As part of this process, other Federal agencies have declared that they would be part of this review, and evaluate the environmental assessment. They're called -- what are called expert authorities. They include the Departments of Environment Canada, Natural Resources Canada and Health Canada. We produce -- as part of this process, we produce what's called a Comprehensive Study Report. Essentially, it's just another type of EIA. This will be submitted to the Federal agencies for review. So, let's run through, what are the major elements of an EIA? I've talked about some of these, but we're going to expand on more, as we go through, as well. First of all, as I mentioned, we need to understand the environmental setting for where the project is to be developed. To do that, we need to assemble some baseline -- environmental baseline information. In other words, we can conduct surveys or literature



searches or data searches to understand what available information is out there. Using this information, we then develop a long list of environmental issues, or conduct what we call issue scoping. Another important component of the issue scoping is to conduct consultation with public, through open houses and through consultation; meet with government agencies, things of that nature, to really understand what are the issues at hand, that we need to address. As I mentioned, we also look at the effects of the environment on the project, get a full understanding of how features such as tidal situations, or waves, or currents, would affect a project such as this. And then we identify what's called Valued Environmental Components, or VECs. These are really the key feature of any Environmental Impact Assessment, and I'll expand on these a little bit more, because they are -- as I mentioned, they are really the key component. For each of these VECs, we then establish temporal and spacial boundaries. Temporal boundaries would include things such as migratory periods. If there's a certain time of year when a certain species is there, we need to establish what those times are. We need to understand

what those timing issues are. So, those are temporal boundaries. Spacial boundaries would include things such as, if you're having a potential effect on a physical footprint, you would evaluate that footprint. But, for the -- or for an example such as air emissions, we'd look beyond the footprint, obviously. we'd have to look into areas associated with the local air shed. So, that's obviously a much larger area than the physical footprint of the facility. So, that's a spacial boundary. We then conduct the assessment of what the potential effects of the project are, and then we determine the significance of those effects. We determine if the effects are positive, or if they're negative. And then, we go further, and determine how significant are those effects. And we'll expand on those a little bit in the presentation as well. We then apply mitigation to the project. In other words, we apply design related changes, or measures, or additional measures, that would minimize these environmental effects from the project. And then we would look at the remaining effects, even after we apply mitigation. These are what we call residual effects. What is remaining? What are those types of

effects that still remain, and then determine if those are, again significant effects. As part of the assessment, too, we need to evaluate cumulative effects. It's okay to determine on, you know, with your project, what those effects are, but you need to understand, if there are other projects in development adjacent to, or nearby, where their emissions, or their issues, may interact with the ones from the project being developed, they could combine and be -- and create an unacceptable condition. So, those are the type of effects we also need to assess. So, understanding the local environment. As mentioned, this typically requires a fair amount of baseline information, or data. To support this information, or to gather this information, a number of baseline surveys were completed in -- over the area in 2004 and 2005. Actually, there were a number of surveys also conducted prior to this. These surveys would include a variety of both physical and biophysical features. These include feature -- components such as wetlands. We look at fisheries, archaeology, ground water and well surveys, as well as flora and fauna. Also part of our evaluation, we conduct a quantitative analysis of

this data. We -- and we collect well data, or ground water samples. We do water quality analysis on that, to fully understand it. As well, we conduct air quality modelling, to understand what the emissions from the facilities may be. All these baseline datas have generated data reports and survey reports. These reports were included as Appendices to the EIA, and are available for review. So, I want to talk a little bit more about VECs. As I mentioned, these are -- or Valued Environmental Components. These are, really, the backbone, or really, the focus, of any Environmental Assessment. As mentioned, we have a large list of issues that are identified, and we need to narrow those down to what is really relevant to the project. In order to do that, an issue becomes a VEC through our evaluation, if it meets a couple of criteria. First of all, there needs to be a pathway, or a linkage, to that VEC. If there -- if the project doesn't interact with that environmental component, there's no real need to assess it further. For example, if a species of concern or -- was brought up to the proponent, and was identified as an environmental issue, if we went to -- and through our

baseline surveys, have determined that species doesn't occur there, or its habitat doesn't occur there, then there's no way for the project -- to interact with that project. There is no direct linkage, therefore there's no need to evaluate any further. Also, we need to establish if there's a likely measurable effect. In order for an assessment to be complete, you need to determine what the effects from the project are. Once we have the VECs determined, and then we want to go forward in the assessment process, we have to determine what we'd consider significant adverse effects. Adverse effects are negative, and we need to determine, even if they're negative, how significant are they? This level of significance is determined individually for each VEC. As mentioned, spacial and temporal boundaries are established for each of the VECs. And then we look at the kind of interaction that we're dealing with, between the project and that component. For example, is it a direct interaction through physical displacement, or is it a potential effect on surface water, or air, that may protect -- may have a potential effect on a VEC, slightly larger -- in a slightly larger area? We need to determine if the

effect is adverse. As I mentioned, it can be a negative or adverse effect, but it also can be positive. And then we determine if this effect is significant. The significance for each effect is evaluated and it can be based on a number of guidance or criteria. These criteria or the guidance for the level of significance can be provided by regulatory agencies through discharge limits or air quality standards. They can be risk based if we conduct human health risk assessments or ecological risk assessments. We can determine a value or a discharge or a limit that needs to be applied to certain VECs. It also can be established from evaluating previous guidance material such as previous scientific reports or other jurisdictions that may set tolerance levels or threshold limits or assimilative capacity for certain components. And in valuating the significance, we're also provided with guidance from provincial and federal authorities. For example, for adverse effects, we need to determine the level of significance based on a number of criteria. They include the magnitude, how large an effect are we having on that VEC. We look at geographical extent, how wide an area does this effect

occur. We look at the timing, duration and frequency of this event or this effect, does it happen every day or does it happen for a number of days at a time or does it happen very infrequently. We look at reversibility -- is the effect that occurs -- is it likely to reverse itself over time. We look at the ecological and socio-cultural context of that effect in the local setting. And then we look also as well at the likelihood. There are some instances where we expect these type of effects to occur, but there are other examples where this -- the likelihood of that effect is very low. All these things go into a valuation of the determination of significance for that effect. Now, specifically for this project, there are a number of VECs that were evaluated. We don't have time obviously to go through them all today, the large volume of documentation that is available. And these specific VECs for the project range anything from land use to archeological resources to forestry to fisheries to wetlands. So there's a number of things that were evaluated as part of the EIA. What I would like to do is just kind of run through some of the conclusions that we found and just pull out some examples that kind

of give you an idea of the valuation that was conducted as well as the conclusions from that evaluation. If we look at the effects on fish habitat, we identified a number of areas where there could be potential effects on fish habitat. But if we look at the Meadow Lake impoundment, this is an area where we are drawing process water from. We looked at the effect of raising the level of the Meadow Lake area through an impoundment and the intake structure there. We found that by raising the water level, we found that there could be both positive and negative effects from this activity. But generally we can apply mitigation and measures in place that will lower this effect, as well provide potential compensation if there's issues of fish habitat that need to be replaced. And through the application and mitigation and these measures, we found that the impacts or the effects are not significant and should not affect the fish habitat or fish resources on a local or regional level. Another example is archeological resources. We looked at the large area for archeological resources. Specifically on the RedHead Cemetery, for those of you who are aware or not aware, on a peninsula near the project site, there was



an African Nova Scotian graveyard that had been subject to erosion over time, and some of those burial areas were being washed out to sea. Prior to the project ever coming into place, the community undertook an initiative to undertake archeological surveys and remove those remains and place them in proper burials on land where they weren't subject to erosion. We subsequently -- when the project came along, we subsequently conducted archeological surveys of that area because obviously of the concern there. We found there's no remains, human remains, on that area -- in that area, but there are -- we'd still consider this area of elevated archeological potential. In other words, it still has potential for resources, so when we're doing work in that area, we need to ensure that we have archaeologists on site to survey that, to develop work plans in case any archeological resources are encountered. If we apply the mitigation, again, we should expect there to be no environmental effects from the project on archeological resources. On terrestrial habitat, if we look at the project imprint or footprint of the site, obviously through the development, there will be a loss of terrestrial habitat, which is

unavoidable with this type of development. But we evaluate that habitat based on the type of species that would utilize it, as well as the type of habitat that exists there. And we've determined that that area does not represent critical habitat. There's a lot of that habitat available in the area, so thereby, the removal of that habitat would not be a significant adverse effect and is not expected to influence the long-term, I guess, viability of those species. Another issue that came up is transportation. Obviously with the construction activity and the operational activities associated with the project, there will be transportation requirements to the site. And we found that there would be a significant additional load to the existing infrastructure, recognizing that some of that infrastructure may need to be upgraded. We're currently in the process of working with Nova Scotia Transportation and Public Works to identify what upgrades are required. They're doing an evaluation as well and we'll continue to consult with them to determine what are those -- what kind of upgrades are we -- are going to be required to support the project. We get to -- also in conclusion of the EIA, we

determined that two other effects needed to be evaluated further for significance, two other residual effects. The first is socio-economic effect. We found obviously with a project of this size and the kind of revenue that would be generated, we found there to be significant positive benefits from the project. These could come in terms of salaries and jobs and employment, but also spin-offs for support services as well as tax -- taxation for the local municipality as well. We felt that the level of benefit on an economic scale was going to be significant for this area. We considered this to be a major effect. With respect to esthetics, one issue that did come up, of course, is the visual characteristics of the site or the visual impact. There's no getting around it, the site will not look the way it looks right now, and there's not going to be much hiding the site. It's a large complex. There will be ways of mitigating the visual impact of it, but generally there still will be a change in the visual characteristics of the site. But generally when we evaluated the site and we looked at the number of receptors for this issue, and we looked at the planned industrial zoning of this area -- and

essentially the Municipality itself has set aside this piece of land for this type of development -- and then when we weigh it against the advantages of the project, we felt that the significance of this effect could be a medium effect and would not be considered significant. So that's the EIA. And I want to talk briefly about some of the permitting and approvals still required or likely required by the project. As people mentioned, you know, people -- the perception is when we get to an EIA, generally this is the end of the road, and once we get the approval, it's all green lights. But there are a number of permits and approvals still required from a number of agencies. On the provincial side, under the Activities Designation Regulation, there will be likely a number of permits required for these facilities. The construction and operation of the pet-chem facilities, the construction and operation of the power plant and the water treatment facilities, as well as the withdrawal of water. All of these activities require -- will require some level of approval or permitting from the Province. All these permits and approvals will require greater engineering detail, and we'll be required to submit this information to those agencies

for review prior to them submitting -- or approving the development. In addition, also, under the Nova Scotia Energy Resources Conservation Act, there is Gas Plant Facility Regulations. These regulations apply to the construction and operation of all LNG facilities. These regulations are administered by the Nova Scotia Utility and Review Board, and there are a number of engineering details that will be required by the Nova Scotia Utility and Review Board before they'll approve the project. This process follows and the evaluation follows the Nova Scotia Department of Energy Code of Practice for LNG Facilities, which were developed in July, 2005, and these standards or these practices incorporate a Canadian-wide standard for the development of LNG terminals and facilities as well. In addition to some other pieces of the legislation that would apply to the project, air quality regulations would be applicable, of course. Dangerous Goods Management Act, Water and Waste Water Facility Regulations, as well as Petroleum Management Regulations would all apply to the project and the proponent would be required to adhere to these regulations. In addition to the provincial

legislation, there are also a number of pieces of federal legislation that would apply to the project as well. We talk about Navigable Waters Protection Act administered under Transport Canada, the Fisheries Act. Various sections of the Fisheries Act would apply. Species at Risk Act, the Canada Shipping Act, Marine Transportation Security Act, the Canadian Environmental Protection Act, Transportation of Goods Act, Migratory Birds Convention Act. As you can see, there's a number of federal -- pieces of federal legislation that would apply, and again, the proponent would be adhering to the requirements of those. Another federal process that's currently under way or has been initiated by the proponent is something called the technical review process or the marine terminal systems or TERMPOL. This TERMPOL review process looks and evaluates things such as operational ship safety, shipping route safety, the construction and operation of a marine terminal, as well as the requirements to conduct what's called a quantitative risk assessment. That's risk assessments then used for system planning and for emergency response planning for the facility. This federal review process is coordinated by Transport Canada as

well -- and in addition to Transport Canada, there are a number of federal agencies that are participating in this review. These would include DFO and Environment Canada as well. And of course, the Municipality has by-laws and regulations that apply to the project. As mentioned under its land-use by-laws, this facility and this area has been zoned -- or this area has been zoned as heavy industrial for the development of these types of facilities, and they do have -- they have some recommendations or requirements for the development of these facilities and the proponent would adhere to those requirements. So just in conclusion, and just to run through some of our main points, as the EIA -- as concluded in the EIA, we identified that there are some negative effects from the project, some positive effects, but generally when we look at the mitigation and the design changes that can be applied to the project, all these effects can be managed. The project itself will create significant employment opportunities, as well as through those employment opportunities and the support services, enhance personal income. The project is in compliance with the planned industrial uses of this location. This

location is planned for this type of development, and this is the type of industry that the Municipality had envisioned attracting to this area when they put that park aside. The project can be constructed and operated in a safe manner. This industry is one of the most regulated in the world. It's not only the LNG industry but petrochemical industries. These facilities, as I mentioned, they're new to Nova Scotia, but they are -- worldwide, there are these types of facilities that are managed in a safe manner. As well, there are a number of additional regulatory approvals and permits still required for the project. There is a number of environmental -- or engineering details still to be developed as we get into detailed design. These design details will be submitted to appropriate regulatory agencies which will review these and consider if they're appropriate and issue approvals for the project that the proponent will then adhere to. That's the end of the presentation. We're open for questions, Mr. Chair. I'll just take an opportunity just to introduce the panel while I'm here.

THE CHAIR

Yes. Sure.



MR. DUNCAN

Again, as I mentioned, my name is Shawn Duncan. I'm with AMEC Earth & Environmental. And just starting from the left, going across, there's folks here that will assist with any questions. Mr. Derek Owen, who's from Maple LNG, he'll be speaking to that corporation or that entity and its involvement in the project. Rob Schonk, to his right, is from Royal Haskoning. Rob will be speaking to issues associated with LNG and LNG terminals, which his company has been involved with developing around the world. To his right, to the right of Rob is Janet Blackadar. Janet is from AMEC Earth & Environmental. She was also instrumental in preparing the EIA. Then there's Glenn Longert, our new addition to the panel. Glenn replaces Dave Purvis. He's from Stone & Webster, who are involved with the process side of the petrochemical industry, the engineers associated with the preliminary design, and who will be looking at the detailed design going forward. And of course, Mr. Kevin Dunn on the end, who's the President of Keltic Petrochemicals. Kevin will be speaking to corporate issues associated with that entity and their involvement with the project as

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well. Thank you.

