MANITOBA CLEAN ENVIRONMENT COMMISSION

CLEAN ENVIRONMENT COMMISSION HEARING

CRYSTAL SPRINGS COLONY LAGOON

* *

Transcript of Proceedings
Held at Fraserwood Community Hall
Fraserwood, Manitoba
TUESDAY, APRIL 21, 2026

* *

MANITOBA CLEAN ENVIRONMENT COMMISSION
CLEAN ENVIRONMENT COMMISSION
Aimée Craft - Chairwoman
Donald (Don) Labossiere - Commissioner
Lydia Carpenter - Commissioner
Peter Crocker - Executive Director/Commission Secretary
Carson MacKenzie - Keewatin-Aski Ltd. Commission Technical Advisor

HARBOUR (CRYSTAL SPRINGS) COLONY FARMS (PROPONENT)
Paul Kathler - Attorney, D'Arcy & Deacon LLP
Luke Bossuyt - Attorney, D'Arcy & Deacon LLP
Daniel Burns - Burns Maendel Consulting Engineer

RM OF GIMLI (PARTY)
Kevin Williams - Attorney, Taylor McCaffrey LLP
Matthew Nordlund - Attorney, Taylor McCaffrey LLP
Indra Kalinovich - Dillon Consulting Ltd.
Kevin Chudd - Mayor
Kurt Reich - Deputy Mayor
Christine Payne - Director of Communications

DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE
Siobhan Burland Ross - Engineering Manager
Barsha Sagan - Senior Environmental Engineer
Anges Wittman - Director

Reporter: Giselle Chen, Nathaniel Laxer

TUESDAY, APRIL 21, 2026

UPON COMMENCING AT 9:30 A.M.

THE CHAIRWOMAN: Good morning. Welcome to everyone. Welcome to all of the participants and presenters.

Members of the public will be observing the proceedings. I am new to reading glasses, so I'm going to be uncomfortably taking them on and off throughout this whole thing, so please be patient with me.

My name is Aimée Craft. I'm the Chair of the Manitoba Clean Environment Commission. I'm joined this morning by two other Commissioners, and I'll ask them to introduce themselves, beginning on my right.

MR. LABOSSIERE: I -- I am Don Labossiere. I consider Virden, Manitoba to be my hometown. I went to the University of Manitoba, where I graduated with a Bachelor of Science Degree in Chemistry in 1987. Worked in private industry for three years, and then after that, with the Province, I started off with -- or as an Environmental Inspector for compliance with environmental legislation. Along the lines, I spent three years, and

often, doing natural resource protection. And by the time I retired, I was the Director of Environmental Compliance and Enforcement.

THE CHAIRWOMAN: Thank you, Don. Lydia?

MS. CARPENTER: Thank you. Good morning. I'm Lydia Carpenter.

I'm joining you from the Southwestern Manitoba. I grew up in the Red River Valley but now reside close to Belmont. So, I had a nice drive here yesterday.

My current role is actually as an entrepreneur, running a cattle-grazing operation in the southwest. I also do facilitation and mediation for groups in agriculture, particularly farm families that are going through succession.

My education is in sciences and natural resource management. I graduated from the University of Manitoba in 2011 from the Natural Resource Institute, and held various different positions on boards and volunteer organizations relating to that work. And I'm -- I'm -- it's a privilege to join you today, so thank you very much.

THE CHAIRWOMAN: Great. And we're showing you how to use these lovely microphones that we have to turn on and off, and so we'll probably be providing some direction on that front and making sure that people are introducing themselves, using the microphone. So, if we have some administrative issues around that, we'll be providing some guidance and we'll be patient with one another.

Also joining us this morning are two staff members from the CEC. Peter Crocker, who's our Executive Director -- I'll get him to wave his hand -- and Board Secretary. He's sitting to my left.

If there are any issues that arise during the proceeding that need to be communicated to the CEC, Peter's the first person that you should be talking to. And also joining us is the Commission's Administrative Assistant, Courtney Harmer, who I can't see but hopefully can wave to you.

Yes. Okay, there she is. She's sitting near the entrance. You would've seen her on your way in. Our legal counsel, Bill Bowles, is sitting also to my left. And

Carson MacKenzie, our technical advisor, is also at that table.

I want to acknowledge that we're gathering today on Treaty 1 territory, very near Treaty 2 territory, and in the homeland of the Red River Métis. We're in close proximity to the western shores of Lake Winnipeg, and I myself am a resident of this lake on the east side.

Again, thank you all for being here today. In terms of our background, the Minister of Environment has requested that the CEC hold this public hearing. We did host an information session earlier this year in this very hall, but we've been now tasked with a public hearing to review the application by Crystal Springs Colony for a domestic wastewater treatment lagoon for their property located in the RM of Armstrong.

So, our mandate is set out in a terms of reference, which is available on the CEC website specific to this hearing, and the terms of reference was provided by the Minister in September and includes a review of the potential environmental effects of the proposed wastewater treatment lagoon, a task of holding public hearings, and providing an opportunity for the public to provide input

into the proposal, and then we must file a report with the Minister that outlines the results of our review, what we heard, and to provide advice and recommendations, including proposed licensing conditions for the Minister's consideration.

I want to note, there's been a name change to the proponent -- for the proponent to Harbour Colony, and I'll ask Counsel for the proponent to address that in their submissions at some point.

And I'll note a few housekeeping matters. Please turn your cellphone ringers to silent. I know that we hear that often, but I'll ask you to do it and make sure that it's not disruptive in the context of these proceedings. Many of you are familiar with this hall, but for those who aren't, the bathrooms are out the main door here that you came in, down the hall to the left. Emergency exits are on both the left and right side of the hall.

So, the hearing itself is going to take place today, Tuesday, April 21st, from 9:30 to 4:30. Today, we'll be hearing from the proponent, and -- sorry. Today, we'll be hearing from the proponent primarily. Tomorrow, Wednesday, we'll go from 12:30 to 5:00, hearing from the

CEC's technical advisor and the RM of Gimli, who applied for and was granted a status as a party to the proceeding.

We'll also be holding a session tomorrow evening from 6:30 to 8:30 for public presentations. Many have already registered. If some of -- of you members of the public are interested in presenting, you can speak with Peter and add your name to that list. Thursday, we'll begin at 9:30 again, and we'll hear closing statements. So, this is a tentative outline. It's subject to change. And this morning, we'll be hearing a presentation from the Director of Environmental Approvals about the review process and then having opening statements from the proponent and also from the party, the Rural Municipality of Gimli. So, that's our outline for today.

Okay. So, anyone who does have an interest in this project is welcome to attend the hearings, and I see many members of the public, and I thank you for making time to be here today to come and listen and share your views.

As I said, those who have not yet registered to present, please speak with Peter or Courtney. An oral presentation is an opportunity for you to share your views and your knowledge. Members of the public who make an oral

statement will not be subject to questioning. However, the Panel -- so the three of us -- may ask you questions for clarification if we need to. If you're referring to notes, you could provide those to Courtney, who is sitting at the back of the room. This hearing is transcribed, so each of you will need to speak clearly into their microphone. Hopefully, everyone can hear me. I'm seeing people nod and -- okay -- and engage, so you have to speak clearly into a microphone to ensure that your comments are on the record. And I think this is important to note. Only information that's on the record can inform the Commission's advice and recommendations to the Minister on this matter. So, other information is on the website -- on the CEC's website for the hearing. That's also part of the record, and things that are on the public registry are also part of the record. So, that's the information that the Panel will use to make the recommendations and advice to the Minister.

When you are speaking, please state your name, and the first time you're speaking, spell it out when you begin your statements, and we'll ask you to repeat your last name at the beginning of any question or response to ensure that the transcript that's generated, which is being prepared off-site, is accurate.

Before we get to the presentation from the Director of Environmental Approvals, I'd like to hear appearances from counsel, beginning with the proponent, please.

MR. KATHLER: Test. There we go. Good morning, Madam Chairwoman. My name is Paul Kathler -- that's K-A-T-H-L-E-R. I'm a lawyer with D'Arcy & Deacon, and Counsel for the proponent.

To my immediate left is Mr. Daniel Burns of Burns Maendel Consulting Engineers, and to his left is Mr. Edward Kleinsasser, who's a representative of the proponent. Behind me is Mr. Luke Bossuyt, also Counsel with D'Arcy & Deacon. Actually, behind me is Mr. John Stewart. To his left is Mr. Luke Bossuyt. Mr. Stewart is also Counsel with D'Arcy & Deacon for the proponent. And Mr. Ryan Johnson, to his left, is also of Burns Maendel Consulting Engineer. Additionally, behind him is Mr. Victor Kleinsasser in the front row behind the proponent's table, who is a representative of Crystal Spring Colony, and the proponent here.

THE CHAIRWOMAN: Thank you, Mr. Kathler. RM of Gimli?

MR. WILLIAMS: Morning. My name's Kevin Williams. I'm with the Firm of Taylor McCaffrey. Beside me, to my right, is Matthew Nordlund, also with Taylor McCaffrey. We're here on behalf of the RM of Gimli. Behind me, we have Indra Kalinovich. I'll spell that one. K-L-I -- K-A-L -- sorry -- I-N-O-V-I-C-H. First name, Indra. And I guess, for the record, my name is Williams -- W-I-L-L-I-A-M-S. Nordlund is N-O-R-D-L-U-N-D. And then, to Ms. Kalinovich's left is the Mayor of Gimli, Kevin Chudd, and Deputy Mayor, Kurt Reichert.

THE CHAIRWOMAN: Thank you. I'll ask -- oh, go ahead.

MR. WILLIAMS: Just before I finish, also to -- to the right of Ms. Kalinovich is Christine Payne, who is the Director of Communications for the RM.

THE CHAIRWOMAN: Wonderful. Thank you so much. So, I now invite the presentation from the Director of Environmental Approvals, and maybe you can introduce yourself and others who are -- who are here with you as part of your presentation.

MR. CROCKER: Good morning, everyone. Peter Crocker, Executive Director of the Commission. Before we start with any witnesses who are providing information to the Commission, we ask that they be sweared (sic) or affirmed for the purpose of the hearing. Would you prefer to be sworn or affirmed? Affirmed. So, can you state your name for the record, please?

MS. SAGAN: My name is Barsha Sagan, and B-A-R-S-H-A. Last name is S-A-G-A-N.

MR. CROCKER: Barsha, do you solemnly affirm that the evidence to be given by you shall be the truth, the whole truth, and nothing but the truth? Thank you.

MS. SAGAN: Good morning, everyone. My name is Barsha Sagan. I am a senior engineer with the Manitoba Environment and Climate Change, and I'm -- I have our Director with us. Do you want to introduce to yourself or -- our Director's name is Agnes Wittmann. And we have our Engineering Manager, Siobhan Burland Ross, present with us as well.

THE CHAIRWOMAN: Before you start, I just want to -- the -- for the members of the public who are

at the back of the room, are you able to see this screen? You can? Okay. Wonderful. Thank you. Please proceed.

MS. SAGAN: This presentation outlines the steps involved in the Manitoba environment assessment and licensing process for the Harbour Colony Holding Company Limited - Wastewater Treatment Lagoon.

The Environmental Act establishes the legal framework for environmental protection, and authorises environmental assessment and licensing of certain developments in Manitoba. Wastewater treatment lagoons in Manitoba are regulated under the Environmental Act and its regulations, including the classes of development regulation, licensing procedures regulation, and Environmental Act fees regulation.

The classes of development regulation made under the Act identifies wastewater treatment and storage facilities, including wastewater treatment lagoons, as Class 2 development. Proponent must submit an Environmental Act proposal that meets departmental requirements. These requirements are set out in established guidance documents, including the Environmental Act proposal report guidelines and supplementary guidelines specific to wastewater

treatment facilities and wastewater treatment lagoons.

Wastewater treatment lagoons must meet the minimum requirement of the provincial guideline document, "Information Bulletin - Design Objectives for Wastewater Treatment Lagoons". All wastewater treatment facilities must be designed by or under the supervision of a professional engineer licensed to practise in Manitoba. The department establish -- establishes environmental performance requirements through guidelines, standard, and licence conditions, but does not prescribe any specific treatment option.

Proponents are responsible for selecting and designing a treatment system capable of meeting applicable effluent quality requirements. Environmental Act licences may be more restrictive than the standard based on the site-specific assessment. The standards are set out in the Manitoba Water Quality Standards Objectives and Guidelines Regulation under the Water Protection Act, and are supported by the existing provincial and federal legislations. Together, this provides the legal basis for controlling pollutants entering Manitoba waters, including municipal and industrial wastewater discharges.

Manitoba wastewater effluent standards and the quality standards are determined by the discharge regime, such as intermittent or continuous, not by the treatment system. Wastewater lagoons are not always intermittent discharge systems, and wastewater treatment plants are not always continuous discharge systems.

Manitoba applies the same effluent discharge standards to both wastewater treatment lagoons and wastewater treatment plants when they have comparable discharge characteristics. Municipal wastewater effluent standards set the limits for bacteria, organic matter, suspended solids, and nutrients.

Bacterial limits are based on fecal coliform or E. coli. Organic loading and suspended solids are limited to protect oxygen levels in receiving waters. For nutrients, specified -- specified facilities are subject to limits for phosphorus and nitrogen, or may be required to demonstrate a nutrient reduction strategy.

These requirements are applied for licensing to manage potential impacts on water quality. The provincial limit for unionized ammonia is less than 1.25 milligrams per litre, and used to prevent acute toxity (sic)

-- toxicity during discharge. For continuously discharged system, the total ammonia limits are typically established on a site-specific basis.

This slide will talk about our environmental assessment and licensing process. Manitoba's environmental assessment and licensing process begins when a proposal is submitted and the department completes an initial proposal review, including an initial assessment to determine whether ground indigenous consultation may be required. The proposal is then posted to the Public Registry for public comment, and circulated to Technical Advisory Committee members for technical review, while ground indigenous consultation is initiated and carried out as appropriate.

When a public meeting or hearing is requested or directed under the Environmental Act, the matter may be referred to the Clean Environment Commission. Following licensing, the Environmental Compliance and Enforce -- Enforcement Branch is responsible for compliance and enforcement of licence conditions during its operation. Alteration and expansion generally follows the same process, although minor alterations may not require advertising or a Commission hearing, depending on the nature of the change.

Next few slides will summarize the proposal departmental review and key steps in the assessment and licensing process for the Harbour Colony Holding Company Limited - Wastewater Treatment Lagoon.

An Environmental Act proposal was submitted on August 17, 2023 by 7317434 Manitoba Limited on behalf of Crystal Springs Colony Farms Limited to construct and operate a new developed -- domestic wastewater treatment lagoon in the RM of Armstrong.

At the time of submission, the new colony development had not been formally named. The department was later notified that the project would be known as the Harbour Colony Holding Company Limited - Wastewater Treatment Lagoon. The Environmental Act proposal for the Harbour Colony - Wastewater Treatment Lagoon and supporting documents are made publicly available through Manitoba Environmental Approval's public registry.

The proposal was advertised in the Stonewall Teulon Tribune on Thursday, October 26, 2023, and Express Weekly News on Thursday, November 16, 2023. The closing date for comments from members of the public was November 30, 2023. In response to a request, an additional one-week

extension was provided to -- to submit public comments.

The proposal was distributed to the Technical Advisory Committee members on October 23, 2023. The closing date for comments from members of the TAC was November 27, 2023. To address Technical and Advisory Committee and public comments, the proponent submitted additional information on April 15, 2024, October 22, 2024, December 10, 2024, December 20, 2024. The Notice of Alteration request was submitted on April 16, 2024, and it was for the revisions to the design as a result of the public and TAC comments.

This slide will provide a overview of the proposal. The proposal was for a domestic wastewater treatment lagoon in the RM of Armstrong, receiving mainly domestic wastewater, truck wash runoff, and abattoir wastewater, excluding blood, with treated effluent discharged to Willow Creek and, ultimately, to Lake Winnipeg.

The design criteria was proposed as follows. The design included flood protection to the 200-year level, 1-metre freeboard, and capacity for a population equivalent of up to 250 people with loading adjusted to account for

abattoir wastewater. The wastewater treatment lagoon would be plastic lined with a high-density polyethylene liner, and it will include both gas relief and leak detection system.

During the review process, the proponent submitted a notice of alteration to increase the volume of the primary cell -- lagoon cell -- to accommodate the inflows during an extended trickle discharge period, and proposed additional tree planting to improve sidelines around the lagoon. The proposed design met the minimum provincial requirement under the design objective for wastewater treatment lagoons, and the Technical Advisory Committee identified no outstanding concerns. Effluent discharge is proposed to occur seasonally between June 15 and November 1st through a controlled trickle discharge, following confirmation that the effluent quality requirements will be met.

The lagoon includes flood protection to a 200-year level, and the bio-solid removals is not expected for ten to 20 years. Any future bio-solids land application would require a separate site-specific licensing. The Director of Environment Approvals Branch did not recommend a Clean Environment Commission public hearing because the potential environmental impacts are well understood and can

be effectively managed through licence conditions. The decision was communicated to the proponent and commenting public on March 10th, 2025, and it was appealable to the Minister of Environment and Climate Change.

Under Section 6(5) of the Environmental Act, the Minister requested that the Clean Environment Commission facilitate a community learning session, which was hosted by the Department on June 4th, 2025. The Minister for Environment and Climate Change received appeals of the Director's decision not to recommend a public Environment Commission hearing. As a result, on September 12, 2025, the Minister directed the Clean Environment Commission to conduct a public hearing under Section 6(5) of the Environmental Act, in accordance with the issued terms of reference. Following the hearing, the Commission will submit a final report with recommendations to the Minister under Section 7(3) of the Act. The proposal and supporting documents remain available on the Environmental Approvals Branch public registry.

This concludes the overview of the regulatory framework and the steps involved in the manageable environmental assessment and licensing process for the Harbour Colony Holding Company Limited - Wastewater

Treatment Lagoon. Thank you so much.

THE CHAIRWOMAN: Thank you, Ms. Sagan. So, your presentation is received and we'll mark it as Exhibit CEC-1. So, this presentation is setting out the steps in the review process, and so it's not subject to questions. After this presentation, we'll be hearing opening statements from the parties, and then when there are technical -- there's technical information that's provided by the parties through their experts, those presentations will be subject to questions from the parties, as well as, if we have time, some questions from the public. Thank you for your question.

This information is information about the process, so it's delivered as information. It's not a technical report or an opinion, so it's received as information by the CEC. Thank you.

Okay, so we'll now proceed with opening statements from the parties, beginning with the proponent. Mr. Kathler?

MR. KATHLER: As a preliminary matter, I -- I may as well address the issue that you raised with respect

to the identity of the proponent, if that's acceptable.

So, you'll hear several names throughout this proceeding, and you've seen several names in the materials that have been submitted. Crystal Spring Colony is a Hutterite colony. It refers to a settlement, not necessarily an (technical inaudible) that is south of Niverville, east of St. Agathe, and just west of Otterburne, Manitoba. Harbour Colony is the -- the future daughter colony. Colonies occasionally reach a size, such that they split, form new colonies. Harbour Colony is the -- the settlement name of the proposed future colony.

The original applicant, 731 Manitoba Limited -- the numbered corporation -- was incorporated for the purpose of -- of the development of Harbour Colony and then was subsequently changed through registrations in the company's office to Harbour Colony Holding Co. Limited, and that's properly the -- the proponent is that corporate entity called Harbour Colony Holding Co. Limited. If -- if you have any questions, I'm happy to address those. Otherwise, I'll move on.

So, Madam Chairwoman, this public hearing concerns, really, just one question, and that's whether the

proposed wastewater treatment lagoon for Harbour Colony is environmentally acceptable and should be approved subject to appropriate licence conditions. All submissions, all evidence, all inquiries should lead to this fundamental question as set out in the terms of reference that you read in their entirety to open this hearing.

The project itself is nothing particularly new. It's nothing particularly innovative. It's a two-cell facultative lagoon designed to serve the future families of Harbour Colony itself that's a community of Hutterites, of Canadians, of Manitobans, expected to grow to a population of pushing 200 individuals. You'll see 250 throughout the materials -- that was a design choice, not an anticipated population.

The project is a type of infrastructure that's -- that's common across southern Manitoba. It's common across rural Manitoba. There's hundreds of similar lagoons operating in the province under similar licence conditions. It's established, it's reliable, and it is a method of treating wastewater from sources such as the proponent's.

Now, the lagoon was designed by qualified

professional engineers, and that's Burns Maendel Consulting Engineers, experienced with similar designs. This is not the first lagoon that they've designed, Madam Chairwoman, and they're experienced in colony development more broadly, using as -- and the -- the lagoon is designed using the established provincial design guidelines and best engineering practises by Burns Maendel.

Now, it's through Mr. Daniel Burns that the proponent's evidence will actually be entered. Mr. Burns and his team have been involved in this project from its initiation, and the proponent has relied heavily on -- on his consultation. That's inception, proposal, design, Environmental Act proposal, and in support of the process leading up to where we are now today. When he appears before the Panel, his presentation will cover his background, of course. It will cover the development of the project, investigations, preliminary investigations that were undertaken in support of the lagoon development. He'll address considerations like project siting choices, considerations regarding the technical design of the -- the lagoon itself, including safety features, and he'll address operations.

Now, when Mr. Burns is presenting, it's --

it's not my intent, for your sake, to do a direct examination leading him through question by question. I will give Mr. Burns the latitude he deserves and respects, and where appropriate, I may ask follow-up questions if I think it'll assist the Panel. Of course, he'll be available to answer any questions from Mr. Williams or from the Panel Members thereafter.

Now, we expect the evidence will show that this is not a proposal that's come forward without scrutiny. Ms. Sagan has just gone through the timelines of this project. We're -- we're over two and a half years in through the Environmental Act proposal, original public notices, public comment, multiple rounds of technical advisory comment and review, and corresponding responses, which Ms. Sagan -- has highlighted as well. The record also demonstrates that issues that were raised by regulators, by members of the public, by the RM of Gimli, have been considered. Many of those have found their way into the Notice of Alteration that was also mentioned by Ms. Sagan, and many of those will, we hope, ultimately find their way into potential licence conditions that can -- that can support this proposal.

