MACKENZIE VALLEY ENVIRONMENTAL
IMPACT REVIEW BOARD

GIANT MINE REMEDIATION PLAN,
PROPOSED BY INAC
CONTAMINANTS & REMEDIATION DIRECTORATE

SCOPING HEARING

Panel Members:

Board Chairperson	Richard Edjericon
Vice-Chair	John Stevenson
Board Member	Danny Bayha
Board Member	Jerry Loomis
Board Member	Nora Doig
Board Member	John Ondrack
Board Member	Fred Koe

HELD AT:

Explorer Hotel
Yellowknife, NT
July 22nd, 2008
Day 1 of 2

APPEARANCES

John Donihee	)Board Counsel
Bill Mitchell	)Giant Mine Remediation
Daryl Hockley	)Project Developers,
Bruce Halbert	)INAC and GNWT
Ray Case	)
Mark Cronk	)
Todd Slack	)Yellowknives Dene
Louie Azzolini	)First Nation
Rachel Ann Crapeau	)
Chief Fred Sanglis	)
Kerry Penney	)City of Yellowknife
Gordon Van Tighem	)
Kevin O'Reilly	)Private citizen
Sheryl Grieve	)North Slave Metis
	)Alliance
Derek Mogay	)Department of

)Fisheries and Oceans

APPEARANCES (Con't)

Jane Fitzgerald)Environment Canada

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--- Upon commencing at 1:37 p.m.

THE CHAIRPERSON: Good afternoon, ladies and gentlemen. I would like to call this meeting to order, this Hearing. It is now 1:36. I would like to start off and mention my name. My name is Richard Edjericon, Chair for the MacKenzie Valley Environment Impact Review Board.

I would like to welcome everybody here, the scoping hearing for the environment assessment of the Contaminants and Remediation Directorate of INAC, Giant Mine Remediation Project.

The Hearing is going to take two (2) days here at the Explorer Hotel, July 22nd and 23rd, and we are going to have a long, probably, two (2) days, I would say.

I would like to start off this Hearing with an opening prayer. Normally, I have an Elder from the community here, but I do not see any here. So I want to ask one of my Board members, Nora Doig, to do the opening prayer.

MS. NORA DOIG: I'm going to do this prayer in my language.

(OPENING PRAYER)

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THE CHAIRPERSON: Mahsi, Nora, for that. Before I go into introductions, I would like to read out a statement for the record. Before we begin the scoping hearing, I, Richard Edjericon, want to disclose that I had some previous involvement before my appointment to the Review Board as Chairman.

I was under a contract with the Contaminant Remediation Division of INAC, playing the

liaison role with the Yellowknives Dene First Nation, explaining the Giant Mine remediation plan and listening to the community. I played no role in developing the plan and was not a decision maker. My involvement in this matter ended in 2004.

I have consulted counsel about this involvement, and I have not declared a conflict over this matter. No party has raised this issue, but I prefer to have this disclosed on the public record early in these proceedings.

Now I would like to introduce the Board and staff of the MacKenzie Valley Environmental Impact Review Board.

Starting off to my far right, I would like to start off with Board Member Fred Koe. On my far right I have Board Member Fred Koe, from the Gwich'in Region. Next, to his left is Jerry Loomis from Norman Wells, John

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Ondrack, Board member from Yellowknife. To my immediate left is Board Member John Stevenson, Vice Chair. To his left is Nora Doig from the TliCho Region, and to her left is Danny Bayha from the Sahtu Region.

And I believe we have staff here -- well, I will come back to that in a little bit here. Moving on, the table over here we have our legal counsel, John Donihee, Tawanis Testart and Martin Haefele.

So moving around the table, I would like to start off on this side here. If we could introduce yourself for the record as a party and them work my way around, and I would like to proceed in the Hearing. Mahsi.

MR. TODD SLACK: My name is Todd Slack. I'm with Yellowknives Dene First Nation, Land and Environment.

MR. LOUIE AZZOLINI: Rachel Ann Crapeau will be arriving shortly, but I'm not Rachel. I'm Louie Azzolini with Terra Firma Consultants, working with the Yellowknives Dene First Nation on this environmental assessment.

MS. KERRY PENNEY: Kerry Penney, and I'm here on behalf of the City of Yellowknife.

MR. MARK CRONK: My name is Mark Cronk. I'm with Public Works Canada on the Giant Mine Project.

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MR. BILL MITCHELL: My name is Bill Mitchell. I'm manger of the joint -- Giant Mine Remediation Project on behalf of INAC and GNWT.

MR. DARYL HOCKLEY: I'm Daryl Hockley. I'm a technical advisor to the project team.

MR. BRUCE HALBERT: And I'm Bruce Halbert, also a technical advisor to the project team.

THE CHAIRPERSON: Thank you very much for your introductions. Moving on. Before we begin, I would like to give you a bit a background as to what we are doing here today and provide some direction on how this Hearing will proceed.

As you are aware, the Review Board is conducting an environmental assessment of the Giant Mine Remediation Plan, which has been proposed by the Contaminant Remediation Directorate of Indian and Northern Affairs Canada.

A little background on the steps taken by the Review Board to date in this environmental assessment process:

This development was referred to in EA, environmental assessment, on March 31st, 2008 by the City of Yellowknife. The Board is currently in the scoping phase of the assessment, which provides an opportunity for the parties and the public to assist the Review Board

by identifying potential impacts or other matters of concerns in the environmental assessment process and bring them to the Review Board's attention.

The Review Board began scoping by asking for submissions for participants in April 2008. Several participants submitted or identified pertinent written materials to be placed on the public record.

In addition, our staff held scoping sessions on June 17th, 2008 that allowed parties and members of the public to get together to discuss any concerns related to this project.

Today the Review Board is conducting a scoping Hearing. The purpose of this Hearing is for the Board members to hear what the people in attendance have to say firsthand. We need to understand what the major issues and concerns are in relation to the Giant Mine Remediation Project in order to make a decision as to how the environmental assessment should proceed.

The Review Board recognize that this process requires a lot of effort by everyone involved, and we would like to thank all the parties for having put in the time, resources, and effort to get us where we are today. Today we will have the opportunity to hear directly from the parties about potential impacts from the development.

We have also set aside time for members of the general public to present their views about the weather, the impacts made because of this proposed development.

After we have completed the scoping hearings, the Board will consider all the information and all other information on the public registry.

After the Hearing, we will make a decision about the scope of the development and how it may affect the environment, including the spatial and temporal scope of this potential effects.

I have a few housekeeping items I would like to review with you in relation to the way we will proceed today.

First of all, all the parties that have seen the agenda, I would ask you to please limit your presentation to time set in the agenda. There is a limited time available to us, and it is important that all parties have the opportunity to speak.

For the courtesy of those around you, would you please make sure your cell phone and pagers are turned off.

After each presentation there is a set order in which groups can speak and ask questions. The parties to the environmental assessments will be allowed

to ask questions first in the order that they present it. Next, if there are questions from the public, they can be asked. Finally, the Review Board and staff may ask questions of the presenter.

Questions should be addressed to the Chairperson and not directly to the parties.

All speakers should identify themselves by their name and who they represent.

Also, we have translators here. If you could make sure that you speak probably at a steady pace, I guess, not too fast, because there's a couple here.

So at the same time, I think I'm going to be asking for breaks probably every hour and fifteen (15) minutes for a fifteen (15) minute break.

And I encourage that we start on time. If we say fifteen (15) minutes, it'll be fifteen (15) minutes.

Finally, I'd like to mention that there will be a transcript of this Hearing. We will tape this session, and information provided today will be made available on the public registry.

Thank you for your participation, and we're looking forward to an informative hearing over the course of today and tomorrow. Mahsi.

25 Now that we have the agenda for today, I'd

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like to move directly into the presentation by INAC. And again, I just want to remind everybody that we have a time limit and when you speak, please open with your name and who you represent. Mahsi.

(BRIEF PAUSE)

PRESENTATION BY GIANT MINE REMEDIATION PROJECT TEAM:

MR. BILL MITCHELL: Mr. Chairman, Board Members, my name is Bill Mitchell. I represent the Giant Mine Remediation Project team, which is essentially a joint Federal/Territorial team.

The presentation today, I plan to give a bit of an overview of the history of the Giant Mine, then leading onto the development of the arsenic trioxide management alternatives.

From that, talk a little bit about the development of the -- what we call the Comprehensive Integrated Remediation Plan that covers both surface and underground issues.

I'll continue on to describe some of the elements, how we plan to do the remediation, trying to give as much information as possible. I mean, this is a very large, complex project, so we'll try and move through it reasonably quickly.

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And then we'll also try and make an attempt to answer some of the questions that were actually raised at the scoping workshop several weeks ago.

And we will finish off with some comments on our perception of what the scoping of the assessment should cover.

From terms of the history of Giant Mine, I think you're all fairly familiar with this. Operated from 1948 to 2004, produced 7.6 million ounces of gold, and it was a significant economic driver to the economy of Yellowknife, along with the Con Mine.

And in fact, there is a recent paper by Bullen and Robb that talks about the economic contribution of gold mining in the Yellowknife mining district. And that was published in 2006.