KELTIC PETROCHEMICAL INC. PANEL - QUESTIONED

THE CHAIR

Okay. Thanks very much. At this point, we do have up to half an hour available for questions, if you have any specific questions for Keltic. Just emphasize -- at this point, we're just dealing with questions. For anybody who wants to make a statement or voice their concerns or issues, we will have time for that later on. Right now, we're just looking for questions. And if you do have any, please use the microphone so that we can record you for the record. Okay. We do have maybe a couple of questions from the Panel Members. We'll start with those.

MS. HENNEBERRY

I have a question -- Penny Henneberry from the Board -- regarding cumulative effects. And in your example, you imply that it is in conjunction with another similar use in conjunction with the project. Is it not also possible that the project itself could have cumulative effects on the environment.

MR. DUNCAN

When you say, "the project itself," you mean within the

project boundaries and components of the project?

MS. HENNEBERRY

Yes.

MR. DUNCAN

Yeah. Absolutely. And that is part of the evaluation that we -- as part of the standard mitigation or evaluation conducted, we do look at these interactions, and these include system planning and design. We look at the placement of these facilities in the context of things such as safety. We look at the requirements for water and water treatment from different components of the project. So you're right, there are components of the project that could act cumulatively on themselves. But again, that's all taken into account as part of the design of the project, as well as the assessment.

MS. HENNEBERRY

Is it not also possible that the cumulative effects could be discovered several years into the project and also several years after the project is complete?

MR. DUNCAN

I guess I'm not sure if there's a specific example you might be able to give. I'm trying to ---

MS. HENNEBERRY

I'm talking about contamination as an example.

MR. DUNCAN

Contamination cumulatively within the project itself.

MS. HENNEBERRY

Yes.

MR. DUNCAN

Again, I think it's -- this probably is addressed through a number of areas, specifically on the design of the project. As I mentioned, we would look at all of the outputs from the project, whether they're waste products or whether it's the actual production process itself. All those systems would be integrated and would have to be addressed for things such as spill containment and for storm water management. All those issues need to be designed into waste water treatment facilities that are being planned. So again, through the system design, we'd expect all those things that act cumulatively within the project itself would be addressed as part of the design.

MR. CRANSTON

Ray Cranston, Environmental Assessment Board. Because of the interest in the area of past gold mining -- or gold mining activities and the use of mercury in that

process, I was interested to know -- in your summary tables of VECs, there's no mention of mercury -- possible problems in surface waters. How did you arrive at that conclusion?

MR. DUNCAN

I guess when we evaluate -- when we determine our list of VECs or identify which VECs need to be evaluated, there are a couple of things that we look at in determining what the VEC is itself that we will assess. When we look at things like mercury, we would consider that not necessarily a VEC, but that would be a contaminant that would affect a VEC, or an activity or a pathway that would lead to a potential effect. So we wouldn't assess the effect of mercury, or we wouldn't assess mercury itself as a VEC, but we would look at mobilization of that mercury or that contaminant and its impact on other VECs, and we'd also look at its impact on vectors or pathways such as ground water and surface water. A lot of times, even ground water and surface water aren't defined as VECs. They can be defined as pathways. But in this instance, we did identify them as a resource to be protected. They also -- they also are a pathway to other VECs that use those

resources. So mercury itself, we would consider that a contaminant, and that would be something that we'd evaluate its impact on other VECs if it's mobilized into the environment.

MR. CRANSTON

And in order to do that, you would need some data on the mercury in the surface water, as I see.

MR. DUNCAN

Yeah. And we -- what we would do is -- I guess you're primarily talking about issues associated with the tailings and interactions with the tailings that may exist.

MR. CRANSTON

Well, specifically, to get to the point, in the table and surface water data, there's no -- there's a table listing how mercury analyses were done and there's no results shown. In table 8.6-5, there's no mercury analysis included for the surface waters.

MR. DUNCAN

Yeah. I think we may have provided a written response. I'm just going to turn it up to make sure we are consistent with what we provided. Sorry, I'm just going to take a minute.

MR. CRANSTON

Yeah.

MR. DUNCAN

We just have a lot of stuff to flip through, as you can expect. If we could come back that probably -- we do have that written response, and I just want to make sure we're consistent with that response that we provided, and then we can reference that.

MR. CRANSTON

Okay.

MR. DUNCAN

And that way, we can provide a specific response to you and -- we're just trying to -- having trouble turning it up right now.

MR. CRANSTON

Okay. Well let me just ask a couple more then that you can then look at at the same time.

MR. DUNCAN

Sure. Yeah.

MR. CRANSTON

That was in Table 8.6-5. That was some surface water work outside the property. There's no mercury data.

MR. DUNCAN

Yeah.

MR. CRANSTON

And then for on-site water sampling done, there was mercury samples taken, it says. There's no data given in Tab 8.6-7.

MR. DUNCAN

Um-hmm.

MR. CRANSTON

And further in the ground water work for the on -- for wells that were considered, there's a mercury method given. And the results for chemical analysis, in Table 8.7-2, there's no mercury numbers.

MR. DUNCAN

Right. While we're waiting for the response, I guess, to be turned up, in general, we would look at -- in terms of the baseline, if there is an existing contamination for mercury, we'd need to understand that as part of our baseline prior to the development of the project. The project obviously doesn't exist, so it's not responsible for the mercury obviously that's associated with previous activities and mineralogical conditions in the area. But we would obviously, as part of the pre-construction activity, very carefully



analyze baseline conditions. We want to be able to determine if the project itself is causing elevated levels of mercury in the water. If those elevated mercuries exist, then we would want to determine that they exist now and that they're not coming from the project. We want to establish that baseline very clearly. So while we're waiting for the response on the table specifically, if that data is not there, it will be collected prior to the construction of the project to fully assess -- fully assess the potential ground water baseline.

MR. NEGUS

Does that go the same for arsenic?

THE CHAIR

Sorry, I just -- we don't want -- if you're going to ask questions from the floor, we need to get you to come up to the microphone and identify yourself. It's just for the record.

MR. NEGUS

Years back, the government came down and tested ---

THE CHAIR

Sorry, I'll need your -- I'll need your name, please.

MR. NEGUS

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A bunch of years back, the government came down -- I don't know how long ago it was -- my name is Colin Negus.

THE CHAIR

Okay. Thanks.

MR. NEGUS

They tested for arsenic, and there was levels of that in the water. I don't know if mercury ever showed up or not. But if these guys are testing water, well arsenic's a pretty bad thing, and like, I mean, I'd like to know what level was there before they started building, and including what level would be there afterwards. I drink from that water, eh?

THE CHAIR

Okay. Maybe if you're looking for the answer on mercury, you could include arsenic as well.

MR. DUNCAN

Yeah, I believe we got arsenic information on ground water available in the report. As a general comment, arsenic in Nova Scotia is high as a baseline in the water. Again, we would look at specifically effects from the project, similar to the mercury, if that exists in the water currently. We just want to make

sure the project either isn't adding to those levels or increasing them or impacting those -- the existing ground water resource and that any effect of the project is carefully tracked and monitored. So arsenic will exist -- if it exists there now, it will likely exist there when the plant is in operation, but we want to make sure that we're not contributing to those levels as well. And the same would apply for mercury. Again, there's no mercury production on the site or in the process, but there are -- acknowledgement that there are old tailings that do have mercury levels there. We want to make sure our activities don't increase -- if there's levels of mercury in the water, we want to make sure those levels of mercury don't increase due to the activities of the project. Just as a reference, we -- I guess we responded to this issue as a response to a question from Health Canada with respect to that same issue. It's what we labelled as Health Canada No. 42 as a response. I can either read that in now, or if it's appropriate just to give you the reference to that response, and hopefully that would provide the answer that you're looking for.

MR. CRANSTON

I read that and it didn't -- it just seemed to be an important part of the report, and if the work was going to be done, I was imagining maybe it would have been done as part of the assessment. But I can't remember the exact wording of what you responded there, but something to the effect that it wasn't a normal part of the suite of things to analyze background waters for.

MR. DUNCAN

Yeah. I'll expand on that a little bit once I have a moment, and then we can -- I'll get back to you on that. I'll take that as an undertaking. (Undertaking)

THE CHAIR

Okay. Thanks. Any other questions from the panel or the audience? Okay. Anything further from the audience, please?

MS. GAGNON

Chantal Gagnon, Ecology Action Centre. For construction, just to be curious, because I'm not a construction person, there will be a work camp or a construction camp for the workers. You will -- I assume there will be a need for energy during the three years of construction for the site. Is that correct?

MR. DUNCAN

That would be correct. There would be a number of services -- electrical services, water, waste water, those type of things, yes.

MS. GAGNON

Okay. So where will the electricity and the energy come from for the three years, and how much would that be, since the co-generation facility will be built after the, like, natural gas plant terminals and using that as your electricity?

MR. DUNCAN

The power for that type of worker facility would be -- would come from Nova Scotia Power from the existing grid system. A hook-up would be required at that -- at that site if there is a work camp developed, and power will be purchased from Nova Scotia Power.

MS. GAGNON

So do we have an idea of how much that would be and how much that calculates into greenhouse gas emissions because of the fact that Nova Scotia Power still uses oil and coal?

MR. DUNCAN

We don't have, I guess, the power requirements for that camp right now. That would -- we would look at the

details and the levels of services required for that camp during the detailed design phase. We're still evaluating even if a work camp is required. But we have assessed the potential for this type of interaction because it has been considered as an option to have the workers set up a work camp instead of commuting back and forth. But a lot of those details would be worked out in the design of the project, the final design, but also working with local contractors as well as the unions. There are some specific requirements the unions have about where their workers are located. So we would have to determine at that time how big a work camp we're talking about and the type of -- and the level of services including the power requirements. So we wouldn't have that level of detail available right now.

MS. GAGNON

Okay. I'm not ---

THE CHAIR

Chantal, could I just -- sorry, just remind you, please, if you could make sure you speak up. I'm not sure if the people at the back are able to hear you.

MS. GAGNON

The mike. Mark, what are you doing with the mike.

THE CHAIR

There's no amp. We don't have it right now.

MS. GAGNON

Oh, that's why. Okay. Now I lost my train of thought.

THE CHAIR

Sorry.

MS. GAGNON

Oh, yeah. I just wanted to find out -- because again, I'm not that knowledgeable on this -- how -- would it have an impact on the residential supply of energy at this time? Because I'm not sure how much energy infrastructure or power infrastructure is in the area for this type of demand.

MR. DUNCAN

The type of demand we're talking about, it wouldn't be an industrial demand. It would be similar to if you're developing a residential area, a subdivision. It would use the existing infrastructure or we would rely on Nova Scotia Power. I mean, they're in the business of selling power. They would put the power whatever facilities or infrastructure that's required to supply that power to the site. But we -- as I said, it's not

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-- we're not building -- the work camp itself wouldn't be an industrial application, so ---

MS. Gagnon

Thank you.

THE CHAIR

Anyone else from the audience at this time with questions for Keltic? And I'm only stretching it out because our experience shows sometimes people want to get up, but they're hesitant to, so I just want to make sure I give you every opportunity. If there's nothing, okay. This afternoon, we have two different intervenors registered to make presentations to us. The first is the Assembly of Nova Scotia Mi'kmaq Chiefs. And if they are present and ready to go, I'd ask them to come forward. You can use the microphone or the podium. As long as we capture you on one of the microphones, that's fine. And if you would just identify yourself, and we'll get you sworn in.

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MR. DOUGLAS BROWN, (Sworn)

MR. MICHAEL COX, (Sworn)

THE CHAIR

Go ahead, please.



## ASSEMBLY OF NOVA SCOTIA MI'KMAQ CHIEFS PANEL - PRESENTATION

MR. DOUGLAS BROWN - PRESENTER

Good afternoon. Good afternoon, Panel Members, proponent. My name is Douglas Brown. I'm here with my colleague, Michael Cox, co-counsel Mary-Jane Abram, and Technical Advisor, Kim Paul. We're here to represent the Assembly of Nova Scotia Mi'kmaq Chiefs. I'm going to break this up. I'm going to give the first part of this presentation dealing with the consultation issue that we had brought forth earlier, and Mr. Cox is going to be talking about the environmental impacts that the project raises. First of all, I guess, to mention, the Assembly of Nova Scotia Mi'kmaq Chiefs represents 13 First Nations that -- First Nation bands across Nova Scotia. They are -- I'll list them. Annapolis Valley is one of them. Acadia Band is another. Bear River Band is another one, and Chapel Island, Eskasoni, Gloosecap, Millbrook, Membertou, Paq'tnkek. And for the transcriber, I'll spell that. It's P-A-Q-'-T-N-K-E-K. And then there's Pictou Landing, Shubenacadie, Wagmatook and Waycobah. For the purposes of this project, there's two First Nations that are geographically the closest, and that's the Paq'tnkek

community and the Pictou Landing community. But we -- despite their proximity, the presentation we're giving today is directed more at the impact that the project has on all 13 bands, because, as we see it, the project and the impacts that it will cause are going to have -- they're going to infringe rights that are collectively held by all the members of the Mi'kmaq of Nova Scotia. And those rights include treaty, aboriginal and asserted aboriginal title rights. Just as a brief background, in 1976, the Nova Scotia Chiefs made a -- submitted a comprehensive land claim to both levels of government, both the federal and provincial, and the nature of that claim was really an assertion of title and interests over the entire province. Both levels of government rejected the claim claiming that it was superseded by law, that aboriginal treaty rights, if parliament passed any piece of legislation, well, that would override any rights that the Mi'kmaq may claim. And that was the state of the law or the state of -- I should say, the perspective of the governments from that time until relatively recently, because during the last 30 years or so, actually it is 30 years this year, there has been several notable court cases that's been