Now, against that background, the proponent

submission rests, really, on three central positions. First, that the project complies with the applicable regulatory and -- and legal framework. That was confirmed, of course, by the Director, and there was no recommendation for -- for a hearing before this Panel initially. Of course, that was subject to appeal, which was granted.

Each of us has an environmental impact. We're not here to say that there's not going to be an impact. It's recognised that any development, any individual has an environmental impact. That's not the question that we're here to address. And the governing legislation does not and cannot require that we eliminate environmental impacts. That is not a reasonable standard. It requires that the project be assessed based on its anticipated effects, and that it be approved where those effects can be properly managed, whether it's through conditions, whether it's through best practises and operation, and in all steps leading to where we are today, in initial design.

You'll hear evidence that the project has been designed to meet or exceed provincial standards. It's been designed to meet or exceed requirements for potential site-specific conditions. Overlying flooding, we expect, is an issue that will be raised from time to time throughout

these proceedings. Those have been considered in the design. It's been designed to meet or exceed setback requirements under municipal bylaws, and it's designed with a conservative capacity over and above those initial design parameters for 250 people, which would be well in excess of an anticipated maximum population. There's no evidence that it cannot meet the effluent limits that are prescribed by the government or that the operational requirements the government requires in Manitoba.

Second, the evidence will demonstrate that the environmental effects associated with the project are limited in scale and manageable. The lagoon will discharge treated water -- it will be treated water -- through natural processes on a controlled, intermittent basis.

The issue of nutrient-loading in Lake Winnipeg, it's serious. It's well-recognised. We read about it in the papers all the time -- everyone in this room. But the evidence will show that this project represents a very small percentage within a much larger and more complex system, and it's influenced by -- by numerous point and non-point sources, whether it's other wastewater treatment lagoons, wastewater treatment plants, agricultural runoff, sources from Saskatchewan, sources from

North and South Dakota. Really, the entire Lake Winnipeg drainage basin. Assertions of risk, particularly when framed at the -- the watershed scale, they have to be grounded in project-specific evidence. At the end of the day, we need to come back to the terms of reference. What is the impact of this project?

Third, where concerns have been raised, it's the proponent's belief, and it was the belief of the Province of Manitoba, that they're capable of being addressed through appropriate and targeted licence conditions with respect to lagoon operations. This isn't a case where the Commission is faced with unacceptable, unmitigatable risk. It's a case where the issues identified can be managed through the ordinary mechanisms well known to operators of these types of lagoons, well known to the regulators, well known to Mr. Burns, and we submit that that's appropriate in this case.

The proponent, of course, recognises that -- that there's a deep concern about water quality. We -- we have no doubt we -- we will hear about that through this -- this proceeding, including, of course, the long-term health of Lake Winnipeg. Those concerns aren't abstract. They affect livelihoods, they affect recreation, they affect water quality. They're taken seriously, and they have

informed both the design of the project and the responses provided throughout this process. But at the same time, it's, of course, important to distinguish between system-wide environmental challenges and the specific question for this Commission. Commission's mandate, as I've said multiple times now, is to assess the environmental impact of this project. It's not to resolve broader policy concerns related to provincial nutrient standards, related to environmental approval processes. It's not here to resolve zoning disputes. It's not an investigation into the colony development as a whole. It is with respect to a wastewater lagoon. It's not the forum to address the cumulative impacts at a scale that extend beyond the impact of this lagoon. That is -- that is beyond the terms of reference.

When the evidence is properly focused on the project itself, it demonstrates a development that's consistent with established and best practise, compliant with government standards, and is capable of being responsibly and safely managed and operated. The proponent should acknowledge the participation of the RM of Gimli, local residents, other stakeholders throughout this now-lengthy process. Despite that engagement, we recognise that there are some for whom no answer the proponent provides will be acceptable. The proponent understands that, that

some simply do not want to see this go forward at all or would have conditions so onerous as to amount to effectively the same thing. There will not be agreement on many points, and this isn't always an easy process for the proponents, for the members of the public, for the RM, or for your ladyship and your -- your Panel Members. It's -- it -- well, the representatives of the Colony, they've -- they've done what they can over this process to participate in good faith over this more than two years. This is not a new project. They've -- they've complied in good faith, and they're here before the Commission now to do the same. They have a genuine belief in their project and they have a genuine belief that -- that their future home can be managed in an environmentally responsible way. Those are my comments. Thank you.

THE CHAIRWOMAN: Thank you. We'll now hear from Counsel for the RM of Gimli.

MR. WILLIAMS: Good morning, Panel. This hearing concerns a proposed lagoon development that will discharge directly into Willow Creek, an ecologically sensitive water course with a clear and direct connection to Lake Winnipeg. At its core, this case is not about whether wastewater can be treated. It's about whether this

particular project -- and by that, I mean the whole project in this particular location -- has been sufficiently assessed to ensure that its impacts are understood and appropriately managed before approval is given. The RM of Gimli's position is straightforward. We say that the current record does not yet provide that level of assurance.

You'll hear two different approaches to this project. On the one hand, the proponent and the Clean Environment Commission's own technical review take the position that the proposal for this single element of a much larger development is acceptable at a conceptual level, and that many of the important details can be addressed later, through licensed conditions, operational planning, and regulatory oversight.

On the other hand, the municipality's expert evidence takes a different approach. It examines how the system is likely to function in real-world conditions within the Willow Creek watershed, and identifies specific risks that arise in that context. My learned friend suggested that, at the end of the day, this is a small percentage of -- of what's actually ending up in Lake Winnipeg, and I'm reminded of the analogy that, Elephant eats -- elephants eat peanuts, which essentially means that it's no explanation

to say, 'Hey, this is just a small bit of -- of -- of loading', because at the end of the day, you can have lots of small bits of loading that ultimately end up with a big problem from our perspective.

The risks are not abstract with respect to this. They include the fact that, during low flow periods, lagoon effluent may comprise a substantial portion, potentially the majority of the receiving creek's flow, meaning that discharge quality directly determines water quality in that system. The potential for impacts on a Class A fish habitat and downstream wetlands and the cumulative contribution of point source discharges within a watershed that's already under nutrient stress and subject to more stringent provincial targets.

And on that last point, our expert evidence identifies a broader issue. There is growing and unnecessary misalignment between historical regulatory discharge limits and the current ecological objectives, particularly in relation to the phosphorus loading in Lake Winnipeg. In that context, a single lagoon simply meeting a provincial limit does not necessarily mean that a discharge is environmentally protective in a sensitive -- in -- in the context of an interconnected system such as

this one. And the mandate itself is to -- I emphasize this -- consider the potential environmental and public health effects of the proposed Spring -- Crystal Spring Colony Wastewater Treatment Lagoon, and -- and that is regarding potential environmental effects. So, to suggest simply, we just look at the targets as it relates to the lagoon, and -- and that's the end of the story, in our respectful submission, is not what you're here to do today.

Now, the municipality's not here to oppose development for its own sake. What we're asking for is something more fundamental. We're asking that the key environmental questions be assessed at this stage, as opposed to deferred on the basis of ill-defined, imprecise, and vague references to licensing conditions and subsequent oversight. And we do so to ensure that there's sufficient clarity and specificity so that the Commission can make an informed decision. On that point, we expect you'll hear that many matters can be addressed through what are called Resolution Pathways -- licence conditions, operational commitments and construction verification. But a central issue in this hearing is whether those resolution pathways have been sufficiently divide -- defined, considered, and assessed to justify that level of confidence, or whether, instead, they represent an assumption that the future

processes will solve -- solve problems as they arise that have not yet been fully examined.

Our position, as you will hear, is that it is the latter, and ultimately, approving now and relying on future as yet undefined conditions to resolve core issues carries a real risk. It carries a risk to Lake Winnipeg, it carries a risk to the people of Armstrong, some of whom reside in very close proximity to this proposed lagoon, and of course, it carries a risk to the people of Gimli, who will be required to bear the burden of the downstream impacts that this development will give rise to.

As you're aware, this development and lagoon is at the very edge of the Armstrong Rural Municipality, and -- and the degree of consultation and involvement from the RM, I expect you will hear, was woefully deficient, and had this particular development been placed in the RM of Gimli, it wouldn't have been approved. And so, for that reason, we need to be -- pay careful attention to exactly the facts surrounding the -- the development and -- and -- and where we are today.

At the end of the day, the RM's position is the question of timing and sufficiency. Had enough been

done -- has enough been done here now to demonstrate the project's impacts are understood and can be appropriately managed, or are there critical gaps that be -- should be addressed before approval's granted? The municipality's position is that additional work is required, not to stop the project but to ensure that it proceeds, if at all, on a sound and defensible environmental basis. Those are my submissions.

THE CHAIRWOMAN: Thank you to both the proponent and RM of Gimli for those opening statements. The next item on our agenda is the presentation from the proponent's consultant, Mr. Daniel Burns.

MR. CROCKER: Good morning. Peter Crocker. Could you state your name for the record, please?

MR. BURNS: Daniel Burns.

MR. CROCKER: Daniel, do you swear that the evidence to be given by you shall be the truth, the whole truth, and nothing but the truth, so help you God?

MR. BURNS: I swear.

MR. CROCKER: Thank you.

MR. BURNS: Switch over to this one. It feels more comfortable. Right side, sorry. All right. Thank you, and good morning. I appreciate the opportunity to -- to present to the Commission, as well as all in attendance today, and the public. It's been a -- a long process, obviously, that we've been -- we've been working through, and look forward to hopefully answering some questions that arise today and having some resolution, so it's great to be here. And I will be presenting, you know, the technical background and details for our lagoon design, providing some information on -- on that design itself and why it was designed and how it was designed and -- and a number of the factors that were considered throughout our design process.

I'll start with a little introduction. My name's Daniel Burns. I'm a senior partner and owner of Burns Maendel Consulting Engineers. If I refer to ourselves as BMCE, that's quite often what we do. Our firm is located in Brandon, Manitoba. We have satellite offices in Portage as well as in Moosomin, Saskatchewan. Our firm specializes in land development, municipal projects, buildings and structures. We have a long-standing history of working with

Hutterite colonies across Manitoba. I've been working with Hutterite colonies since probably the late -- late '90s on a wide variety of projects. I grew up on a family farm half a mile from a Hutterite colony, so I've been well-versed in -- through the Hutterite culture and understanding as -- since I was a kid. So, we've been doing a lot of work with colonies over the years. Currently, in fact, I'm working on six different projects that are daughter colonies throughout Manitoba at various stages. Some are almost built out. Some are in the planning stages. Harbour or Crystal -- sorry if I keep mixing those two up today -- is in kind of the mid-stage and have started construction, so that's one of the projects that I've been working with since 2021, actually.

Since founding BMCE in 2008, we have successfully completed a number of domestic manure storage lagoon projects for Hutterite colonies. All have been functioning with approved licences and parameters, and we're not aware of any issues, any emergency discharges that had to have occurred from any of the structures that we've designed. I will admit, I'm probably in the engineering world conservative, so I know that my design is typically fairly conservative when we look at the sizing. That's just something that we've always -- always done. I've always

believed in the cost of front to make it a little larger is a -- a good well investment versus having issues with capacity later on, because that can be a challenge for lagoons in the Province of Manitoba.

Crystal Spring Colony, as Mr. Kathler had mentioned, is a -- a Hutterite colony located in the RM of De Salaberry, close to St. Agathe. They have a current population of approximately 200. They have existing manufacturing at the existing colony site of -- they produce some hog feeders, and they have a -- a business that manufactures grills, barbecues and such. They have livestock. They have hogs. They have chickens. They're a pretty common, traditional Hutterite colony throughout Manitoba. Very similar. They purchased land in the RM of Armstrong and the RM of Gimli, and -- approximately 5,000 acres combined within the two municipalities -- and began the process of planning a new colony in early 2021.

Do we want to copy it over into that other laptop? Would that be better? All right, we'll try that again. It's working? Everybody can hear me all right in the back?

I thought I'd start a little bit this morning

-- I was just touching on -- that Burns Maendel has been working with the proponent, Crystal Spring or Harbour Colony, since 2021. Just a little bit on the -- on the timelines, actually, of -- of that, just to give you an idea that, you know, this -- this just isn't a -- a not-well-planned and thought-out project. You know, this project has been well-planned from day one. Crystal Spring Colony recognised the impacts of -- and the difficulties -- of starting a new daughter colony site. It wasn't like the old days where they just bought a piece of land and started building. Obviously, there's a lot of rules and regulations in place now that they didn't have to do 50 years ago when they developed at their current site, and that was why they came to Burns Maendel. We've -- we've done this for a number of other colonies, and we've built up that reputation in the Hutterite communities as understanding the processes required in order to move through a development.

So, as I mentioned, in -- in February, 2021, Crystal Spring met with us, and we were retained to provide the engineering and technical expertise for the design of their -- of their colony. There's a lot of steps that happen in order to move forward with a project of this magnitude, if you can imagine. A colony, in some estimates, it's a $50,000,000.00 investment, from buying land to being fully

built out, so it doesn't just happen overnight. It's definitely not willy-nilly. We typically will start with a detailed regulation review. So, they identified the land that they owned and where they thought they would like to -- to build the homestead, and with that, we bore through all of the regulations that are applicable, whether those are planning, zoning bylaws, development plans, heritage resources, endangered species, nutrient management, you know -- basically all the various plans and regulations -- and we generate a report -- a simple form report -- and advise to the suitableness of the proposed site. So, that was done in -- in 2021, early.

With that, we also conduct a detailed topographical survey. Heritage resource assessment was completed. It was identified that the site looked suitable for -- for construction of a new colony site. Groundwater assessment in the form of a desktop review from Friesen Drillers was completed to ensure that there was adequate water. Obviously, water's a key for -- for all life, and for a colony is -- is no different.

We move on to then beginning the development of a site plan. So, we look at the site, we look at our topography, natural lay of the land, where there's bush,

forest, and -- and we develop a layout that would be suitable for the future. You know, we're creating a master plan for what this community is going to look like in 50 years, so it has to be well-thought-out, where all the buildings are going to go. That includes the lagoon.

Site plan was developed in '21. A development permit was then applied for with the RM of Armstrong for the development in accordance with the RM of Armstrong's zoning bylaw. A communal farm was a permitted use in agricultural land, so a development permit was applied for and -- and approved. With that, that kind of signals to the proponent that development will be acceptable in that location, as proposed, once we'd obtain that development permit.

So, with that, then -- then, you begin more detailed design, a geotechnical investigation, looking at the detailed soil stratigraphy in the area, what type of foundations buildings might be on, suitability for lagoon, whether it's a liner, a clay liner. We look at a number of factors with the geotechnical. That also helps us refine the siting. You know, we might have an area that has poor soil quality for bearing and we may relocate buildings from that area, so we use the geotechnical information for that.

So, that was completed November '21 -- in November. And through then, we began kind of the design process and approvals process, and it was identified.

'22 was a wet year. The Interlake saw significant rainfall events that we'll talk about today. There was overland flooding in -- in -- on some of the properties that we've proposed for development. So, with that, we identified that a hydro-technical investigation was warranted to determine what those flood elevations would be, what our expectations should be, what the flows would be around the site through the Malonton Drain. That was commissioned and completed, and that information was utilized in -- in refining our design.

With that, then we moved on to the Environmental Act proposal submittal for the lagoon. So, Burns Maendel executed -- executed the design of the lagoon. We generated the Environmental Act proposal, which was submitted (inaudible) to the Environment Branch, which is a fairly standard typical process that we do for all domestic lagoons. We are still working through that process, obviously, and that's the reason for the hearing today. Hopefully, we're on the back end of it.

And also in there, I have drainage licences. Those are also pieces that are required for the development. So, we have applied for and obtained all required drainage licences for the project as well, and that includes two aspects. One being the development of the colony site, the drainage licence that's a requirement for that, as well as the installation of a new access and culverts through the Malonton Drain is a -- requires a licence from MTI. So, we have obtained those as well.

So, we -- we feel like, you know, building and planning a colony is a process. It's a step-by-step methodically thought-out process, and -- and obviously, the lagoon is only -- is -- is one piece right now that we're here today to obtain. There are all kinds of other licences that will be required along the way. There's -- you know, there's building permits that still will be required as the buildings are constructed. There's a licence for livestock, if required. There's -- there's a number of different other licences, processes that have regulatory requirements throughout the construction and the evolution of a -- of a colony site. You know, it -- it -- it takes time and it's a step-by-step. You can't design it all at once at the beginning because it's fluid. It's moving. You're making changes on the fly and you're making decisions as you get

more information and more results.

So, just touching on a little bit of -- of that work, if I back up -- preliminary data and regulatory documents. These are just the lagoon-related zoning bylaws, proposed development site, and the surrounding mile sections. They're all AG General, meaning that there's no planned developments within that land that have been identified. Communal farm-dwelling, it's permitted under the AG Zoning and the RM of Armstrong. So, conditional use was not required. Nutrient management regulation outlines setbacks from wetlands, water bodies and water courses. Based on the proposed site, a three-metre nutrient buffer must be adhered to. Site elevations, I noted in 2021 -- or sorry -- we noted in 2021, the high-water event that occurred -- (inaudible) '21, not '22 -- within the area. This was -- necessitated the -- the need for the hydro-technical investigation that was conducted, that has formed a large part of our design rationale, even the setting of building elevations, finished floor elevations. You know, we want to make sure that everything is well-protected above the 200-year flood elevation.

Fisher Armstrong Planning District Development Plan provides insight into general-use land

policies, agricultural area, use transportation within the area, waters and shoreline heritage resources, et cetera. That was reviewed.

Willow Creek Integrated Watershed Management Plan, it was reviewed. Provides recommendations into surface water management, drainage projects, wildlife, fish habitat protection practises within the area.

So, those were all documents that were reviewed and considered as part of our design. Once the lagoon was designed to -- to proceed -- or the decision was made to proceed, then you move into the detailed design of the lagoon itself. As was presented this morning, the lagoons in Manitoba are designed in accordance with provincial guidelines and regulations. They lay out a number of factors that must be considered for -- for the design of a lagoon. That includes the loading, the loading rate, placement of it, setbacks, geometry, size of the cell, the depth of wastewater within the lagoon's facility. That's all laid out in -- in their guidance document. So, we basically design size of lagoon according to their -- to the regulations and then generate a detailed EAP report that is submitted, and that was what was provided and has been provided in (inaudible) subject of today's proceedings.

Through that process, I mentioned that a site plan is developed. So, I just wanted to give kind of an overview, a little bit more of -- of what's proposed on the full -- full build-out. You know, this is a 25 to 50 years down the road type full build-out.

Let's see if I can get the mouse to work here. How's that?

So, just to -- to provide a little bit of information, obviously, this -- this is the main access road that's been constructed off 106, heading north into the colony site. If you continue that to kind of the end of the road, the residential areas proposed for construction up in -- up in this corner. Anybody that's drove by recently as well have noticed that there's a couple of houses that have been -- construction has commenced on. That's along this front here. So, that will be the residential area. I'm not sure how familiar anybody is with -- with colonies. Typically, the residential area surrounds their community building, and the community building will consist of a communal kitchen, the church, an assembly occupancy space. So, that's sort of the heart of the colony.

If you back out from there, they've got a public utilities building that's been constructed. So, within the public utilities building would be your plumber, your carpenter, your electrician, anybody that's in charge of looking after utilities on the -- on the site. A shop will be constructed. Manufacturing -- proposed manufacturing kind of down in this area, and poultry operation kind of off to the west.

So, that's a fairly -- and obviously, the lagoon in the southeast corner, as proposed. That's a fairly standard kind of layout to a colony. They all come in different forms, but they have those main components -- a manufacturing area, a livestock area, and an -- and a residential would be the three standard -- excuse me -- components to a colony.

So, if we look at the -- the lagoon itself, subject of today, why were -- why did we place it there? So, when we looked at the colony and the site, the lands kind of in the -- in the northern portion are a little better quality. It's closer to the Willow Creek drain. We looked at topography. This area is a little -- you know, it's less value from an agricultural perspective. It's poor land type. It is a little lower. There's some willows and some

-- some brush growth on it. We looked at discharge, too, from the lagoon, knowing that it needed to discharge and that drainage pathway was selected to be the drain, the west side of Road 15 East, and that was why it was -- it was placed there.

We looked at the setbacks. It's 30 metres required from property line, 300 from a residence, and the decision was to -- to design and place it there. So, that's -- really, that was the rationale behind the design, topography, land use, meeting setbacks and proximity to -- to the drain.

As I indicated, we had noted that -- been advised that that area was prone to overland flooding or -- so, we did do the hydro-technical investigation to assess that and determine what elevations we needed to be considering in our -- in our design.

Having selected that as the location, the geotechnical investigation was commenced. For this particular site, the geotechnical investigation was fairly extensive because we didn't limit it only to a lagoon. We recognise that the value in -- in doing the geotechnical investigation on a broader basis for the entire colony site

would ultimately save them some funds in the -- in the long run, so we were looking at the foundations for buildings. You know, we were looking at groundwater, potential issues that would impact construction, shallow groundwater, and also the lagoon assessment for -- for the clay, to see whether the clay would be suitable for a clay-lined lagoon or not.

Just this table shows sort of the two test holes that were done within the vicinity of -- of the lagoon. I won't get into too much details, but essentially, the soils were deemed unsuitable for a clay liner. So, with that information, it was determined that, 'Okay, we're not going to use clay. We'll -- the design will include a synthetic or a -- a plastic liner, a 60 mil HDPE.' I should have brought a sample. These liners are thick. Like, they're -- they're 60 mils. They're heavy. It's a heavy sheet plastic with a textured surface on it so that it's -- if it's wet, it's not slippery. You know, like, they're -- they're really robust material, standard in lagoon and manure storage facility designs. For -- for years, they've been utilized.

One note I've got here, groundwater encountered during drilling showed water in two of the 27

test holes at depths of 2.6 to 5.6 metres below surface. So, (inaudible) the 27 test holes were drilled to various depths, only two showed any groundwater. It's a -- it's a pretty tight clay -- silty clay till with some rocks, boulders, obviously, but it's a -- it's a -- it's a heavy -- classified as a heavy soil, and with no direct connection to aquifer (inaudible) at those depths. So, we -- we -- we deemed that groundwater and groundwater, you know, protection is -- is important, but we weren't concerned with it as we didn't find that there was groundwater close to the surface that would be or could be potentially contaminated.