The big issue at the site is the fact that the processing of gold resulted in the production of about 237,000 tonnes of arsenic trioxide, and that

trioxide is now stored in solid rock in underground vaults.

There is also arsenic contamination on the surface. So in 1999, when Royal Oak was assigned into -- into receivership, that was the effective environmental condition of the site that the Crown inherited at that

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point.

And so we -- we brought in Miramar Giant Mine Limited under a reclamation security agreement to complete interim activities, to care for the site and make sure that there was no release of arsenic that would harm either human health or the environment.

In 2005 Miramar Giant Mine opted to terminate their reclamation security agreement, which was their right, and they were then assigned into bankruptcy. At that time, Public Works and Government Services issued a contract that was a result of a competitive process to Deton'Cho Nuna to continue these interim activities to care for the site.

So obviously, after the mining had ceased, the mining rights that were held by INAC, the Crown, were withdrawn. And currently, the surface lands are administered by GNWT MACA, so this leads to some of the com -- complexities on the site.

The remediation plan that we have proposed -- that's in front of you, in fact -- covers the former mining lease, which is outlined in red on the diagram here. The mining lease was surrendered. And in order to -- for INAC to be able to complete the interim care activities and also the remediation of the site, MACA assigned a reserve in favour of DIAND to -- to allow INAC

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or DIAND access to the -- to the site.

The remediation plan also covers the Giant -- the old former Giant Mine town site lease that is now leased to the City of Yellowknife. That's this yellow area here. And in addition, what we have included in the remediation plan is the small area right here, which we call the historic tailings beach, where historic tailings spill down into the -- that bay of -- of Yellowknife Bay.

The City of Yellowknife, essentially the -- the boundaries of the City of Yellowknife extend north of the site, so the site lies within the city limits. In addition, it -- the site lays within the Akaitcho traditional lands, which is non-settled land claim. And furthermore, the extended economic measures Monfwi area

of the settled TliCho land claim also covers the -- the site.

So most of the studies -- all of the extensive studies that we -- we've done basically are on the site. We've done extensive physical, biological, chemical studies. And we've also completed a human health and ecological risk assessment that actually extends to a much broader area, in fact, covering Yellowknife and all the way down to -- to Dettah.

So moving on, again, this is the site that we inherited back from the mining company when it was

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signed into receivership. The main components, the mine infrastructure, mine road. You can see tailings ponds, the northwest pond, north central, and south pond. The old TRP that was built in the mid-'80s operated for a couple of years and then went defunct. And then the effluent treatment plant, settling pond, and polishing pond here. And there are various pits. This is the B1 pit right here. And so you can see there's been a lot of surface impact caused by mining.

And just for a scale here too, people always ask us where the arsenic chambers are. Are they located under the creek? under the bay?

Well, all of the chambers are essentially located within this area right here. And the next slide will -- will show a section that's basically a vertical slice from here to the north end.

And one of the most contaminated areas on the surface is the roaster complex. We know that building is very highly contaminated. We actually had a study done by Kent Morton, who was the former mill superintendent.

So we know that that building actually contains tonnes of arsenic trioxide. It's clad with asbestos. The insulation between the asbestos sheets are loose asbestos. So it's going to be a very difficult and

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challenging demolition, again, pointing to what we got back from the mining company when it went into receivership.

So here's that section I talked about. The underground component that we inherited from the 'C' shaft. About roughly 2,200 feet to the north is where the arsenic chambers lie. There are a total of fifteen (15): ten (10) chambers and five (5) stopes.

Chambers were purpose built. In fact,

they were essentially caverns that were excavated in solid rock, much like this room would be if you walked into them. The stopes are old mining holes or voids that were leftover after rock was extracted from the mining process. And the other thing to note here is that all of these chambers and stopes are relatively shallow.

The initial method of arsenic storage relied on permafrost. The permafrost prevented any water seeping into the chambers, becoming contaminated and then seeping out.

Now we'll take a little bit more of a look at this one here. I would also point out you can see the -- the B1 pit, and that is part of the reason that the permafrost degraded over time too, is that surface insulation was stripped off. They were pumping the arsenic trioxide down underground in a hot powder form,

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dust form; and in addition, they were also heating the mine to keep the miners comfortable.

Am I going too fast for the translator or is that okay? Good.

Okay. The next one, we're going to look at this specific stope here. We call it the B2-12. Again, you can see the -- the size of one of these things. This is a mining stope. So you can see all the draw points where the broken ore was drawn out of that stope.

Before they put the arsenic trioxide dust in there, they built what we call bulkheads. These are just concrete plugs that effectively seal off all of the tunnels and entrances to that stope.

And so they blew the arsenic trioxide in here, and it worked its way into all of these mining supply things, like this ore pass or raise, also into all these draw points. And this points to the difficulty of ever trying to extract this material from underground.

Now, just for scale we've included the Precambrian Building, an eleven (11) story building in Yellowknife. So you can see the size of these things and the enormity of this problem that we inherited.

I'm going to talk a little bit about the interim activities. These essentially are the operations

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that we currently conduct to care for the site, and these operations have been in place since -- effectively since Royal Oak went into receivership.

And this is not a normal development in

the true sense. It's an abandoned mine with environmental concerns and physical hazards that must be managed through these interim activities.

In other words, we -- we can't allow the subsurface to flood because of the arsenic dust located in these chambers and the possibility of potentially large releases of arsenic dust if the water should be allowed to rise in the mine to that level.

These are the -- the main components of the interim activities. I'm not going to go through them all in detail because of time constrictions. But essentially, what we're doing is water management.

We're water -- we're managing the water, both underground and on the surface. We collect all the contaminated surface water, prevent it from going into bigger creek by collecting it in sumps, pumping it to storage areas, and eventually it goes to our water treatment plant.

And in order to do this we have to maintain many of the underground and surface infrastructure or components of the site. And they're

listed here. Again, I'm not going to go through them in detail.

Other things we do under the -- these interim care activities are to apply seasonally a product called soil cement on the tailings. This is to try and prevent dusting during high winds. And you may recall a few weeks ago, there was an issue where there was considerable dusting, and one of the tailings ponds ended up as a note on the CBC News. But we try and prevent that as much as possible.

We also apply calcium chloride to the mine roads, again, as a dust suppressant. We have site security on site, because it is a dangerous site. We restrict access, and that's basically a twenty-four (24) hour, seven (7) day a week process.

We conduct regular inspections of various components, including the bulkheads. We do annual geotechnical inspections of dams to make sure that they are not failing. And we had some incidents not so long ago where we did have a dam that partially failed, and we had to take corrective measures, again, under this -- these interim activities.

We do conduct -- or the NWT Mine -- Mine Health and Safety Act inspectors conduct various inspections of the mine components. And we also complete

routine sampling and reporting in compliance with the metal mining effluent regulations of the Fisheries Act.

Now, in addition to these interim activities, INAC considers it necessary to move ahead with a freeze optimization task during the period of time that the project is under EA.

The reason for this is that we have done some modelling on how the freeze will work. I'm going to show a little bit of an example of that later, but we want to confirm that these models are actually working. And we feel that doing this test would further elaborate and inform the whole EA process.

We also need detailed engineering design information, and the only way to get that is by doing a optimization test. In addition, one of the worst points of arsenic leakage, both water and arsenic solids in the form of -- of sludge, is from Chamber 14 at Bulkhead 68. And if we were able to proceed with this test, we could eliminate that prob -- that problem. And being able to do this test now would avoid further delay, because we would have to do this after the EA anyway.

In addition to these items, we would also gain more accurate cost information that would help to feed in -- feed into the effective project approval, a request that we will have to submit to the Treasury

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Board. Currently, the project has a preliminary project approval. But to do the large implementation, we will need effective project approval.

Going on to our project team, the team was formed in 1999. The main response -- responsibilities were the interim care and maintenance act -- activities at the site.

The team, and with the assistance of its technical advisor and other consultants, has done numerous site investigations throughout the site. And we've managed the development of both the arsenic trioxide management alternatives and the remediation plan.

In 19 -- sorry, in 2005, under the corporation agreement, the GNWT then became a co-proponent of the remediation plan. And we have an oversight committee in place that provides guidance to the team, and that's sort of shown graphically here. There's the -- the oversight from -- that stems from the corporation agreement.