-- just to name a few, there was the Simon case that the Supreme Court decided, the Sparro case, the Van der Peet case, Delgamuk, Van der Peet, Marshall and the Taku River, just to name a few. Since all that litigation there's been more or less a recognition by both levels of government that the Mi'kmaq have legitimate claims for aboriginal treaty rights, including title rights. Therefore, they have been formally invited, finally, after 30 years of making the initial land claim, to sit at the table to negotiate those claims. Just recently, the 13 Chiefs unanimously passed a resolution calling upon the federal and provincial government to consult with respect to this project with the Mi'kmaq. Support for the Chiefs' position for the government to consult with them concerning the impacts of this project come from, of course, the direction that's been repeatedly espoused by the Supreme Court of Canada. And just to reiterate some of the project's impacts in a brief and summary way, and I'm sure it's been said again and again but you have the use of the freshwater from fish habitat at Meadow Lake, a dam that's going to be constructed at Isaac's Harbour River, a water pipeline to be built

across Crown lands, a 12 km roadway to be constructed, pipelines for LNG and natural gas to be constructed, a marine terminal to be built on foreshore and in marine waters, and there will also be ship tanker traffic through inland waters, and major ground disturbance through on-site construction and occupation. But one of these cases that I had mentioned, a recent decision that came out of the -- and actually, let me precede these remarks, well, we're here today but at the same time we're making these representations to the panel we, at the same time, don't wish these representations to be construed as a waiver or an acquiescence to the right that we have to have consultations directly with the government on this issue, because we recognize that this panel, this forum, is statutorily set out, regulations guided. But we are here as an intervenor yet, at the same time, we're asserting a constitutional right that rests outside of the four corners of the legislation. But I want to just give an example of the recent Supreme Court of Canada case in the Taku River, just to -- instead of saying the whole thing, it's quite a long name, but it was a Supreme Court case out in BC that involved a mining company that sought

permission from the British Columbia government to reopen an old mine. The Taku River First Nation participated in the environmental assessment process engaged in by the province under the Environmental Assessment Act. The First Nation objected to the company's plan to build a road through a portion of the First Nation's traditional territory. Despite the objection, the province granted project approval. The First Nation, in that case, brought a petition to quash the decision on the grounds of administrative law, and based their petition on asserted aboriginal rights and title claims. Not proven claims, asserted claims. The Court held that the Crown had a duty to consult and accommodate aboriginal peoples prior to making decisions that might adversely affect their as-of-yet unproven rights and title claims. In that case it was held that the process engaged in by the province under the Environmental Assessment Act fulfilled the requirements of its duty to consult and accommodate. But here we're not -- we don't believe that the same type of accommodation exists, and these are the reasons why. In the BC process the environmental processes differed greatly. For example, the central vehicle for

assessment and providing recommendations to the minister was a project committee. First Nations were invited to participate on the committee, and did participate on the committee over a 3.1/2 year period during the environmental review. The First Nation also had status to participate in sub committees. They were financially supported, so that their participation was meaningful, they could do the research, they could get the -- they could find out the facts, they were financially supported to meaningfully participate. And they also had special studies conducted to address their own particular concerns. In this Nova Scotia process, First Nations are to participate with the general public as any other intervenor would, despite a fundamental difference, that being that the Mi'kmaq have a collective proprietary interest, that meaning aboriginal title claims in the affected lands. As well, the hearing panel in this process has no Mi'kmaq participation. As for the proponent, it was a similar case, the Haida Nation versus BC Minister of Forestry, in that case, the Supreme Court held that there is no duty on third parties to consult, and it stated, and I quote:

"Third parties cannot be held liable for failing to discharge the Crown's duty to consult with aboriginal peoples. The honour of the Crown cannot be delegated, and the legal responsibility for consultation and accommodation rests with the Crown."

And I emphasize the next phrase:

"This does not mean, however, that third parties can never be liable to aboriginal peoples."

The proponent has responded to the Chief's request for Crown consultation on these matters, and we're encouraged that the proponent supports any process that the Honourable Minister Prentice, Jim Prentice, deems necessary to resolve the issues. Meaningful consultation would normally take place before approval. However, due to time constraints imposed by statute and regulation this may not be feasible. The assembly of Mi'kmaq Chiefs would like to remind the panel that the right of meaningful consultation that the Chiefs are asserting is constitutional in nature. Therefore, we ask the panel to recommend that approval not occur

until after consultation occurs, or, alternatively, that the panel recommend that approval be subject to the condition that meaningful Crown consultations occur regarding the project prior to the operations of the project. And I don't know what the time is right now - --

THE CHAIR

Let me just check. You've got about 15 minutes.

MR. BROWN

Wow, I was much faster than I thought!

THE CHAIR

No, I'm sorry, my mistake. You have about, I'm sorry, five. I was looking at 30, not 20, sorry.

MR. BROWN

I'm going to have to make room for my colleague, Mr. Michael Cox, but before I do that I wanted to point out going through the materials handed over by the proponent, those big binders that everyone hates to carry, there was one section in the tables that were under there, and I thought it was misleading somewhat when I was reading it. Under the Table 12.0-1, 12.0-2, 12.0-3, those tables were talking about advantages that the project has, and under one of the sections it said



there was no interaction with aboriginal land claims. And again, there may not be any specific land claims in the areas that the project is building on, but again we're talking about a collective right that is asserted over pretty much the entirety of the province. So I just wanted to point that out, hopefully maybe some kind of more specificity would be necessary for that. Again, I'm going to let Mr. Cox finish off this presentation regarding the environmental impacts.

THE CHAIR

And we are a little ahead of schedule overall, so if we need a little extra time I think that will be fine.

MR. COX

My name is Michael Cox, I'm with the Confederacy of Mainland Mi'kmaq. My title there is Director of Lands, Environment and Natural Resources. I'm here on behalf of the 13 Chiefs just speaking specifically to the EA and specifically to the Mi'kmaq involvement in the EA process. I guess we all know why we're here, so I don't have to get into the class 2 environmental registration, but I wanted to point out that the first time that I heard about this, and I'm assuming that most of the public would have heard about this, was in

January 2005 when we received the document titled "Registration Document for a Class 2 Undertaking." In that document, we raised several issues with some of the comments that were made. Specifically one example, I guess, was the proponent, and I guess in this case I believe it was authored by Strait Engineering, stated that the aboriginal use within the study areas is uncommon. We made the comment that this was based on one phone call, or maybe several phone calls, to the Department of Indian Affairs to determine whether the lands in the study area were used by aboriginal people or not. There was no Mi'kmaq people involved in that process, and I know this was early, early in the stage of the game, and we recommended that Mi'kmaq people be involved in that. We also advised the proponent that they should start exploratory discussions with the Mi'kmaq rights initiative who is the 13 Chiefs of Nova Scotia. So that was back in January 2005. My understanding is since -- I guess, earlier this month there was some contact between the proponent and the Chiefs, so a while later on. Specifically about what they call the Mi'kmaq Ecological Knowledge Study or the MEKS, I'll just use that acronym from here on in, I

noted in the presentation that it wasn't included in the baseline data section, so I guess I have a question about where it would be part of the EA. I noticed it was in the back but anyway, just a question. I know that the proponent did commission that study, and this study is otherwise known as a TEK in other parts of the country, the purpose of, to determine Mi'kmaq land and resource use activities within the study area.

Typically, the MEKS would include doing interviews, so conducting interviews with knowledgeable Mi'kmaq people about activities, historic and present, complete a historical review of research documents -- we have a ton of research done in our various organizations done for many different reasons, land claims in particular, that are really useful for projects of this nature. And also to complete field work. The field work identifies species of significance that are important to Mi'kmaq people that wouldn't necessarily be on a cozywick list or any other kind of western science list. Identify areas of cultural significance, and ground truth information that would have been found in the interviews and the research. These are the limitations that I want to point out about the MEKS

that was completed. My understanding is that there was a very tight timeline to complete this work. There was interviews completed in August, I guess it would have been, 2005. At that time, in August, a lot of people are away, just vacations. Mi'kmaq people in particular migrate to the US for different functions, potato picking, blueberries, and that type of thing. It's not a great month to try to find knowledge holders about traditional use activities. So I'm just pointing out limitations. The second one that I'd like to point out is that I had an e-mail that the team of consultants carried out a detailed terrestrial biological survey that the occurrence of any "plants of significance to Mi'kmaq" could be determined from that data. Therefore, the MEKS did not involve the necessary field work to identify species of significance and places of cultural significance within the study area. We're recommending further work, and it needs to be done by the Mi'kmaq community, not by -- unless we can determine that there is somebody else that can determine what a culturally significant area is, then I think it should stay within the Mi'kmaq community to do that. I wanted to point out, too, what the MEKS is,

and what it isn't. It is a method to determine potential Mi'kmaq concerns with a project. These concerns are based on historical and current land use and historical or current resource use within a defined area. We know the study area in this particular situation. It's not meant to be consultative, nor is it a method of notification about a project. It should be viewed as a process to collect baseline information which may indicate further work if issues are identified. For example, if a MEKS identifies a present-day use of a resource which will be negatively impacted by a project, then mitigation measures must be implemented. In this particular case, the mitigation would involve consultation with 13 Chiefs and the government responsible to resolve the issue. The purpose of the MEKS is not to resolve the issue but to identify it. And I wanted to make some comments on the archaeology section. I believe that the Chiefs are on record to say that there is identified within the study area significant Mi'kmaq occupation places within the study area, and that they feel that these need to be thoroughly looked at, more investigations done. But, at a minimum, training on archaeological resources need

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to be done with the contractors, with all contractors during construction. And if archaeological resources are encountered, work should be stopped until there is an investigation by an archaeological mind or a person or body or outfit. In the event that resources are encountered, the proponent should create a communication plan that includes notification to Joe B. Marshall, the Executive Director of the Union of Nova Scotia Indians, Dr. Donald M. Julien, Executive Director of the Confederacy of Mainland Mi'kmaq and the Nova Scotia Museum. I didn't find that anywhere within the registration documents. That's all I had. Doug, did you want to -- done. Okay.

THE CHAIR

Okay, thank you. Maybe just while you're there, I just want to check if there are any questions from the panel or from the audience regarding the presentation. Please.

ASSEMBLY OF NOVA SCOTIA MI'KMAQ CHIEFS - QUESTIONED

MR. NEGUS

Colin Negus. Do you have any maps of these areas that are proposed sections?

MR. COX

We weren't involved in collecting the information. I would assume there was.

MR. NEGUS

Could I see them, or ---

MR. COX

The problem -- well, one of the -- the process that we would use to collect this kind of information would be done in somewhat of a confidential way, but maps with polygons of areas usually are, and I believe it would be in the report.

MR. NEGUS

Yes, because I was under the understanding the MicMac people were an inland band, and that the Mi'kmaq were more along the shore, so I don't ---

MR. COX

Say that again.

MR. NEGUS

--- see where you guys would have anything to do with it.

MR. COX

Who?

MR. NEGUS

The Mi'kmaq. I was under the understanding the MicMac,

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the other band, they were the Indians that tended to the east coast while the Mi'kmaq were more west towards the United States so ---

MR. COX

The difference between -- the MicMac and Mi'kmaq are the same people, sir.

MR. NEGUS

Well, why do you have two different names then?

MR. COX

English/Mi'kmaq.

MR. NEGUS

Okay. I could never figure that out. You're the same people then.

MR. COX

That is correct.

MR. NEGUS

Okay. That makes sense, because nobody ever explained that to me, because I hear MicMac/Mi'kmaq. It's almost like you guys are separating yourselves, because like anything to have to do with Maine, you (inaudible - not on microphone) and anything to do with Nova Scotia they're Mi'kmaq.

THE CHAIR



Sorry, sir, we're not getting your comments on the record because of the microphone. Please.

MR. NEGUS

Well, normally like they build a project in Maine, the Mi'kmaq are right there. They build a project in Nova Scotia, the MicMacs are there. We're lucky, we've got them both.

THE CHAIR

I think the answer is it's just a confusion in names between the original native word and the English version.

MR. NEGUS

Yeah, could they hyphenate it so that we know it's the same or, at least, like, they're married?

THE CHAIR

I think we understand it at this time.

MR. NEGUS

Well, I don't. I just do now.

THE CHAIR

Any other questions for the presenter? No? Okay.

Thank you. Our second intervenor presentation today is Nova Scotia Department of Environment & Labour, Kim MacNeil, is that correct? Okay. So they're going to

swear in the presenter and some of the other staff I assume because there may be questions that they'll be addressing. Okay. Thank you.

MR. DUNCAN

Mr. Chair?

THE CHAIR

Yes.

MR. DUNCAN

Maybe while we're getting set up I can respond a little bit more fully to the issue of mercury that Mr. Cranston had asked, or would you rather wait?

THE CHAIR

Yes, okay, that will be fine.

MR. DUNCAN

There's a couple of issues, I guess. We did evaluate or assess the potential for mercury in ground water during a drilling programme that we had conducted at the time for ground water resources. That data is presented in Appendix 5 of our detailed drilling programme. So it was assessed for mercury in ground water conditions. Residential wells were sampled, but were not assessed for mercury because we needed further

detailed specific scientific data available, and we didn't want to daylight those wells, so to speak, so the sampling programme that was conducted did not account for mercury because there were too many biases in the system. Essentially, we were taking water from people's drinking waters from the taps. A lot of people in the area are bleaching their wells which would affect the sample, so we didn't include mercury for that reason on the well programme. As well, surface water, there was some mercury data, I guess, existing mercury data available for some of the surface water conditions, specifically for the Goldbrook system, but that data was not made available to us, so we don't have that information available for us. The other surface water areas that we evaluated aren't known to be affected through anthropogenic sources of mercury, but, having said that -- so those surface waters were not assessed for mercury. Having said that, though, of course, as previously stated, a full baseline or a monitoring programme would be established for all adjacent surface waters and ground water areas as well as drinking waters to ensure that the project development and construction operations would not have

an effect of increasing mercury levels in the water, either surface water or ground water. So there would be a monitoring programme set up that would carefully track those type of things in and around the site to ensure that we don't have those type of effects.

THE CHAIR

Okay. Thanks. Are we ready to go here?