As I talked -- spoke already the hydro-technical modelling that was done. I won't get into too much of the -- the details of it, but we did recognise that it -- it was wet, has been wet in the past, and we wanted to investigate that. Several models were run, looking at channel velocities and elevation of surface water under those various models with different frequencies. So, like, a one-percent frequency would be a one-in-a-100-year event and a 50-percent of one in two-year events, so if you kind of -- following that in the -- in the tables there. This data was utilized as a large part of our design. It -- it was -- forms the basis for the culvert sizing through the Malonton Drain that we utilized to obtain a licence for --

from MTI for the -- those installations of the access, the culvert sizing of the unnamed drain that runs kind of diagonally through the colony site itself, and also, the surface water elevations for flood protection level.

I guess, on that, I can, like, touch on -- a one-in-a-100-year flood event was determined. The corresponding berm elevation of 248.5 would provide a 600-millimetre or 0.6 metres above the 100-year flood elevation. So, that's what it was set at. Through the -- the process and the review of TAC, the request came for an analysis to a one in 200-year flood elevation. So, that was remodeled, and that request came back that high-water level of 248.06 was -- would be the one in 200-year elevation. So, our berm height still provides a -- a free board of 0.45 metres -- or 18 inches, for some of us older people -- above the high-water elevation for a one in 200-year flood event. That's the outside of the lagoon. So, you've got 18 inches or 0.45 from one in 200-year elevation of surface water. On the inside of the lagoon, there still is a -- there's a one-metre freeboard buffer that is also designed into that. Now, (inaudible) further into that.

So, if we move on to, kind of -- that was the bit -- a little bit of the regulatory side and some of

the work that we did in order to assess the lagoon suitability and location, then moving into the actual technical design methodology of -- of what we did and how a lagoon is designed commonly in the province. That's the next section.

Domestic. So, a domestic lagoon -- typically, there's two -- there are two governing things that are utilized in the design. One is hydraulics. So, how big does it need to be? Can it hold the -- can it hold all of the wastewater that is being generated and sent to it? And organic loading. In the organic loading, the sizing speaks to appropriate treatment of it.

Domestic lagoon loading for this particular job, 75 cubic metres per day was our design. Residential population. You know, based on historical colony sizes, most colonies start to think about splitting around the 150 level. They'll have a bit of a buffer. They might get up to 200 before they've actually split. I usually choose -- or I like to choose 250 as a bit of a conservative number to make sure that I've got some extra capacity. Like I said before, it's easier to oversize the lagoon now and have an extra buffer and extra capacity than to have capacity problems in the future. That's -- that's a huge problem,

so I typically like to design for 250.

Provincial loading rates are arranged, typically, from 283 to 300 litres per person per day. That's from Statistics Canada. We typically choose 300. In today's world, they're -- probably, that's a little high, but that's still a conservative number. Again, I'd prefer to be conservative on what I'm estimating that -- that water usage as.

The abattoir wash water. So, that's -- obviously was -- has been and will be a -- a issue that comes up. I want to make sure it's -- that it's clear an abattoir, while I use that name, this isn't a commercial abattoir. This is the -- the colony going out once a month or once every couple months, killing some chickens and some hogs for their own consumption and to cook in their own kitchen facility. This isn't commercial abattoir, where they're producing and selling to the public or shipping off. There are some colonies that do that. This is not one. This -- they're -- this abattoir's purpose is for their own consumption, so it's not a daily, every time used. It's intermittent when they need to produce some of their own produce that they are raising for their own consumption of -- of their people.

So, in that, I can say that a lot of other designers that I've looked at, and I went on the public registry and reviewed a number of other consultants, most that are doing Hutterite work, or a lot, don't even account for abattoir wash water. It's happening because every colony does it. We want to be transparent. We want to make sure that we're accounting for our numbers, so it was included in our design. We made sure that we included an allowance and a provision for the anticipated loading and -- and organic loading from that -- that process.

The other piece of our loading is backwash water from water treatment plants. That's a difficult one to really reign in an exact number on yet at this stage, because we haven't moved into the water treatment plant for the colony, but when you treat water, there are various filtration that will require some backwash, and there's backwash component. That -- that water goes to waste or goes to -- to drain and goes out to the lagoon. We've provided a -- a pretty conservative estimate of 13.27 cubic metres per day for that backwash process as well, and we've also included a 15 percent kind of a wet weather infiltration. That's pretty standard in what we would do in -- in a city or a town when we're designing a sewer

system. For -- during wet weather events, you're going to have infiltration into manholes and to, potentially, joints. You know, old sewer -- old infrastructure has joint leak problems new stuff won't have, but in the future, it may. So, there's an allowance provided for that. That's the 15 percent. So, that total in the hydraulic loading, you know, equates to roughly 25,000 cubic metres, with a daily rate of 107 or 110 cubic metres per day.

THE CHAIRWOMAN: Sorry. Can you turn on your mic, Mr. Kathler?

MR. KATHLER: Mr. Burns, can you explain the nature of the effluent from the abattoir wash water system, and just describe exactly what will be making its way from the abattoir into the domestic lagoon?

MR. BURNS: (inaudible). I don't have that right in front of me, but I can provide that at -- at a later date. Essentially, the wash water's just the processing water, so it is -- it is higher in -- in organic or -- or BOD loading that would be transported via gravity -- sewer main out to the lagoon. So, it's -- it's not blood -- the blood is separate from that. It's just during the cleaning and the processing of those meats that that water

goes into the drain and will accumulate or be -- be pumped out to the lagoon. I could provide the percentage of BOD loading. Like, if you look here, we are -- if that's the -- 1.33 cubic metres per day would be the -- would be the volume of the -- on the hydraulic side. Let me look if I got it in the -- okay. The organic component of that 6.82 kilograms of BOD per day from the abattoir. So, you're -- you're beating me by one slide, so yeah. (inaudible). Okay. Is that sufficiently answered?

MR. KATHLER: Yes, thank you.

MR. BURNS: So, when -- upon determination of hydraulic loading then, we -- then, part of the lagoon design looks at the organics -- the organic loading. Typical residential wastewater in Manitoba has an organic loading of 0.077 kilograms of BOD per person per day. So, that is the value that would be utilized as part of that in our organic loading calculations.

As I mentioned, the abattoir loading of 6.82 kilograms BOD per day is also part of the loading requirements that would be disposed off into the lagoon. So, based on the design objectives for primary cells, they can't be loaded with more than 56 kilograms of BOD per

hectare per day. So, essentially, in the -- this design of your primary cell, it's a calculation of your total BOD loading divided by 56 will tell you how many hectares that primary cell has to be, and that is -- that is the sizing, and how the sizing of your primary cell occurs is based on that limit of 56 kilograms of BOD per hectare per day. And essentially, that number is well-utilized throughout the province. You know, if you look in different jurisdictions, there's different values. It's an established number through empirical. As much as anything, it's been found to work well in Manitoba to reduce and minimize odour issues from the lagoons, and as well as to provide the required design criteria, or the design or discharge treatment at the end of the day. So, that's the standard that is applied for lagoon design.

So, I mentioned the BOD for primary cell sizing. I should have clicked my slide, sorry. The primary cell utilized for organic treatment and the removal, organisms and pathogens. Utilizing the -- the -- the rates that we talked about -- the 56 kilograms per hectare per day -- from our design objectives for wastewater treatment lagoons, we end up with a primary cell that equated to 4,655 square metres or 1.2 acres. Cell width is then chosen. In this case, we look at the land and where we want to put it.

It was set at about 70 metres. Active height within that cell is defined by the design objectives as 1.2. So, on that, a lagoon typically has 1.5 metres of liquid within it. The bottom 0.3 or one foot is considered inactive. It's kind of below the invert of any discharge pipes and connection pipes, and it's there to allow for accumulation of sludge and bio-solids over time. So, that bottom foot isn't included in the calculations. It's dead space, but it -- there is a 1.5 metres of liquid in a facility. So, the active liquid volume 1.2 -- four feet -- based on the design objectives, you know, the primary cell has a hydraulic capacity, then, of 5,600 cubic metres. I assume everybody's okay if I run -- round the numbers up just a little bit. It makes it easier.

In this particular lagoon, through the TAC review, the requirement or -- for a trickle discharge was identified, and the question was asked by one of the -- I think maybe Gimli -- whether we had included enough capacity to handle while the trickle discharge was occurring. Was there enough capacity in the primary cell so that it wasn't entering the one-metre free board during that isolation time? And we looked at that and we -- we said, 'No.' If we're going to do a slower trickle discharge, we recalculated and we added an additional 2,300 cubic metres

of hydraulic capacity to the primary cell to allow us to isolate for a longer period of time. In that added capacity, then, you actually -- if you back-calculate your BOD loading -- because of -- what I mentioned before was 56 was kind of the target of what maximum was -- by adding that additional 40 days of storage, we're actually adding additional surface area, which then reduces our BOD loading down to approximately 23 kilograms BOD per day. So, we're running at quite a bit less on our BOD loading into that primary cell.

Secondary cell is -- main purpose is removal of suspended solids, nitrogen and pathogens, as well as just strictly retention and holding. Manitoba lagoons are not as effective in the winter. They're primarily dormant during cold weather, So we have to store liquid in -- in Manitoba for a period of time to get us through the winter for sure, and then also, a period of time to have some treatment occur and, you know, this -- right now, it'll be starting up again as the things begin to melt and the ice -- - ice thaws. So, typically, you need a hydraulic retention, and that is set at 230 days storage to be able to retain and not have to discharge to get us through that winter period. Discharge also due to -- to regulations cannot occur until after June 15th, just due to fish-spawning requirements as

well. So, we need to get to that timeframe. So, that's the primary -- or the secondary cell is sized accordingly based on our, you know, total loading. We figure out the secondary cell sizing, hydraulic capacity of 22,000 cubic metres.

So, just in a little bit of a summary, this is a -- you know, a -- a blown-up little sketch. It's hard for me to show you my engineering design plans on this form so that you can see all the details, but this provides you a little -- with a little bit more of a close-up of -- of the lagoon itself. One of the comments that came back from the public was, you know, 'We would like to maintain as much trees around it as possible.' So, we've proposed a plan, thinking about some additional trees to kind of close in the gap. You know, this is good -- good and bad. It's good from a neighbourly perspective of, you know, if -- if -- if it's deemed to be an eyesore. I -- I personally don't believe it is, but it also has a -- a negative impact. In -- in lagoons, we actually want wind action because we want to oxygenate. We want to get that water kind of stirred up to provide oxygen because that -- that optimizes the treatment process, so, you know, there's -- there's benefits, but it also isn't great from a treatment perspective, but we added the additional shelter belt and trees. But on this drawing, you know, as I indicated private

-- previously, primary cells, roughly 9,500 cubic metres in storage, secondary cell, 22,000, and the discharges out this southeast corner, which kind of we'll get into.

Again, the lagoon, the berms for this lagoon are designed for two feet -- 0.6 -- 600 millimetres -- above the one in a 100-year flood elevation that could occur on the lands around it, and 0.45 above the one in 200-year flood elevation.

THE CHAIRWOMAN: Mr. Burns, I'll stop you there. Might this be an appropriate time for a morning break?

In terms of your presentation. I don't want to break the flow of what it is that you're presenting, but I see that your next slide is -- has a new heading.

Great. So, let's take a 15-minute break. It's now 11:07. So, we have 15 minutes and we'll resume with your presentation. Thank you.

-- OFF THE RECORD AT 11:07 A.M. --

-- ON THE RECORD AT 11:22 A.M. --

THE CHAIRWOMAN: All right. I'll ask everyone to take their seats. We're going to resume the presentation by Mr. Burns.

And if anyone would like to continue their conversations, there's a lovely lobby with very comfortable couches -- I've tested them out, they are very nice -- but Mr. Burns, we'll turn it over to you to continue your presentation. Thank you.

MR. BURNS: Thank you.

So, everybody had a good short break there. I had a question asked, so I'm going to back up a few slides. Bear with me. There. Regarding the site plan. So, that maybe I just give you a little bit more detail on that. Then, I'll jump back forward.

Mentioned residential. So, this is a road, this isn't a pipeline. There's a road that runs through here and then runs out to here and down to the lagoon. You typically always have to have a road to provide access to your lagoon. So, that's the rationale there. The question was, "What's the donut on this site?" But I didn't touch on that, and I will. The -- the easy answer is it's a

dugout. It's a reservoir. It's a recreation area for colony members, for swimming and such, but that's not the primary purpose of it. The purpose of that ties into the storm water management plan for the colony.

So, this is separate from the lagoon, but I'll just touch on it a little bit. When you do a design or development in the province, you require a drainage licence anytime that you install a culvert or build a road or you're attracting natural flow of water. So, by developing this colony, we're obviously directing natural flow of water. We're installing culverts. So, a drainage licence is required from the province. The requirements of a drainage licence are, as we take this piece of property before development and we apply a design rainstorm that would occur in a one-in-five-year occurrence -- so, we call it a pre-five design rainstorm -- and then, we calculate how much water would run off based on a pre-five rainstorm.

So, I'm just going to give you some hypothetical numbers. Let's just say, a pre-five rainstorm results in 100 cubic feet-per-second discharge. Then, we come and we develop it, and we turn grass into gravel and roads and roofs, and -- and there's obviously going to be more discharge that occurs with after-development than a

pre-development. So, the requirements, then, are, we calculate all the impervious materials and some engineering calculations and we come up with a post-one-in-25-year storm. So, that's the requirement. You're -- you're comparing pre-five to a post-25. So, automatically, you have more discharge just due to the frequency of the storm intensity, but also coupled with the changing landscape and the infiltration of -- in the -- in the soils. So, you're going to have more runoff. So, let's say it has -- it would require a runoff of 300 cubic feet-per-second, which is 200 more than the 100 pre-five. We have to store that water, and then it's released at the 100. So, we can -- are allowed to discharge a hundred, a hundred, a hundred. So, we direct it all to a retention detention pond, and that's why you see detention ponds everywhere in developments, which is what this structure is. It collects the water, it's a buffer, and then it allows the maximum discharge from that site to be controlled at 100 cubic feet-per-second. So, that's the prime purpose of that. So, we have a licence for that. It's all been obtained through the province already. That's the donut. The -- the -- the Colony asked that we design a couple of terraces in it so that they could use it for -- for swimming and such as well, so -- normally, they're square and rectangular and boring engineering-looking things, but their request was something a little more.

So, I'll jump back. All right. Moving on to the last portion or section of my proposal, I think it is. Lagoon -- lagoon -- basically, this section is just going to detail the -- the -- the specifics to the lagoon itself and some of the features that have been designed into it for insurance of environmental protection.

So, again, it's probably going to be difficult to see, but I'll just point out some of the key kind of highlights, just so you understand what this lagoon is. So, I mentioned earlier, there's a 60-mil HDPE liner that's installed, and thickness-wise, it's 60 mils. Like, it's probably about an eighth of an inch. Like, it's a heavy, heavy sheet of plastic. It's not something that you can perforate easily. It's a heavy, durable piece of black polyethylene, essentially. It has a texture on it so that it provides a safety feature in case anybody was to slip into it. Early on in my career, I stepped on one of these things that was wet and unfortunately, it was a hog manure storage facility. I almost went in. I didn't, but it was pretty close. They can be pretty slippery when they're -- when they're wet. So, these -- this has a texture on it.

So, the footprint -- we -- we talked a little

bit about what's beneath the liner. So, beneath the liner, there is -- it's essentially a weeping tile grid. So, if you look at this drawing, all of these -- these lines throughout, those are basically a weeping tile system. So, it is installed below this liner and it's -- it is sloped. It's sloped towards the centre -- to this purple pipe that's in the centre -- and this purple pipe is then sloped back to this point, which slopes to here. There's one there and one here. So -- and at those locations, there's a -- a vertical sump pit so that, if there's any leakage from within that liner system, it's collected with these weeping tile pipes, which is just a perforated plastic pipe. It's collected. It's drained to a centralized location that's drained to a sump pit. So, it's a -- it's a -- a way of being able to monitor, and the licence requires weekly -- or not weekly -- monthly inspections and reporting to check the sumps to make sure that they're dry, and if there is anything in them, then it would be tested to determine whether it is -- if it's effluent or whether it would be groundwater or rainwater that may have -- may have been captured.

So, that's one of the mechanisms for protection of groundwater is -- is a -- a collection system. That collection system functions for -- as dual purpose. It

also actually acts as a -- a gas venting system for these synthetic liners. So, there's -- there's natural gases that occur in the earth that potentially can collect underneath the liners. So, if you went back to the early '90s when some of these liners were utilized, they used to call them a whale back. It'd be a -- it'd be a pocket of gas that might collect underneath the liner, and it would float to the surface and look like a big whale. Designs have changed over the past 25 years. So now, we design the system so that they have a gas venting capability. So, while those pipes are all sloped down towards the centre to permit collection of liquid, they also then obviously are sloped out and up towards the berms to allow gas venting. So, if there is any gases that are generated below that liner, they will flow -- naturally, they're -- they're going to flow towards the outside in the pipe and -- and come up and be discharged. So, that system does, like I say, two purposes. One is collection-monitoring and, potentially, gas venting, if that becomes an issue, to prevent whale backs in -- in the liners.

It's not too much exciting here in an engineering drawing -- and it would be difficult to see, I apologize, but -- so, this would be the interior slope of the lagoon. The liner is -- is anchored into an anchor

trench at the upper portion of the berm. That's normally a trench that's about two foot-by-two foot, and that liner just lays in it, and it's backfield so it holds it all tightly in place. The discharge pipe, as I mentioned earlier, is -- its standard invert would be 300 millimetres or a foot off the bottom floor. There is a valve -- so, valve stem. So, this is how it would be operated when you want to discharge. It penetrates through the berm and will deposit the effluent in a swale that has been proposed and licensed by MTI that then connects to the Malonton drain. So, that's just a section through a berm. It's a six-inch pipe, 150millimetre pipe. There's splash pads and rip-rap to prevent any erosion at the outlet. What else is -- (inaudible) HDPE pipes prevents UV light degradation. That's probably all.

I mentioned the anchor trench before. So, that's the anchor trench to hold the liner in place. Everybody laughs and chuckles quite often when they see why is there a concrete boat ramp. We call it a boat ramp, but it's an egress-ingress into -- to the cell. That's designed with a synthetic liner. It's tough to go back and do any work in the future. You've got to make sure you're protecting that liner, so you can't get equipment in and out easy. So, what we do, in the event that treatment requires

dosing of the cell with alum, we -- we design a ramp so that you can get in with a small boat and you can disperse your alum and agitate it, so that's the purpose of that. It also provides a -- a safety feature that -- if somebody was to slip and slide and fall in, that you can at least crawl out on -- on that versus a plastic liner.

With synthetic liners, Burns Maendel typically designs a pretty robust fence. The requirement from the -- the province is a three-stand -- three-strand barbed wire fence. I've always believed that we need something a little better, specifically with synthetic liners, because of the potential of a elk or moose. If they get in and they -- they may be able to puncture that liner. And also, to keep any, you know, livestock -- or not livestock -- any wildlife from -- from entering and slipping into the lagoon. So, we typically detail a pretty robust wildlife fence -- the -- with a page wire, solid fencing on the bottom four feet, and then there's two, another two -- so, it's a six-foot-high fence with barbed wire strands on the top, so it's a pretty robust fence to -- to keep wildlife and, hopefully, any kids and anybody that might be around -- around that lagoon. So, that's one of the safety features.

The drainage path has been a question that

has come up through the review process, but essentially, it is in the southeast corner. That discharge pipe that I showed you through the berm cell, the valve here, and then, there's a shallow ditch that ties into the roadside ditch. And that has been licensed to modification for this discharge into that ditch.

I guess I lied. I did have one more section, but I'll keep it short. Operational procedures. Just so people understand exactly how a facultative lagoon functions, I wanted to include this. So, any time after June 15th, a discharge can occur. That's typical to all -- I would think all provincial licences. Any that I've obtained in the past, for sure. When a discharge is required -- because we don't know -- it doesn't -- it's not always required. Most communities, once you're at full size, full operation, yes, you're doing an annual or two discharges per -- per year. With a colony and a daughter colony, we talked about the design is 250 people. Well, there might only be 50 people living there for a number of years at the beginning, in which case your evaporation rate is typically higher than your production rate, and there isn't a discharge required. So, there -- it could be a -- a number of years before any discharge actually occurs from this lagoon. But after June 15th, let's say we're at operating

capacity and a discharge is required. What would happen is, you would close the valve between the primary and secondary cell. So, you're then isolating that secondary cell so no -- no new untreated wastewater is being entered into that cell. It normally is -- will be allowed to be isolated and sit for a period of about 14 days. Can be more. Typically 14 is sort of the minimum, at which time, once that has occurred -- so, during that timeframe, you're having additional treatment of the -- of the wastewater. After the 14 days, a sample is collected and it's submitted to the laboratory for analysis to evaluate it, compared to the parameters of which the licence requires or permits a discharge. So, the testing that would occur for ---

MR. KATHLER: Mr. Burns, can you describe, when you say "treatment," what are the processes that are occurring in the secondary cell that constitute treatment?

MR. BURNS: So, treatment within the secondary cell is a natural biological process, but that buffering time, what's happening is the -- the natural process is allowed to occur. So, you're having treatment of remaining organics, and you're having -- the UV is treatment for any bacteria, and you're -- typically, you're having a reduction in your nitrogen. So, those processes

are all natural biological processes that occur over that period of time. And while that's -- so then, after that period of time, the sample, like I said, is -- is collected. It's submitted, sent to the lab, tested for E. coli, nitrogen (inaudible), phosphorus and BOD.

Once those results come back, it dictates two things. One, you meet the discharge criteria and all your parameters of your licence, in which case, a discharge would commence. Two, you don't, and then your -- you know, your operator, they are licensed, they are trained, they have to determine, 'Okay, well, what would be the next appropriate steps?'