The oversight committee, equal members of GNWT and INAC in recognizing that the main interest groups are -- are probably the City of Yellowknife and the Yellowknife Dene. We sort of deal with them and try and meet with them as much as possible, give them

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information as to where we are with the remediation plan.
The oversight committee has as subcommittee, the land management committee, that deals with third-party issues at the site, such as the Superior Propane pig farm or tank farm. And then we -- we deal quite a bit with the GNWT ENR directly, feeding in again to the -- the oversight committee that meets on a routine basis.
Over on this side, we have what we sort of look at the -- the technical advisor or the people that helped us develop the plan. Technical advisor group, headed by SRK, was a group of different companies that -- I'll talk a little bit more about that later -- that have been instrumental in helping us develop the arsenic trioxide management alternatives as well as the remediation plan. And a whole series of other consultants have also fed into that.
And the IPRP -- that's our independent peer review panel -- again, I'll talk a little bit about that later -- group of nine (9) experts that have critiqued and given advice, suggestions, and significantly improved the plan because of their input.
We have a Giant Mine Community Alliance that also feeds into our -- our Giant project office. The community alliance is chaired -- co-chaired by Steve

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Peterson and Linda Comerford. And the Mayor of the City of Yellowknife sits on the community alliance; Walt Humphries, Mining Heritage Society. George Gibson, a retired doctor is on that. North Slave Metis are members and regularly attend meetings as well. And the Yellowknife Dene First Nation have acted as -- participated as observers in -- in that group.
And the group has arranged various meetings of the site. They've had open houses. In fact, we had a tour of the site, both underground and surface, last week that was basically orchestrated by these folks.
INAC inspectors, they're involved, but the dotted line indicates that they don't really deal directly with us. They com -- they come on the site, they perform their normal inspection role. They do not even inform us when they'll be on their site -- on the site.
In addition to those inspectors, we have the NT mining inspectors that inspect the site. DFO inspectors occasionally have been on the site. And in

addition, one of our main regulatory components is the Metal Mining Effluent Regulations and Fisheries Act. And that is administered by the Environment Canada, and Environment Canada Enforcement Officers also visit the site to -- to do checks.

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So there's a lot of checks and balances built into the system.

Now, working around here, the -- the ones in green, these are what we call the -- the FCSAP expert department. The FCSAP stands for Federal Contaminated Sites Action Plan.

Now, all of these folks also have reviewed their remediation plan, provided comments and suggestions, recommendations for improvement along the way. And the expert groups are Environment Canada, Health Canada, Public Works and Government Services, and Department of Fisheries and Oceans.

And Public Works performs a specific task different from the others in that through an agreement -- special services agreement -- and a project charter, they look after the contract for the care and maintenance of the site.

And then very often anything that happens in Giant, such as the dusting issue from tailings a week or so ago, it -- it's almost always picked up by the local media, so we deal with them quite a bit.

So that gives you a bit of a perspective on -- on how the project team is structured and what we do. We also report through the Regional Office and we report to INAC Headquarters. And then maybe at this

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point, that makes it's -- it's a useful point to indicate what the role of our minister is.

I mean, INAC here is a co-proponent of the Giant Mine Remediation Plan, along with the GNWT. But the INAC Minister continues to be the Federal Minister responsible for the Mackenzie Valley Resources Management Act. However, while this is a bit of a unique situation, the Act actually contemplates different roles for the Minister.

In this case, INAC will not be an Intervenor, as is normally the case when industry is the proponent of a development. And once the Mackenzie Valley Environmental Impact Review Board has submitted its EA report, the INAC Minister will take part in the decision-making process as a responsible Minister, along

with other responsible Ministers. And normally, those Ministers would be DFO, Environment Canada, and the GNWT Minister of Environment and Natural Resources.

Further down the line in the regulatory process, the type 'A' water licence conditions will be set by the Mackenzie Valley Land and Water Board. And these will be recommended to the Minister who will be -- actually play no part in the setting of these conditions.

So now going on to our project team and how we have managed this project. In 2000, just almost

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immediately after the receivership of Royal Oak Mines, INAC looked for a technical advisor to provide a broad-based, neutral technical advice on the identification of a profound, long-term arsenic trioxide management plan.

And based on a Canada-wide competitive process, the successful company in that bidding process was actually SRK Consulting Engineers and Scientists, along with a group of other companies, including Senes Consultants, Lakefield Research, and HG Engineering. So they have played the technical advisor role from a very early stage.

And then I've listed some of the other companies that have completed specific studies on the site, and they're -- they're listed right here.

Now, all the information from these studies that we have completed on the site have been used in the development of the remediation plan. And in fact, most of those are included as supporting documents in the remediation plan itself.

And I should mention there are a series of copies of the remediation plan, plus the supporting documents, on the table. They are for reference only. We would ask you not to remove these. But if you would like copies, we can certainly arrange for that to be done.

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And then the other component of our team that is of arm's length that we formed in 2002 -- and this was based on -- we went out to the local stakeholders and asked for suggestions. And we got some suggestions of names of experts that they would like to have included on this independent peer review panel.

So these are the -- the experts. They are -- these folks are generally world-recognized experts. Some of them travel all over the place, dealing with specific problems. Fred Matich, for instance, he is

travelling to Mexico, South America, Indonesia. His expertise is in tailings dams and -- and tailings and general geotechnical issues.

But all of these expertise -- areas of expertise are covered by those folks. And we felt this was particularly important to this project, where essentially we -- we're dealing with all these issues. And we needed that level of expertise.

Now, moving on to the development of the arsenic management -- arsenic trioxide management alternatives, this was a process that was ongoing from about 2000 -- January 2000 through June 2003.

The technical adviser looked at the history of the arsenic trioxide production, how it was stored, completed investigations of the dust and the

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various storage areas. And at that point, we also completed a preliminary Tier 1 human health and ecological risk assessment for current and possible future releases of arsenic from the site.

Also through public workshops -- a workshop, I believe, was held in 2001. The -- a lot of public input was solicited, in terms of selecting various methods that could be used to deal with the management of the arsenic trioxide underground. And ultimately, these fifty-six (56) methods that were initially discussed by the small groups at that 2001 meeting were boiled down to a -- to a smaller number.

But the conclusion was that there was essentially no way that none of the alternatives afforded us the opportunity of saying, Okay, we've dealt with this problem, and we can now leave it forever. There's no walkaway solution. And hard as it may seem, this is going to have to be managed for a very long time.

The other -- the other thing to note is that generally, it was not possible to remediate the site to a pre-mining condition. And effectively, there was a requirement to manage the condition of the site in the best way possible to protect human health and safety in the environment.

So from these fifty-six (56) methods, the

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technical advisor then looked at twelve (12) alternatives, which combined various of these methods, in much -- much detail and -- and then produced a comprehensive report with nineteen (19) supporting documents.

That report was released in December 2002 and then was tabled at the workshop in January 2003. And also, our independent peer review had a lot of input to that report; recommendations for modifications, improvement and such like. And coming out of that, at the workshop, essentially, the technical advisor recommended that two (2) alternatives be considered for further study.

So these were the -- the twelve (12) options. They were actually -- some of the more variance. The A-1 options are all essentially pumping the contaminated water out of the site -- out of the mine and treating it.

Currently, what we're doing is basically A-1. They looked at a series of in situ, or leave it underground, options and concluded that of those the -- the most robust was this freezing option, called the frozen block for simplicity.

And then of the take it out options, the feeling was that the G-1, or cement encapsulation, option

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was probably the -- the most robust. We also looked at the deep disposal. We also looked at the deep disposal option as well.

And these various options or alternatives were evaluated using an assessment of risks; looked at the short-term risks, long-term risks, and also the risks to worker health and safety.

So you can see the reason we don't like continuing with what we're doing right now, the -- the water treatment is that in the short term it appears to be fine but that gets more and more problematic as time goes on, because the risk of significant arsenic release becomes higher with time.

You can see for the -- the frozen block, frozen shell -- that they're -- all across the way are very low risks -- low and very low. And any of the alternatives down here involve removing the arsenic actually end up being a moderate risk to worker health and safety.

And in terms of deep disposal, the independent peer review felt that the very low risk here for the long term was inappropriate, and they -- they felt that that risk was considerably higher.

And we -- we actually removed two (2) of the options. One was to allow the permafrost to

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essentially regenerate. And we also removed the bitumen option, specifically because they were technically or economically unfeasible.

So during this process, it was a very public process. After the January workshop, we held about twenty (20) public sessions and then went back to another public workshop in May 2003.

And at the May 2003 workshop, the four (4) Yellowknife MLAs read a statement that they had prepared jointly and signed, giving support to the leave it underground/freezing option. They felt that it was much less problematic than trying to remove the arsenic from where it is.

Some of the attendees -- quite a number of the attendees at that workshop actually agreed and indicated it was time to move ahead and get this thing done. And that was back in 2003.

There were some attendees at that workshop however who remained unconvinced that the in situ alternative was the best preferred option.

However, after taking all of the input from these workshops, the recommendations of our technical advisor and peer review panel, INAC then selected the in situ frozen block as the most appropriate long-term management alternative, and we announced that

back in 2004.

So with the arsenic trioxide management plan more or less crystalized, we were then able to move ahead and look at the surface aspects of the site.

And this was very strongly recommended by our independent peer review panel, because they felt that we could not separate the underground components with what had to be done on the surface, in terms of water management, openings to the surface, and such like.

So we -- we worked at developing a remediation plan through 2004, again, with input from various public meetings that we had with our community alliance and others, and also with various technical advisors with the GNWT.

And we had our independent peer review panel review that plan in January 2005. And in anticipation of the signing of the cooperation agreement, the plan was also reviewed by the GNWT.

And at that point we also circulated the remediation plan -- the draft plan to all of the expert groups that I mentioned earlier: Health Canada, Environment Canada and DFO. And we actually met with them and got a number of comments and suggestions for improvement as we went along.

We then took all of the comments from

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GNWT, ENR, Health Canada, Environment Canada, DFO, and some of our own comments from the INAC team. And the technical advisor then produced a -- a final revised plan that we again went back to our independent peer review panel, had it reviewed by them, again reviewed by the GNWT, and again went back to these three (3) contaminated -- Federal contaminated site expert departments, the Fisheries and Oceans, Health Canada, and Environment Canada.