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NS DEPARTMENT OF ENVIRONMENT & LABOUR PANEL:

MR. KIM MacNEIL, (Affirmed)

MS. SOLVEIG MADSEN, (Affirmed)

MR. DAVID SHEA, (Affirmed)

MR. JOHN DRAGE, (Affirmed)

MR. ANDREW MURPHY, (Sworn)

MR. JOHN THEAKSTON, (Sworn)

NS DEPARTMENT OF ENVIRONMENT & LABOUR - PRESENTATION

MR. KIM MacNEIL - PRESENTER

Good afternoon, Mr. Chair. It's a pleasure to be here representing the Nova Scotia Department of Environment & Labour and we'd like to thank the panel for allowing us to make the presentation this afternoon, myself and staff from Nova Scotia Department of Environment & Labour. My name is Kim MacNeil, I'm the Executive

Director with the Environmental and Natural Areas Management Division out of Halifax, and the department's mission is to promote and protect the safety of people and property, provide a healthy environment, provide employment rights and look at protecting consumer interests. The department mandate, we are the lead provincial department responsible for environmental protection, and environmental management, and some of our responsibilities include the development of regulations, policies. We have environmental monitoring networks throughout the province. We manage databases. We provide professional advice to the public and government, and we also do monitoring for compliance. The department is also the lead agency for occupational health and safety and public safety in the department. And just so that people know, there's some other groups or other divisions within the department. The Alcohol & Gaming Division, there's a Financial Institutions Division as well as several other divisions and agencies. What I'll be doing today is speaking on behalf of the Department of Environment & Labour, and we will be accepting questions from the environment side of the

Department of Environment & Labour and we will be accepting questions from the occupational health and safety side, or the public safety side, should they arise, and we can get back with those responses from staff that aren't currently here today -- that aren't here today. The environment side of the department is separated into two divisions, Environmental and Natural Areas Management Division that I'm involved with, as well as an Environmental Monitoring & Compliance Division, and we have Mr. David Shea here from our Antigonish office today who's representing that group. The Environmental and Natural Areas Management Division, or ENAM as we call it, looks after environmental assessment. We have a network of protected areas across the province. We monitor for air quality, we are involved with waste resource management, hazardous substance management, water resources and, as well, we have an environmental outreach programme. The Environmental Monitoring & Compliance Division, which is essentially our regional office network, is responsible for the majority of field operations that involve environmental protection, and they look at processing of applications, inspection

and monitoring of approvals, the response to public inquiries and complaints, as well as enforcing activities. And I think this may be a good time to explain there's two separate functions that are taking place here, separate but working together, between the Environmental & Natural Areas Management Division and the Environmental Monitoring & Compliance Division. The first part of the process is the environmental assessment, and after -- or should an environmental assessment approval, should the Minister provide a go-ahead on that, it would go to an industrial approval, and the proponent is then responsible for the detailed information and they then work with the regional offices of the Environmental Monitoring & Compliance group to come up with that industrial approval. So it's in two sections that it's done. So, water and waste water. This branch within the department looks after drinking water, ground water, surface and waste water. Several aspects of the project do have the potential to negatively impact water resources, as would any large project like this, but we feel that these impacts can be managed with appropriate mitigation measures and monitoring. Now, some of the

specific issues with this are site development activities, which include the blasting and excavation work, disturbance of historic mine tailings and any acid bedrock issues that may arise. A pre-blast survey would be required in order to document the existing well conditions and as well as we'd like to see mine tailings and acid bedrock being avoided, if possible, and, if not, contained or removed. Water supply development may affect surface water, wetlands and public safety. But we feel this can be managed by selecting the least impacting source options, provisions for protecting downstream water use and following appropriate dam safety guidelines. Both water quality and quantity of surface and ground water should also be monitored. Detailed mitigation and monitoring plans are required to address any potential impacts that are associated with the storage, handling and transportation of petroleum hydrocarbons and any other potential contaminants that are involved in the site -- with the site. These following items should be developed after the final stage design and include environmental protection plans, environmental monitoring compliance affects monitoring plans, and any



contingency plans that are required for the operation. Air quality, in this branch we are looking at the management and protection of outdoor air. Also looking at the regulations that are involved in air pollutants, as well as an ambient air monitoring network that the network has across from Cape Breton to the western part of the province. So, some of the recommendations on air quality, we are looking for a final detailed air dispersion modelling report that includes specific volatile organic compounds, or VOCs, and we're also looking at the local impacts of those VOCs on the environment and limits would have to be established once those are determined. We're also looking to have installation and maintenance of a continuous and permanent real time air monitoring network. We'd also like to see volatile organic compounds included in that monitoring network. And we're also requesting that the proponent undertake periodic stack testing that would ensure a proper calibration between the monitors that are on the ground and the actual emissions from the stacks. Pollution prevention, this branch looks after green procurement, reduction in toxic substances and the management of contaminated sites, dangerous goods,

pesticides, and they also are responsible for conducting emergency response planning. It's recommended that a pollution prevention approach start -- begin, I guess, with the project in the planning stage, and we'd like to see a focus on the reduction of hazardous raw material inputs and outputs using process integrated techniques. The EA release we would suggest requires submission of more details on the petrochemical facility prior to the application for industrial approval. There's a large volume of detailed information required, and as this is the first polyethylene facility in Nova Scotia there's a lot of information to catch up on, so to speak. There's also -- we'd also like to see a fully characterized chemical composition of all inputs, intermediate products and wastes from the facility, and we'd like to see predictions of the fate of all emitted contaminants, including those which can be produced during process disruptions, and looking, in this case, at the potential for long term or chronic toxicity, if that is applicable. We'd also like to see an environmental management system plan included in the pollution prevention options that takes into account a waste

management plan, environmental emergency plan and a monitoring plan. And that's the presentation.

THE CHAIR

Okay. Thanks very much. I'm going to ask -- at this point we are ahead of schedule, we have a lot of time for questions. Anyone with a question for Department of Environment & Labour?

NS DEPARTMENT OF ENVIRONMENT & LABOUR - QUESTIONED

MS. GAGNON

Chantal Gagnon, Ecology Action Centre. Could you just clarify, for the pollution prevention requirements for identifying the waste and the chemicals, is this needed prior to the proponent getting approval or after they've gotten approval?

MR. MacNEIL

Well -- do you want to speak to that, Solveig?

MS. MADSEN

We would like to see it as part of the submission for the industrial approval application, rather than, you know, after the proponent is released, if it is indeed released, from the EA process. So part of the IA process, industrial application.

MR. MacNEIL

Part of the reason for that is that the detailed information that will be required is specific to the operation as it's going to exist, and so we want all that -- as much information as we can get.

MS. GAGNON

I have another question. Could you just explain how the enforcement of Monitoring & Compliance will be -- I guess what is typically done, what is the procedure and how, and for local residents if they have complaints how the process is, how quick the response is. And in this case, since there is no liquified natural gas facility in Canada yet, this is something very new and you said the same for the polyethylene, so if we could just have a bit more information on that, please.

MR. MacNEIL

Yes. I think any resources that are required above and beyond what the department has on hand, we would access via an industrial approval. As far as the enforcement part goes, it would be enforced, there would be monitoring restrictions and those monitoring restrictions would be observed by the department as we would for any facility, and when limits are exceeded there is an enforcement policy within the department

that outlines an appropriate action for an appropriate problem. And depending on the nature and the severity of the problem, that would -- the enforcement action would sort of coincide with the nature of the issue. And there is a policy that's available from the department, the environmental enforcement policy and that's -- and that's how any project that was begun or exists in the province would be monitored.

MS. GAGNON

Environmental enforcement policy.

MR. MacNEIL

Yes.

MS. GAGNON

Thank you.

THE CHAIR

Maybe I can jump in, I've just got a couple of questions. One is, is your presentation available to the Panel?

MR. MacNeil

Certainly.

THE CHAIR

I don't know if we have it yet but -- we do, okay, thanks. You mentioned a couple of points in your

presentation that there are certain things the department would be looking for, it was in relation to the water and waste water issues, air issues, pollution prevention and so on, and you itemized a few things you're looking for. I just wanted to clarify are those items things that you, as a department, have the authority to require? Or are those things that you are looking for as a result of the environmental assessment process?

MR. MacNeil

We would rather have them through the environmental assessment process so the proponent is aware of those, but some of those items could be obtained through the industrial approval process. But obviously if we can identify as many of those requirements up front, it looks better for everyone.

THE CHAIR

My other basic question was I just want to get your views, to put you on the spot, I guess, where it's been mentioned by you and others, this is a new industry for Nova Scotia, we don't have a track record or experience locally with regulating and dealing with these industries. Is the department satisfied, and I guess

this is both on the environment side as well as the labour side, that you have the resources and expertise available to adequately monitor, enforce, assess and so on, all of the things that you would have to do to regulate this industry?

MR. MacNeil

Sure, I don't think that's putting me on the spot, I think that's a fair question. I can't speak for the Labour side but from the Environment side any deficiencies that we did have or would have would be addressed in the industrial approval, and we would look at having resources made available through that process to hire, if required, or obtain people from other departments and to compensate those people for their expertise.

THE CHAIR

So just to clarify, you're saying that you have the authority to require resources of the proponent in order to support those activities?

MR. MacNeil

That is correct. And that's been done in other approvals, as well, especially when it's -- the scope is so broad and it's a large project like this.

THE CHAIR

Okay. Any other questions for Environment & Labour? Maybe -- you mentioned that was on behalf of Environment. I think we'd probably ask for a similar undertaking from the Labour side.

MS. GAGNON

Chantal Gagnon, Ecology Action Centre. Don't worry, I do this every day. Regarding water, source water protection is usually the best number one way of ensuring clean drinkable water down at the tap, so I'm just wondering with what we heard at the first hearing - you weren't here - that the municipality has rezoned 3,000 hectares or so of land for heavy industrial and is looking at expansion, and with the proponent there would be a new wharf and all, which would open the area to future expansion. In the land that is expected to be developed into heavy industrial, I think there are two or three watersheds, I'm not 100 percent sure. So how or what is the government doing to work with the municipality on source water protection in the area or trying to protect, because there will be one watershed affected with this project, but with the expansion and the cumulative effects of



that, there would be two watersheds that would end up being surrounded or -- anyways, have a huge heavy industrial impact on it? So how or what is the government going to do or what does it work with for development water strategy on that?

MR. MacNeil

Okay. I'd like to take a shot at that question but we've got one of the best tetra-geologists in the province here so I'll get him up and he can explain this, Mr. John Drage.

MR. DRAGE

Hi, my name is John Drage, I'm a geologist with Nova Scotia Environment & Labour. I think to answer your question I can maybe break it into two parts because you spoke about source water protection, and then you spoke about watershed protection, and there are two different ways that gets looked at. In terms of the source water protection, there is a process in place now in Nova Scotia where the department is working with the municipalities to protect source water for municipal supplies. So that takes place where there is a municipal supply, where there is a source, say there's an aquifer that's being used as a municipal

water supply or a surface water, a lake or a river that's being used as a service water supply. So there is a process in place for those source waters to be protected, and I don't believe there are any municipal source waters in this area. So that's the source water side. On the other side is what about watersheds, what's being done to protect that. And so at this point, there's not a specific programme in place to -- like the source water protection, to protect all watersheds. That's something that we're currently looking at. But there are processes in place. For example, the process that we're going through now, the environmental impact assessment, where on a project-by-project basis we look at the possible impacts of each project, and then if there is anything that -- any conditions that need to be put into place to protect the watershed in general, they would be put into the environmental impact approval. So that would include ensuring that ground water is protected if there are any private water supplies nearby, and requirements to replace those water supplies if by chance they were affected.

MS. GAGNON

Thank you.

THE CHAIR

Okay. Thanks. Any other questions for Environment & Labour? No? Okay. Thank you very much. All right. We're well ahead of schedule so we have time for open forum. If anyone wishes to raise an issue, voice a concern, make a statement, or ask any further questions, I'd ask you please to come up. Last call, any further questions or comments? Okay. Well fine, thanks very much. We'll adjourn for now, then. We are here again starting at 6:30 this evening for a further session. Thanks very much.

--- Upon adjourning at 3:22 p.m.

--- Upon resuming at 6:31 p.m.

THE CHAIR - OPENING REMARKS

Folks, I think we'll get started in just a minute here. So everybody's pretty much got a spot. Welcome to the hearings. This is a continuation of hearing sessions that we started this afternoon. We've been doing a series of these. We were in Guysborough on Monday, Sherbrooke yesterday and we're in Antigonish from now until Saturday afternoon with sessions each day. So welcome. Normally when we do a first session in each of our locations we've had a longer introductory remarks and a longer presentation from the Proponent. I know that some of you have seen it all before so in the interestS of time we're not going to repeat the long version. We'll do a brief version at these subsequent sessions. The hearings are being conducted under the Provincial Environmental Assessment process. I'm Tony Bluin. I'm the Chair of the Nova Scotia Environmental Assessment Board and chairing these hearings. On my left is Penny Henneberry, a member of the Board and on her left Ray Cranston, also a member of the Board. So we are the Panel for the Keltic Hearings. On my right is Jim Gordon who's the EA Board

administrator. And on his right is Mark Rieksts who is our legal advisor. We do have a number of handouts at the side table there for people's information. There's the Environmental Assessment Report. There is also a series of written questions that were submitted prior to the hearings to Keltic from the Panel and from members of the public. And Keltic has provided answers to those. So those are in a couple of binders, also at the side. We are keeping a complete transcript of all of the sessions so we are being recorded on audiotape so if anyone wishes to speak at any point during the proceedings, I'd ask you to please use a microphone and identify yourself by name and just give us the area that you live in for the record. We are producing transcripts. We had a transcript from the Monday session that was produced in draft form. We had it on the table this afternoon for display purposes and I understand it may have gone missing. If anybody here still has it I'd just ask you please put it back on the table at some point. Thanks very much. So as I said these are Provincial hearings under the Provincial Legislation. There's also a Federal Environmental Assessment process that also applied to the Keltic

proposal because they will be required to get some Federal permits for the project. The two processes run in parallel but they are separate. The Federal process has decided that public hearings are not required under their process so this is strictly a Provincial hearing. Our role as a Board, we are volunteers. We are advisors to the Minister of Environment so we're not Provincial employees. We don't report to anyone in the department except the Minister. We will provide a report with our analysis of everything we hear at the hearings and all of the technical information we've received. And we'll make recommendations to the Minister. Essentially we can recommend that the project not go ahead. We can recommend that it go ahead with certain conditions that we think are advisable. Or we could recommend that it go ahead just as it was described in their report without any additional conditions. At the end of the process the Provincial Minister has to make a decision. Separately the Federal Minister will also make a decision. The processes are coordinated as much as possible to avoid duplicating effort and information but the decisions are separate at the end. It's intended to be an

informal hearing. We don't abide by the same rules that a Court of Law would but we do have rules of procedure that are set out in the regulations. The basic principle is that everybody has an equal right to appear and express their views and that people are expected to respect that. So in other words, no interruptions from the audience while someone's speaking. And maybe I should note, if you have cell phones or pagers, this would be a good time to turn them off please. The order of speakers is set out in the regulations. We will start with a presentation from Keltic, a brief description of their project. As I say this is a somewhat shorter version than they present at initial sessions. And then we'll have time for questions, if anyone in the audience or the Panel has questions for Keltic, we'll do that then. And I'd ask at that point please confine yourself to questions for Keltic. There'll be plenty of time at the end for comments, issues, statements, anything that anyone wants to say. We'll have an open mike type of session, an open forum at the end for that. So please hold those till then but we will have time for questions, specifically after the presentation. We then have one

intervenor who has registered with us to make a presentation this evening. That's the Concerned Citizens of Lincolnville. So after that we'll ask them to come forward and make their presentation and we will have time for questions for them if you have any. And then as I said we'll wrap up with an open forum. For presenters who are giving substantial testimony to the Panel, the regulations require that they be sworn in before they speak. We have already done that for the entire Keltic team at the start of the hearing so that still applies for all of them. For the presenter, whoever is coming forward for the Concerned Citizens of Lincolnville we'll get them sworn in before they make their presentation but for the audience, if you just want to stand up at a microphone and say something or ask a questions, it's not required for you. And I just emphasize if you do get up at a microphone at any time, please give your name, identify yourself, that's for the record. And at some point in the evening if you could just go over and identify yourself to Carol, who's over on my right here, our administrative assistant. Carol will just make sure that we've got your name and the spelling correctly for the record.