So, let's -- let's explore those two things. Option 1, all discharge criteria are met. Elevation of the primary cell and secondary cell are measured, and the discharge valve would then be operated, opened into -- we'd have to determine exactly how far open, but normally, it's a couple of turns on a valve will provide the discharge that you're looking for. Normally, they'll open the valve a couple of turns, and then they'll measure the level after 24 hours and determine roughly how much is being discharged and then adjust it to maintain that trickle discharge that we're looking for. So, your trickle discharge we're looking

for is about -- I think on this one is approximately 14 litres per second would allow the discharge of that primary cell over approximately a two-week period. So, that -- that would be allowed to discharge, drain to the drain. After that timeframe, it would be closed. The cell or the equalization pipe valve between primary and secondary cell would then be opened and the two cells would be allowed to -- to equalize. So, that would be a standard operation of a -- a lagoon.

In the event of a failure to -- on your test results, well then -- then, you need to go into a bit of a troubleshooting mode and determine, 'Okay, well, what's the most appropriate steps? If -- if you aren't able to meet your discharge criteria. And that all depends on what's not meeting it.

There are -- you know, if -- if you're having bacteria problems, additional time due to UV will -- will provide additional treatment. Phosphorus -- if you're not meeting your phosphorus targets, which is a -- which is a big concern, then typically, you can douse and agitate with -- with alum that will help precipitate phosphorus to the -- settle in the bio-solids that would remain. TSS, typically. Time -- nitrogen time. So, most of those --

most of the things would just -- you would allow it to sit longer while it's being isolated, and then -- and then, sample again, and that'll -- you know, providing that sample meets the discharge criteria, then you would -- you would commence with the discharge regime.

(inaudible). One thing, when it is isolated, I will touch on or just mention is that, when the two cells are isolated -- we talked earlier before that we had approximately 4,300 cubic metres of storage to allow that to occur while the trickle discharge is happening. The operator has to be watching the levels in the lagoon and the primary cell. The licence will require or dictate that they can't exceed the maximum operating level or move into the one-metre freeboard that a lagoon has built into it. So, it may be that they have to cut that discharge short because they're getting to the maximum operating level, but that's just a matter of then, they would close the discharge valve and re-equalize, and they could do another dump. Typically, they'll have enough room (inaudible) capacity to -- to get until your fall discharge before a winter freeze-up.

So, the operation is -- is pretty simple, but the operators need to have training. They need to be licensed and understand, you know, what they're doing and

what the implications are for the operation of a (inaudible) wastewater treatment lagoon to ensure they're conforming to the licence.

There were some questions that came up related to emergency discharge on the lagoons and -- and how that's addressed, and there was failures of lagoons in the Interlake and Red River, and I -- I -- I talked about that earlier. I -- I'm not aware of any of the projects that Burns Maendel's designed that that's been an issue, and that's also why I'm conservative with my numbers when we're sizing things to, you know, hopefully prevent that from ever happening. Can you say never? No, you can't, you know? There are extreme situations that may arise. So, you know, there is some -- some thought that -- that can go into that.

Any emergency discharge in that event, you know, we have to plan for that, and -- and that was one of the -- one of the -- my comments in -- in the responses was, you know, if -- if the Panel or the Commission deems necessary or warranted, we would generate an emergency response plan that the -- the proponent could have and follow that would be submitted and approved through Manitoba Clean Environment Conservation.

That plan, you know, could be a number of different things, so it -- it's hard to say exactly what it'll be, but -- and it depends what the emergency is. More than likely, the emergency is that we're dealing with is excessive wet conditions. You know, that's been identified. In which case, you know, there's a few things. If you have excessive wet conditions, we don't have our cells isolated so it's operating as a -- as one cell or one -- one facility. We have excess capacity already built into our calculations, but let's say we are at the operating capacity and you had a late summer rain where there was a lot of flooding. We do have one metre of freeboard built into a lagoon as well, which the licence doesn't allow you to utilize that operational space, but in a case of emergency, you know, we can buffer into that -- that additional freeboard. That freeboard value provides an additional 92 days of storage -- so, you know, almost an additional three months -- which -- at which time, I would anticipate that any flooding waters would have receded to the point where a standard discharge could commence.

The other pieces that could be done, you know -- and this comes down to operation and the -- and the colony and the colony's plumber that would be licensed -- would be if it's identified that they have a problem -- it's a really

wet year, there's weeping tile installed and it's connected -- one of the licence requirements can be -- which I recommend -- is that, within their sump pits in -- in their buildings, they have a -- a valve so that they can cut off discharge to the lagoon and send it to the surface outside under wet conditions, right? So, to cut that loading off, you know, they can go to water conservation measures. Worst case, they shut their lift station down and -- and they haul -- they haul on truck if the lagoon has reached capacity. So, there are a number of things in there that could be done. They're operational, you know, and they're -- it depends on the situation and the circumstances, eh? So, it's -- it -- you know, we can explore all of those, but I'm confident that there are measures -- there are -- are processes that can be taken to handle those situations.

A typically dry year where concerns for discharge -- you know, irrigation is -- is definitely a possibility that the -- the effluent can still meet discharge criteria and could be irrigated onto colony-owned lands. You know, that -- that is -- I wouldn't say fairly common, but there are other licences that have irrigation requirements, so that's an option as well.

So, just a quick concluding remarks. The

lagoon in Manitoba is designed in accordance with the design objectives for wastewater treatment published by NECC. These objectives in Manitoba are empirically-based with concentration-based discharge versus site-specific discharge criteria. We're going to talk a lot about that over the next three days but, you know, the reality is, those are the regulations that we design the lagoons to in Manitoba. That's very typical and would be the standard of care and expectation.

Harbour Colony's lagoon has been designed. It was submitted for -- the EAP was submitted in 2023. It's been, you know, subject to what I'd call extensive review by TAC. All governing bodies, public review, public comments. You know, we've been at it for almost two and a half years, so I think the -- the review and the consultation has been fairly extensive and, you know, we're happy to -- to be here today to -- to present and -- and hopefully be able to move forward in the future.

NECC has recommended that the environmental licence be issued for the EAP. It was reviewed by all departments and no further objections were filed. I think the -- the proponent and Burns Maendel as their engineer answered all concerns. We heard that this morning -- that

all concerns, all questions that arose during the advertisement and the consultation period were addressed to their satisfaction, and that they were prepared to -- to issue a licence, and I -- I believe that that still remains their position.

Phosphorus loading to Lake Winnipeg. You know, we're -- we're not here to say there's zero impacts, you know, to development. There are impacts with -- with development. Are -- are the impacts mitigated? Can they be mitigated? I believe so. The licensing dictates that and the conditions of the lysing (sic) -- licensing dictate that. You know, let's look at the facts. We are -- this proposed project would add an additional 27.05 kilograms per year to Lake Winnipeg. Is that desirable? No, we'd love it to be zero, but the reality is that there is phosphorus in the wastewater. But let's look at it from a factual base. That equates to 0.0000367 percent of the total loading to Lake Winnipeg. That's -- that's -- that's a pretty small number to -- to consider that as the total impacts.

So, we're here today to provide details to the CEC, answer any questions, and, you know, hopefully a recommendation for a licence to be issued will be made to the Ministry. Thank you.

THE CHAIRWOMAN: Thank you, Mr. Burns. So, your presentation will be marked as Exhibit H-002. And I'll just ask Mr. Kathler if you have any other information on direct for your witness.

MR. KATHLER: These things are stubborn, Madam Chairwoman, but I'll figure it out. No, that's the proponent's evidence for this morning, and I thank Mr. Burns for his presentation. I won't be making any further direct, so I'll turn things over to the Panel or Mr. Williams.

THE CHAIRWOMAN: Thank you. Okay, so we'll turn it over to Mr. Williams for questions.

MR. WILLIAMS: I wonder if we could just have two minutes. I just need to speak to Mr. Crocker about a technical matter.

THE CHAIRWOMAN: Absolutely. Just to provide some clarity, we're going to be hearing questions from Mr. Williams for the RM of Gimli, and after that round of questioning, there will be an opportunity for members of the public to ask some questions of Mr. Burns relating to his presentation today.

MR. WILLIAMS: (inaudible), Mr. Burns. You're aware I'm Kevin Williams from Taylor McCaffrey. I'm here on behalf of the RM of Gimli, and I have a number of questions for you. Not -- not a ton, but -- but several.

And so, I just sort of want to start out by understanding what your role was on the project. You're a professional engineer with Burns Maendel, sir? Is that what you have to do (inaudible)?

THE CHAIRWOMAN: Just going to ask a technical question. So, we can only have one mic operating at a time, so we'll have to switch on and off? Yes, that's correct.

MR. BURNS: Yeah. I am an engineer at Burns Maendel Consulting Engineers.

MR. WILLIAMS: Sir, you were involved in the design of the proposed lagoon that we're talking about today?

MR. BURNS: Yes, I was involved in the design.

MR. WILLIAMS: And that design work that your firm provided was engineering services for the -- for the lagoon system itself. I have that correct?

MR. BURNS: Yeah, along with a lot of other services, but yes, the design of the lagoon.

MR. WILLIAMS: Is there -- I guess, is there a possibility that -- like, I can talk pretty loud -- that -- that he could just keep his -- his microphone on and we could try doing -- no? Okay.

THE CHAIRWOMAN: Unfortunately, for the transcript, everything has to be in the mics, and I'm going to ask, if there is a potential solution that we can come up with, that that be done. Is it possible to have two channels open?

I'm just trying to figure out if we can come up with a solution, so -- well, I just want to -- should we be working on a solution, is my question? Is it possible? Should we take a break?

It should work now? Okay. No break

required.

Okay. Mr. Williams, please carry on with your questioning.

MR. WILLIAMS: Okay. So, mine's red now. Is yours (inaudible)? Do you want to try to turning yours on and see if it works?

Perfect. I think we're in business. Thank you. I appreciate that. Thank you very much.

MR. BURNS: That's better.

MR. WILLIAMS: So, now, sir, your responsibilities included the design of the treatment system? And when I say 'your', I mean Burns Maendel.

MR. BURNS: Correct.

MR. WILLIAMS: And that included determining how the wastewater would be treated. Correct?

MR. BURNS: Correct.

MR. WILLIAMS: And how the wastewater would ultimately be discharged. Do I have that correct?

MR. BURNS: Yes.

MR. WILLIAMS: Now, you're responsible for preparing or contributing to the engineering design documents, sir?

MR. BURNS: Yes.

MR. WILLIAMS: And that included drawing specifications and design assumptions. Correct?

MR. BURNS: Yes.

MR. WILLIAMS: And you designed the system on a lagoon-based treatment approach. Correct?

MR. BURNS: Yes.

MR. WILLIAMS: Were you instructed to use this approach, sir?

MR. BURNS: It was discussed with the

client as to what approach was appropriate, and it was a recommendation of Burns Maendel that that was the most suitable approach for their application.

MR. WILLIAMS: What other approaches, sir, were considered and rejected?

MR. BURNS: From a high-level consideration of mechanical treatment, which is not ideally suited for a small population, and a consideration for tying into Gimli's plant when they made the request that we consider it, it was looked at and deemed not feasible.

MR. WILLIAMS: What about trucking it to Gimli's plant, sir? Was that considered?

MR. BURNS: No.

MR. WILLIAMS: So, I take it, then, no consideration was given to -- as to whether the effluent could be treated at Gimli's -- trucked to Gimli, and treated in their treatment plant, right?

MR. BURNS: Not economically. Correct.

MR. WILLIAMS: And, sir, you're aware of the fact that, of course, the -- the -- that Gimli has a treatment plant that's capable of -- of treating the effluent from this particular lagoon?

MR. BURNS: I didn't contact Gimli to determine their capacity. A lot of times, municipalities are at capacity already, so I was aware that they have a treatment plant. I'm also aware that it has the same discharge criteria.

MR. WILLIAMS: But my question, sir, was a -- a little more focused, and it basically was, that -- that you didn't contact Gimli to determine whether the effluent could be trucked to their treatment facility and be treated there?

MR. BURNS: Correct.

MR. WILLIAMS: And those are, sir, the only other methods of treatment that were explored by Burns Maendel?

MR. BURNS: Correct.

MR. WILLIAMS: And, sir, as part of your design work, you determined the discharge strategy, including where and when the effluent would be released. Correct?

MR. BURNS: Correct.

MR. WILLIAMS: And the proponent relied on your firm's expertise in advancing this design approach. Correct?

MR. BURNS: Correct.

MR. WILLIAMS: And you stand behind the suggestion that this design is appropriate for this location. Correct?

MR. BURNS: Yes.

MR. WILLIAMS: Sir, in designing the system, you relied on provincial guidelines. I have that correct?

MR. BURNS: Correct.

MR. WILLIAMS: And my understanding is that those guidelines are intended to apply broadly across many different sites and locations. You'd agree with that?

MR. BURNS: Province-wide, yes.

MR. WILLIAMS: They're not site-specific, sir, are they?

MR. BURNS: No, they're not.

MR. WILLIAMS: They would apply equally to a lagoon in Northern Manitoba as they would to a lagoon that ultimately discharges into Lake Winnipeg. Correct?

MR. WILLIAMS: Yes.

MR. WILLIAMS: And for example, you rely on a one-milligram-per-litre phosphorus limit?

MR. BURNS: Correct.

MR. WILLIAMS: And you're aware, sir, of the fact that Lake Winnipeg's ecological target is

significantly lower for phosphorus. Correct?

MR. BURNS: The Lake Winnipeg target reductions were published in 2024, post submittal of the EAP. Prior to that, the 2011 water quality guidelines utilizing one milligram per litre was the targeted requirement.

MR. WILLIAMS: But sir, now, I take it you agree that -- that Winnipeg -- Lake Winnipeg's ecological target is significantly lower. Correct?

MR. BURNS: Correct.

MR. WILLIAMS: It's one half of -- of what it was previously. Correct?

MR. BURNS: I can also speak loudly, but --

MR. KATHLER: There we go. I -- I think the question is potentially confusing, Madam Chairwoman. Mr. Williams is simultaneously speaking about nutrient targets in the basin of Lake Winnipeg and discharge limits, discharge criteria. I -- I don't know that those are one

and the same metric that's being considered, but maybe Mr. Williams can clarify exactly which metrics, because I think we're kind of talking about apples and oranges. Discharge criteria versus basin nutrient target levels.

MR. WILLIAMS: I -- I -- I think you understood my question, sir. And that is, I'm just getting you to confirm that, based on the current guidelines, which is one -- 0.05 milligrams per litre, which is the ecological target for Lake Winnipeg -- you had confirmed that you knew that now. That's what it is, right?

MR. BURNS: (inaudible).

MR. WILLIAMS: It's a target, correct. Yeah. And -- and -- and you indicated that -- I think in your evidence -- that that target was reduced in 2024, prior to which it was at the one-milligram-per-litre phosphorus limit. Correct?

MR. BURNS: The -- phosphorus limit of one remains. It is the current requirement. The 0.5 is a target, but within regulation, one milligram per litre is what the requirement is. Right. So, a difference between regulation and target.

MR. WILLIAMS: Right, but -- but what your design is -- is -- is twice what the target is. You'd agree with that?

MR. BURNS: Correct.

MR. WILLIAMS: And you designed this system for operation into the future. Correct?

MR. BURNS: Correct.

MR. WILLIAMS: And so, unless the target is changed, the limit is -- the -- the limit of the system you've designed is non-compliant with the target. You'd agree with that?

MR. BURNS: Could you ask that question one more time, please?

MR. WILLIAMS: I said -- let me try again. I said, I think that you indicated that you had designed the system for processing going forward, and I indicated to you that, therefore, your -- the -- the manner in which you've designed the system is non-compliant with

the target going forward.

MR. BURNS: I wouldn't agree with that, no. The system, as designed, is compliant with regulations, and the target considers all of loading to -- to the lake. You could have some that have higher concentrations and some that have lower, but ultimately, there's a target of a cumulative effect, a cumulative number.

MR. WILLIAMS: And that's -- that's 0.05 milligrams per litre?

MR. BURNS: Correct.

MR. WILLIAMS: And your design is one milligram per litre?

MR. BURNS: Correct.

MR. WILLIAMS: So, the target's one half of what the current design is, right?

MR. BURNS: Well, if I was to correct your math, I'd actually say you're incorrect because 0.05 is a lot less than one.

MR. WILLIAMS: Oh, okay. So then, it's -- it's -- so, I -- I --

MR. BURNS: Yeah.

MR. WILLIAMS: --n misspoke. So, it's far lower than -- than -- than the one-milligram-per-target -- or one-milligram design parameter in your system. I have that right?

MR. BURNS: Yes.

MR. WILLIAMS: The provincial guidelines you relied on are not designed to assess cumulative impacts within a watershed, are they?

MR. BURNS: No, they're not.

MR. WILLIAMS: The assessment is -- or -- or the compliance is based on a lagoon-by-lagoon basis. Is that fair?

MR. BURNS: Correct.

MR. WILLIAMS: And I take it that I -- you didn't do any assessment as to the cumulative effects for this project on the watershed, did you?

MR. BURNS: No, we didn't, as it wasn't requested.

MR. WILLIAMS: For instance, you did not assess how this discharge contributes to the overall nutrient loading in Lake Winnipeg, did you?

MR. BURNS: No, we didn't.

MR. WILLIAMS: And so, you'd agree, therefore, that your design does not account for the cumulative impacts within the watershed. You'd agree with that?

MR. BURNS: Correct.

MR. WILLIAMS: You'd agree that government guidelines are a starting point for a design, sir?

MR. BURNS: Starting point on a regulatory

requirement.

MR. WILLIAMS: Right, but the -- the fact that -- the fact that -- that -- that it's the starting point doesn't necessarily mean that it's the end point for an appropriate design. You'd agree with that?

MR. BURNS: Sure.

MR. WILLIAMS: Sir, if you could turn to Slide 7 of your presentation there.

MR. BURNS: You want me to go to seven?

MR. WILLIAMS: Please. Thank you. Now, I -- I saw you had a little red pointer there.

MR. BURNS: (inaudible).

MR. WILLIAMS: Do you know where that is? Yeah. Okay.

MR. BURNS: Figure it out again, maybe.

MR. WILLIAMS: So, now, sir, if you

could -- is it working?

MR. BURNS: Yeah.

MR. WILLIAMS: Yeah. Can you put -- can you put your little pointer on the -- on the secondary treatment cell, please? And so, indicate with that little red pointer, sir, where it is that the discharge occurs from the secondary cell, and then -- you're moving it from left to right there on the screen, just for the transcript -- and if you could tell me what the -- the road is that's on that diagram that that is being discharged into. It says, Road --

MR. BURNS: This?

MR. WILLIAMS: Yeah.

MR. BURNS: 15 East.

MR. WILLIAMS: 15 East?

MR. BURNS: Correct.

MR. WILLIAMS: And sir, my understanding is that 15 -- Road 15 East is the border

between the RM of Gimli and the RM of Armstrong. Do I have that correct?

MR. BURNS: Yes.

MR. WILLIAMS: And sir, it's fair to say that this treatment lagoon is immediately adjacent to the RM of Gimli's lands -- or lands that are within the RM of Gimli, sir?

MR. BURNS: Correct.

MR. WILLIAMS: And sir, are you aware that this sort of a development would not be permitted in the RM of Gimli?

MR. BURNS: Not specifically because I didn't review it in detail for the RM of Gimli's requirements.

MR. KATHLER: Objection for the record. I won't be able to get the -- the microphone working (inaudible) ---

THE CHIARWOMAN: One moment, we'll get

your mic (inaudible).

MR. KATHLER: Just an objection with respect to relevance. You know, we're talking about zoning and what is or is not permissible in an adjacent rural municipality. I take it Mr. Kevin will -- Kevin Williams will ask his questions, but I do want to note an objection on relevance as we get into zoning issues in an adjacent municipality.

THE CHAIRWOMAN: Thank you. We'll -- we'll allow the question, but please move on.

MR. WILLIAMS: Yeah. Sir, if I have your -- had your evidence correct, you said that -- that this particular lagoon was compliant with the setbacks. From memory, you said it was 30 metres back from the property line. Do I have that right?

MR. BURNS: Correct.

MR. WILLIAMS: And was it two or 300 metres from residential?

MR. BURNS: Three hundred.

MR. WILLIAMS: Three hundred? And sir, I take it that the -- what is the distance between the outer boundary of the lagoon and the property line? Is it 30 metres?

MR. BURNS: Off -- off memory, it's probably about 45. I'm usually not exactly right at it. I don't know, I could -- Ryan could look that up quickly, maybe.

MR. WILLIAMS: Now ---

MR. BURNS: It -- it's minimum 30 metres, but it'll be more than that.

MR. WILLIAMS: But you're unable to tell us today how much further it is than the -- than the 30 metres today, right, sir?

MR. BURNS: Well, I could answer the question if you give my colleague one second to pull up the drawing that he's just looking at, but ---

MR. WILLIAMS: Okay. Sure, I'd -- I --

MR. BURNS: (inaudible)?

MR. WILLIAMS: Yeah, you can look it up and we'll -- we'll come back to that.

MR. JOHNSON: Okay, we'll come back? Yeah.

MR. WILLIAMS: Yeah, good with that.

MR. JOHNSON: Okay.

MR. WILLIAMS: Now, sir, if I have your evidence correct, you indicated that the site of the lagoon is lower than the rest of the property site.

MR. BURNS: Yeah. Then, naturally, this property actually drains towards the northeast -- obviously, towards Willow Creek. So, it's not the lowest part of the site, but lower than -- than where the buildings are being constructed.

MR. WILLIAMS: Okay. And sir, when one looks at the -- the lagoon structure in its totality, how large is it? Like, dimensionally? Do you know that?

MR. BURNS: The primary cell and secondary cell widths are approximately 80 metres, I believe. The primary cell is 115 -- so, 80 by 115. And the secondary's, like, 80 by 190, but again, my colleague could give you those exact numbers when he pulls up our design drawings.

MR. WILLIAMS: Okay. Well, we'll ask him to do that, too, and we'll put that -- put that down on the record momentarily. But my point is, is that -- is that, I think, in your evidence, you confirmed that -- that the area where the lagoon is is subject to overland flooding from time to time.

MR. BURNS: There has been events that it will -- the -- the drain will breach the outer limits of its -- the channel.

MR. WILLIAMS: Sorry, can you explain that to me? I didn't understand that totally. You said, "The drain would leach -- reach the outer limits of the channel"?