Now, during all this time we continued with various public meetings, meetings with our community alliance, site tours -- all of these are well documented in supporting document P1 with the company's remediation plan.

Because some of the site tours that we've had on site, Yellowknife Dene Elders again being pointed out some of the -- the issues we have to deal with.

And we did work closely with the Yellowknife Dene in developing their technical knowledge report, which, in fact, was prepared by them. And it's included, again, in our remediation plan as Supporting Document 'A'. Basically, it tells their story over time and their experiences with Giant Mine.

The remediation plan consists of a main report and fifty-three (53) supporting documents. The

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main report is outlined with an introduction, site history. We deal with the current site conditions, current environmental conditions, and then describe how we will -- how we intend that the remediation will address all of these conditions.

We then try and go through an assessment of the post-remediation conditions. There's a section in the remediation plan about monitoring and -- and also an implementation schedule and a reference list as well.

In terms of supporting documents, these are the -- the main aspects that the supporting documents cover. Obviously, a lot of documents on the environmental conditions, less so on -- on other things. But all in all, a series of very complete reports and studies, and it is quite a challenge to get through all of this material.

So boiling it all down, what -- what the remediation plan involves are these three (3) main components: the underground, how we deal with the underground arsenic trioxide, the frozen block; the surface, again, dealing with all that historic legacy

issues that we inherited when the mining company went bankrupt -- I'll go through these in detail; and also the remediation plan. The remediation plan covers the monitoring, and what will be required is long-term water

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treatment.

Now, we're -- we're often asked how the -- the freezing works, and this diagram is intended to try and address that. If you can imagine that diagram that I showed you earlier, with the -- the arsenic stopes and chambers -- these underground storage vaults in solid rock, again, located somewhere between 80 feet below surface and maximum depth of 200 feet -- 250 feet, all very shallow.

The idea then is to -- to freeze these. And how we're going to do that first is to essentially channelize Baker Creek. And we're going to do that because this is a diagrammatic representation, but the creek actually used to flow right on top of the C2-12 arsenic chamber.

Now, because of the emergency situation that developed several years ago, where we were ending up with the creek beginning to leak into the C1 pit and we were concerned that we would lose the pit wall and the creek would fit it -- fill in through the -- flood into the pit, we opted to move the -- the creek channel from the east side of the highway to the west side of the highway.

And that was done in 2006, I believe -- yeah, 2006. So we've already essentially completed this

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part. But the idea was to move the creek away from the top of the C2-12 arsenic chamber.

The next thing we have to do to implement the plan is to backfill the B1 pit. This is to allow for the situation or the location of a drill platform so that we can drill the freeze holes and insert the freeze pipes around these chambers right here. The mine can slowly be allowed to flood.

And in fact, we're establishing a new water pumping system at the north end of the mine, because we're very concerned about the -- the current infrastructure of pumps because it's a decaying system. It's an old mine, and we're continually patching the thing up.

But we just don't want it to flood, obviously. And so we've put out considerable effort and

expense in constructing a new pumping system here, where we pump the mine water -- which is shown in the blue -- pump it up to surface, store it in the northwest pond, and seasonally treat it.

So the -- the blocks will -- the chambers will be frozen into -- to solid blocks. The rock will be frozen. And the reason we're doing this is much the same as the original concept. We want to prevent any leakage of groundwater -- surface water into these chambers.

If it's not leaking into the chambers, it's not going to become contaminated. And even any water that did leak in would -- wouldn't -- would never escape. It would just freeze and stay there. So this is a very robust engineered barrier, if you like, that will prevent the future leakage of arsenic from these chambers.

And if any of you were on the tour several weeks ago, the MVEIRB staff and folks also met -- visited the site, you could see the amount of leakage that we are experience -- experiencing at some of the bulkheads. And our community alliance, just last week, saw the -- the same thing as well. So that's the -- the concept.

Now, we know that the -- the water in the mine is likely to be contaminated and likely will be contaminated for a considerable time, partly because of this seepage and leakage that we've experienced over time. And so there is a need for a new effluent treatment plant that would be constructed. Instead of pumping from the north end of the mine and drawing contaminated water to the north, it will actually pump from the area around the chambers themselves and treat near the 'C' shaft.

And then once the whole thing is frozen, we can slowly let the mine flood, monitoring all the time

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to determine whether the -- the frozen ground is operating as -- as designed.

So how this will happen is that if we look at -- imagine this is the surface. Here's a stope or chamber filled with arsenic. These little things are the -- the tunnels or drifts that we can walk in in the mine and access these areas.

The first step here is to drill underneath the chambers, insert freeze pipes and connect the freeze pipes to an active freeze plant on the surface. This would be much like a hockey rink freeze plant. And then

we would circulate a cooling fluid through this -- these pipes and freeze the rock underneath the arsenic chambers.

We would then drill a series of drill holes from surface at specific spacing. Again, the spacing would be something that would come out of this optimization study that we suggested earlier and, again, connect that to an active freeze plant and freeze around the chambers.

And once we've established this frozen shell around the chambers, we can then saturate the chambers with water. And once the whole thing becomes frozen, we can convert the -- the freeze pipes to a passive system called thermosiphons, and thermosiphons

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are just these metal tubes filled with CO2 that -- that operate with no power during the winter months. And one (1) of our posters over there has a depiction of how the thermosiphon works if you wish to look at that any further. Then we can allow the mine to flood.

And this is just a three-dimensional model of the various stopes. This is what we call the AR3 area. There's that B208 stope. That's the one (1) -- same one (1) I showed earlier in comparison size wise to the Precambrian Building. You can see the peripheral drill holes all around these and below them that would basically carry the freezing fluid and allow this thing to freeze.

So at the end of the day, what we would expect to end up with are not just individual frozen blocks around each -- each individual chamber but we'll have four areas of solidly frozen rock, one (1), two (2), three (3) and four (4).

And you can see the blue indicates the extent of the freezing and that freezing front would extend from the drill holes that you can see here, as well, outwards and inwards towards the -- the arsenic. So you can see from this, the -- the thickness of that frozen block, if you like.

I'd also point out in this slide that you

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can see the -- this is the Ingraham Trail Highway right here, goes right over the top of the 223, 224 arsenic chambers and that's why we need this small part of the highway relocated. But it's just this little part of the highway that we need to be moved to implement the -- the plan.

I'm going to show you a couple of examples here very quickly. This -- these are some of the modelling that we've done that shows -- the first one (1) that you'll see shows the -- the active freezing taking place. It will show you how quickly these things can be frozen.

And all of this modelling, I should point out, is -- has been done taking into account the climate change and the models all contain -- all incorporate warming predictions of the intergovernmental panel of -- on climate change.

So the first one (1) that you'll see here when I start it is the -- basically, the active freezing. We'll then go to the number 2 which is going to be no active freezing but the thermalsiphon. So you'll see the thing cycling.

And then the last one (1) would be the, kind of the -- the doomsday scenario that somebody forgets to do anything in terms of maintenance of the

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site so we've no active freezing, we've got no thermosiphons, nothing, the thing is just allowed to -- to flood -- to melt. So I'll start the first one (1).

(BRIEF PAUSE)

MR. BILL MITCHELL: So there's your -- your -- the -- these chambers, the 223 chamber. You can see the -- the freezing proceeding. See this is minus ten (-10) in blue. You can see the time advancing there.

So already within a year and a half we've sealed this thing up. And remember the concept is to prevent any contaminated water, contaminated with arsenic, any arsenic solis -- solids seeping out of these chambers. So you can see that we can freeze this thing quite -- quite quickly.

It runs to about five (5) years. And as soon as that stops, I'll start the thermosiphon.

(BRIEF PAUSE)

MR. BILL MITCHELL: So this is from five (5) years going out to twenty-five (25) years. It's kind of interesting that you can thermosiphons active during

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the winter time, but then in summer they're not active so

you can see the thawing.
And then we'll go back into the winter cycle again with them, you know, coming in. Again, you can see the -- the freezing there. The interesting thing to see is that this blue area of the minus ten (-10) continues to get colder. So you -- I think you get the -- the gist of it, so I'm not going to run it up to twenty-five (25) years. But it progresses like this.
Next one is the scenario where nothing is working. This is just total thaw left on its own, starting from fifteen (15) years onwards. Again, you can see a little bit of the effect of the freeze/thaw on the near surface during the -- the summer.
But it goes out to sixteen (16) years. I'm just going to speed this up a little bit. Okay, at thirty-one (31) years you can see the blue is still well advanced in these chambers.
Going on to forty-six (46) years, we can take it up to the end. We're still well within the minus five (-5), minus ten (-10) range there.
Or even at the end there it was still well within the minus one (-1) to minus five (-5) range. Speaks to how robust this -- this method of containing the -- the arsenic trioxides is. So that's the -- the

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underground.
Now, we deal with the surface. There are a series of open pits on the site. Baker Creek runs through the -- the centre of the site. Part of that we've already fixed up because of the emergency flooding and the -- the area of this pit.
And then the -- the other component on surface obviously is the tailings ponds, about 95 hectares of tailings and the plan covers those, as well.
It also covers the sludge settling pond and there's for reference, there's Ingraham Trail running through the site. And the only part of the trail that we need to be -- to have moved is this little part here because that's where the -- the arsenic chambers are.
So in terms of the pits, the B1 pit, the plan is to -- it sits adjacent to the AR4 arsenic chamber area here, and then the AR3 area is this side. I'll just flip that over. What we plan to do is to fill the area of the pit at the AR4, this is the arsenic chamber area, with a platform that we can install the drill pipes for freezing on.
And what we're going to use for that platform is the most contaminated soil that's in excess of the 340 milligram per kilogram limit, which will come from primarily around the area of the roaster, which is

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the most -- the location of the most contaminated soil on the site.