So I'm going to, at this point invite Keltic to come up and give their summary presentation on the project please.

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MR. W. KEVIN DUNN, (Previously Sworn)

MS. JANET BLACKADAR, (Previously Sworn)

MR. SHAWN DUNCAN, (Previously Sworn)

MR. DEREK OWEN, (Previously Sworn)

MR. ROB SCHONK, (Previously Sworn)

MR. GLENN LONGERT, (Previously Sworn)

KELTIC PETROCHEMICAL INC. - PRESENTATION

MR. SHAWN DUNCAN - PRESENTER

Thank you, Mr. Chair. My name is Shawn Duncan. I'm with Amec Earth and Environmental. We've been assisting Keltic -- the Keltic project with preparing the Environmental Impact Assessment. As mentioned this is a brief overview of the presentation we gave earlier. Tell a little bit about the project, the EA process, how we produce EA's or conduct them, as well as some of the conclusions and the summary of the findings of the Environmental Impact Assessment. The Keltic project just as an overview is a -- is developed to be world class facilities. What we mean by that is

that they will operate on a world global scale, importing and exporting materials internationally. It comprises of two main components. There is the liquid natural gas component. This -- liquid natural gas will come in, be imported into Goldboro. It will be brought ashore -- unloaded, brought ashore and then turned back into natural gas for use in the facilities as well as for sale at market. The volume currently proposed is one billion cubic feet per day which can be expanded to two billion cubic feet per day. Associated with the LNG is also an integrated petrochemical complex. This petrochemical complex will use liquids from the LNG, the liquid natural gas product as well as liquids from the existing Sable gas. They'll use these liquids to turn -- to produce a feed stock of material for plastic -- production of plastic goods. The Keltic project just, again is located in Goldboro. There -- as mentioned there are two main components but there are some other components associated with the project. The petrochemical facility will have its processing facilities and storage on land in Goldboro. It will have associated marine terminal or marginal wharf associated with the storage and shipping of the

product, the finished product. The LNG facilities will be located next to that with gasification structures, infrastructure as well as storage infrastructure on site. Associated with that facility, there will be LNG terminal, unloading terminal for LNG ships. As they come in they can unload at this terminal. The power -- the facilities themselves will require a fair amount of power so there is proposed an onsite power facility, power generation facility. It's currently proposed to be a natural gas fired cogeneration plant. And as well, process water -- the process itself will require fresh water. Fresh water will be taken from Meadow Lake. There's proposed to be an impoundment structure there to raise the level of Meadow Lake and withdraw water from that source. So very quickly why Goldboro? Why would you locate a facility there? Goldboro and Nova Scotia, actually, in general is very well situated for these types of transportation routes, specifically for the liquid natural gas market for ships coming from various sources around the world. Russia, the Middle East, Africa. These locations, the shipping times to Nova Scotia are much shorter than they would be to the Northeast U.S. or the Gulf of Mexico. As a result,

these -- the shipping times are reduced by a number of days to come to Nova Scotia. Also Nova Scotia -- here in Nova Scotia we have access to -- very easy access to North American and international markets through shipping and through rail and road transportation. The other thing that's attractive about the location, of course, is the location -- is the existing gas infrastructure, specifically Sable. The Sable gas plant as well as the Maritimes and Northeast System. The facility itself, the petrochemical facility will use liquids from the existing Sable Gas plant and the transportation system will transport remaining natural gas that's brought ashore to markets here in Nova Scotia, New Brunswick as well as Northeast U.S. In addition when the Sable plant was developed the Municipality set aside land in anticipation that there would be additional development of this type. The Goldboro industrial park was zoned -- was created and zoned heavy industrial. This park envisions these types of facilities for development, oil and gas and petrochemical facilities. Also this location is also the corridor for additional offshore resources to be brought onshore as additional projects come on line

such as Deep Panuke. This is the -- currently the proposed landfall for those developments to again, transport their gas via the existing infrastructure. This location also offers an ice-free deep harbour for ships to come in and dock, unload materials or LNG or export materials as well. So what is an Environmental Impact Assessment or an EIA? EIA is essentially a planning tool that's used to determine how a project will affect the people, the environment or the economy. The EIA is also used to assist decision-makers in approving projects or requiring projects to undergo additional study or to determine if there are additional permits required. EIA's are also used to refine the project design, for example through the EIA process, if it's determined that there aren't acceptable -- unacceptable environmental effects from the project, the project itself can be redesigned to ensure that those environmental standards are met. EIA's are generally conducted within a regulatory review process through legislation. As The Chair mentioned, this is the Nova Scotia Environmental Review Process under the Nova Scotia Environment Act. This project is designated as a Class II undertaking and as

such it requires certain steps that are different from other EIA processes. The project was registered with the Province on January 12th, 2005. The Province then subsequently developed what's called a Terms of Reference. This Terms of Reference is essentially a road map for the EIA or the people conducting the EIA to give them some direction of what should be included in the evaluation. This EIA is then subject to a review by an Environmental Assessment Board who are here this evening. And then through the process, the Environmental Assessment Board then conducts these public hearings to hear input from the public and intervenors. As mentioned there's also a Federal Environmental Assessment Review process under CEAA, the Canadian Environmental Assessment Act. This EIA or this process is initiated by two triggers or lawless triggers that are associated with the issuance of permits or approvals from Federal Departments. Specifically the Fisheries and Oceans Canada have indicated that they'll likely have to issue an approval for the project. As well Transport Canada has also indicated that they'll likely have to issue an approval for the project. Under this process three other

departments have declared themselves as what's referred to as expert authorities. They provide input and review of the EIA. These three departments are Environment Canada, Natural Resources Canada and Health Canada. The -- through this Federal review process a comprehensive study report or a CSR is produced. Essentially that's just another name for the EIA. And as mentioned the Federal process is separate from this process. We're currently undertaking that in a parallel fashion. So we're going to go through quickly the major EIA elements, what are the major components, how do you conduct one of these assessments. First of all, you need to assemble appropriate level of environmental baseline, collect enough data so you understand what the environment is that you're working in or where the project will be developed. Then you have to undergo what's called issue scoping. This is essentially gathering enough information so we understand what all the environmental issues are. It's a large list of everything that is determined needs further evaluation. Some of this information is collected through research, but also through consultation with the public, with stakeholders, with

First Nations, with government agencies. We also look at the effects of the environment on the project. We have to look at considerations such as wind, tide, waves, these environmental issues would affect how the project is designed. And then we go -- then we evaluate and identify what are called Valued Environmental Components or VEC's. We'll come back to VEC's in a minute but really these are the backbone or the real focus of any Environmental Impact Assessment. These are the issues that we specifically want to focus on. For these VEC's we establish temporal and spatial boundaries. These establish when these VEC's are present and how large of an area we should consider evaluating them. For example, if there's migratory periods for certain species we would want to know that and evaluate those periods during -- when those species would occur in the area. And for spatial boundaries, spatial boundaries would differ for each VEC as well because you'd want to evaluate things differently if the impact is associated with an exact footprint or for example, for things like air emissions you'd look much larger -- to a larger area than just the footprint of the site. The -- we then go through an assessment of



what the potential impacts or effects from the project would be and then we make a determination of level of the significance. And we'll talk about this a bit more too. But we have to determine if there is an effect whether positive or negative, how significant is that effect. We then apply what's called mitigation. These are measures whereby the -- through the design or application of additional measures we include things that would minimize or reduce the environmental effects from the project and after we apply this mitigation to the product or design changes we then determine if there are any left over effects or what we call residual effects. These effects are then assessed, are these effects then considered significant. We also look at things such as cumulative effects where we have one -- the interactions from our projects with the environment may be acceptable but if there's another project adjacent or in the similar area that may impact these same things would the combination of the two create a situation where there's an unacceptable effect on the environment. So we have a large number of effects that we evaluated as part of the EI process. There's obviously far too many to go through today. We

have a large binder. They're available to look at. But what I'd like to do is just go through a couple very quickly and the conclusions of those. Just to give you an idea of how those assessments are conducted and what our findings were. Effects on fish habitat, there were a number we evaluated, specifically on Meadow Lake impoundment. If you take that example, we did evaluate that structure or that potential -- those potential effects on fish habitat. And what we found was that there would be positive and negative effects from this development on fish habitat. But generally when we apply mitigation measures or issues of compensation to offset habitat loss, we found that those effects are -- would be considered insignificant and would not have long-term impact on fish habitat either locally or regionally. We looked at a number of archaeological resources as well. To use the example of the Red Head Cemetery, specifically. This is an area on a peninsula where African Nova Scotian burials sites were located. And prior to the Keltic arriving and proposing the project these burial sites were subject to erosion and there was concern over these -- some of these graves being washed out to sea. There

was a number -- the Municipality conducted some surveys and conducted these surveys and carried out a program where these remains were removed from the site and placed in a location that would be appropriate and protected. When Keltic arrived, recognizing the fact that this site had significance or some concerns associated with it. Additional archaeological resource surveys were conducted and found that there were no remaining human remains on the site but because of the significance and because of the previous work that was done, there's still an elevated archaeological potential at that site. As a result, that site would have additional mitigation. If there's any additional ground disturbance proposed for that area, an archaeologist would have to be present. If there's any archaeological resources that were uncovered, work would have to be suspended and we'd have to contact Nova Scotia Museum and the local community to determine what the proper procedures were. Effects on terrestrial habitat, is another issue we evaluated. We looked at the -- when we look at the project footprint for example, there would be a loss of habitat, terrestrial habitat from the development that is

inevitable with this kind of development. But we went through our environmental work and surveys we evaluated the type of habitat that exists there as well as the type of species that utilizes habitat and it determined these areas don't constitute what's called critical habitat. So the loss of this habitat would not create a significant effect on these species or this habitat because of the abundance of that type of habitat in the area. Effects on transportation were also evaluated and determined that as well during construction and operations there would be significant traffic volumes on existing infrastructure as proposed. So part of the mitigation was to work with Nova Scotia Transportation and Public Works, identify if any upgrades would be required on those -- on that infrastructure and work with the department to conduct and ensure that the infrastructure is appropriate to handle the type of traffic volumes that we're describing. A couple of other issues, once we apply our mitigation and determine if there's any residual effects there are two that came up that required a further evaluation. Specifically under socio-economic effects there was a determination that there would be significant economic

effect from the project. Because of the nature of the project and the jobs created there would be an increase in benefits with respect to incomes and economic considerations in the area such as support services and spin-off industries as well as the taxation benefit to the local municipality. We would consider this a major effect, a major positive effect from the project. With regards to aesthetics the project would result in a change to the aesthetic or the visual impact of that area. Essentially, this project will change the characteristics of that site in terms of how it looks. There's no disputing that. So when we -- but when we evaluate that and look at it with respect to the relatively small number of receptors for this type of issue. And we look at the planned industrial zoning for this area, essentially the Municipality has set aside this area for these type of developments and the advantages that the project provides overall we would evaluate that significance as what we term a medium level and would not be considered significant.

THE CHAIR

Shawn, excuse me, I'm just going to give you about a two minute warning.

MR. DUNCAN

Sure, thank you. As previously mentioned there are a number of permits and approvals both through the Provincial and Federal approval process. And these are required for the project to proceed, specifically with construction and operation of these facilities. As you can see they apply to a number of components of the project and we're working with the Provincial agencies and we'll provide them with additional design information to ensure that these approvals can go forward. As well, under the Federal process we have a number of processes as well for review and approval specifically what we call TERMPOL or the technical review process of marine terminals. It looks at things such as operational ship safety, shipping route safety, those type of issues. These are coordinated and reviewed by Transport Canada as well as other Federal agencies. As well the Municipality has some By-laws that need to be adhered to by the project for development. So in conclusion the EIA -- the findings of the EIA is that all potential negative effects can be successfully managed. The project will create employment and enhance personal income through the

development and through the creation of jobs. The project is in compliance with the planned industrial uses of this location. The project can be constructed and operated in a safe manner. This industry is one of the most regulated -- highly regulated industries in the world. This applies both to the petrochemical industry as well as the LNG industry. As well, there will be additional regulatory approvals and permits required for the project and we're working with those individual agencies to ensure that we can provide them at some point with the design information they need to process those approvals prior to the construction and operation of the facilities. Now, that's just a brief overview. We're now open for questions from the Panel as well as the public.

THE CHAIR

Okay. Thanks very much. I'll start by giving the audience an opportunity. Anyone who wishes to ask a question of Keltic. Maybe just to get things started though, I'll pose one question myself.

KELTIC PETROCHEMICAL INC. - QUESTIONED

THE CHAIR

A couple of times in each of your presentations I've

112 KLTIC PETROCHEMICAL INC. - QUESTIONED

heard you speak about the proximity to the potential sources of LNG as being one of the advantages of the location here. And I can certainly see how we would be closer to a potential source in -- from Europe or Russia probably than the Eastern U.S. would be. But I can't quite work out how we would be closer to a source from the Middle East or from Africa. I'm just wondering if you could elaborate on that.

MR. DUNCAN

Yeah, I'll have Derek Owen from Maple LNG. He's evaluated those kind of shipping routes. Can probably explain those a little bit better.