MR. BURNS: So, the ditch -- to simplify, the ditch will not be able to handle the flow and it will

spill its banks on -- on occasion. Anything, I believe, greater than, like, a one-in-20-year precipitation event.

MR. WILLIAMS: And so then -- so then, when that occurs, then the overland flooding is -- is -- occurs towards the lagoon. Right?

MR. BURNS: In that corner, correct. Yeah.

MR. WILLIAMS: Yeah. And to the extent that the lagoon is taking up a footprint, it's displacing water that would otherwise just pool there. Right?

MR. BURNS: Yeah.

MR. WILLIAMS: And so, that water that's being displaced as a consequence of the size of the lagoon, I take it, has to flow to a -- to a -- a different area?

MR. BURNS: Be retained on the -- on that property, correct.

MR. WILLIAMS: Well, does it get retained in the property or does it flow off the property

depending on how -- how large the overland flood is?

MR. BURNS: It continues down the flow channel. But yes, it is displacing a -- calculated-wise, would be an insignificant volume compared to the volume of a flood in that situation.

MR. WILLIAMS: Now, sir, if we can turn to Slide 17, please.

Now, on this slide, there's two little hatched black areas. See those?

MR. BURNS: Yeah.

MR. WILLIAMS: And -- and I take it that those are actually depicting the outlets, are they not? The location of the outlet. One is to the -- is to the discharge -- that's the one you've just put your little red dot on -- and the other one is the one that goes to the retention pond. Do I have that correct?

MR. BURNS: No. Your discharge is out this corner, right?

MR. WILLIAMS: Okay.

MR. BURNS: These are their concrete boat ramps.

MR. WILLIAMS: I see. Okay.

MR. BURNS: (inaudible).

MR. WILLIAMS: I -- I misunderstood that. Okay. Thank you for that for clarification. Now, sir, if you can go to Slide 23.

Now, this -- you were talking about the operation of the lagoon. And so, what you've indicated, sir, was that -- was that, when discharge is ongoing, it's -- it is designed, or hopefully occurring, at 14 litres per second. Do I have that right?

MR. BURNS: Correct.

MR. WILLIAMS: So, that, by my math, is 840 litres per minute. You'd agree with that?

MR. BURNS: I would need to calculate it,

but I'll assume that, yeah, that got -- correct.

MR. WILLIAMS: That's --

MR. BURNS: (inaudible).

MR. WILLIAMS: -- 50,400 litres per hour, by my math. You don't take issue with it, if my math's correct?

MR. BURNS: Seems high.

MR. WILLIAMS: I just took 840 litres per minute and times it by 60. So, if my math's correct, it's 50,400.

MR. BURNS: Okay.

MR. WILLIAMS: Okay. And sir, by my calculation, that would be -- now, you're causing me to -- I have to check my math. Sorry about that. So -- yeah, so -- and by my math, that's -- 50,400 litres per hour is 1,209,600 litres per day -- if I times it by 24. You're okay with that?

MR. BURNS: I wouldn't agree or disagree with it. You've got the calculator, I don't, so I'm assuming you got it right.

MR. WILLIAMS: Yeah.

MR. KATHLER: Object.

MR. WILLIAMS: Okay.

MR. BURNS: Okay.

MR. WILLIAMS: And so, sir, then ---

MR. BURNS: I can't do those ones in my head. They're a little too big.

MR. WILLIAMS: No worries. And so then, over the 14-day discharge ---

THE CHAIRWOMAN: I'm just going to make a procedural note, Mr. Burns. If there are things you'd like to put on the record with agreement subject to check, that is an acceptable answer for the purposes of this hearing.

MR. BURNS: Okay. So, all of these calculations, I agree subject to check.

MR. WILLIAMS: Sure. So, that -- so, that tells me over a two-week period, that there would be 16,934,400 litres of discharge from the -- from the lagoon. So, if my math is correct, subject to check, you'd agree with that?

MR. BURNS: Sure. Yes.

MR. WILLIAMS: And sir, I take it that there isn't -- the -- the -- the -- the amount of discharge isn't a -- isn't precisely controlled? And -- and I'll tell you why I say that. You said you open the valve a couple of turns, and -- and -- and then, you come back the next day to see how much is drained, and -- and -- and -- and -- and that's how you check how much the discharge is. Is that how it's done?

MR. BURNS: Yes, because discharge rate varies with the amount of water that's being held back, so as the lagoon drains down, you can open the valve more to adjust for that. But is it a -- exact? No.

MR. WILLIAMS: So -- so -- and -- and sir, so then, I take it that you and I can agree that -- that, if somebody opens the valve up too much, then the discharge would actually exceed what your design parameter -- 14 litres per second -- would be, sir?

MR. BURNS: Potentially could, correct.

MR. WILLIAMS: Yeah.

MR. BURNS: However, that is dictated in the licence.

MR. WILLIAMS: Now, sir, you had agreed with me that the -- that the guidelines are the starting point for a design, and I'm going to suggest to you, sir, that -- that they do not eniminate (sic) -- eliminate the need for a site-specific analysis. Would you agree with that?

MR. BURNS: No, I would disagree.

MR. WILLIAMS: You'd disagree with that? So, from your design perspective, if you've complied

with the guidelines, that's where the design obligation starts and ends?

MR. BURNS: Through the licensing process and the review with the provincial departments, that's where it would been -- be identified. If additional concerns are raised by the provincial experts that a site-specific analysis be conducted, then it would be requested at that point.

MR. WILLIAMS: And so, other than the guidelines and -- and the fact that the government didn't require you to do anything further, that satisfied you as to the propriety of this design, sir?

MR. BURNS: Correct. That would be the standard of care for an engineering professional designing lagoons in Manitoba.

MR. WILLIAMS: Now, sir, you understood, in the context, you designed that the lagoon discharges into Willow Creek?

MR. BURNS: Yes.

MR. WILLIAMS: And that Willow Creek is therefore the immediate receiving environment for this effluent?

MR. BURNS: Malonton Drain is the immediate and then drains into Willow Creek at the confines.

MR. WILLIAMS: Sir, notwithstanding that, you did not conduct a detailed hydrological study of Willow Creek, did you?

MR. BURNS: Not of the entire Willow Creek. Adjacent to the subject site. It was part of our hydro-technical review.

MR. WILLIAMS: Just adjacent to the site, but not the -- the ---

MR. BURNS: Not the full length through to (inaudible).

MR. WILLIAMS: Like, how far, once the drain enters Willow Creek, Malonton Drain, did -- did you actually study Willow Creek in the context you designed?

MR. BURNS: I'll have to review that number again, but I believe the model looks at 500 metres downstream and upstream of that intersection of Road 15 East and Willow Creek.

MR. WILLIAMS: Okay. Did you develop a flow model for Willow Creek?

MR. BURNS: We retained a sub-consultant to do such.

MR. WILLIAMS: And who did that?

MR. BURNS: Trek Engineering.

MR. WILLIAMS: Did you make any attempt to quantify or model seasonal variations in flow in the creek?

MR. BURNS: The model is based on precipitation events and background flows within the -- within the Willow Creek.

MR. WILLIAMS: Well, you would agree with me, sir, as a matter of engineering principle that, if

it's a dry year during the discharge, the proportion of effluent versus natural water would -- would be much higher. right?

MR. BURNS: Correct.

MR. WILLIAMS: So, Madam Chair, it's -- it's 12:20. I'm -- don't have that much more. I would say probably no more than ten or 15 minutes. It may be appropriate, if -- if you would agree, to take the lunch break.

I can get the numbers from the witness and -- over the lunch break, and then I can conclude with those questions right after the lunch break, and I can work on a technical issue that I have with Mr. Crocker.

THE CHAIRWOMAN: Sure. So, we can take a break now 'til 1:30 for lunch. When we come back, we'll get those -- some of those answers on the record, and as I said, resume at 1:30.

MR. WILLIAMS: Thank you.

TUESDAY, APRIL 21, 2026

UPON COMMENCING AT 1:30 P.M.

THE CHAIRWOMAN: Good afternoon. It's 1:30. Mr. Williams, are you prepared to continue with your examination?

And while Mr. Burns is taking his seat, we'll try and get the microphone magic to happen again with two channels so you can talk to each other.

MR. WILLIAMS: So, can you turn your -- turn your microphone on, see if we're -- there we go. Look at us.

Good afternoon. So, I just have a few more questions for you, Mr. Burns, but I want to, first of all, just start by confirming a few numbers on the record, just so that it's clear. And so, you indicated to me over the lunch break that the edge of the lagoon is 128 metres from the property line. Do I have that correct?

MR. BURNS: Correct, 128 greater than the 30 requirement.

MR. WILLIAMS: Yeah. And -- and you indicated to me as well that the other side of the lagoon is 525 metres, at least, from the closest residents on the property. I have that correct?

MR. BURNS: Yeah, the set -- setback distance from (inaudible) lagoon to nearest residents. Correct.

MR. WILLIAMS: Five twenty-five. You indicated to me as well over the lunch break that the primary lagoon is sized as 83 metres by 136 metres. Correct?

MR. BURNS: Correct.

MR. WILLIAMS: That's 11,288 square metres, by my math, which I think you're okay with. And that you indicated that the secondary cell was sized at 83 by 273 metres. Right?

MR. BURNS: Correct.

MR. WILLIAMS: And that, by my math, is 22,659 metres squared. You're okay with that?

MR. BURNS: Yeah.

MR. WILLIAMS: And so, by my calculation, if my Boolean math is correct, the footprint of the lagoon is 33,947 metres squared. Sound okay to you?

MR. BURNS: Yes.

MR. WILLIAMS: You indicated to me that, in terms of hydraulic modelling that was done as it related to the Malonton drain where it -- where it enters Willow Creek, was done 1,500 -- sorry -- 1,400 metres upstream. Is that right?

MR. BURNS: Correct.

MR. WILLIAMS: And 800 metres downstream. Right?

MR. BURNS: Correct.

MR. WILLIAMS: And the flow was analysed for the purpose of capacity, basically to do some culvert sizing. Correct?

MR. BURNS: Yes.

MR. WILLIAMS: Okay. Now, I'm going to ask you to turn to what is known as the application -- the Environmental Act proposal -- so it's on the screen there. And if you don't mind, I'm going to ask you to -- to -- to turn to the 19th page -- sorry -- the 12th page of the PDF.

And then, if you can maybe zoom in on that for me. Can you zoom in a bit more? There's a little -- perfect. Great, thank -- okay, that's good. Okay.

Now, your evidence this morning was that you were advised that there would be no commercial use at the -- at the property, right? That's what you were told, sir?

MR. BURNS: Correct.

MR. WILLIAMS: And you were told that by the proponent, right? Somebody -- somebody from the colony told you that, right?

MR. BURNS: Clarify commercial use -- your intention in that definition, please.

MR. WILLIAMS: Well, I mean, my understanding of your evidence this morning was that -- was that the livestock and birds that were going to be on that property were for personal consumption by the colony members. Isn't that what you told us this morning?

MR. BURNS: No, that's incorrect. I didn't say what would be on the site. I said what would be processed on the site would be for colony members. So, what would be slaughtered or killed would be for their own consumption.

MR. WILLIAMS: Oh, so -- but, I mean, did you -- are you not indicating to us that there's 6,000 chickens that are going to be slaughtered on the site? Isn't that what I'm to understand your -- to be your understanding from your report -- or from ---

MR. BURNS: Yes.

MR. WILLIAMS: And -- and so, by my math, that is 40 chickens per person at a 200-member colony. You see how I did that calculation? Sure? And using the same math, that is 10 ducks per colony member at 200 people. You see that?

MR. BURNS: Yeah.

MR. WILLIAMS: Oh, I'm sorry?

MR. BURNS: Hmm?

MR. WILLIAMS: Sorry. Yeah. And -- and by my math, sir, that's -- that's 2.5 hogs per, if there's 200 people there. You see how I come up with that?

MR. BURNS: Correct.

MR. WILLIAMS: Yeah. And about one-eighth of a cow per person at 200 people capacity. You see that?

MR. BURNS: Yeah.

MR. WILLIAMS: Now, I want to understand, you made a comment this morning about there would be the separation of blood from the other effluent that would be making its way to the lagoon. How -- how did you understand that was going to be done?

MR. BURNS: How did I understand it would be separated?

MR. WILLIAMS: Yeah.

MR. WILLIAMS: It would be typical in the slaughtering process, when livestock are -- are butchered or initially killed, that, you know, their blood is drained and collected as a separate item. It gels fairly rapidly and is then typically composted with the entrails and -- and other aspects of the -- the animal and ---

MR. WILLIAMS: And it's processed. Sorry. And -- and did Burns Maendel design work include designing the abattoir?

MR. BURNS: No, we have not.

MR. WILLIAMS: So, it's not been designed yet?

MR. BURNS: Correct.

MR. WILLIAMS: Okay. So, you can't really speak to exactly how that separation process is going

to occur right now, you're just talking about what typically you've seen historically. Is that fair?

MR. BURNS: Fair.

MR. WILLIAMS: Okay. Now, sir, if you can now turn to the other document that is -- I think, if you minimize this tab, it should show up.

(inaudible). No, just -- you see the -- the -- there you go. Now, can you make that a little larger, please?

Yeah. Now, this is a -- a -- a conditional use application dated December the 5th, 2025.

MR. KATHLER: I'm going to note an objection, for the record, on relevance, as this has nothing to do with the domestic wastewater lagoon. Just noting the objection for the record.

MR. WILLIAMS: Right.

MR. KATHLER: Thank you.

MR. WILLIAMS: So -- so, sir, the legal description of the property -- Southwest 2818-3E -- that is the property on which this -- your -- your -- your lagoon is located, right? That's the same quarter section, sir?

MR. BURNS: No, incorrect. We're on the southeast.

MR. WILLIAMS: I see. So, it's the southeast quarter is where the lagoon is. And is the residential area on the southwest corner -- the residential side of it on the southwest quarter?

MR. BURNS: I believe it'll be on the northeast.

MR. WILLIAMS: So, it's -- and it's -- -

MR. BURNS: It's partially cut in half, and that's full section.

MR. WILLIAMS: Yeah. So -- so -- but what we can agree is that -- is that it's the same section of land that's referred to in this conditional use

application. See that? Same section?

MR. BURNS: Yes, I have not come -- seen this document in the past, but I would agree it's in the same section.

MR. WILLIAMS: Yeah. And if you see what the conditional use request is as of December the 5th, 2025, it's the establishment of a 40,000 bird layer facility, a 40,000 bird pullet facility, and a 60,000 bird broiler facility, representing a total of 764 animal units. You see that?

MR. KATHLER: Madam -- Madam Chairwoman, I'm -- I'm going to object again. I mean, we were anticipating this, and I know it's been raised as a preliminary matter through discussions between Mr. Williams and -- and Mr. Crocker well in advance of this hearing. It's -- it's been made quite clear that this is unrelated to the project that is the subject of this review abundantly, and I -- I'm certainly aware that it's the prerogative of the Chair to limit evidence that's entered, questions that are asked to the subject matter before this hearing, as set on the terms of reference. I don't know where Mr. Williams is ultimately going, but I'm going to object because this has absolutely

nothing to do with what is being contributed to the domestic wastewater lagoon, and that's the purpose of -- of our hearing.

THE CHAIRWOMAN: I'm going to ask Mr. Williams how many questions you have on this matter?

MR. WILLIAMS: About three or four.

THE CHAIRWOMAN: We're just going to take a few moments to consider this.

Thank you for your patience. Mr. Kathler, we've heard you and your objection is noted on the record. A limited amount of questioning on this will be allowed, with reservation that its relevance will be determined at a later point in time as we assess the whole of the evidence that's been brought forward in the hearing.

MR. WILLIAMS: Thank you, Madam Chairman. Yeah. Sir, I take it that this particular quantity of birds was not factored into any of your design analysis because you didn't know about it, right, sir?

MR. BURNS: Correct, but it is also

separate from a domestic lagoon.

MR. WILLIAMS: Well, you can't say that, sir. You don't know that as a fact because you've never seen this before. Isn't that, in fact, true, sir?

MR. BURNS: Correct.

MR. WILLIAMS: Now, I take it, because you hadn't seen it before, you can't say where the slaughter waste -- in relation to this conditional use application, where that slaughter waste is going to end up, can you?

MR. BURNS: No.

MR. WILLIAMS: And you can't confirm for the Panel that the slaughter waste isn't, in fact, going to go through the lagoon and end up in Willow Creek. You can't tell them that, can you?

MR. BURNS: I can tell you that the lagoon is not designed to accommodate that, so it would be separate -- it's a separate waste stream and a separate licence.

MR. WILLIAMS: Sir, now, if you could

turn back -- maybe you minimize that and go back to the first document, please.

Now, if you -- if you can go to Page 5 of 81, please.

Bear with me for one moment.

Now, sir, if we look under the section that's called "Executive Summary" and we turn to the penultimate paragraph, you talk about the lagoon discharge into -- travelling north to Willow Creek, and (inaudible) say that you indicate special consideration will be taken during construction to ensure no deleterious substances are deposited into the drain. During operation, wastewater effluent will be tested prior to release in accordance with the Manitoban Environment Conservation and Park requirements. As such, any possible anticipated risks are minimized. You see that? Sir?

MR. BURNS: Correct.

MR. WILLIAMS: Yeah. And so -- so -- so, you and I can agree that they're not eliminated. The best that you can say, in the context of your design work,

is that you've minimized them. Fair?

MR. BURNS: Correct.

MR. WILLIAMS: And, sir, if you look at the last paragraph there, it says that, "No registered points of use greater than 25,000 L/D were identified downstream in the discharge path. Additionally, well logs show the nearest domestic well is approximately 22 kilometres downstream. The distance, as well as lagoon liner requirements prohibiting infiltration, reduce the likelihood of any impact on this user or any further downstream." That's your opinion, sir?

MR. BURNS: Correct.

MR. WILLIAMS: And -- and to be clear, what you are able to say, and the best you can say, is that you've reduced the likelihood of that occurring, but you certainly cannot tell this Panel you've eliminated it. Correct?

MR. BURNS: Correct.

MR. WILLIAMS: Thank you. Those are my

questions.

THE CHAIRWOMAN: Thank you, Mr. Williams and Mr. Burns. I'll look to my co-Panel Members to ask any questions, and we'll begin to my right with Mr. Labossiere.

MR. LABOSSIERE: Hi. Before I ask the question, I just want to clarify something for the record and for the -- the folks in the crowd, is that I'm going to be using a term "Information Request", otherwise known as an IR, and that's a document that is developed in the process that the Clean Environment Commission goes through, where, as we go through the various levels of -- of comments and concerns, that, if a question comes up, an information request is generated and forwarded to the proponent to -- to answer.

And so, one of the responses that we received from an information request, you indicate a monitoring plan has not been developed. If this project proceeds, could you clarify what monitoring that you see is essential and -- and kind of with -- with -- with three -- three or four parameters? Where, geographically, from -- let's say, from the end of the pipe to the lake, what parameters, what frequency, and what reporting you would anticipate? Thank

you.

MR. BURNS: Thank you to the Chair. Typically, a monitoring plan is not part of the -- the licensing. That's what we would work with MECC on, and when -- when they're prepared to issue a draft licence and, ultimately, a final licence, and, you know, we would take any recommendations that the CEC may have on what they would like to see as a monitoring plan. It hasn't typically, in the past, been a requirement of a -- of a licence, providing that you -- your design is meeting the nutrient-based discharge criteria that the province utilizes province-wide. That's been deemed an acceptable practice.

MR. LABOSSIERE: Just to take that further. Rather than if -- if you were to anticipate or receive such direction, again, using those parameters I'd outlined, what would you maybe envision that plan looking like?

MR. BURNS: If I was to produce a plan, I would suspect or would probably be looking for a -- a baseline. So, upstream of the discharge point location, probably -- you know, simultaneously with a sample as discharged. And then, I -- downstream, I'd have to look at

kind of the natural topography and, you know, the -- the routing, even, of -- of Willow Creek as to determine where a -- an appropriate sampling location might be. The province, I know, does sampling at Highway 8, so I would probably suggest that that would be the likely location for -- for this particular project.

MR. LABOSSIERE: How about parameters and frequency? You could speak to that as well. Again, realizing that this is kind of speculative, but ---

MR. BURNS: Yeah, parameters, you're likely going to -- you know, you're going to test for the discharge criteria -- total spent solids, phosphorus, nitrogen. Probably, you can look at pathogen as well, and frequency. Frequency, I'd have to do a little thinking and calculating, maybe, to decide on what the duration, like, over a two-week time frame, when -- when would discharge effluent reach, potentially, the Highway 8 and Highway -- or and the Willow Creek point location. So, I suggest that a monitoring plan requires some additional thought, not just my off-the-cuff thoughts. Like, there's some design that would be essential to developing an appropriate monitoring plan.

MR. LABOSSIERE: Thank you.

MS. CARPENTER: Yeah, thank you. This might fall a little bit into this previous question. Just for clarification, you mentioned a little bit earlier that you would -- you know, when you check the sumps, if they're dry, everything's fine. If they're wet, then you could test them whether or not it's groundwater, rainwater, effluent. I'm curious, like, what is the recommendation or the protocol for when you check those sumps, and if they do have effluent in them, what happens after that?

MR. BURNS: So, the checking of the sumps -- so, just for clarity, we're -- we're referencing the sump pits that collect -- are connected to the weeping tile below the liner. Requirement of the licence is that the operator does monthly inspections, so I would have that as part of their monthly inspection report, that they would be opening the sumps to see if there is any liquid. I don't anticipate that they're going to find it often, and if there is liquid found, then I would recommend that that would be part of their operation -- would be to sample and submit it.

MS. CARPENTER: And just for clarification, you mentioned that that may not happen or may not happen -- happen often. If -- and this is just a

curiosity just for clarification -- if you do find effluent -- and I mean, these are backup systems, as I understand it. So, if the sump -- if the sumps do have effluent, is that an indication that there's an issue with the liner? And then, what happens after that?