And then also this area we'll -- we'll put it in there. And so that -- that contaminated soil then becomes part of this frozen envelope. Again same principle, because it's frozen we won't get any leakage of arsenic out of -- out of these contaminated materials.

So the plan is to fill this pit completely. It'll be graded on surface to shed rainfall and then vegetated on top as well. All the other three (3) major pits will remain open. They'll be bermed or fenced.

We have no source of fill on the site without quarrying or creating other impacts during the process. In other words, it really doesn't make sense to knock off the top of a hill or dig another hole to -- to fill a pit.

On the tailings, you can see the extent of the tailings ponds here. Some of them are wet, dried in places. We're currently using the northwest pond and north pond for part of our water management system and, ultimately, when we get the new treatment plant built, then we no longer would need that for water management and we can start to remediate the tailings.

And the plan is to, since we are so close

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to a major city, we felt that, again, we needed a very robust cover that performed various functions. We -- we're looking at the tailings here. We needed a bottom layer which basically provides a physical barrier to prevent contact with the tailings by humans or animals.

It prevents erosion through ATVs or dirt bikes and it prevents the upward wicking of arsenic through to the -- the soil cover. And it would also prevent -- help prevent roots from spreading from the surface down into the tailings.

And the upper layer would be of -- locally available silt and silty clay excavated from borrow pits or other areas of the site where we have that material. It would act as a clean surface to shed runoff. It would allow vegetation to re-establish. It would reduce water infiltration and it would allow for recreational or other traditional uses. And also very importantly it would eliminate the problem of airborne tailing fines on windy days.

In terms of the contaminated surface materials, we opted to use the GNWT industrial standard but there's quite a bit of confusion over the fact that

we've used that standard. What we used that standard for, effectively, was to identify the areas of highest contamination. Not all of the site is contaminated.

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There are some areas of the site that the arsenic numbers are very low. But we use this essentially as a guideline to delineate the most contaminated areas of the site. And you can see these areas right here.

This is the area around the roaster most contaminated. Probably the -- the worst contamination too because it's primarily stack outfall so it's a soluble form of arsenic; whereas other areas the -- the arsenic form is different.

You can see the -- the -- up the road here. This is along the tailings pipeline that, essentially, conveyed the tailings into the tailings ponds and, obviously, there were spills of tailings along that road at some point.

These are also tailing spilled and this big area here, in fact, is tailings as well because in the earlier days of the mine they deposited tailings into this valley in an uncontrolled fashion. There were no tailings damage then.

And so that could spread out across the highway into the -- just the edge of Vee Lake Road, that's why that mud off to one side in that lake doesn't grow anything is because it's tailings.

And then there's some wind-borne tailings in this area here. And down in the city, I'll deal with

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that a little bit later and the city town site, things are a big different.

Again, the -- the type of the arsenic is different there and the material is different. But you can see also there's some areas of hydrocarbon contamination more or less coincident with the arsenic contamination so they can be dealt with together.

So here's this area, the central part, the most contaminated materials around the roaster and you can see that tail of, you know, it's probably a combination of tailing spills, mine rock.

And then down at the -- the town site area this -- this points to the kind of the difficulty in using these strict criteria because there are some very high arsenic numbers from this area here. But this material is crushed rock. It's fill from -- from -- probably from the mine or adjacent quarries contains

arsenopyrite. It's essentially not -- it's not bio-available. It's not soluble. It's quite a stable form of -- of -- of arsenic. Now if we were to excavate all of this, then it would excavate, essentially, all of the road material in the -- the town site. So this is one (1) issue that we need to work closely with the city and determine the best way forward.

All of the buildings, without exception,

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on the site -- well, I shouldn't say without exception. I think the Mining Heritage Society and also the City Heritage Committee want to preserve some of the old houses down at the town site and we're -- we've already been talking to the city about how we can work with them to retain some of these old buildings that are deemed to have heritage significance.

But all of the other buildings are going to be demolished. This is the most problematic. This is the roaster. Again, it's highly contaminated with arsenic. There's literally tons of arsenic dust in that building. The asbestos insulation as well since it operated it at high temp, so, this is going to have to be done in a very rigorous fashion, probably negative pressure shrouded type of demolition. Then all of the other mine infrastructure -- old tanks, tailings reprocessing plant, old RC (phonetic) labs, all demolished.

The remediation plan also covers the ongoing site water treatment. Remember I said that we needed to treat the water for some indefinite period of time. We looked at using the existing water treatment plant but there are issues with the age of that plant. It is basically on its last legs. And, in fact, just this last year, we've had to take one bank of the reactor

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tanks out of service and change the operation from a twelve (12) hour per day operation to a twenty four (24) hour day operation to ensure that we can treat all the water that we extract from the mines. So again, this points to the need for moving ahead rather quickly with this project.

So the -- the new water treatment plant will be constructed using best available tech -- technology near the 'C' shaft, as I indicated earlier. And we're going to change the operation procedure from seasonal to year-round discharge. There will be a holding pond or -- or tank and on-going monitoring of the

effluent, just as we do right now. And we plan to change the discharge point. Rather than decanting into Baker Creek, we would put it into Yellowknife Bay using a diffuser.

And in additional, all the surface runoff from the tailings, even after we put on the cover, would be collected until we're sure that the -- the quality of the water and the runoff meets acceptable criteria for discharge to the environment.

So this is what the project will look like at the end of the day. The essential area probably fenced off with the thermosiphon sticking out the freeze plant. The open pits that will be fenced. Highway

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running through the site. Instead of going right through here, it's now over here. So there's the little realignment that we -- we have proposed in the plan. And also you can see the tailings ponds covered, re-vegetated grass.

You can see an example of this right now if you drive out past the mine and look at that area where we diverted the creek. You can see the -- how quickly that vegetation has reestablished. There's no dusting or any issues there; prevents erosion of any sediment into the creek. And so this is what we would envision for the -- the rest of the property. And we could see that these areas, ultimately, would be returned to recreational or -- or even possibly traditional use as well.

So once -- once the remediation plan is implemented, we looked at what the post-mediation conditions would look like from human health and ecological risk assessment perspective. So we expect that the plan would reduce arsenic releases from the project area significantly and, more importantly, the plan would prevent the release of probably many thousands of kilograms of arsenic per year if the plan was not implemented.

So in terms of the human health and

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ecological risk assessment, that was a very broad based assessment that was done by Senes. It covers all of the area of the site. It covers Yellowknife all the way down to Dettah.

And you can see here the -- the number of different samples that were used, different types. We had surface water samples, sediment quality data, aquatic

vegetation, fish data, terrestrial environments, soils and also vegetation. So all this data was used in the development of that comprehensive human health and ecological risk assessment.

And the conclusion is that this way people living in the area are unlikely to be at risk of adverse effects from arsenic exposure and arsenic intakes are generally within the range of other Canadians. The estimated cancer risks arising from the Giant Mine arsenic are well below the risks associated with other causes of cancer. But we -- we've said that in order to be cautious we may have to look at restricting certain uses in Baker Creek.

In terms of the ecological risk assessment, again, the aquatic plants and fish in Back Bay and Yellowknife Bay will not be at risk. And, in fact, as part of our metal mining effluent regulations we have to complete environmental effects, monitoring, and

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already we can see that the benthics and things are beginning to re-establish quite well in the bay and the areas we sampled.

But due to sediment contamination and upstream sources, Baker Creek may actually take a long time to recover. And the mink and muskrat in Baker Creek could be at risk but the field studies that have been done to date by some of our consultants show that there are actually healthy populations of these animals.

Obviously, monitoring is a very important aspect of these projects to verify the results and so we are planning a surface water monitoring. In fact, we have a significant surveillance network program already in place.

Treated water monitoring, we already do that. Mine water monitoring, already done. Groundwater monitoring, again, already underway on a routine basis. Air monitoring, we do that routinely. Environmental effects monitoring, I just mentioned that so we do that, as well. So all of these are already in place. They may well have to be expanded for some of the site elements but there is a good deal of monitoring already in -- in place.

And, in fact, if we look at the -- the next slide, it's not too easy to see but each of these

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little yellow and -- yellow numbers with the red marks here, each of these is a water monitoring well. So you

can see we've got water monitoring wells all around there. They're essentially here again, more up here, here. So we've got the site essentially surrounded with monitoring wells already.

And we, obviously, realize that the -- the monitoring is a requirement that's normally specified during the regulatory licensing process but since it has been raised at the workshop by various parties, we would see that for a project like this we might expect some various additional audit options as well as monitoring.