MR. OWEN

Yes, the -- yes, Mr. Chairman, I believe in the -- from the presentation the -- just as an example, the shipping distance from Nigeria to Nova Scotia is 4,664 nautical miles. To Cove Point, Maryland from the same source, Nigeria, it is 5,197 nautical miles. And to Sabine Pass in the Gulf of Mexico, Texas it is 6,103 nautical miles. That is a -- that's the area from West Africa. From the Middle East, from Qatar it is -- to Nova Scotia it is 7,538 nautical miles. Maryland, Cove Point it is 8,388 nautical miles and to Sabine Pass,



Texas it is 9,676 nautical miles. The -- in the range of locations of LNG supply if we look at Trinidad which is -- for Nova Scotia is 2,176 nautical miles. To Maryland, Cove Point it is 1,908 nautical miles. And to Sabine Pass, Texas it is 2,257. So out of the recognized sources of LNG, Trinidad to Cove Point, Maryland is the -- is -- it is the only one which is a shorter distance than to Nova Scotia.

THE CHAIR

Okay. I'll have to have a closer look at a globe. Okay, thank you. Once again, anyone who wishes to ask a question of Keltic, please feel free. And I stretch it out on purpose because I know sometimes people are a little hesitant. But yeah, please come forward. And just let us have your name please and where you're from.

MR. HIBBERT

My name's Lyndon Hibbert and I'm from Halifax. I wanted to know if there will hazardous waste shipped from the dump plants to the Guysborough landfill. And if there is is there plans in place if anything happens like spills?

THE CHAIR

114 Keltic Petrochemical Inc. - Questioned

Okay.

MR. DUNCAN

Currently, we are evaluating the types of wastes that will be generated by the project and some projects -- this project will generate some hazardous materials. But I believe that the Guysborough landfill facility does not accept any of these type of wastes so those hazardous wastes would not be going to that location. All waste would be going to a properly certified and licensed facility, whether it's hazardous waste or construction wastes or recyclable materials. As you know, in Nova Scotia we've got a great program with regards to waste management and recycling so all these locations are very specific and certified for the types of waste they will receive. And my understanding is that the Guysborough site does not accept any of these hazardous waste so they would not be going there.

MR. HIBBERT

Thank you.

THE CHAIR

Sorry, ma'am, just -- I'm going to ask -- we need -- for the record, please, if you would use the microphone so we can record your comment.

MS. DESMOND

Mary Desmond, Guysborough. If you're not going to use the Guysborough site, how does the waste get from the plant to where a proper plant is going? Where's -- what's the route it's going to take?

MR. DUNCAN

As I mentioned, there may be some waste that goes there that that landfill is approved for, but with respect to the hazardous waste I was talking about right now we don't have those type of design details. What a project or facility like this would typically do is make an arrangement with a waste management contractor, and this waste management contractor would be licensed to transport this waste with approved transportation, trucks or means of transportation, and take it to an appropriate facility. And we haven't got those kind of details about where it would go and how it would get there, but these types of services are pretty highly regulated so we would expect that any certified management -- or waste management company would have specific transportation means and methods of transporting this material to an approved location. For example, one example we've looked at as an option -

116 KELTIC PETROCHEMICAL INC. - QUESTIONED

- and, as I said, these aren't details that we've finalized, but some of the waste that we've looked at would have to go to refineries and could be taken to refineries in Montreal, for example. Some of the hazardous materials or waste, petroleum products or hydrocarbon products, typically some refineries or other disposal locations will take these products and use them either as a fuel or as some other means of disposal. So, one option a lot of times is for these wastes to be transported to a location such as Montreal where there are properly certified facilities for disposal of those.

MS. DESMOND

But what I'm saying is that the waste would come from the LNG plant and go to the communities?

MR. DUNCAN

Well, it would go to a specific certified ---

MS. DESMOND

It would come to the communities to get to Montreal?

MR. DUNCAN

It would have to go via either -- there are a couple of options. One is by truck on road or it could be shipped -- there are -- because of the marginal wharf

there, there is an option of shipping these materials via boat as well.

MS. DESMOND

But you don't know yet which ---

MR. DUNCAN

No, we don't have those type of details in terms of the design determined. Yes, that's correct.

MS. DESMOND

Thank you.

THE CHAIR

Okay. Thank you.

MR. HIBBERT

I just wanted clarification. So, there are hazardous wastes being sent -- there will be hazardous wastes sent to the landfill that's approved by the landfill?

MR. DUNCAN

No. Maybe I wasn't clear, but I think your -- was your original question with regards to the Guysborough landfill?

MR. HIBBERT

Yes.

MR. DUNCAN

And with respect to hazardous wastes, my understanding

118 KELITIC PETROCHEMICAL INC. - QUESTIONED

is that that landfill is not approved to accept those hazardous wastes.

MR. HIBBERT

You say "those." Are there any hazardous wastes that it will accept?

MR. DUNCAN

Not to my knowledge. I don't think that landfill is approved for any of those types of -- any -- when I say "those types" I mean hazardous wastes in general.

MR. HIBBERT

Okay. Thank you.

THE CHAIR

It might help -- I do happen to know that the approval that they're speaking of is by the province, so it's not the individual landfill that would decide whether they would accept it or not, it's the provincial government that would approve it or not approve it for specific landfills, and we were told at a previous session that the Guysborough landfill is not approved to accept hazardous waste. Anyone else that wanted to pose a question for Keltic?

--- (No response)

THE CHAIR

No? Okay. We do have, as I indicated, one registered intervenor, the Concerned Citizens of Lincolnville group. So, if I could ask whoever is going to make a presentation on their behalf if you would please come forward and we will get you sworn in.

MR. DESMOND

My name is James Desmond and I'm from the African-Nova Scotian community of Lincolnville, and I'm here on behalf of the Concerned Citizens of Lincolnville.

MR. GORDON

You have a choice to promise to tell the truth by affirmation or you may swear on the Bible. Which do you prefer?

MR. DESMOND

I'll swear on the Bible.

---

MR. JAMES DESMOND, (Sworn)

MR. HIBBERT

My name is Lyndon Hibbard from Halifax, I'm with the organization Bound to be Free, and I'm here for the Concerned Citizens of Lincolnville.

MR. GORDON

You have a choice to promise to tell the truth by

120 Keltic Petrochemical Inc. - Questioned

affirmation or you may swear by the Bible. Which do you prefer?

Mr. Hibbert

By affirmation.

Mr. Lyndon Hibbert, (Affirmed)

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Concerned Citizens of Lincolnville - Presentation

Mr. James Desmond - Presenter

Good evening, ladies and gentlemen. Lincolnville is a black community located in Guysborough County along Route 16. The community has a history, like other black communities in Nova Scotia, of being victimized by racism practised by local governments. These practices formed the community settled in 1784 by driving the people from their promised land, a 3,000-acre Thomas Brown Spriggs' land grant promised to them by Queen Victoria, onto a barren land away from the white communities. Also, as in other black Nova Scotia communities, the children of Lincolnville were segregated into black-only schools. It wasn't until 1983 that the elementary school aged children of Lincolnville were permitted to go to school with whites, making Lincolnville the last segregated school



in Canada. Even when the opportunity for integration presented itself in 1965, the school board of Guysborough did not rise to the occasion. They made an agreement with the school board of Antigonish to have white students trucked to the Antigonish school board district so that the white students would not attend a school into the Lincolnville area. These scars still affect the community of Lincolnville and the black community in general. Since 1974 Lincolnville has been fighting against a first-generation landfill site located next to their community, placing their health and rights in jeopardy. Many times the fight against this environmental racism that afflicted the people has been risen up but has not sustained due to the pressure and false promises by the Municipality of Guysborough and a lack of financial support and legal counsel. The Concerned Citizens of Lincolnville is in opposition to the Keltic project for the reasons of destruction of heritage sites and the planned placement of waste into a landfill site which we are seeking to remove from our backyard. With regards to compensation for our heritage sites being destroyed by the Keltic project, we would like to know what compensation would be

appropriate to replace the loss of one's history and who do these discussions -- and who are these discussions with. Since the heritage site issue is being covered by other intervenors, we will outline the impact the LNG plant will have on our community by contributing to the waste at the Municipality of Guysborough waste management facility. Lincolnville has been neglected by the Municipality of Guysborough and indeed the Province of Nova Scotia. There has never been an injection of any appropriate community service in terms of education, health, social service, cultural, policing and leisure, only the marginalization of a people. There has always been the need of special and appropriate programs and services for the uniqueness of the community and its residents. Like Africville, residents of Lincolnville have paid taxes and not received programs and services that the surrounding white communities enjoy, nor has there been any infrastructure established. Even with the establishment of a first-generation landfill site in 1974, a site just a kilometre away from the community, there has not been any compensation for depreciation of land or quality of living caused by having a landfill

site situated in the community's backyard. Largely there has never been any equal sharing in Guysborough as it pertains to persons of black descent, nor has black Nova Scotians in Guysborough County ever been welcome, active participants in the decision-making process and the allocation of resources. The problems Lincolnville face based on the locating of an LNG plant in Goldboro are the lack of environmental justice for our community. Environmental justice can only exist when the environmental risks, hazards, investments and benefits are equally distributed without direct or indirect discrimination at all jurisdictional levels and when access to environmental investments, benefits and natural resources are equally distributed, and when access to information, participation in decision-making and access to justice in environment-related matters are enjoyed by all. Lincolnville, as a Nova Scotian black United Empire Loyalist community, has suffered disproportionately at the local, regional, provincial and national levels from environmental risk and hazard. The community continues to suffer disproportionately from the violations of fundamental human rights as a result of environmental factors, neglect, first- and

second-generation landfills located a kilometre from the community, lack of opportunity, no compensation, no infrastructure, denied access to environmental investments, benefits or natural resource and/or are denied access to information and/or participation in decision-making and/or access to justice in environment-related matters, et cetera. Traditionally Lincolnville was never truly consulted when environmental and ecological issues, including wilderness, were discussed and decided upon. Although the lack of consultation continue to put Lincolnville at risk, if the powers that be are concerned and value the input of the black Nova Scotians on environmental issues, there must be a shift in policies and procedures to include issues and concerns around racism and injustice that leads to unequal burdens and inequality with a grave impact on the people of Lincolnville. The lack of inclusion of the people of Lincolnville leads to compromising environmental protection and the law and strongly goes against justice for all. We in Lincolnville have heard talks about compensation before but never received any. Who are these talks being done with, and is the community

informed? I assure you the community is not informed of any talks concerning compensation for destruction of heritage sites nor contributing to the waste at the landfill site a kilometre away from Lincolnville. There has been no public meeting held within the community, and having discussion with a couple of members from the community without ensuring the information is shared is not consultation with the people. Persons responsible for the locating of the LNG plant in Guysborough must focus on the direct and indirect impact this plant will have on the living conditions of affected communities. These are primarily health and land opportunity concerns. Accountability must be a major part in establishing environmental justice for the residents of Lincolnville. The residents of Lincolnville must also be informed of what type of waste is planned to be placed in the landfill and protected -- and projected initial and yearly amount. Also, in the event of a leak in the lining of the landfill, what measures will be put in place to protect the community just a kilometre away from the toxic waste created by the LNG plant and other sources? Plans to send a segment of

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the waste from the Keltic project to the landfill further complicates the community's efforts to remove the landfill. The landfill site needs to be removed and relocated to a safe area that is not near a community before any plans of waste disposal from the Keltic can be made. Thank you very much for hearing my presentation.

THE CHAIR

Thank you. And, sir, before you go, anyone who has any questions for the presenter? Any questions at all?

--- (No response)

THE CHAIR

Sorry, did the other gentleman -- did you have anything that you wanted to present?

MR. HIBBERT

No. I'm just here for -- if there was any questions being asked.

THE CHAIR

Okay. Fine. Okay. No questions? Yes, ma'am?

OPEN FORUM

MS. DESMOND

If there has been -- Mary Desmond again. If there has been compensation -- like, you know, I'm from the

community and I have not heard anything about any compensation regarding the heritage sites -- could you find out or tell me who has been talking about this or what has been going on about it?

MR. DESMOND

To my knowledge, there has been no talks into the community level regarding our compensation. My understanding from people that -- it's been discussed at the municipal and the Keltic level but not in the community as a whole. Well, is there anybody from the Keltic who can shed any light on this?

THE CHAIR

Can Keltic provide any response for that?

MR. DUNCAN

I'll just briefly outline kind of the information that we've provided in the EIA. Certainly we've evaluated the potential for -- as I mentioned, I think, in the presentation, we were aware -- when the Keltic project first looked at the site, we were aware of the heritage site on Red Head, the cemetery there, we were made aware of that by the municipality and the project that they initiated to remove those burial sites for their protection and placement in the Baptist cemetery.

Because of our knowledge of that heritage site, we did further archaeological assessments and determined that there were no remaining remains on the site when we did sub-surface testing. But still, as I mentioned, the site still remains as what we call elevated archaeological potential, so as we currently understand there are no remaining archaeological resources on that location. With respect to, I guess, communications or consultation -- I think there's been a document -- in the document we -- there was an open house that was held in Lincolnville, I think, in July 2004 in my understanding. So, there has been some consultation at least at that level in terms of providing information about the project and trying to provide information to the community. Information is provided as well to the municipality, as indicated by the gentleman. There are discussions regularly with the municipality, with representatives from that area as well, so -- but with respect to compensation, there's been no plans and no issues associated with that for the Keltic project.

MR. HIBBERT

Can I ask a question?

THE CHAIR



Sure, yes. Again, please just for the record, if you could give your name.

MR. HIBBERT

My name is Lyndon Hibbert. The consultation that -- happened July 2004 -- is that correct? -- can we get who was in attendance of that consultation? I know that in the past in Lincolnville there has been two, three, maybe five people in attendance of something and they call it proper attendance, and sometimes only two, three, five people really know what's going on and know that there is a consultation. So, we're just concerned and we would like to know if a proper consultation happened, if the community was informed of this, of the consultation, because as far as I know at a community level the community doesn't know about these consultations.

MR. DUNCAN

Sure. And my understanding at least is that there were some representatives here who attended the open house in Lincolnville. I probably don't have the details about the attendance at that site or that open house, but I can certainly find them for you and provide them. I'm being handed a note. Apparently there -- six

people attended the consultation. I guess a notice was advertised in the paper with respect to the time and place for the open house in that community. It should be also added that the Keltic project has a specific CLC, or community liaison committee, with, I believe, some representation as well, to have -- and really the purpose of this committee is to act as a bit of a sounding board, to have representatives of the community meet with Keltic on a regular basis to gather information and disseminate or pass around that information in their respective communities. So, that's been the level of consultation to date, and I don't think that's the end of the consultation. I mean, there's been a pretty high commitment by Keltic to continue to work with the community there, whether it's Lincolnville or some of the other areas in proximity to the facility. So, there will be need and there will be a requirement to continue ongoing consultation with the community, so I don't think that's the end of the discussions. So ---

MR. HIBBERT

I just want to know, is there anybody that wasn't on the committee that attended a consultation? If you can

find that out, and if we can have the names of the people that were on the committee.