MR. BURNS: Yes, that would be indication. If -- if -- so, if liquid is found in the sump and it's tested and -- and found to be wastewater, then -- then, you would move into troubleshooting to determine what the cause is. The department would be contacted, so we would advise the department -- the local environment enforcement officer -- that this has occurred, and we would devise a programme to ascertain the cause or the location of the leak. They can be difficult to find, but that's part of running a facility that's lined. You know, you have to -- you've got to deal with that if it occurs. That might be isolating sections. The liners can be repaired. You know, they can -- they basically can be welded. They're -- the sheets come as -- as sheets and they're welded on-site, so -- and that -- there's a whole process and specification to the installation of a liner and the quality control that is done, and quality assurance during construction. So, you would essentially move into troubleshooting for that leak, and finding it and repairing it. But you have the system

in place to at least identify that you have a problem.

MS. CARPENTER: Okay, thank you. No further questions.

THE CHAIRWOMAN: Following up on that, what is the life expectancy of this type of liner that's being proposed?

MR. BURNS: That's a good question. The manufacturer will tell you, "Forever." Practicality, it'd been -- it's been utilized for 30-plus years in -- you know, for lagoon liners. They're UV-stable, so they really have a long life expectancy. The -- but the trick's protection, you know? And that's why I'm -- we have a fairly extensive fence around it to ensure as much protection as possible. But, you know, if you've got an operator or somebody went out to -- to cut the grass around it and they ripped it all up with the mower, well then, that's, you know, human issue. But just strictly, the liner, as it sits, I would expect a 50-year life expectancy out of an HDPE liner without -- without issue, provided they're protected and maintained, and you'd deal with it. If you do have a problem or an issue, you repair it.

THE CHAIRWOMAN: Okay. And in terms of period of discharge, in your presentation, you indicated that the discharge -- the trickle discharge period would be between June and November. Can you -- this is a two-part question -- what would be the frequency -- the expected frequency of discharge, and how would timing be decided upon?

MR. BURNS: Initially, the frequency of discharge will be -- like, I wouldn't expect a discharge for three to five years, initially. But let's just fast forward 15 years down the road, when -- when the colony is at close to a full build-out -- 150 to -- to 200 people. The discharge would be twice a year -- so, typically, spring, after we've achieved the 230-day kind of storage -- that's what we've designed for -- to get past June 1st. So, normally we're looking to do a discharge late June, early July, because that would be, normally, when your lagoon is kind of at its maximum level because it's made it through the winter and -- and been storing hydraulically. And then, we would typically do a fall discharge, just to ensure that you've got capacity that you need to get through until the following spring. So, that would be common.

THE CHAIRWOMAN: And did I understand

correctly that the anticipated trickle discharge period would be approximately two weeks or 14 --

MR. BURNS: Correct.

THE CHAIRWOMAN: -- days?

MR. BURNS: Yeah.

THE CHAIRWOMAN: Great. Thank you. We'll now have a bit of time for some questions from the public, and we'll take a few minutes to do a setup. So, we'll -- we'll have a break.

In terms of questions from the public, if you can please come and see Peter at the break and indicate your interest in asking some questions, just so we have a sense of -- of how long we might be here. If people can limit their questions to approximately ten minutes -- you've seen that we've been very efficient with our questions -- if you can model very clear questions. Not argument, because we do have opportunities for people to present their views at a later point in time, and you can register to do that. But these would be questions that are specific for Mr. Burns on the presentation that was made today and how it relates

to the proposal for the sewage lagoon. Okay? So, let's take a -- a 15-minute break to allow for that setup, and those who would like to ask some questions to just come and indicate to Mr. Crocker here that they will be asking some questions. Okay? So, 15 minutes brings us to 2:15. Thanks.

-- OFF THE RECORD AT 02:00 P.M. --

-- ON THE RECORD AT 02:15 P.M. --

THE CHAIRWOMAN: Okay. It is 12:15 (sic). I think you've started to get to know me. I start on time.

So, we now have the microphone set up for some of the questions from the public. We've -- have five members of the public who've indicated that they would like to ask some questions of Mr. Burns; Mr. Tkach, Mr. Veldink, Mr. MacKenzie, Mr. Sefton (ph), and Ms. Mastin. So, that's the order in which we'll proceed. If we can have Mr. Tkach step up to the microphone. I'm -- I'm hoping that we have about (technical inaudible) minutes per person, just to make sure that we have an opportunity to hear from everyone who would like to ask some questions. And again, the questions will be directed to Mr. Burns and related to the presentation of this morning and the matter at hand. So, I'll turn it

over to you to begin your questions.

Right there. Yeah.

MR. TKACH: Thank you for your presentation, sir. Just one clarification. On Slide 11, you had a note there about 15 percent infiltration of your presentation. Could you elaborate as to what that is, please?

MR. BURNS: In our analysis in hydraulic loading, typically, we allow 15 percent of the total loading or we take the total hydraulic loading, added 1.15 or 15 percent to account for wet weather flow. So, when there's lots of rain and weeping tiles are running that are capturing that leakage in pipes or manholes, that's what the 15 percent allowance is allowed for.

MR. TKACH: So, that's 15 percent going into the lagoon and not leaking out of the lagoon in ---

MR. BURNS: Into the lagoon.

MR. TKACH: Okay. Thank ---

MR. BURNS: Additional loading, yeah.

MR. TKACH: Okay, thank you. Groundwater, you talked about a little bit in your presentation about doing a -- a desktop review only, and you mentioned the freeze and drilling report. You also talked about doing some drill holes, where you did 27 test holes, two of them had water. Now, that monitoring was only for one year where you detected the water in the two holes, was it not?

MR. BURNS: Those two separate things that you're referencing there, if I may -- the Friesen Drillers Desktop Study. So, typically, we engage them. They're hydrogeologists that will look for groundwater to ensure there's adequate water for development, for drinking water -- for domestic purposes, if you will. So, they will look at all the drill logs within the area and generate a report that will say, typically, 'Yes, there's adequate aquifer and groundwater shouldn't be an issue', or, 'We recommend that a further investigation and actual exploration be conducted in order to verify.' So, in this particular case, it's identified the Interlake has -- is essentially right over the carbonate aquifer, that there's lots of water. That's what their study determined, that -- that a source, if you will, for domestic purpose drinking water would -- wouldn't

be an issue, that there would be lots of water and it wouldn't impact other -- other wells.

The second part of your question regarding the 27 boreholes, that's -- that's done for geotechnical purposes. So, what we're looking for there is more of the shallow -- shallower soil stratigraphy that's going to be assessing, building foundations, primarily. If you're constructing roads, you know, how thick a gravel section that road needs to be to stand up. I know there's a few bad ones out in the area, I drove on some. To ensure that we don't have frost boils and all of those issues. And then, also, part of that is to look at clay and suitability or quality of clay, and whether it could be used as a liner material for a lagoon. So, that was the purpose of the geotechnical investigation.

Within that, they sometimes will put in a piezometer or monitor for groundwater if -- if it is detected. It's been a while since I actually looked at that report, so I -- I don't recall the -- the details of that, other than the -- the monitoring well or the logs indicated that there was only water present in two of the 27 holes, which would be shallow perched sand lenses with some water in it, which is common to a clay or to a till. I don't know

if that answers your question.

MR. TKACH: No, it's -- it's good, and I'm -- I'm going to keep going a little further on that one, because I --

MR. BURNS: Okay.

MR. TKACH: -- I read through your Trek report, which did kind of flag this as a bit of a concern in terms of the longevity of the monitoring, and they referred to the one year of looking at things and saying that that may not have been long enough to get an understanding of what's going on, even in that shallow subsurface that you're talking about, and I understand that there are two separate processes there. And I am the landowner across the road from this and -- and I can tell you, after living there or -- or being there for 15 years and just looking at water level fluctuations in my own swamps and so forth, it's -- it's quite unpredictable, and I'll -- I'll suggest that -- that one year of looking at things probably isn't enough to get to look at things. And as an engineer, we -- yeah, go, go. Yeah.

MR. BURNS: Neighbour to the south? Just

so I'm ---

MR. TKACH: Southeast, yeah. I'm northwest 22183.

MR. BURNS: Okay, thank you.

MR. TKACH: Yeah. So, as an engineer, we normally love to do, like, groundwater analysis, numerical analysis for quality and quantity for instances like this. Why wouldn't you use that approach of doing a detailed numerical model for this, given the concern that we're seeing here?

MR. BURNS: The groundwater modelling portion, you know, is -- is not my area of expertise. That's -- that's why we retain sump consultants. And that is why we retain Friesen Drillers, because they have probably the, you know, provincial most authority on -- on that. And within their -- their works and their desktop study of the aquifer, the subsurface conditions, it was deemed not a requirement, not necessary. They were pretty -- pretty comfortable. They know the subsurface geology in this area of the aquifer. They were pretty confident with what -- what was proposed.

MR. TKACH: Okay. And then, further on that -- and we've touched on this a little bit with the -- the leak monitoring, and this is where I want to connect all these dots together. So, it's understood here that the operator is going to do the -- the leak monitoring -- the sump pits -- and that's referred to, and -- and I am quite concerned. You know, as you said, if there is a leak and we get some understanding as to how far and how fast that leak can spread, you mentioned that you're going to be checking monthly. I'm suggesting that we don't maybe have the best picture as to how far where that leak is going to go, and in a month, it can go pretty far. I know, when they had dug the ditch on the north side of my property, in an instant, the dugout across the road drained. So, if there is a leak and you're checking monthly, is there any reporting system to the people that rely on groundwater quality? Because that -- that is one of the concerns, where we have a leak, you're checking monthly. Is there any monitoring system for the public, where suddenly you can say, 'My kids can't play in that ditch'? 'We can't swim in that.' 'We shouldn't be kayaking in that.' What -- what kind of alarm system do we have here?

MR. BURNS: So, I guess -- just thinking on

the spot, that's what you got me doing -- firstly, the geotechnical and Friesen Driller report both indicate that this area of the province is founded on dense till, which has a very slow migration -- lateral migration rate. In fact, the -- the -- the geotechnical report found that the clay was close to being suitable for a lagoon liner, which would be one times ten to the minus seven centimetres per second as a -- as a permeability rate. So, if you can think that's how fast water's moving through, it's -- it's pretty slow. So, with that, if there was leakage, it's my opinion that it will be -- it would be years before there's any, like, horizontal impacts to surrounding area. So, the -- the -- the -- the sampling from the wells on a -- on a monthly frequency is adequate to be able to detect and address any potential concerns.

MR. TKACH: Okay, so -- and -- and I will concede that there are very inconsistent geotechnical parts of the area where you may have a portion of clay from (inaudible) that is very dense clay and it may be appropriate, but the next hundred metres could be boulders. But let's -- let's not debate this back and forth. Thank you for your answer.

With regards to the -- the embankment of the

lagoon, generally speaking, you don't want to have an embankment of a dam next to flowing water. Do you have any concerns about flowing water from south Malonton Drain at the base of the dam of the lagoon with regards to failure?

MR. BURNS: No, I looked at that when we designed it and thought about it with the -- with the trees and the natural prairie that's there, and the distance away from the drain. Initially, when the lagoon will be first constructed, it takes some time to establish vegetation on the exterior of the lagoon, which it would have to be monitored and watched as part of the inspection protocols. But once that's rapidly or, you know, fully established with -- with a grass strand with roots, you know, I don't anticipate that -- there isn't sufficient velocity outside of the flood channel that -- that I have concerns with the embankment.

MR. TKACH: Okay, thank you. We've repeatedly asked questions pertaining to odour monitoring for the lagoon. Your reports indicate that there will be monitoring of lagoon odour, and that, if it's deemed to be excessive, that corrective actions will be taken. Now, unfortunately, the questions that we've asked haven't been answered. So, I'll ask them again. What type of monitoring

are you planning? What are you monitoring? At what location? What distance from the lagoon? Are the results going to be published anywhere? And what corrective action would you take if the -- it's deemed excessive? You know, if you cross some sort of threshold?

MR. BURNS: Sure. Odour from a lagoon is -- is typically limited to spring and fall when there's turnover -- so, at snow melt or when the ice is melting -- and then, in the fall when the temperatures are rapidly dropping. So, you normally will have some odour in -- you know, for a -- a few days or a week period of time, kind of depending on how fast and rapid the fluctuation of temperatures are in spring and fall.

Other than that, you typically shouldn't notice odour from a properly designed lagoon cell, because you're designing -- a -- a large portion of that is your BOD loading, and as that is being consumed or broke down, you could have odour if it's improperly designed, if your cell was too deep and you went into anoxic conditions, but a properly designed, sized lagoon should not produce a significant odour, other than for a few days to a week in spring and fall.

So, I know the question was, 'Can you put a -- then put a synthetic liner -- put a liner over?' Well, that -- that doesn't work for the -- for a lagoon. We rely on wind, oxygen action, UV for -- for treatment. So, they -- they can't really be covered. So, in the industry, the typical stance would be that, you know, provide some additional shelter belt, if that will provide some -- some odour mitigation measures. From my own experience with cells that we've designed in -- in the recent past that are fully utilized, I haven't had any odour complaints, providing they're designed properly and sized properly.

MR. TKACH: So, I -- like, I personally grew up close to a lagoon and it reeked 24/7, 365. And so, I guess the point I'd like to make is that, once we deem that this is a bad situation, that there really isn't a lot we can do at that point.

MR. BURNS: So, as a neighbour, if odour is -- becomes an issue, then the mechanisms are in place and the province could probably (inaudible) possibly answer that on. You know, unfortunately, it is a complaint-based driven system that, if a complaint is filed, then the enforcement officer will do an inspection, assess the -- the lagoon. You know, I -- my experience has been, a lot of times, those

have been small, under-designed facilities that are old. Wherever you grew up beside one, it probably quite often was -- was an old, under-designed, improperly designed facility. We used to design them deeper so there was more of a -- an aerobic condition that provided and gave off more gases than -- than current design standards. So, I'm -- I'm confident that properly designed, sized depth will provide minimum odour for the majority of the year.

MR. TKACH: Okay. Well, we'd appreciate if you took that seriously. Moving along quickly here, we flagged that climate change is a bit of concern, obviously, globally. I haven't seen any calculations or estimates on greenhouse gas emissions for the lagoon project. Why is that?

MR. BURNS: They weren't -- weren't conducted as part of the design.

MR. TKACH: So, climate change isn't a concern for this project?

MR. BURNS: Climate change is a concern, but greenhouse gases weren't evaluated as -- as part of a standard lagoon.

MR. TKACH: Okay. Page 21 of the D'Arcy Deacon Report, Items 49 and 50, refer to some drainage and stream crossing that were done for the lagoon project. Can you speak to the details of these or no? Or do we -- is there anybody else here?

MR. BURNS: Sure, I can -- I --

MR. TKACH: Okay, well, it's --

MR. BURNS: -- don't know --

MR. TKACH: not ---

MR. BURNS: -- what pages, but I'll tell you ---

MR. TKACH: No, that's fine. So ---

MR. BURNS: I -- no, I'm -- I'm happy to speak to that.

MR. TKACH: These were done in accordance with the Manitoba stream crossing guidelines, I take it?

MR. BURNS: Correct.

MR. TKACH: Correct? Did they calculate for fish passage? I didn't see anything in that regard for them.

MR. BURNS: Yes, I did.

MR. TKACH: Okay. So, I have a letter from the Regional Director-General of the Department of Fisheries and Oceans, saying that they have not been asked to review any in-water work for this project.

MR. KATHLER: Objection, not in evidence. Also, hearsay.

MR. TKACH: It's actually submitted in my written submission as part of this project.

MR. KATHLER: Objection, hearsay.

THE CHAIRWOMAN: (inaudible) has been provided?

MR. TKACH: Yes, it's -- it's in my written submission, which is actually posted on the CEC webpage already.

THE CHAIRWOMAN: And what is the nature of your question, specifically?

MR. TKACH: My question is, why hasn't DFO been involved if there's in-water work? Their highest level of official has sent me a letter, which you have a copy of, saying that they have not received an application to review any in-water work at this project. My question is, why haven't -- why haven't they been involved?

MR. KATHLER: Objection, relevance as well. These are with respect to drainage works that are not related, that -- that are for road improvement, as I -- I believe was the question. That has also nothing to do with the lagoon project. That has to do with site drainage and is not a matter before this Panel.

MR. TKACH: Your Honour, I am a former regulator with the Department of Fisheries and Oceans. It was historically my job to review projects of this nature, and on the basis of that experience, I can tell you I would

have wanted to have looked at this.

THE CHAIRWOMAN: Okay. So, your question to this witness is whether or not there was a request that was made?

MR. TKACH: Why wasn't there one? Because the RDG, the most senior official, has sent me a letter, saying that they have not received an application to review in-water works at (inaudible) project site.

THE CHAIRWOMAN: And Mr. Kathler, you're indicating that it's not required in these circumstances?

MR. KATHLER: I'm indicating that this is -- these are not works that have anything to do with the lagoon project.

MR. TKACH: They're listed --

MR. KATHLER: There --

MR. TKACH: on your report, sir.

MR. KATHLER: -- there's a broader site

development because these -- these issues have come up time and time again, and as they're raised by members of the public, by the RM of Gimli, we do have to address them in rebuttal. Us addressing them in rebuttal does not necessarily -- it's not tacit consent to their relevance. We have to address them, explain that they're not relevant. These are drainage works that are unrelated to any discharge, unrelated to the influent into -- into these works. It -- it's not relevant to this project.

MR. TKACH: They are related --

MR. KATHLER: (inaudible).

MR. TKACH: to the construction of this lagoon. Unless you're building this lagoon using helicopters, these access points for construction are required. How else are you going to get to the lagoon to build it if you don't have road crossing infrastructure in place?

THE CHAIRWOMAN: I'm just going to pause for one moment to consider what's been asked here. Just -- just one moment.

MR. TKACH: Thank you.

THE CHAIRWOMAN: Okay. So, we're at a point in the proceeding here where we're taking questions from members of the public, so we're going to be very lenient in terms of allowing certain types of questions. The witness may answer or not answer, and legal counsel may have some objections to make about relevancy at a later point in time, but I certainly don't want to restrict too heavily what the members of the public can ask in the context of the proceeding for clarification. And if no answers are available, or if limited answers are available, then we'll proceed on -- on that basis.

MR. KATHLER: I -- I appreciate that, (inaudible). I just do -- relevance is -- is well and has been stretched, and I just want to make sure that that objection is known because ---

THE CHAIRWOMAN: Your objection is noted, Mr. Kathler.

MR. KATHLER: Thank you, (inaudible).

THE CHAIRWOMAN: But also, the Clean

Environment Commission has a mandate to engage with the public to hear public concerns, and -- and we want to make sure that we're fulfilling that role and balancing the interests of --

MR. KATHLER: Understood.

THE CHAIRWOMAN: -- both parties, as well as members of the public who are here (inaudible).

MR. KATHLER: Thank you, Madam Chairman.

MR. TKACH: Thank you, Madam Chairman. And I'd also like to note that this DNO -- DFO involvement is part of the integrated watershed plan for Willow Creek.

THE CHAIRWOMAN: Do you have any other questions?

MR. TKACH: No, other than -- I guess I don't really get an answer as to why they weren't involved? Or no?

THE CHAIRWOMAN: I'll give the opportunity to the witness --

MR. TKACH: Okay.

THE CHAIRWOMAN: -- to provide a response, if he would like.

MR. BURNS: Yeah. At this stage in the project, we're still seeking a licence. So, there hasn’t been -- there is no in-water works for the lagoon construction. Hasn’t been -- hasn't been built, hasn't been licensed. I'm not authorised to proceed. Upon acceptance of a licence, the project would then move into a tendering stage, which, within that tender, there'll be requirements for erosion protection, silt protection of any streams, drains, the Malonton drain. At that time, it's part of the construction and tender package. So, we're early in the -- in the process, and therefore, we haven't consulted them. We don't have a licence, so I'm -- I'm not going to chase that if it's not a -- if it never happens.

MR. TKACH: No, fair enough. The crossings are already built in some cases, so it's not really late, but I will say, I would encourage you to include them in -- in your process.

MR. BURNS: Yeah.

MR. TKACH: Thank you.

MR. BURNS: Thank you.

THE CHAIRWOMAN: And thank you for your questions and answers. Mr. Velnik (ph) -- Veldink.

MR. VELDINK: Thank you very much. I have a -- first, real simple question. The colony received -- or submitted an application to raise 60,000 broilers. I assume those broilers are going to be processed on-site. So, could you please tell me, will they be processed on-site? Yes or no? Because it will have implications for the contents of the lagoon.

MR. BURNS: Correct. You're -- you are right. I'll -- I'll answer that. I will preface it with, I didn't do the conditional use for the broiler application for the client, but I have done a number of them and I'm very familiar with how the process works and how colonies work. So, that number of birds will not be processed on-site. That number of birds is actually part of their quota that's owned by Dunn-Rite Chicken, who will -- the colony's

role -- or a colony's role in that is raising only. So, Dunn-Rite will actually ship and put the chicks in the barn, raise them 'til they are ready for market, and then come and pick them up. So, that's why it's a separate process. It's not tied into the lagoon. Those birds are owned by Dunn-Rite. So, again, they're -- they will not be processed on the site. They can't process them.

MR. VELDINK: Okay, thank you. The second question in regards to the contents of the lagoon is what comes into the lagoon from the truck and car wash. Like, we get salts, heavy metals, other contaminants. How do you see those contaminants being dealt with or treated in the lagoon?

MR. BURNS: Mm-hmm. National Building Code requires that anywhere there -- where there's potential for oil and grease to enter a sewer system -- so, let's call that the domestic sewer here -- that an oil and grease interceptor is installed. So, within that car wash, they will have an oil, a grease, and a grit interceptor, typically, to settle out your large particles, because we don't want it in our plumbing anyway. So, the majority of those contaminants are settled out in that grit chamber, oil and grease is settled out in the interceptor, and then it's

cleaned on a regular basis to prevent it from getting to the lagoon. There will be some degree of contaminants, the same as if you go to the truck wash in Gimli on your way home and it goes to the treatment plant. There is some contaminants of salts that are dissolved solids. Heavy metals typically settle in the lagoon. They'll settle into the sludge, and they'll be removed at a later date under a separate Environmental Act licence, and addressed appropriately.

MR. VELDINK: Okay. That <01:22:27> to my last question. What will happen to the -- the sediment -- the sludge -- and how often will sludge be removed from the lagoon?