And just as examples, there's the -- what the uranium industry does, creates status of the environment reports. There's the Alaska example where independent monitoring audits are done every five (5) years of both the project and the enforcement and regulatory agencies to make sure that they're doing the job. And, of course, there's the NWT example, as well, of the independent environmental monitoring agency.

So getting -- getting close to the end now. This is getting on to the -- the scoping recommendations that we see in terms of the -- the project.

The scope of the development should be the

remediation plan as proposed and submitted as part of the water licence application.

The interim necessary activities that I already discussed and also that freeze optimization work, we would ask that that be excluded from this assessment.

And we also would recommend that the road alignment -- realignment recognizing that the GNWT are looking at various road corridors, we would also suggest that any road re-alignment beyond what is discussed in the remediation plan should not be incorporated within this assessment.

In fact, looking at the -- at the highway in terms of the -- the Board's own guidelines in terms of independence, the implementation of the remediation plan does not depend on any of the three (3) corridors currently under consideration by the GNWT Department of Highways.

The reclamation plan only requires a minimal move of the highway from the area of the AR3 arsenic chambers, as I pointed out earlier. And it would make sense to consider the -- any additional -- any relocation of the highway to the corridors proposed by the GNWT as a separate project.

In terms of linkage, the three (3) corridors that the GNWT currently have under

investigation are significantly -- well, totally different from what is proposed within the remediation plan.

And the relocation of the highway to any one (1) of these three (3) corridors is really to address other highway issues such as the sharp curves at the location of the 'A' shaft and the culvert at the town site, sharp curve at the Vee Lake Road and also the poor quality of the road bed throughout that whole area.

In terms of proximity, INAC will not be the developer nor will it be a co-proponent for the road relocation that extends beyond what has been proposed in the remediation plan. And in fact, the GNWT Department of Highways will -- will be the developer in that case.

But in terms of looking at cumulative impacts. We do recognize that if the highway is moved to one (1) of these (3) corridors then there may be impacts related to those and it probably would be appropriate to consider those impacts in terms of cumulative impacts related to -- to Giant as well.

In terms of the scope of the assessment, the distinct nature and unique nature of the proposed development and the state of the site, in this case being an abandoned mine site, should be taken into account when determining the scope of the assessment.

This is not a typical for-profit development that operates -- that generates wealth; in fact, the taxpayer is on the hook and will pay the full cost of this remediation.

The site environment is already heavily impacted from the fifty (50) years of mining and the short term impacts from the remediation activities, if any, will be mitigated. And primarily we expect these to be dust issues that we will -- that we will mitigate by either wetting down or using dust suppressant.

The long-term impacts of the remediation will be positive and will result in a significant improvement to the existing state of the site and also the receiving environment. The scope of this development should inform the scope of the assessment.

And we also have to be mindful that I've already eluded to this that giving the state -- given the state of decay of the mine infrastructure including the arsenic chamber bulkheads, the effluent treatment plant, it is important that the project proceed on a timely basis to protect human health and the environment.

It's the proponent's view that the impacts -- impacts that would be considered for a significance

determination for this proposed development would only be those impacts caused by the implementation of the

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remediation plan.

Now, obviously, the history and the current environmental state of the mine have played an important part in our site assessment and evaluation of work leading up to the development of the remediation plan and from that point, the -- the -- it's important to recognize that the plan addresses those issues -- the historical legacy issues and the plan moves out -- moves forward in terms of dealing with -- with those issues.

In terms of the cumulative impacts. Again, given the unique nature of the proposed development, the cumulative impact assessment is also rather unique. In supporting document Q5, is our assessment of the cumulative impacts and it indicates that there are no potential cumulative effects expected to extend beyond the implementation phase of the remediation.

No significant cumulative effects are anticipated for the physical works and activities associated with the proposed development either.

And the proponents recommend that the relevant cumulative impacts determination should focus on whether it is likely that the remediation activities may worsen or compound the impacts of this abandoned site.

So in conclusion, we spent a lot of time

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studying the site. We know a lot about it. I think almost to the point where it's been overstudied in some cases. So after essentially eight (8) years of detailed extensive study and consultation, we feel that the proposed remediation plan is -- will certainly protect human health, will improve the environment and, ultimately, it will meet the approval of the local stakeholders.

And that concludes my presentation. Thank you.

THE CHAIRPERSON: Thank you, Bill Mitchell, developer with INAC. At this time, I am going to call for a break and we will come back at 3:20 and we will go into questions to the developer. We will take a twenty (20) minute break. Thank you.

--- Upon recessing at 3:05 p.m.
--- Upon resuming at 3:29 p.m.

THE CHAIRPERSON: Okay. We're going to reconvene this scoping Hearing. I'd like to thank Bill Mitchell, with INAC, for giving us the presentation as the developer.

QUESTION PERIOD:

THE CHAIRPERSON: The next part of the agenda we have is the questions for the developer from parties and public. So I'm going to go in order. I'd like to see if there's any questions from the City of Yellowknife.

MS. KERRY PENNEY: Kerry Penney for the City of Yellowknife. I just have one (1), what I believe is a quick question.

With respect to the scope, the developer proposed that the interim necessary activities should be excluded from the scope.

And I just wanted to ensure that what those necessary activities included, whether it was security and maintenance or if it went further than that.

THE CHAIRPERSON: Thank you. Bill Mitchell...?

MR. BILL MITCHELL: Mr. Chair, the activities that are included in the -- the interim maintenance, interim care, they were listed on one of the projection slides.

But essentially, it does include site security ongoing and includes all of the other activities involved with keeping the mine in an un-flooded state, and just general housekeeping and care for this site as well.

So I -- I -- if need be, I can pull that slide up again, and we can go through each activity if -- if that is required.

THE CHAIRPERSON: Thank you.

City of Yellowknife...?

MS. KERRY PENNEY: No that's not necessary. That's all of my questions.

THE CHAIRPERSON: Thank you. Moving on, Kevin O'Reilly...? He's not here. Okay. Moving on to YKDFN.

Yellowknives Dene First Nation...?

(BRIEF PAUSE)

MR. TODD SLACK: Todd Slack, Yellowknives Dene First Nation. I guess the first question that I have is a sort of broader, overarching question. We're of the sort of perspective that this is a management strategy, in terms of extent.

I'd like to ask the -- the developer: With their expertise, given the current limitations of technology to process and stabilize the arsenic, are there -- what future technologies could be coming along that would be perhaps more of a solution to the problem rather than just a management strategy?

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THE CHAIRPERSON: Developer, Bill Mitchell...?

MR. BILL MITCHELL: Mr. Chair, if we were aware of any possible technologies that might be coming on in the future, we prob -- that would achieve a better result and potentially a walkaway solution, we would certainly not proceed with the plan as discussed.

However, I have no knowledge of any technology on the horizon that could achieve that purpose. Furthermore, given the nature of arsenic, being an element that cannot be destroyed -- in fact it's even different from radioactive elements; it doesn't decay into other products -- in my mind it is very unlikely that such technology will become available, certainly in the near future.

Maybe our technical advisor group would like to comment on that too.

THE CHAIRPERSON: Yes. Proceed, but state your name.

MR. DARYL HOCKLEY: Daryl Hockley for the technical advisor group. We asked that question eight (8) years ago, and that's how we got to a list of fifty-six (56) methods that were assessed in the project.

Of that fifty-six (56) methods, I would guess a dozen of them were kind of cutting edge research

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things that -- that were either in the scientific literature or that -- or that salesmen were -- were wandering around trying to promote.

We looked long and hard for -- for a magic bullet that would -- that would make the -- make the problem go away, because we knew that would be very attractive to all the stakeholders. But there -- there wasn't any -- any eight (8) years ago. And there wasn't

any five (5) years ago, the time we finished the arsenic trioxides management alternatives project. And I don't believe -- I think Bill is correct. There aren't any now.

There is -- I think there is a very important reason why -- why that's the case, easy to understand. The -- the greatest difficulty with -- with any of the reprocessing options is getting the arsenic out of the ground.

There are maybe a num -- a dozen ways that you could get 90 percent of the arsenic out of the ground. And there is maybe two (2) of three (3) ways you could get 99 percent of the arsenic out of the ground. But there is no way that you can guarantee to get 100 percent of the arsenic out of the ground.

It's the nature of the arsenic trioxide that even if you left 1 percent of it behind, it would

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dissolve, and it would create as much groundwater contamination as if you left 100 percent of it behind.

And that was a stumbling block that we came upon with all these options, even after we'd come up with clever ways to get 99 percent of the arsenic out of the ground and paid all sorts of hundreds of millions of dollars to convert it into somewhat more stable forms. We were still left with having to manage this site and -- and manage the arsenic chambers and whatever residual arsenic trioxide dust was left in there.

In addition, we found that the exposure of workers to -- to, you know, working with arsenic underground, all sorts of other complications, and -- can introduce all sorts of other risks. And we still have a -- a problem that we have to manage in perpetuity.

And that's what I think was one of the factors that convinced ourselves and -- and most of the community five (5) years ago that the right the thing to do was to try to manage it where it was.

(BRIEF PAUSE)

THE CHAIRPERSON: Thank you.

Yellowknives Dene First Nation, is there another question?