MR. DUNCAN

Okay. I think Kevin Dunn -- Mr. Kevin Dunn, was ---

MR. DUNN

--- (Speaks off microphone)

MR. DUNCAN

--- he was at the open house and he can speak to maybe who he remembers was there.

MR. DUNN

Well, Donna Hawko[?] was there and Al Ingram was there from Port Hawkesbury. That's the only two names that I remember.

THE CHAIR

So, is it possible -- could Keltic maybe provide that list at some future ---

MR. DUNCAN

Typically we do keep attendance lists for these open houses. We can certainly find that or talk to the people who attended and get the names of the people who were in attendance at that open house.

MR. HIBBERT

Thank you very much.

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THE CHAIR

Okay.

MR. HIBBERT

So, this list will be put together?

THE CHAIR

Yes. Okay. What I'll ask is if Keltic ---

MR. DUNCAN

As an undertaking. (Undertaking)

THE CHAIR

--- would provide that to the panel, and we'll endeavour to get it back to you in some way, or if you can contact us to get it.

MR. HIBBERT

Thank you.

THE CHAIR

Okay. Thanks. Yes?

MR. DESMOND

Can I ask a question?

THE CHAIR

Yes, sure. I'm only hesitating because I'm just wondering if they have something further there.

MR. DUNCAN

No. I'm being handed names one at a time. So, we'll

put together a proper list and we'll submit that to the board.

THE CHAIR

Okay. Thank you. Yes, go ahead, please.

MR. DESMOND

I'm just wondering are -- in regards to the removal of the remains at the Red Head cemetery, was the remains removed because there was a significant threat of them being washed to sea or were they moved to accommodate the Keltic project?

MR. DUNCAN

As mentioned -- and I think it was presented in Guysborough -- the municipality undertook this project. This project was undertaken before Keltic had selected the site or evaluated Goldboro for the location of their facilities, and my understanding from the presentation from the councillor was that this was a municipality-led project based on risks of erosion from the shoreline to protect those burial sites.

THE CHAIR

Okay. A question for the presenter?

MR. MacDOUGALL

No, just clarification. They're speaking on behalf of

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the municipality, and I have some information that's contrary to what the proponents are saying. I just wanted to clarify that the ---

THE CHAIR

Okay. That might be useful to them, so yes.

MR. MacDOUGALL

--- Red Head initiative was not led by the municipality.

THE CHAIR

I'm sorry, sir. I recognize you but ---

MR. MacDOUGALL

Dan MacDougall.

THE CHAIR

--- we need your name for the record.

MR. MacDOUGALL

Dan MacDougall, chief administrative officer for the municipality.

THE CHAIR

Okay. Yes.

MR. MacDOUGALL

My understanding is that the Red Head initiative was led by the Lincolnville Community Development Association, or certainly members of Lincolnville that

led that initiative. I understand that they were concerned about the number of graves that were lost to erosion caused by action from waves and the sea. They approached the municipality first to look for a funding contribution to assist them with their initiative to relocate the graves to a place where they wouldn't be lost. The municipality did commit to twenty-five to thirty-five thousand dollars (\$25,000 to \$35,000) in funding and we were the first funding partner in. The Community Development Association of Lincolnville then found additional funding partners, and I heard in testimony on Monday that Maritimes and Northeast provided funding, I believe the figure was ten thousand dollars (\$10,000). I know the Development Association also found funding, they did some fundraising, et cetera. So, I don't -- the Lincolnville Development Association would have the full details of that initiative, the municipality wouldn't. So, I thought it would be important for both the panel and the proponents to understand that it wasn't a municipal-led initiative. The Development Association had used the services of an architect and they would have access to that information.

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THE CHAIR

Okay. Thank you.

MR. DUNCAN

My apologies for the mischaracterization of who led up that initiative.

THE CHAIR

Any further questions, please?

MR. DESMOND

I'd like to give some clarification on what was stated by Mr. MacDougall ---

THE CHAIR

Okay. Could we have that first, please, yes.

MR. DESMOND

--- concerning the Lincolntonville Development Association. It is my understanding that this here group that was involved into the Red Head project was a committee that was formed to work on relocating these here graves. To my knowledge, it was not an initiative carried out by the Lincolntonville Development Association per se.

THE CHAIR

Okay. Well, I guess we maybe don't have final clarity on that. There's a little bit of question maybe about



how that initiative was led, but I guess we can leave it at that unless there's anything further you can provide maybe in the future. Okay. Thanks. And there was a question, I believe?

MS. SIMPSON

My name is Anne Simpson and my question is -- the Red Head site, I'm not really clear on this because I can't see it, and I'm just wondering if you have a slide of the -- so we could see a map of the area. I'm sure you've done this before, but I just would like to know where the -- where exactly that burial ground is. That's just one part of it. But it does seem to me that even if you remove the bodies from that burial ground -- is this not -- and I can't really speak to this, but is this not a sacred site? So, that's ---

THE CHAIR

Does Keltic have some -- a visual, something you could show the audience with that location?

MR. DUNCAN

I could put something from the presentation up on the screen or I could -- if the woman is interested, I could show her the figures from the EIA that -- where the Red Head Peninsula is. Either option is -- it's

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whatever would be to the benefit of the speaker or the panel.

THE CHAIR

Okay.

MR. DESMOND

I would like to speak onto the second part.

THE CHAIR

Okay. As far as the map, I guess I'll ask the questioner, would you prefer to see it on the screen or could they show it to you on paper?

MS. SIMPSON

It could be nice if we could see it on the screen so everyone could see it.

THE CHAIR

Okay. Okay. Well, I'll ask Keltic then if they could come up. And I believe the presenter has some further information, so while maybe they're setting up the -- finding that slide, if you could just go ahead, please.

MR. DESMOND

Yes. In regards to the burial area of our ancestors, we hold that very sacred and we do not agree to have that area disturbed into any way, and if there's any intention to disturb that area then it should be

discussed at the community level as a whole, and this presentation this evening does not constitute our discussions with the black community of Lincolnville and surrounding area of -- who also have descendants from that area.

THE CHAIR

We're just going to give them a minute to find the best slide.

MR. DUNCAN

I'm probably going to be in the way here, but the proposed project closest to the Red Head area would be the -- what's called the marginal wharf here. That marginal wharf will extend on this peninsula that comes out from the shoreline here as well. Red Head cemetery -- or the previous location of the Red Head cemetery was down on this point as well right here. There are a number of other archaeological surveys to evaluate that area, the entire area as well. There was -- I believe there was what looked like the remains of -- could be a foundation or something here, as well as some stone depressions which could be a result of some mining activities, we're not quite sure. But as a result, that's why the area is still considered a high

potential for archaeological resources. The resources -- when we did the survey there were no resources found with respect to human remains or other archaeological findings, but there's enough indication and enough history there to determine that it would be an elevated significance, and in that situation what our typical approach is is to develop a construction response plan. If there is any ground disturbance to occur in this area, we would have to have an archaeologist on site and we have special digging, mitigation measures, small excavators or, you know, small backhoes instead of heavy equipment, to do any of the ground disturbance, to have an archaeologist present to evaluate -- as the ground is disturbed, to evaluate the presence of any archaeological resources. If those type of archaeological resources are unearthed or uncovered, the work would be stopped, we would contact the Nova Scotia Museum, contact community representation associated with these types of resources and determine what should be done in these locations. Right now we're fairly confident that there are no remaining resources, but again I must state because of the elevated potential these are the kind of measures

we would have to implement in that area. In terms of the physical point here, I don't think that we're going to be doing any physical excavation. The marginal wharf butts up to the land as it looks here, in actuality this wharf may be a bit smaller than what's represented here as well. So, the wharf dimensions will be determined on the final design of the project in terms of how big it'll be, but certainly we've included a representation of the wharf to its maximum extent. It certainly wouldn't be any bigger than this and there's a likelihood it may be smaller than this. We also have some figures in the EIA as well as the appendices to the EIA that come from the archaeological survey that was conducted, so there's -- and these areas are mapped out showing exactly where those locations of the resources were, as well as the cemetery. And, again, those are the mitigation -- those are the measures that are a result of the survey work as well as this area being of high potential.

THE CHAIR

Okay. Thank you. Please, yeah.

MR. HIBBERT

I guess this is more of a request.

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THE CHAIR

Okay. I think that's fine because I -- you're finished with the -- the Lincolnville citizens presentation is finished, is that correct?

MR. HIBBERT

Yes.

THE CHAIR

Okay. Thank you. All right. Well, I guess at this point we are in more of an open forum. So, sure, if you want to go ahead, please.

MR. HIBBERT

This past Saturday we had a meeting in Lincolnville and there were approximately 37 members in attendance. We asked the question if anybody heard of -- or have been involved in any consultation involving the LNG plant, and except for a couple people who just recently heard of it, including myself, nobody was informed of any talks concerning the LNG plant. So, I'm making a request that the Keltic project consult the Concerned Citizens of Lincolnville along with the Lincolnville Development Association, that they just don't inform the Lincolnville Development Association because it doesn't always go to a community level.

THE CHAIR

Okay. Maybe if I could just ask for clarification. Is there a particular contact or -- if you could identify, you know, the people that they should be in contact with.

MR. HIBBERT

Well, James Desmond would be a contact, Wendy Campbell, and I can -- I'd like Jim Gordon to e-mail, so I can provide e-mails and a list of people who are involved in the Concerned Citizens of Lincolnville.

THE CHAIR

Okay. I'd appreciate that. Thank you.

MR. HIBBERT

Thank you.

THE CHAIR

Okay. Thank you very much. So, we've come to the open forum part. This is where, if anyone has a statement, want to voice their concerns, raise an issue, ask any further questions, the floor is open.

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THE CHAIR

I'd ask you to please come forward. Yes, please?

MS. GAGNON

Chantal Gagnon, Ecology Action Centre. This is a bit more formal than my usual way of doing things. I thought it through during the break. So, Mr. Chair, I would like -- after reviewing the Mi'kmaq ecological knowledge study during the break and after hearing the presentations from today, I would like to suggest that the Board recommends that Section 5.2 and 6 -- so 5.2, the mitigation measures, and 6, the conclusion -- of appendix to the ecological knowledge be reviewed by a qualified Mi'kmaq organization which is not related to the first study or the proponent through partnership or affiliation. The reason I ask that is just to clarify that this study does offer conclusions as to the significance of the impacts that the project will have on Mi'kmaq use of land and resources. So, we believe these should be reviewed given the concerns that were expressed this morning, that we heard this morning regarding Mi'kmaq consultation and the absence of an important number of traditional ecological knowledge holders during the period of the study. So, we just wanted to make that as a suggestion to the Board.

THE CHAIR

Okay. Thank you. We'll take that under advisement.



MS. GAGNON

Okay. Do you guys need me to put it in formal writing or something later?

THE CHAIR

It might be good if -- just to document it, if you would send Jim Gordon an e-mail or something on that request.

MS. GAGNON

Okay. I will do that.

THE CHAIR

Thank you.

MR. DUNCAN

Maybe, Mr. Chair, I could just add to the request or the comment made.

THE CHAIR

Yes.

MR. DUNCAN

The Mi'kmaq knowledge study was conducted by an aboriginal firm, Membertou Geomatics. On a number of these environmental impact assessments we do conduct typically an aboriginal study or a Mi'kmaq knowledge study, and in Nova Scotia really there are only two -- there are two aboriginal firms that do conduct these

surveys with any sort of regularity. They include Membertou Geomatics as well as Eskasoni Fish & Wildlife Commission. So, we regularly contract with these folks to evaluate those -- to conduct those types of studies. There is a -- in the last few years there's been quite a formal process or, I guess, standardization of how these studies are conducted within the aboriginal community. They set up a committee that reviews the methodologies and the processes associated with conducting them. So, it's fairly -- within the last few years these types of studies have become much more formalized, much more standardized, and there is a process that is followed specifically by these two firms as well as they conduct a number of these studies. So, we're completely confident in the evaluation that was done by the firm and certainly would be open to it being reviewed by anybody else.

THE CHAIR

Okay. Thank you. Anyone else who wished to raise a question, voice a concern?

--- (No response)

THE CHAIR

I'm going to pose one question, then. In a number of

the written questions or several of them at least that the Board had submitted to Keltic we had asked for some specifics regarding the impoundment at Meadow Lake and the potential effects of that. And specifically relating to -- I understand your intention is to -- prior to the impoundment and raising the lake level, you intend to clear away the vegetation and organic material, I understand the reason being to avoid possible suspension of mercury and, you know, reintroducing that into the system, so it's to avoid contamination. But my specific question is, I understand some of the vegetated areas that you would be removing are presently wetlands, for example, and I'm wondering how you are going to undertake that removal of vegetation of wetlands, those sort of areas, without causing further impacts in terms of sedimentation, release of nutrients, physical disruption and so on that would affect the present Meadow Lake and the systems downstream of it.

MR. DUNCAN

Yeah. Generally -- I'll speak just generally about construction associated with wetland areas and the mitigation associated with that. Ms. Blackadar can

speak to previous evaluations that we've conducted for this type of activity in terms of the creation of impoundments, a specific project we were involved with. With regards to wetlands, there -- obviously, as you mentioned, there will be a removal of vegetation around the lake to reduce the potential for the creation -- or of methyl mercury to be entered into the water courses, into the lake. This would require some removal of organic material in those wetland areas, you're correct. A lot of times what we do in wetland areas is conduct the construction activities, if we can, in wintertime to see if we can minimize sedimentation and minimize the disturbance in those areas, and that's the preferred time of year for construction on these type of soils regardless. We also would look at the, I guess, application of sediment fencing adjacent to the lake if we're working in those upland areas, but also we would look at application of silt curtains, things of that nature, when we do work around water courses and wetlands where there's the potential for sedimentation to occur. We'd apply this type of mitigation to minimize that effect. Perhaps Ms. Blackadar, or Janet, could speak to some specific

examples of where that's been applied.