MR. BURNS: So, that's a good lead-in. So, sludge -- the bio-solids, we'd call that -- it settles and does need to periodically be -- be removed from any -- any wastewater treatment facility. I know Gimli has a bio-solids application programme. I've -- I've seen that on public registry, all lagoons. Typically, you're looking at, you know, for a colony, like, in the order of 20 years before a bio-solids application, where you have to dredge the bio-solids, remove it. And that falls under a whole new Environmental Act process, so I'm -- hopefully, we're not here in 20 years again. But essentially, we follow the same

process. Well, we have to test the bio-solids in the lagoon. We have to see what's in it, what nutrients are in it, determine what we can do with it. Quite often, it's land-applied. Calculate the nutrients to determine we're not overloading any of the land that it's being applied on. That whole process gets submitted to the -- to the department for another Environmental Act proposal. The -- we go through the same public process -- reviews, comments, public hearings -- and then, typically, a licence is issued for the bio-solids application to land so that the nutrients are consumed by the plants and then ultimately harvested and removed.

MR. VELDINK: Thank you.

THE CHAIRWOMAN: Thank you for your question. Alex MacKenzie.

MR. MACKENZIE: Thank you, Madam Chair. I have a couple of questions. And thank you for the latitude that you've extended to we, the public.

I live in Siglavik, which is immediately -- I share the same road with Miklavik. Miklavik is the little area when Willow Creek comes out and crosses Highway 9 and

then runs north-south for a ways before -- as it's going to the marsh.

MR. BURNS: Okay.

MR. MACKENZIE: Yeah. A lot of my friends are in Miklavik, and I swim there and fish. And one of the things I noticed in your presentation -- and again, I'm not enough of a mathematician to know what 0.0000367 percent is, but maybe 367 millionths or something like that -- was going to be the load on Lake Winnipeg, which is a lake that's about 120 miles long and 60 miles wide. Have you calculated the contaminant load right at Willow Creek where it exits into the marshy area? And -- and could you -- could you tell me what that contaminant load would be where I swim?

MR. BURNS: I haven't done -- done that work because that would be more for a complete in-stream assessment. So, no, we did not calculate current or future loading at that --

MR. MACKENZIE: Okay.

MR. BURNS: -- location.

MR. MACKENZIE: So, in the river, you don't have a -- a number that would represent the contaminant load in the river itself then?

MR. BURNS: No, in the stream, the province has -- it'll take me a little while to dig that one out, I might have to get back to you on that -- but they do have some readings. The number you're asking is a percentage of total phosphorus that's entering Lake Winnipeg, but the readings would be milligrams per litre, not percentage of total phosphorus entering there, so it ---

MR. MACKENZIE: Okay. Well, it -- it's just that the -- to me, where I swim, it really doesn't matter what the load on the entire lake -- this -- this 40-foot-deep, 120 -- or 60-mile-long, 60-mile-wide lake. What's the load in that lake? I want to know the load where I'm swimming and fishing, and -- and -- and I -- I conceive of it as relevant to me, at least, if no one else.

MR. BURNS: Yeah.

MR. MACKENZIE: So, I -- I'd like to know that number. And if you don't have it, thank you

nonetheless. That was my question.

MR. BURNS: Yeah. Yeah, and that -- that hasn't been calculated, sir.

MR. MACKENZIE: Okay, thank you. And now, I noticed on Table 8 of your presentation, which talks about the drilling that was done to check the soil, that there was a -- that it was a depth of -- I think, maximum was 1.5 metres that was drilled. There were two drill holes, and -- and one was -- I think, the maximum one was 1.5 metres. And -- and I was surprised to see -- or to not hear of the soil conditions that were below that, partly because I had taken the trouble to read this Integrated Watershed Management Plan for Willow Creek that was done in 2011, and one of the things it had said on Page 7 was, "Groundwater is considered sensitive to land-use activities in areas with less than six metres of clay overburden." And I was wondering if you could tell me what the depth of clay is in that location.

MR. BURNS: Approximately a hundred metres -- hundred feet, sorry.

MR. MACKENZIE: Hundred feet?

MR. BURNS: Yes.

MR. MACKENZIE: Yeah, so the -- this was a measurement in -- in -- in metres, but it was to be ---

MR. BURNS: So, the -- I don't know if there was a question there, but I'll just talk. How's that?

MR. MACKENZIE: Well, the question was, how deep is the clay -- clay underneath that location where the drilling was done to 1.5 metres?

MR. BURNS: So, when the -- when the geotechnical investigation was done, site-wide, there was 27 test holes that were drilled, and of those test holes that were drilled, they all ranged in various depths to what -- how deep they went. I'm just looking to see which ones was right in that area, and I will answer the question. Just give me one second.

So, five test holes were actually drilled within the footprint. One of those test holes was drilled to 6.5 metres below and ended in a silty till, a dense -- with trace clay, sand and gravel. So, it was -- and - -and

seepage was observed from 2.4 -- 2.1 to 2.4 on that particular test hole. Test hole 16 was also drilled to approximate depth of 6.5 metres in a till. Test hole 17, the same result -- six and a half metres. Number 17 was shallower, was only drilled to 1.5 metres because we were looking for what the clay quality was. And 19 was drilled to approximately six and a half metres -- so, 20-ish feet -- 22 feet, approximately -- from grade to bottom of test holes.

MR. MACKENZIE: And so, where this suggests that there should be six metres of clay, you -- you're saying they drilled down, but they drilled down six metres of till. Now, the till can be -- can be a more granular material, can it not? More materials, which is less impermeable. This, specifically -- the only reason I'm asking is because this report specifically said, "There should be no less than six metres of clay." And -- and do you have a report that says there's at least six metres of clay? I guess that's my question.

MR. BURNS: Yeah. Clay' a pretty broad-based term. Till would typically be considered as a -- as a dense, tight soil. So, do I have a report that says six metres of clay? No. I have a report that says over six

metres of dense till, supplemented with the hydro-technical report produced by Friesen Drillers to say that, in that area, it ranges in a hundred feet depth.

MR. MACKENZIE: Thank -- thank you. I noticed that, in your presentation, on Diagram 7, which was the layout of the entire complex, you pointed out where the chicken-raising section of the project would be. And although you mentioned that there would be hogs raised -- or hogs -- and, I had thought, also slaughtered -- perhaps I was wrong -- that there was no mention of where the hogs would be raised. Just wondering where would -- that would be.

MR. BURNS: Again, I haven't worked on that portion of this project, but there is no intention to raise hogs at this facility. We had hogs in our numbers in the abattoir, you know, and -- and -- and that was asked by Mr. Williams. The -- those are pretty conservative numbers, so I included some hogs that could potentially be killed. Sometimes, what a colony will do is, they will buy from another colony hogs that have been already slaughtered, and they're just buying the carcass that they'll use for making sausage or making bacon, but there's no intention, there's no application for raising any hogs on this site. It is

poultry only.

MR. MACKENZIE: It's not intended to raise hogs. I had misunderstood that. And then, I guess my last question is, sir, you know, we've -- as a society, we've become kind of used to some level of bureaucratic or government control on -- on things. In -- in terms of who -- who -- who will be inspecting this on a regular basis? Will it be an outside administrative body or will it be some, perhaps, young person -- with credentials, of course -- from the colony itself?

MR. BURNS: I would (inaudible) ask the province to answer that, but I -- I can -- I can answer that a colony of Class 2 wastewater lagoon requires an operator to have a training. So, an -- you need to have a certified operator, so that would be a colony member, typically, that has to obtain a training course so that they can properly operate the facility. It would be their role for operations and as part of their licence to ensure that they're in compliance. If there was an issue, then typically, if it's an issue the operator is aware of, it's -- it -- according to his licence, he will report that to the Environment Officer and seek direction in how to rectify what -- what that issue might be. If it's a complaint from yourself,

(inaudible) neighbour that thinks that it's not being operated properly, a complaint would go to the department and it would be investigated then by an Enforcement Officer to ensure that the facility is being operated in -- in accordance with their licence.

MR. MACKENZIE: And -- and again, thank you very much. And just then, the one final question. I -- I would presume that, if it's a member of the colony, they would also be beholden in -- in many respects as a family member, virtually, to the colony also.

MR. BURNS: Yes.

MR. MACKENZIE: Okay.

MR. BURNS: (inaudible).

MR. MACKENZIE: Thank you. Thank you. Those were all my questions, (inaudible).

THE CHAIRWOMAN: Thank you, sir. Mr. Sefton?

MR. SEFTON: Yes. Thank you to the CEC for

facilitating this discussion here today. I really appreciate that. And also, Mr. Burns, for your presentation.

You did answer a little bit -- my first question, about who is doing the sampling. So, I guess the -- the question would be, if a colony member is the one doing the testing, drawing the sample, and taking the sample to the lab and analysing it, who -- who holds them accountable to the accuracy and the validity of their -- their test procedures and whether they do actually disclose discrepancies in -- in the levels that they're seeing?

MR. BURNS: That's a good -- good question. From my perspective as -- as the designer, I have to -- I have to believe that the -- that the process works. Now, I -- the licensing process is that the -- the operator has to have the proper training and certification. There obviously is an onus on -- on that operator to do things ethically, and ensure that the samples are extracted properly and submitted to the lab on time, and the test results are reported accurately. Those results are -- would then normally be included in, like, a -- an annual submission to the province with the test results so that they see what -- you know, what the values were primarily prior to discharge.

But it is -- it is, you know, based on a, you know, ethical -- you know, the -- they're -- they're licensed. They have a certificate to do what needs to be done to test it and sample, and submit the results.

MR. SEFTON: Is there any requirement for a third-party on-site testing to validate their process and their test methods?

MR. BURNS: I haven't had that on any of my projects. Maybe the province could potentially speak to that. It's -- it's never come up that it was a third party, but it -- it -- it could be. As a professional engineer, we have the capability to do that testing and operation as well. I have a client that we are the operator of their facility, so our company does all the testing, all the inspections, all the monitoring because the operator doesn't want anything to do with it, and he wants to make sure it's done according to all the rules and the regulations. That would be a decision of -- of the colony or -- or of the Commission. If they deem that it would be a third party to take that sample and submit that sample, that's possible.

MR. SEFTON: Actually, I -- I would feel really comforted by having someone external do the testing,

if that could be a -- a consideration of the CEC as far as putting conditions on this application.

The other -- the other concern I have is mostly operational, to be honest, because I also am an engineer (inaudible), and what looks good on paper and what happens in the real world are often very different. And very often, it's operator error that causes some of the -- the biggest catastrophes that we see in industry. And so, the other -- the other -- sorry, did you ---

MR. BURNS: No. I -- I -- I just -- I agree with you there, and -- and -- and that's why some questions have come up about the operation. It's hard to give you an exact answer because it's situational. If this has happened, we're going to do this. If that's happening, we do this. So, yeah, you -- you -- you do have to understand the operation, for sure, in order to operate that facility appropriately. So, you know, I -- I definitely agree with your comment there.

MR. SEFTON: So, one thing I -- I see as -- as a really big, I -- I would say, design deficiency is the lack of flow control of the discharge. Because if 14 litres per second is the maximum allowable discharge rate and

you're controlling it by a hand valve, I -- I know the difference between one turn and two turns can be many, many gallons per minute, and -- and if the operator is just eyeballing this and checking it a couple days later to see what the level drops, that's very poor control of the flow. Then, why would you not put a restricting orifice or, by -- by virtue of reduced pipe size, automatically inherently restrict the maximum flow of that effluent discharge line?

MR. BURNS: Yeah, we can. I actually talked at the break about that. I said, 'Well, we could easily add an orifice on the discharge pipe to limit that to the maximum.' You know, that wouldn't be an issue. The licence, although I haven't seen the draft yet, if -- if we get to that stage, even that 14 litres per second trickle discharge is based on a lot of factors. So, does it need to be exactly 14? You know, probably not. That 14 was basically to discharge the entire volume that I wanted to over a two-week period. Well, if there's less volume, you know, it could be higher, it could be lower, but, yeah, to be -- to be conservative, we could easily put an orifice on the outlet pipe -- which I don't have a problem adding that -- which would limit the maximum to that value. It's just -- typically, there's not really that in the licence that says that is the maximum amount.

MR. SEFTON: In -- in some cases, depending on the flow of Willow Creek, 14 litres per second may be too much, because if you're familiar with Willow Creek at all, there's times it doesn't flow at all. And so, any amount of discharge into the creek would -- would end up with an effluent pond sitting in Willow Creek, waiting to be discharged downstream, as a slug of concentrated effluent upon the first good rainfall. So, can there not be some sort of restriction on discharging on -- like, no discharging unless there was a minimum flow rate in Willow Creek to actually flush the toilet, so to speak?

MR. BURNS: Yes, and that's, you know, one of the conditions that I -- I felt the Commission may come back with, is -- is the flow regime for when -- when the discharge can occur.

MR. SEFTON: Okay. Thank you.

THE CHAIRWOMAN: Thank you for your questions. Ms. Mastin?

My apologies.

MS. MASTIN: This is a simple question.

THE CHAIRWOMAN: Oh.

MS. MASTIN: This is a simple question, and it's something that I know the neighbours are -- are concerned about. But under the liner, you have a pipe to have a gas outlet for what's occurring underneath the liner. Now, what does it smell like? Is there really an odour or is it just kind of -- you know, what type of odour would it be?

MR. BURNS: The concentrations there would be minuscule, very small. Like, the -- the gas venting is just there to prevent -- if you can picture a piece of plastic with a little bit of gas coming really slowly, you don't want it to float up, right?

MS. MASTIN: Mm-hmm.

MR. BURNS: You know, it's a question of what gases are there. Radon gas is one of the -- one of the gases that's prevalent in Manitoba. That's -- that's a carcinogen, so -- but very small quantities, right? So, it's more -- I -- so, I guess my answer is, there'd be no

smell. It's -- we don't -- like, it's just a matter more of a practical piece of the design to ensure the -- the liner doesn't float.

MS. MASTIN: Okay. Thank you.

THE CHAIRWOMAN: Thank you for your question, Ms. Mastin. Any questions from Commissioners?

MR. LABOSSIERE: I have one question for clarification, and again, this speaks to the back-and-forth on -- on how questions can kind of beget further questions. So, this -- this is for you, Mr. Burns, but also possibly for the -- the proponent writ large. But there had been some -- frequent references to the -- the Friesen Drilling. (inaudible) was geotechnical or hydro-technical, as it was referred to. Do you recall if that was submitted with the EAP or just referenced in the submission?

MR. BURNS: I believe it was submitted with, but if not, it was asked right at the first round and it was added to it, but let me confirm.

MR. LABOSSIERE: Okay. What I'm -- what I'm saying -- and again, this -- this might go to the

proponent writ large -- but could you confirm that had been -- if -- if it hadn't been submitted, can you ensure that it's been submitted so we can put it into the record? Just because there have been some -- a -- a fair number of questions regarding it.

MR. BURNS: It wasn't submitted with the EAP. The appendices for the EAP were the Trek geotechnical report, certificate of title, the design drawings, the heritage resource impact assessment, and the Trek hydraulic and hydraulic assessments were the original appendices -- so, A through E.

One of the questions that came up during the Round 1 of questions with the EAP submission was related to groundwater, and requested that that be submitted, and it was submitted at that point. So, it is on the -- the province's TAC website -- a copy of that report.

MR. LABOSSIERE: Okay, great. Thank you very much.

MR. KATHLER: And just for reference, Mr. Labossiere, to pinpoint that, and for the public as well, that was attached as Appendix A to Information Request

number 3 -- the reply to information request number three of the RM of Gimli.

THE CHAIRWOMAN: Thank you. So, we'll turn it over to you, Mr. Kathler, if there's any redirect questions that you would like to ask of your witness.

We can also take a short break, if you would like. Unless you prefer to ---

MR. KATHLER: Just -- just a few minutes would be appreciated.

THE CHAIRWOMAN: Let's take a ten-minute --

MR. KATHLER: Thank you, Madam.

THE CHAIRWOMAN: -- break and reconvene. Thank you.

-- OFF THE RECORD --

-- ON THE RECORD --

THE CHAIRWOMAN: I'll ask everyone to

please take your seats. And turn it over to Mr. Kathler for the redirect of his witness. Again, if anyone feels the need to carry on conversations, there is a lobby space that's available to -- to everyone.

MR. KATHLER: Thank you, Madam Chairwoman. I have no redirect. Mr. Burns is free to go, subject to any further questions from the Commission.

THE CHAIRWOMAN: Great. We don't have any further questions. I want to thank you, Mr. Burns, for what was a long day, and also for a lot of questions from us and from members of the public. Thank you for your presentation and answers to those questions.

MR. BURNS: Thank you for the opportunity today to -- to be able to meet and provide some clarification. Thank you.

THE CHAIRWOMAN: So, we'll be calling up our next witness, Mr. Carson MacKenzie from Keewatin-Aski Limited, who is a technical advisor to the Clean Environment Commission, and provided a report that is on the record. Go ahead.

MR. CROCKER: Peter Crocker. Can you state and spell your name for the record, please?

MR. MACKENZIE: Carson MacKenzie -- C-A -- C-A-R-S-O-N M-A-C-K-E-N-Z-I-E.

MR. CROCKER: And Carson, do you -- do you solemnly affirm that the evidence to be given by you shall be the truth, the whole truth, and nothing but the truth?

MR. MACKENZIE: I do. I do.

MR. CROCKER: Thank you.

MR. MACKENZIE: Okay. Everyone can hear me? Hello. Welcome, everyone. My name is Carson MacKenzie, as we said. I'll begin presenting on behalf of Keewatin-Aski. We are the independent third-party reviewer associated with this project.

So, we'll dive into our presentation. So, a couple of topics we're going to discuss briefly. We're going to review the overview and the regulatory framework, we are going to discuss key issues and comment responses, and we're going to look at resolution and regulatory

takeaways.

So, introduction to the review. So, we've been reviewing the EAP application, as well as the documentation of the exchanges that have -- have gone on. This includes the Crystal Springs Colony lagoon proposal, which has been outlined in detail today.

We've been providing a third-party technical assessment of our thoughts of the application of -- of that -- the -- the documentation, and then we've been comparing it against the regulatory processes, and that's what's in our report, essentially, is the comparison of the -- the documentation. We'll provide a review here.

So, structured regulatory process. We're going to outline the -- the lifecycle requirements and the -- the Environmental Act proposal licensing and construction and operation requirements. So, these are all outlined in our report in detail. Each -- each stage addresses a different level of -- of detail and oversight for the -- for the process review itself.

So, the evaluation framework, as well, is included in our report. This is -- categorizes technical

and operational procedures, and focuses on whether concerns are addressed at the appropriate regulatory stage.

And you'll notice, as was mentioned this morning, we've got resolution pathways that we've included. The intent here with the resolution pathways is to identify, as a neutral third-party, what are the steps forward for the process, and they're not intended to respond directly to whether the project or an aspect of the project is acceptable or not. We're speaking specifically to what are next steps for regulators or for the proponent or any respondees.

So, a key part of our report is Appendix A. In here, this is where we're summarizing the review of TAC comments, public comments, the report findings, and we're presenting kind of our -- our basis for our next steps. So, this is -- as we've got here, traceability between comments and responses, understanding, you know? There's a significant body of work that's gone on (inaudible) over the last five years throughout this process, and as a part, it can be difficult sometimes to track what was discussed at the early stages versus late stages in the project. So, we're providing a compilation of these perspectives, and we're also working in the public comments and TAC comments as well. So, we've got a sample at the bottom here of the

-- the table, but I do encourage everyone to go and look at the table in detail because, in many cases, if you've asked a public content, your public questions would be summarized into a category, essentially. So, the table, you might find very helpful to address some of your questions, if -- if they're not currently addressed yet.

In the table, it's also going to outline the basis of a review, and you can kind of see that we've kind of spelled out some description for particular topics, and we've got additional review considerations for the Board. Now, generally, these are in a couple of different categories. These are the resolution pathways that we're looking for -- next steps for additional information that's either required of the proponent, or licensing conditions, for example, which we'll get into here.

So, resolution pathways and licence conditions. We've got clarification pathways. What does that look like? It's what we're doing today. It's asking and answering questions. Licensing conditions. When -- when a licence is issued, there's conditions that go with that. Now, the idea here is that, when you have broad regulations, you can't be prescriptive on the site conditions all the time. So, the licence conditions are an

additional tool that are used by regulators to implement additional requirements of the site where it's necessary. So, in this case, it -- because we're -- the nature of the type of project, you're looking at something that is site-specific. We've talked a lot today through the presentations about site-specific conditions, and the -- this -- the licence conditions provide an opportunity for regulators to add conditions in support of the existing standards.

Additionally, we've got construction QA and QC. This will be another part of the process. This is for standard construction processes. Things like, you know, how is the liner to be installed and whatnot. These are identified by the designer for the -- for the lagoon, but again, it -- it -- ultimately, they're leading on regulations that are existing, that are established.

And then, operational commitments, we talked again today. There's been some discussion about operational commitments, and what does day-to-day management look like?

So -- so, a couple examples here of analysis and resolution pathways -- just pulling some highlights from the table here. So, an issue area, for example, has been

effluent monitoring and reporting. What is the primary resolution pathway? In this case, the reports identifying licensing conditions. So, is that the only resolution pathway? Not necessarily, but the primary one would be if there's concerns in the documentation that have flagged issues with the monitoring and reporting process -- process, that should be -- that our recommendation would be that the -- a licence condition addresses those concerns, and those are -- that's kind of the -- the flow here of what we're looking at.

So, another example -- discharge timing and notification. Again, there's been quite a bit of discussion about that today as well. So, again, you're going to see a pretty good theme here. License conditions, again, would apply to the -- to the -- yeah, the licence if and when it is issued. That would help inform the -- the ultimate operation of the lagoon, and management of the licence, essentially.

Flooding and wet weather condition -- wet -- flooding and wet weather operation. Again, a topic that's discussed at length today. Again, licence conditions. Pretty consistent theme all the way through here.

And then, groundwater protection and liner verification. Construction QA/QC standards.

So, I encourage -- I encourage you to look at the -- the full table because it is a compilation of all the steps in the process and building out what category does your question fall into, because it's -- it's quite complete.