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MR. TODD SLACK: Todd Slack, YKDFN. Staying with this subject in a -- but taking it in a bit of a different dir -- direction here.

Understanding that management is going to be the foreseeable future for this site, at some point down the road, let's say fifty (50) years -- you know, this is a hypothetical question -- the current freezing scenario that -- or -- or plan that's being proposed, during our tours there was considerable concern expressed about the horizontal bulkheads and their potential stability.

I'm wondering that -- what sort of impacts might this freezing plan have on the stability of those bulkheads that are already suspect with regards to any sort of future solution that may occur down the road?

THE CHAIRPERSON: Thank you.

Moving on to the developer, Bill Mitchell.

MR. BILL MITCHELL: Thank you, Mr. Chair. The -- certainly, the -- the horizontal bulkheads underneath the arsenic chambers are of a concern. There is several -- there are several of them in the mine. Specifically, there are several underneath that B208 arsenic chamber, which is the one that -- which is the one that I showed in the presentation.

The remediation plan actually calls for

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backfill underneath those bulkheads that may be at risk prior to freezing. And so the -- there's an open void underneath the B306 -- the B208 chamber, called B306. And so the plan would be to fill that, tight-filled against the bulkheads to provide support, and then the freeze pipes would actually go through the fill that we put in place.

And so there is a plan to stabilize any horizontal bulkheads that might be at risk during the freezing. I hope that answers the question for Mr. Slack.

THE CHAIRPERSON: Okay. Go ahead -- want to go ahead with the Yellowknives Dene First Nation, Todd Slack, and if we could let me know how much more questions you have, then I could decide whether we can move ahead or not. Thanks.

MR. TODD SLACK: Thank you. I have three (3) more questions and I believe my colleague, Louie, has additional questions after that.

THE CHAIRPERSON: Very good.

MR. TODD SLACK: Proceed?

THE CHAIRPERSON: Proceed.

MR. TODD SLACK: In -- sorry, excuse me. In my research one of the driving factors behind the design of the plan was a human health risk assessment.

And this -- this risk level is based on exposure concentrations of three hundred and forty (340) parts per million in the terrestrial environment and slightly less in the soil sediment area for the -- the boat launch area. This risk assessment also assumed on -- of five (5) months of exposed soils.

I'm just wondering if climatic change has been taken into account with regards to this risk assessment, especially in light of reduced snow cover and ice cover.

(BRIEF PAUSE)

THE CHAIRPERSON: Okay. Thank you, Todd. Bill Mitchell, developer...?

MR. BILL MITCHELL: So I -- I understand the question then is whether a longer season of exposure, because of potential climate warming, climate change, less snow on the ground, more -- more time that people might be exposed to that material, is -- is what you're -- you're asking?

MR. TODD SLACK: Yes.

MR. BILL MITCHELL: Yep. Well, maybe I can pass that to Bruce Halbert, who actually completed the human health risk assessment on the SENES side.

THE CHAIRPERSON: Yes, proceed.

MR. BRUCE HALBERT: What you're referring specifically to -- just to be clear -- is we're looking at the exposure to something living in the Giant Mine town site area and being exposed to a level of three forty (340) milligrams per kilogram in soils on that site area.

That was a very conservative assumption that was made. Indeed, we expected the actual levels would be lower than that. But that was used as a cutoff for the identification of areas that would be remediated, and we took a very conservative approach to the assessment in that regard.

Now, for other receptors located in other locations, the exposures were actually assessed based on levels that were measured in those community areas, such as Unlath Mound (phonetic) or in the City of Yellowknife itself, as well as Dettah.

Now, as far as time is concerned, we actually do not discount intake relative to -- to time of exposure. And the effects of climate change consequently really have no bearing on -- on the assessment.

(BRIEF PAUSE)

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THE CHAIRPERSON: Is that it?
MR. BRUCE HALBERT: Yes, sorry.
THE CHAIRPERSON: Okay.
Todd Slack, YKDFN...?
MR. TODD SLACK: My third question relates to the -- sorry, my fourth question relates to the plan not to backfill the -- several of the pits that are on site.
I'm just wondering if the developer doesn't think this is presents a significant risk and limits the -- the usability of the site down the road after the remediation plan is done. I appreciate that there's a plan to fence and berm some of these sites.
But in terms of risk management and risk mitigation, it seems like if possible to fill these, it would be a much better idea.
THE CHAIRPERSON: Developer, Bill Mitchell...?
MR. BILL MITCHELL: In terms of -- of the pits, we -- we are actually going to fill one of the pits, the B1 pit. But as I pointed out, three (3) of the other pits are going to be left open because -- primarily because we have no fill to fill them up.
I mean, it -- it doesn't seem to make sense to create additional impacts to the site by, say,

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quarrying the top of another hill to -- to fill a pit. I mean, these are large pits. They're going to take a lot of fill. And so there would be a huge impact to the site environmentally.
And so we chose to take the approach where we would berm and fence the pits to prevent inadvertent public access. Ideally, if we had a supply of material to fill them with, that would be great. But it's just not available on the site.
THE CHAIRPERSON: Okay. Thank you, Yellowknives Dene First Nation. I think you have another question. Okay, proceed.
MR. TODD SLACK: And my last question, in listening to Bill's presentation there, it occurs to me that the -- the plan being to let the mine flood completely, wouldn't this create a tremendous amount of resistance or, you know, I'll use the work inertia, later on down the road if and when any solution for this arsenic problem is found?

I -- I guess the question being, after the -- the mine is flooded, how much -- how big an obstacle would it be to go back in and access the chambers again, if any solution were -- were found?

I just -- it just feels like this is moving towards a management strategy in perpetuity rather

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than a management strategy until a solution might be found.

THE CHAIRPERSON: Developer, Bill Mitchell...?

MR. BILL MITCHELL: Mr. Chair, certainly, the plan ultimately would be to flood the mine to a high level. But I would point out too that we will be drawing down the water to a certain extent during -- for quite a period, even after the freezing has implemented.

I pointed out the fact that we -- we have the contaminated water on the site, so we need to keep a draw down at least 100 feet below surface for an indefinite period.

Now, having said that, also, we will not let the flood -- let the mine flood above the base of these arsenic chambers and above the base of the freezing until such time that we're sure that the freezing -- the ground -- the frozen ground is maintaining its frozen state.

And in any event, these openings will stay open while we're pumping. And based on rough estimates of volumes, it would only take two (2) years to pump the mine down to well below the level of these chambers. So it's conceivable that it could be pumped out eventually. And it's quite common in the mining business for -- for

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mines to flood and be left in a flooded state for years, and then to pump them out at some later date.

The technology is there. The engineering is there. It doesn't take a lot to sling a bunch of pumps down in a mine and -- and pump it out.

I hope that answers the -- the question.

THE CHAIRPERSON: Next on the list for the Yellowknives Dene First Nation, I believe, is Louie Azzolini.

MR. LOUIE AZZOLINI: Thank you, Mr. Chair. I have several questions. And the -- I will begin by asking the questions based on the scope of development and move on to scope of assessment questions. And then I will be asking questions regarding the

justification for the proposed development and monitoring commitments.

With respect to the scope of the development, the scope of the effects from the mine have been documented off the lease block as it currently exists, and as a matter of fact, to quote:

> "Two men working 1 1/2 miles north of Giant Mine were hospitalized with definite diagnoses of arsenic poisoning caused by drinking contaminated snow water.

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> In May of the same year, a herd of cattle imported for dairy production was wiped out by arsenic poisoning after ingesting contaminated water and vegetation.
>
> In the year later, an Injun -- an Indian child died after consuming snow laced with arsenic."

The point I'm making here is that arsenic travelled off the lease block. What is your rationale for limiting your scope of development to the lease block?

THE CHAIRPERSON: Thank you for that question.

Developer, Bill Mitchell...?

MR. BILL MITCHELL: Well, part -- part of the -- the rationale is that the lease block is essentially the area that we have any authority to do anything on. That was the land quantum, if you like, that was surrendered from the receivership of Royal Oak, and that's what essentially we inherited.

We have an agreement with the GNWT -- effectively, the reserve -- which gives us the -- the right and the authority to enter onto that site to essentially conduct the remediation. But we have no

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larger authority to extend outside that site and do work outside the site. We have no authority to enter into people's gardens in the city and dig up soil or -- or anything like that.

So we've essentially limited the aerial extent of the -- what's in the remediation plan to what we can deal with based on the -- the land holdings and the reserve specifically. Thank you.

THE CHAIRPERSON: Louie Azzolini,

YKDFN...?
MR. LOUIE AZZOLINI: Thank you, Mr. Chair. Second question deals with some scope of assessment -- deals with the scope of assessment of the project and the factors to consider. Again, a quote here:

> "The Giant -- the Giant storage contains sufficient water-soluble arsenic to kill the world's population four (4) times over."

He went on to observe:

> "Thus the Giant storage of soluble arsenic is sufficient to pollute a freshwater body 290 miles long, 62 miles wide, and 300 feet deep to above Federal Government's acceptable level."

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As my colleague taught us, that this appears to be a management strategy. And as such, given the risks that exist, why should not -- why should the scope of assessment not include the potential impacts of catastrophic failures, given that this will exist in perpetuity?