MS. BLACKADAR

Janet Blackadar from AMEC. We've recently completed a very similar study in New Brunswick for a drinking water reservoir, and of course drinking water is a very sensitive issue and we've just completed a study doing vegetation removal and also removing the organic soil to eliminate methyl mercury production or greatly reduce methyl mercury production. Also, another reason for wanting to ensure that the organics are removed is to not increase biochemical oxygen demand, and as well for ensuring that things like parts of trees, for example, roots and this sort of thing, won't eventually wash out and then cause debris dams farther downstream. So, it's important to ensure that those things are removed in order to keep the dam working, the impoundment working at its proper levels. And, finally, we want to ensure that -- whenever we do this sort of thing that we're not creating sedimentation or siltation downstream. So, as Mr. Duncan was pointing out, there are a number of mitigative measures that would be put in place, and where Meadow Lake is currently approximately two metres deep winter work is

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a preferred time to do that. It's the preferred option, and then impoundment can begin early in the year.

THE CHAIR

Okay. Could I ask, in regard to the -- you mentioned a study in New Brunswick. Is that a project that's actually been undertaken or it's just planned?

MS. BLACKADAR

The project is planned, the EIA has been undertaken and that would be a public document in the New Brunswick environmental impact assessment system.

THE CHAIR

Okay. Thank you. Could you maybe give me -- is there a project title or something where we could look it up?

MS. BLACKADAR

Yeah, sorry. Tower Road Dam.

THE CHAIR

Tower Road?

MS. BLACKADAR

It's near Moncton. Tower Road, yes.

THE CHAIR

Okay. Thank you. Yes, sorry, go ahead, please.

MR. CRANSTON

Ray Cranston, Environmental Assessment Board. In terms of this organic removal, what sort of efficiency -- how much of the organic matter do you ---

MS. BLACKADAR

Is removed?

MR. CRANSTON

--- are you removing, and how does that compare to what's required for methylation processes?

MS. BLACKADAR

Well, we would want to remove as much of it as we possibly could, so that would include removing the vegetation in the organic soil layer.

MR. CRANSTON

But in terms of the overall amount, is it like ---

MS. BLACKADAR

Like 90 percent, 95 percent, perhaps even higher. It's a very large proportion that is removed of the potential ---

MR. CRANSTON

Wouldn't that still leave, compared to the amount of mercury there, many orders of magnitude of organic carbon left? And it doesn't -- it takes a very small amount for the methylation process to occur.

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MS. BLACKADAR

This is -- we're looking at a flushing rate of six days in this reservoir as well. We need to remember that. It's a very high flushing rate which is also very important in helping to alleviate that.

MR. CRANSTON

Okay. So, you're relying on flushing, not on stopping the ---

MS. BLACKADAR

Right. And I should just point out the -- we're not talking about mercury from tailings, we're talking about methylated mercury from actual vegetation decomposition.

MR. CRANSTON

Well, could you explain that. I don't know what you mean. You mean mercury that's in the vegetation?

MS. BLACKADAR

No, I don't -- I'm not going to get into a lengthy explanation of methyl mercury production because I'm not qualified to do so, but I can tell you that that's where it comes from and that's why we remove the material. I can find some more information for you if you like and provide it to you.



MR. CRANSTON

Well, I don't -- I'm not aware that the mercury is part of the organic particles. It tends to be more in the solid ---

MS. BLACKADAR

It's from the decomposition of the organic material.

MR. DUNCAN

Yeah, the decomposition process creates a release of the methyl -- the mercury from the mineral soil as well. So, when you get this decomposition of the organic matter that's a resultant reaction that occurs, the methylation, so -- but we can certainly provide more detail on that process specifically if that's of interest to the Board.

MR. CRANSTON

Well, no, I just -- I discount the suggestion that if you remove -- if you still have orders of magnitude -- more organic matter there and there's methylation going to occur, removing 90 percent of the tree stumps isn't going to stop it. So, if you -- your calculation says the flushing will do it, then we'll take that as the answer to suggest that methylation isn't a problem.

MR. DUNCAN

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Okay.

MS. GAGNON

Chantal, Ecology Action Centre. Talking of the dam, will your environmental management plans or monitoring plans for the water in the dam and the water being used by the site include and calculate climate change predicted impacts in the region? Because we do know that there will be changes -- at least we're expecting changes to precipitation patterns in the Atlantic region which would change the intensity of water and then the periods of droughts in between precipitation levels. And so I'm just wondering, on -- I can't remember seeing this in detail in the report, but regarding water quality and water quantity the hydrology of the area will probably change with those climate change impacts, and I'm wondering if you're planning on integrating these in your environmental management plans down the road or your monitoring of the lake so that this site doesn't consume more at one point than pre-impact.

MR. DUNCAN

I guess with respect to the management of that water control structure, there would be a plan in place to

manage the water levels in the impoundment and supply the maintenance flows downstream. Keep in mind that we're talking -- in terms of the water take from that reservoir we're talking less than 10 percent, or 10 percent as a maximum of the flow available in that system. So, it's a pretty low percentage of the current flow as it exists now, but that control structure will be regulated not only for issues associated with climate change or potential climate change-related issues such as, you know, potential changes in drought or flooding conditions, it would be managed on a much more micro-scale than that with respect to seasonality associated with flash flooding or just general water change -- regime change in the natural system. So, there would have to be a management of that system to accommodate just natural existing changes in those water levels to make sure there's proper flows downstream. And actually we've been discussing about the fact that there needs to be probably a replication and continuation of the types of downstream flows that occur. We get these -- the downstream -- downstream of the lake is fairly -- in size, so as a result you get a lot of very quick

runoff, a lot of flash flooding when you get rain events occurring. So, typically we would have -- the management and flow water management would essentially try to replicate this type of process that would -- that's already existing there as well. So, it's a long way of explaining that, regardless of climate change issues that may occur, the management of that water level would have to match existing conditions which are much more variable than we expect those changes to be.

MS. GAGNON

So, just a clarification. So, if the flows were to change and, you know, coming in the future years, 10 - 15 years, whatever, water consumption should -- from the lake should not -- will not exceed 10 percent of the flow, whatever that flow happens to be at the time of intake, is that ---

MR. DUNCAN

Well, that's a flow rate typically that regulators are -- have some level of comfort with. If you're taking flow from a lake or a water course, the general rule of thumb -- and it's not a legislation or anything like that, but generally there is a preference for that take of water to be below 10 percent -- 10 percent or

less of the existing flow regime or volumes. So, that's a number that regulators have used in the past as some guidance in terms of water take or water usage. So, that's kind of what's guided us in the design of the dam or the reasoning for having the impoundment at all. So, that's the number that we've worked with.

THE CHAIR

Okay. Thanks.

MR. HIBBERT

Has the Keltic project done any research pertaining to land grants, deed land ownership in the Guysborough area?

MR. DUNCAN

With respect to the land required for the project or --  
-

MR. HIBBERT

Yeah, with respect to the land required for the project.

MR. DUNCAN

Yeah. The -- I don't have all the deeds in front of me or the land map, but I do -- the project itself, the footprint, is within the Goldboro Industrial Park, which I believe is owned by the municipality.

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MR. HIBBERT

Okay. Yes.

MR. DUNCAN

There will be some land obviously required for the impoundment that we just talked about, which I understand most of which is owned by the province, it's crown land. So, we'd have to acquire -- if those areas are to be flooded, those areas of crown land, we'd have to work through the provincial integrated resource management system to acquire those crown lands for flooding. So, those are my understanding at least of what the ownership issues are related to the project itself.

MR. HIBBERT

Thank you. Would the Concerned Citizens of Lincolnville be able to have access to any of the research that you have done pertaining to land grants and land ownership?

MR. DUNCAN

Absolutely. Any information that we have we're certainly open to providing to anybody of interest.

MR. HIBBERT

How would we go about to speak to somebody about that?

MR. DUNCAN

We can do it right after these hearings, if you like.

MR. HIBBERT

Okay.

MR. DUNCAN

We can -- and then we can arrange to find out what information you're looking for specifically and see if we have it in our records. We can only make available what information we have and ---

MR. HIBBERT

Yes.

MR. DUNCAN

Yeah.

MR. HIBBERT

Okay. Thank you.

THE CHAIR

Okay. Good. Thanks. We have a question from the panel.

MS. HENNEBERRY

Penny Henneberry of the Board. I'm wondering if -- once construction were to begin on the site near Red Head, would that permanently prevent descendants from visiting that site?

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MR. DUNCAN

I guess there -- we're still awaiting some final design details to see what the configuration and size of that terminal -- or marginal wharf would be. Based on our preliminary evaluation, we don't -- I don't think there'll be any disturbance to that -- the Red Head area that would prevent people from visiting it, but the other consideration, I guess, would be associated with safety of the site. Obviously this is going to be a site that's used for industrial purposes associated with the off-loading of LNG and storage and shipping of petrochemical products, and I suspect there would have to be some arrangement if there was -- if people wanted to come on the site, regardless if they were from -- interested in that site or just visitation, that area would have to have -- you know, people would have to be accompanied and there would have to be arrangements for people to enter onto an industrial site. It should be mentioned, though, that the site -- and it depends on who you -- you know, your interpretation of the site, but my understanding of the work that was done there by -- the previous archaeological work, the site itself -- and the site would constitute -- the remains have been



removed and placed in proper locations. Now -- and that's not to suggest that the site still wouldn't have some significance to other individuals, but again the interest of -- at that site would be, of course, safety first and foremost, so -- but I know, I mean, in other industrial sites, you know, that arrangements can be made to tour sites and enter sites upon proper safety orientations and things of that nature. So ---

MS. HENNEBERRY

I guess the reason I ask the question is I'm aware of an air force base in Nova Scotia that has a cemetery in the middle of the air force base and we escort people to that site to visit it, to -- and they even are still permitted to bury people there.

MR. DUNCAN

Right.

MS. HENNEBERRY

So, I am aware that it is an option, that people can be escorted through a secure site and ---

MR. DUNCAN

Yeah. We did anticipate that, too, and again it's just in the interest of safety, we'd ensure that people are either accompanied or provide special orientation for

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safety. You just -- it is a -- you know, there is some inherent industrial safety requirements associated with these types of facilities.

MS. HENNEBERRY

Um-hmm.

THE CHAIR

Okay. Again, anyone in the audience -- we want to provide full opportunities -- anyone who wants to have a say, ask a question? Yes, please, at the back. Come on forward. Oh, okay. I think we have two.

MS. DESMOND

The number of jobs that are going to be provided -- you know, you hear lots of rumours. I think the first part was going to be 3,000 and then permanent 500, or 300 to 500. Is that true?

MR. DUNCAN

Yeah, we've had some discussion about employment numbers, and again some of these details are going to be dependent on what the final design of the project looks like. The final design of the project will also have to incorporate any conditions -- if the approval process goes through, the Board hearings, approval is granted by the Department of Environment, it most

likely will have conditions associated with it, as will the permits. All those things will affect the final design of the facility. That final design will then -- subsequent to that final design, then we'll look at employment, final employment numbers, but right now our projection is that at peak construction we're looking at 3,000 jobs. We estimated 4,700 from start to finish in terms of positions throughout the entire construction phase of the project. During operations, again it's more the operations that are going to be a function of the final design of the project, you know, what components are going to be there and what staffing requirements will be required to operate them, but we are estimating in that range, 300 to 500 people to operate the facilities.

MS. DESMOND

Is local people going to have -- to get many of these jobs, the local people, or are there going to be people brought in?

MR. DUNCAN

Well, I think there'll be opportunities available to whoever wants to apply for the job. There will be varying types of jobs required, and we can speak to

this a little bit more but, I mean, there are specialized jobs where we will require people to come in from other places in Canada and probably even internationally, because these facilities just don't occur here in Nova Scotia. Hopefully we have local people who are working in other locations who could come back and work on these -- on this project. But with respect to local employment, certainly that's one of the objectives of having -- or, you know, one of the objectives -- or not the objectives but one of the outcomes of the project and the facility, is to increase employment for the local community and the local area.

MS. DESMOND

Would you people be providing any training to get the people in the local area ready for some of these jobs?

MR. DUNCAN

Well, we've talked a little bit about this before, but one of the things that we need -- the project needs to do is evaluate what skillsets are currently in the area, what skillsets are available in the local unions, what skillsets are available -- or what training is provided by local community colleges and those kind of

training institutes. We also will be looking for folks coming out of university -- and we talked a little bit about this before, about chemical -- the need for chemical engineers for these facilities and civil engineers, mechanical engineers. So, there will be a requirement for this type of training as well. So, in order for a project of this magnitude to proceed and these types of positions to be filled the project and the companies will have to go out and find out what are the resources available, who is available and what skillsets are available to fill these positions. And the way that's been done on other projects is to go out with -- to the community with a list of occupations and have essentially jobs fairs, that's probably not the right term but to present the kind of positions we're looking for. Contractors, again, will come in for specific components of the project, they'll be approaching union halls, they'll be having -- they'll be going out to the local community to see who's available for -- to conduct certain components of their work as well. So, through those activities I suspect there'll be a pretty high level of communication to the local community of the kind of positions that will be

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available.

THE CHAIR

Okay. Yes, I believe there was someone at the back. I saw a hand up at one point there. Yes, okay. Thanks.

MR. DESMOND

Yes. I wonder if during our -- your discussion onto our land for this here Keltic project, was there ever any discussions concerning black land claims in the Country Harbour area?

MR. DUNCAN

In the Country Harbour area, you say?

MR. DESMOND

Yes.

MR. DUNCAN

Yeah. No, we haven't had any knowledge or discussion in that regard.

MR. DESMOND

Thank you.

THE CHAIR

Anyone else who wanted to make a comment or ask a question? Final call.

--- (No response)

THE CHAIR

No? All right. That being the case, we'll adjourn for this evening. We will be here again at -- excuse me, I'm going to have to look at our schedule -- at 9 o'clock tomorrow morning, and we have some presenters scheduled for that time as well. Thank you very much.

(ADJOURNED TO THURSDAY, NOVEMBER 23, 2006 AT 9:00 A.M.)

CERTIFICATE OF COURT REPORTERS

We, Gwen Smith-Dockrill, Sandra Adam, Ruth Bigio, Janine Seymour and Lorrie Boylen, Court Reporters, hereby certify that we have transcribed the foregoing and that it is a true and accurate transcript of the evidence given IN THE MATTER OF: NOVA SCOTIA ENVIRONMENTAL ASSESSMENT BOARD - KELTIC PETROCHEMICAL AND LIQUEFIELD NATURAL GAS FACILITY, taken by way of electronic recording pursuant to Section 15 of the Court Reporters Act.

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Gwen Smith-Dockrill, CCR  
Sandra Adam, CCR  
Ruth Bigio, CCR  
Janine Seymour, CCR  
Lorrie Boylen, CCR

Thursday, November 23, 2006 at Halifax, Nova Scotia