Just a little bit expanding here on some of the points that we're talking about here. So, effluent monitoring and reporting. So, recommendations focus on the monitoring parameters, the sampling frequency and compliance points, insurance transparency, and regulatory oversight for the effluent quality. Discharge timing, coordination, similar. There's been some back and forth today about discharge windows and things like that. These are all great examples of things that can end up in licensing conditions.

Flooding, wet weather and ice conditions. Again, the proponent has spoken at length about this today -- how they're planning to mitigate it on the design side, and any -- any licensing conditions that would be necessary to support the original design, and any amendments to the design with future expansion would all come into licensing

conditions.

Groundwater protection and liner performance. Same idea, except we're going primarily through construction QA/QC process.

Did that not go forward? Oh, it did.

So, just to highlight here, effluent monitoring and reporting. Look at the outline -- clear monitoring expectations, defining compliance points, transparent reporting mechanisms, and resolution pathways to -- to get to next steps. And again, seeking clarification and enforceable licensing conditions.

Discharge timing and coordination. We've had quite a significant discussion with that today. So, seasonal discharge coordination, again, would be on as-needed, but the ultimate report is looking at the maximum capacity situation. Notification procedures -- so, there's been some discussion in the table about protocols necessary for notifying agencies and stakeholders before discharge events occurred. And then, regulatory collaboration as far as the discharge (inaudible) timing itself -- itself. Resolution pathways here include clarification and licensing

conditions as well.

(inaudible) at wet weather operation. We've got flooding and ice impact concerns. Proponent has discussed this. There's conditions that are going to have to go with that as well. Those are all outlined in the table.

Operational and contingency planning -- we've had some exchanges back and forth today between the proponent and the Board regarding contingency planning and supplemental information being provided around contingency planning, and I think that that's been -- been answered at -- at this point.

Regulatory resolution pathways include, again, clarification, which is the questions that have been exchanged today, and then operational commitments as well.

Groundwater protection and liner QA/QC. So, what does it look like when you've got liner integrity and permeability? Public attack comments highlighted concerns about liner quality and about potential groundwater contamination. We've heard about that, again, today in the questions for the proponent. So, the focus is on meeting

the Manitoba lagoon design objectives for containment and for permeability. Construction and QA/QC commitments around the actual installation of the liner itself, and then verification of liner performance. I think there's testing required at the construction phase as well to ensure that things are constructed to a standard. That's the -- the case with all construction.

Resolution pathways, clarification. Again, we've been engaging in that all day. And final confirmation for the construction stage for the -- for -- for the construction elements of that.

So, getting into takeaways here, you'll notice that I've -- I've been repeating myself a little bit here, and a huge part of that is that, while some of these issues could seem very broad and like there's a lot of questions that need to be answered, there's a pretty common theme as far as how these things can -- these topics can be broken down into, okay? Is this a regulatory issue? Is this a proponent design issue? And is this an environmental issue? Like, ultimately, it's -- it's going to be on the proponent to provide their response and supporting position for their design, and it'll be on regulators to make an assessment as far as what licensing conditions are required

of the -- of the proponent if -- if a licence is issued.

So, comprehensive comment review, regulatory pathways -- that -- this is, again, a key -- key discussion point here because it's really next steps for (inaudible) recommendation -- assessment of information for gaps, and regulatory authorities maintained.

So, that's the -- the summary of kind of our involvement in the review. Our focus has been at the back end of this. I know it's been going on since '21, but we've only been involved for the last -- last six months or so. But I hope that provides some clarification and some transparency to -- to everyone here as far as the support that we're providing to -- to the process as far as helping direct clarification of -- of supplemental questions.

THE CHAIRWOMAN: Thank you, Mr. Mackenzie. I will mark your exhibit -- or your presentation as Exhibit H-003. And I can't help it. The lawyer in me wants you to confirm for the record that QA/QC is Quality Assurance and Quality Control.

MR. MACKENZIE: That's correct, yes.

THE CHAIRWOMAN: Thank you. All right. So, I'll turn it over to counsel for the proponent for any questions of this witness.

MR. KATHLER: I have no questions for this witness. Thank you.

THE CHAIRWOMAN: Thank you. And to Mr. Williams, RM of Gimli, any questions for this witness?

MR. WILLIAMS: I do, but I had spoken to Mr. Crocker about starting tomorrow morning with them.

THE CHAIRWOMAN: We have an entire hour left, unless there's any compelling reason to do this tomorrow. Are you not prepared to proceed today? I understand that this is a shift in the tentative schedule, so we'll affore (sic) you -- afford you some leniency.

MR. WILLIAMS: I mean, I can start asking some questions, but I -- I -- I -- you know, I -- I -- I certainly wasn't thinking that -- that we could get to the stage today, but I mean, I can certainly start asking him some questions, but -- and so, if you want me to do that, I can, but I -- I will not finish today, not because

of timing, but because of the fact that -- that I simply didn't think that we'd be getting here at this point in the schedule.

THE CHAIRWOMAN: Okay. That's fair. And so, we'll -- we'll take your questions tomorrow. Maybe I'll turn it over to see if there are any members of the public who would like to ask any questions relating to this presentation, if there are a few. Then, maybe we'll take a short pause and you can come and indicate to Mr. Crocker your questions, and then we'll come back to your -- questions from RM of Gimli tomorrow morning. So, let's take five minutes.

-- OFF THE RECORD --

-- ON THE RECORD --

THE CHAIRWOMAN: Okay. I think we will get started with questions from the public, and I'll remind everyone that these are questions for Mr. MacKenzie on his presentation and materials that are on the public record in the report that was prepared by Keewatin-Aski. I believe Mr. Tkach was our first member of the public to ask questions again, followed by Mr. Veldink, and I think there are others, but I'll wait for a list. You can proceed with your

questions, and again -- questions -- and as succinct as possible. Thank you.

MR. TKACH: Thank you for the opportunity, and I apologize. Like Mr. Williams, I'm not quite as prepared as I'd like to be. We'll -- we'll try and make best use of the time.

So, thank you for your presentation. Is it safe to say that one of your roles here in doing this is to look at this process and say, 'Have we checked all the boxes?'

MR. MACKENZIE: Ultimately, the design elements of the project are the responsibility of the designer. We're reviewing the submission of the -- of the proponent and evaluating whether or not there are existing information presented that conflict with existing regulatory environments.

MR. TKACH: But you -- you have your table, and then I've gone through your report and your table and your --

MR. MACKENZIE: Yeah.

MR. TKACH: -- presentation here, and it's like, you know, the question was asked about this and was a response given? Is there a solution? Is there -- like, did we -- did we check that box? Because, you know, we've -- we've satisfied the -- the needs of that. Whatever.

MR. MACKENZIE: Can you provide an example of --

MR. TKACH: And I'm going --

MR. MACKENZIE: -- (inaudible) box that you're --

MR. TKACH: -- I'm going to.

MR. MACKENZIE: -- (inaudible)?

MR. TKACH: (inaudible) kind of -- yeah. Okay. And so, we'll -- so, we'll -- we'll get into that. Before I get into the details of that, on Page 4 of your report, you notice -- note that this is one part of a -- a -- a broader transparent regulatory process. One of my comments on this has -- that I felt that -- that this process

has been fairly (inaudible), and I'm not going to go too far down that road.

In my experience as -- as an environmental regulator, I don't look at parts of a project at a time. I look at the whole thing. What -- what's been your experience? Do you look at -- when you do this type of work, do you look at parts of project at a time or do you look at the whole thing?

MR. MACKENZIE: Well, in this case, the whole project is the design of a lagoon. So, if you're alluding to something beyond that, then that wouldn't be within our scope to comment at this point.

MR. TKACH: Okay.

MR. MACKENZIE: We're reviewing specifically the lagoon portion of the project. We're not privy to any information outside of the lagoon portion.

MR. TKACH: Okay. No. So, fair enough. You're -- you're limiting your scope. In Section 6 of your report, you talk about things that are missing. One of the comments that has been made was, there was questions in the

original public consultation about not consulting with First Nations. I've read through the D'Arcy Deacon report, where it says it's, you know, not in the part of the proponent to consult with First Nations. That's on the part of the province. What are your comments with regards to the involvement of First Nations as being a comprehensive part of this project?

MR. MACKENZIE: At this point, we haven't flagged any concerns with consultation with First Nations based on the information that we've reviewed.

MR. TKACH: Have you seen any? I -- I haven't seen anything from First Nations. I -- I -- I just -- maybe I've missed something.

MR. MACKENZIE: No. The -- the only comments I've seen about First Nation consultation are in the letter that you provided on the 7th.

MR. TKACH: Yeah, okay. So, we haven't gotten anything from any, like, Assembly of Manitoba Chiefs or any -- like, I haven't seen it, and -- and I miss things.

MR. MACKENZIE: I haven't seen any --

anything for or against the application.

MR. TKACH: Okay. No.

MR. MACKENZIE: (inaudible).

MR. TKACH: Well, fair enough. Again, this is where I'm going back to boxes being checked in terms of stuff to look at.

There's been a lot of questions and concerns about socioeconomic impacts associated with lagoon. I'm a property owner across the road. There are other property owners here. We've talked about, certainly, the emotional and psychological stress of -- of this project and, on a more tangible level, the effects on, say, our property values. Do you see that those items have been addressed as part of this process?

MR. MACKENZIE We're supporting the technical review of this. We're not supporting the regulatory commitments around assessment for what you're describing.

MR. TKACH: Well then -- and I don't think

that's a regulatory assessment. I'm -- I'm just saying, you know, a lot of people have come forward with concerns and I -- I really haven't seen a response to say, you know, 'What's going to happen to the value of my property? How am I going to deal with the emotional and psychological stress of, you know, this is my property that I can no longer use because it's right next to a sewage lagoon, whereas today, I'm -- I'm breathing fresh air. It's peaceful and tranquil and everything's good.' Like, has that been something that you think has been -- had -- inadequately addressed?

MR. MACKENZIE: What you're describing does not sound technical in nature. That's based on approvals that are outside of our scope of our review.

MR. TKACH: Okay. So, that's not in the scope of your review? Okay. You talk about stuff being licensing conditions addressing a lot of the things, and in your report under Section 7.5, you talk about licensing conditions being able to address flooding issues, which we've heard a lot of concerns about. What licensing condition do you think could be used to address flooding?

MR. MACKENZIE: Our table would have addressed specifics on that.

MR. TKACH: I -- I didn't see any, but again, I miss things. Like, I -- I -- I'm a water resources engineer.

MR. MACKENZIE: Sure.

MR. TKACH: And -- and this is kind of what I do for a living and -- or used to do, I'm retired -- And I'm just trying to think, what would you do after the fact, with the design of a lagoon, to address flooding after? And I -- I can't come up with anything. It's -- it's kind of like it's too late.

MR. MACKENZIE: I'm not sure I understand exactly what you're referring to, but in this particular case, the proponent has put forward a design that includes technical conditions which outline what would happen in the case of flooding events. As a part of that submission, regulators will be reviewing it. We've been supporting that process. But as far as a licensing condition that would apply, you can regulate things like, for example, changes in scope, changes in size, but the operation is ultimately the responsibility of the proponent's design. If it's designed for a particular use case, the licensing

condition would address a change in that use case that isn't captured in the design, but the design is ultimately responsible for the intended use case.

MR. TKACH: No, fair enough. So, in looking at addressing this issue with -- do you think that the consideration of a different alternative to a lagoon would have been something as -- as a -- a possible condition of this?

MR. MACKENZIE: Do you have an example we'd like -- you'd like to put forth or ---

MR. TKACH: Well, certainly, and -- and others have. Like, I mean, there was discussions and they were talked about earlier about, you know, connecting this to the municipal treatment system, and -- and I think the RM of Gimli can speak more to this, where they have -- and again, I -- I'm going to get an -- a hearsay thing here, so -- but I've been told that there was an option on the table to have, say, a pipeline constructed to connect this to the municipal treatment system, which would alleviate this need for odour concerns, which would alleviate the flooding concerns, which would alleviate the social economic concerns. Is -- is that something that -- that should be

investigated a little bit further, maybe, as part of your report?

MR. MACKENZIE: We haven't been authorised at this point to review alternates to the proponent's design. We've reviewed the proponent's design as it is, given the -- what they put forth. Their judgment for the selection of that process is included in their presentation today as well as in their reporting. So, we've not reviewed additional alternatives. That said, if we need to, we can review something, but we're not authorised to prepare an additional design, and there's a -- a separate component to this. Like, we're not the proponents preparing the design for this. If you want us to comment on things like other connection points and whatnot, like, the -- if it's not in the record that's been provided to us for specific review, then it won't be captured necessarily, so ---

MR. TKACH: And -- and I respect that, that that's all your job, and I guess, for me, this is the check box of examination of alternatives, and that's -- that's something that I was going to -- and -- and, you know, this -- well, this is my last question here.

I think, when I talked earlier and asked questions of Burns Maendel about the odour concern -- and again, you said this will -- in your report, you said this will be addressed with licensing conditions -- but as you heard the response from the proponent, he said, you know, 'It's typically not an issue, but if it is to be a problem afterwards, there really isn't anything we can do, other than plant trees around it,' which, in itself, has detrimental issues because it then decreases wind-mixing and so forth. So, again, that's not really something that can be addressed with licensing conditions, can it? Because we -- like, we just -- we asked the proponent and he said, 'Quite frankly, there isn't much we can do, other than plant trees.'

MR. MACKENZIE: I feel like you're not --

MR. TKACH: (inaudible) ---

MR. MACKENZIE: -- factoring in that the proponent's design has already addressed that with their methodology -- to reduce the odour in their design.

MR. TKACH: I appreciate that, and -- and

I'm an engineer, too, and -- and even though we think really highly of ourselves, sometimes, we make mistakes and -- and then have to deal with them afterwards, but, you know -- and I'm just looking at robustness of design and, I guess, the -- in asking these questions, I wanted to point out that there really isn't a lot we can do after the fact. Thank you for your time, sir.

THE CHAIRWOMAN: Thank you. I'll invite Mr. Veldink to come and ask some questions, and I'll just remind the public that these are questions and -- and not argument or opinions, but questions directed to Mr. MacKenzie on his report and presentation. Thank you.

MR. VELDINK: Thank you, Madam Chair. On Page 7, 8, 9 and 10, you talk about the effluent. The question is, have you looked at the -- the present amount of phosphorus, nitrogen, any other contaminants in Willow Creek?

MR. MACKENZIE: I think the proponent spoke to that today. We haven't provided any -- we haven't done any additional investigation, if that's what you're asking.

MR. VELDINK: Yeah. Mr. Burns did give some figures as to what will end up in Willow Creek from the colony, but I'd like to know if you looked at the present level of contaminants in Willow Creek, because, of course, that adds to it, and eventually flows into Lake Winnipeg and might have some severe consequences. So, any -- any info on that would be appreciated.

MR. MACKENZIE I don't think we have anything to add on that at this point.

MR. VELDINK: Okay. That's my only question. Thank you.

THE CHAIRWOMAN: Okay, thank you. We also have Mr. Buckles (ph), who's indicated that he would like to ask some questions of Mr. MacKenzie. I'm not sure, Mr. Buckles, if you were here this morning.

MR. BUCKLES: No, I was not.

THE CHAIRWOMAN: Okay. So, the questions from the public are really directed to the particular presentation, and you were here for Mr. MacKenzie's introduction and presentation, I believe.

MR. BUCKLES: And I -- I'd like to do some catching up with Mr. MacKenzie. If you don't mind, Mr. MacKenzie.

Generally, in my training as an engineering technologist, when we developed use cases, we started with the scenario. And it seems to me that you're coming in after the fact, and your scenario's been handed to you, so you -- you're only developing one use case. Is that correct?

MR. MACKENZIE: Generally speaking, as the independent third-party, we -- we're not putting forward the project and we're not a part of the design, like, process. That's all been prepared by the proponent, who spoke this morning. So, we're -- we're reviewing it independently after the fact. We're not --

MR. BUCKLES: So --

MR. MACKENZIE: -- part of the initial preparation.

MR. BUCKLES: -- the proponent is one actor in the use case, correct? There are other actors in this

particular use case, are there not?

MR. MACKENZIE: Can you expand on that, please?

MR. BUCKLES: Okay. When I took my UML -- when I took my use case and -- and object-oriented analysis and design -- because I -- I think that's where you're referring to -- back in the 90s, when we -- when we were fairly early on in developing use case -- it wasn't a wide use in engineering at that time, mostly in software, so you have to forgive me if I have a different impression than you do -- but we always looked at risk analysis as being the beginning of our use case process, and we would mitigate our risks according to the use cases. One of the major risks to me -- and I -- I -- I don't know if it's fair to ask you this question -- but one of the major risks to me is the risk of overland flooding, and I'm -- I'm wondering if this is part of the use case. Was -- was this -- was -- was this given as -- as one of the factors to be considered in your use case?

MR. MACKENZIE: We're not going to speak to information that was provided by the proponent. They identified both the flooding scenario for inside and

outside of the lagoon. There are two different design standards that they considered. We're just reviewing that application as a third-party and supporting that. That -- the proponent may better -- be able to better answer your questions, I guess --

MR. BUCKLES: Okay.

MR. MACKENZIE: -- is what I'm saying.

MR. BUCKLES: So, I guess I have this question. I -- the last time I looked at this project, we were -- we were looking at just clay as being -- being the liner for the lagoon. Now, we're looking at plastic as being a liner for (inaudible). When did that change?

MR. MACKENZIE: I would defer to the proponent on the timing of that.

MR. BUCKLES: So, it -- was there -- was there any consideration given to fish habitat as being one of the considerations in this design?

MR. MACKENZIE: For the lagoon development itself? I mean, that would have been -- the

proponent would need to consider that during their design phase. That's not for our review. The -- they -- they spoke about that this morning for fish habitat.

MR. BUCKLES: So, you're -- you're -- you're not representing the design phase?

MR. MACKENZIE: We're not representing the design, no. We're -- we're representing the technical review of the design as part of assisting the -- the regulators.

MR. BUCKLES: So, I -- I wasn’t -- I also wasn't here for the discussion on quality assurance versus quality control. Could you explain to me the difference between quality assurance and quality control so that I really understand what the difference is?

MR. MACKENZIE: Sure. So, quality assurance is the testing requirement that you need to determine what the standard should be, and the quality -- while the quality control is there to ensure that you're meeting that standard.

MR. BUCKLES: So, in -- in the requirements

analysis phase, which happens at the beginning of the project, the QA standards are developed for the tests for that function, right?

MR. MACKENZIE: Again, if it's -- if you're talking about the design phase of the project, I would refer to you the -- the proponent.

MR. BUCKLES: I -- I would suggest that you can't have quality assurance without being involved in the design phase.

MR. MACKENZIE: We're not performing --

-

THE CHAIRWOMAN: Mr. Buckles, I'm just going to intercede here for a moment.

MR. BUCKLES: Sure.

THE CHAIRWOMAN: This particular moment in time in the hearing, we're asking questions of someone who's conducted an independent third-party review to identify pathways at this stage. So, their review is limited to the moment in time of having received the full information

package that was put forward by the proponent. So, I just want to make sure that those questions are properly directed to the right parties. And there's also an opportunity, if you would like, to speak with Mr. Crocker to register to make a presentation about some of your views and concerns about this project, and that might be a very good avenue for -- for which you -- you could present tomorrow.

MR. BUCKLES: I'm -- I'm occupied for the entire afternoon.

THE CHAIRWOMAN: And evening. There's an evening ---

MR. BUCKLES: Evening, I perhaps could present.

THE CHAIRWOMAN: Yeah, so --

MR. BUCKLES: Evening --

THE CHAIRWOMAN: -- I would -- I would --

MR. BUCKLES: -- for ---

THE CHAIRWOMAN: -- highly encourage you to have a discussion with Mr. Crocker. There will also be another piece of evidence review of the proposal by the expert for the Rural Municipality of Gimli, and that will be another opportunity to ask some of the technical questions that may arise. So, given the -- the late time today, I think that it might be best for you to -- to have that conversation with Mr. Crocker about how best to participate going forward.

MR. BUCKLES: And will -- will the Environmental Minister be -- will Mike Moyes be here with us tomorrow?

THE CHAIRWOMAN: The Minister I don't believe will be attending, but our report is intended to provide advice and recommendations to the Minister following the hearing and considering all of the evidence that's been put on the record in advance of and during this hearing. Okay?

MR. BUCKLES: Can I make one statement and I'll go (inaudible) -- and then I'll leave the gentleman here to carry on? But of -- of the 160 commercial fishers

in this immediate area, it is by far the largest industry in Gimli and in the Interlake. There's only one other gentleman here. My father-in-law, Robert T. Christianson (ph), who is -- who is present from the commercial fishing community. And I would think with, you know, all the other -- forgive me everybody -- but with all the other people in this room, that it's very important, it's -- it's almost necessary that -- that we get some representation for the commercial fishery because we don't have any here. Okay?

THE CHAIRWOMAN: Thank you.

MR. BUCKLES: And I'm going to go sit down. Thank you. Thank you. Thank you very much.

THE CHAIRWOMAN: Thank you. We will resume tomorrow morning with questions for Mr. MacKenzie from the RM of Gimli. Mr. Williams, we'll start promptly at -- well, morning. It's 12:30 tomorrow is our start time because we'll be going into the evening. So, shall we call that teenager -- teenager morning time? 12:30 will be our -- our start time tomorrow and planning to go into the -- the evening. So, have a good rest, everyone. Thank you again for your patience and your time today, and we'll resume tomorrow. Thank you.

MR. CHRISTIANSON: I got a little bit of a chest cold here. And as I -- of our family of 135 years in the industry, (inaudible), from it started, the (inaudible) who set the lake and when we started to fish, I'm not here ---

THE CHAIRWOMAN: Mr. Christianson. Mr. Christianson, we've closed for today, but I'm going to encourage you to come and speak with the Secretary to the Board about when is a good time to be presenting information. Okay? Thank you.

AFFIDAVIT OF COURT TRANSCRIBER UNDER SECTION 31 OF THE EVIDENCE ACT

I, Vineet Sharma, Court Transcriber, HEREBY MAKE OATH AND SAY, that the foregoing typewritten pages contain a true and correct transcription of the recorded proceedings provided herein to the best of my knowledge, skill and ability.

Vineet Sharma
Court Transcriber
April 23, 2026