And perpetuity is a long time, and God knows what's going to happen in the long time, especially given your previous statements that you can't do anything with it except freeze it.

THE CHAIRPERSON: Developer, Bill Mitchell...?

MR. BILL MITCHELL: In terms of -- of the question, I mean it would seem to me that if it's considered to be such a danger, in term -- I -- I'm not sure I can -- I would agree with the figures necessarily. I'm not quite sure where they came from.

But if it is considered to be such a danger, then surely it's imperative that we move ahead and ensure that, you know, we don't have that catastrophic event that could release large amounts of arsenic to the environment.

I think it's -- it's very unlikely anyway, given the -- the fact that the arsenic is by and large quite -- quite tightly sealed in the arsenic chambers.

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Once we get them frozen there's really little possibility of a catastrophic release anyway.

And I think essentially, that's -- that's the crux of it. The -- and I think the technical advisor

would like to comment as well.
THE CHAIRPERSON: Please proceed.
MR. DARYL HOCKLEY: Daryl Hockley. The assessment of the risk over the long term was -- was very much a part of the work done to date.
In the initial assessment of -- of arsenic management alternatives -- arsenic trioxide management alternatives, we looked at what would happen. For every alternative that was proposed we looked at three (3) cases of future -- future problem. One, a case where a budget failed to go through, for example, and there was a one (1) year lapse of funding and one (1) year lapse of management.
Then we looked at the case where something went seriously wrong. The government decided to neglect the north for -- for awhile, and there was ten (10) years of no management.
Then we looked at the catastrophic case, where there was a war, a nuclear catastrophe, and there was a hundred (100) years of nobody looking after the arsenic trioxide.

On all three (3) of those categories, the -- the safest alternative is the one that's being put forward. So that consideration of what could go wrong in the very long term was very much a part of the assessment to date and, in fact, is one of the major things that drove us towards keeping the dust underground and freezing it, putting this large body of ice all around it that -- a body of ice that would stay there, as you saw from the animation, for decades, even if we were foolish enough to -- to ignore it for that period.
THE CHAIRPERSON: Okay, thank you for your answer.
Louie Azzolini, YKDFN...?
MR. LOUIE AZZOLINI: Louie Azzolini. I'm not a statistician, and maybe someone in the room is. But if I take a small probability and multiply it by an infinite amount of time, I end up with a certainty. In other words, if I flip a coin a certain number of times, the odds are it will be 50 percent heads, 50 percent tails.
Now, if I take a small, little probability and multiply it out over a thousand (1,000, ten thousand (10,000) years, what's the result? Maybe a statistician can help me, but I trust that you've done that calculation.

THE CHAIRPERSON: Developer, Bill Mitchell...?
MR. BILL MITCHELL: I'm really not sure where the question is going. I presume your implication is that if there's a small probability, that if we extend it over many, many decades, then that probil -- probability may become a reality.
And I think, again, in terms of the options that we looked at, certainly the -- the long-term stability of the options we proposed were considered. And I would submit that in terms of probabilities of failure of any of the options we looked at, the -- the frozen block was the most robust and certainly, really, presents no possibility of immediate failure -- catastrophic failure.
And I think that was borne out by the -- the models that we ran that showed that, even if we forget about this and don't do any maintenance on the site for a long time, that the frozen block will stay coherent for decades, and it's very unlikely that we would experience that sort of catastrophic effect.
I think the technical advisor would like to add a comment too.
THE CHAIRPERSON: Yes. Please proceed.
MR. DARYL HOCKLEY: Daryl Hockley. It's

a good question because a lot of engineers, in particular, fail to make the link that when you're talking about a perpetual project like this, you've got to be very cautious about those low-probability events.
But that's actually what -- what I do for a living. I go around the world writing closure plans for -- for mines, which are always perpetual plans. So that's the world of engineering that -- that I live in.
I won't answer the probabilities directly, because I don't think anybody else wants to go into the math. But -- but the point is a good one. You do have to worry about these -- these -- the sort of things that are -- that are very unlikely. And I -- I hope that a nuclear war that wipes out our government for a hundred (100) years is an unlikely event. But we have considered things that unlikely in -- in assessing these options.
Maybe what I've -- I've failed to communicate before is that all of the alternatives that -- that we could come up with required some kind of long-term management. If you -- let's say, for example, we took the material out of the ground and -- and converted it to a -- to scordite, which is one of the more stable forms of arsenic. Well, we went through all the -- all the math on that. And as I mentioned before, at least 1 percent of the arsenic would still stay underground. So

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you'd have to manage that.
Of the stuff that got turned into scordite, it would end up in a massive landfill that would be somewhere on the surface of the ground, and it would be leaching into the ground. It would have monitoring wells all around it. It would have to -- it would have to be managed.
And when you take any other option and add up all of its long-term management requirements and then ask the question, What happens in a nuclear disaster? The best one of all -- when you take that perspective -- the best one of all is to have that arsenic underground and frozen.
That -- that's one of the main reasons why -- why we believe it's -- it's the right option and why, again, most of the community, I think, agreed with us five (5) years ago, when we had been discussing this in depth, you know. Bill -- Bill mentioned dozens of community meetings discussing this.
THE CHAIRPERSON: Thank you for your answer. Moving on to YKDFN. But I would like to just point out that I think you have a couple of more questions, Mr. Azzolini?
MR. LOUIE AZZOLINI: Mr. Chair, I have two (2) more questions.

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THE CHAIRPERSON: Okay. Please proceed with your two (2) questions.
MR. LOUIE AZZOLINI: Just for clarification, Mr. Chair, a perpetuity is not one hundred (100) years. Perpetuity is perpetuity, forever.
The second to last question addresses insufficient justification for the proposed development. And I appreciate that, as Mr. Mitchell has indicated, that numerous studies have been done.
And what I haven't seen in the studies is a transparent weighting of the alternatives and a sensitivity analysis of how the various criteria, if they are modified in terms of the assessment of the alternatives, affects the outcome.
And what analysis tools were used? Was an analytical hierarchal process used, in terms of formulating decision criteria solutions? What kind of logic chains were brought to bear, in terms of integrating the information? How was the information normalized so that we were dealing apples with apples and

oranges with oranges?
Essentially, what it seems a lot of things fall on here is professional judgment and "trust me," in quotes, but not transparent weightings of information, where the Yellowknives Dene can see how the various

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components or the criteria used for the evaluations were derived and applied.
Is that information available?
THE CHAIRPERSON: I'd like to go to the developer, Bill Mitchell.
MR. BILL MITCHELL: There's certainly a lot of information available on how the options were developed for the -- the remediation plan. And the arsenic trioxide management alternatives, there was a lot of discussion went into that as well.
A lot of that information, I believe, is actually within -- contained within the remediation plan and supporting documents. And I would add that also each -- the -- in terms of evaluating the different options and what tools were used to analyse the options is certainly well described there.
Again, these -- the independent peer review -- review panel was very intimately involved in -- in the assessment of the options. And they have some discussion of that also in their report on the arsenic trioxide management alternatives.
THE CHAIRPERSON: Is that it for your answer?
MR. BILL MITCHELL: Sorry, I would like to just pass it over to the technical advisor now for

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some of additional comment.
THE CHAIRPERSON: Okay, please proceed.
MR. DARYL HOCKLEY: Daryl Hockley again. There is an entire report on the -- on the selection of arsenic trioxide management alternatives. It's a binder about that thick, and I believe it has seventeen (17) or so supporting documents.
We've done our best to summarize that in here, but I think probably the -- the misunderstanding is -- is a little more fundamental here.
We saw it as our -- we saw the definition of transparent as being something that would be easy for -- for different parties to understand, rather than being something that would be decipherable by a -- by a specialist.

I've been involved in -- in assessments, including in the Canadian North, where people have tried to do the -- the highly rigorous quantitative assessment of pros and cons, or benefits, or multi-attribute utility analysis. You might be familiar with some of these terms. And I don't find them to be transparent at the end of the day.

They're transparent in that I can understand them, and I can figure out the numbers if I have to. But they're not transparent in -- in the fact

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that you can stand up in front of a -- the public and say, We chose with this option because it had the lowest risk in the short term, the lowest risk in the long term, and the lowest worker health and safety risks.

And we -- we aimed for that level of transparency in our -- in our deliberations. And -- and that's what you'll find in the report. You'll find fairly simple tables that say, you know, what are the -- the main -- the main factors were the risk of arsenic release in the short term, being the implementation phase; the risk of arsenic release in the long term, being perpetuity, and not a hundred (100) years -- perpetuity, exactly as you said; and -- and worker health and safety risk. Those -- those were the main -- main factors.

And the -- and the alternative that we chose, the frozen block alternative, scored very well on all three (3) of those categories.

If you want to find the backup to how we came to those categories, it's not just "trust us." It's all there. It's -- there are -- there are supporting documents to that report, supporting documents to this report, that explain how we've determined that -- that it is -- it does present the lowest risk of arsenic release in the short term, in the long term, and the -- and the

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lowest worker health and safety risk.

It's all there and documented. The story's actually pretty simple though. It presents the lowest risk of arsenic release in the short term, because we're not moving arsenic around. Any other option, where we try to take it out of the ground and put it in pipes and move it all around the place, has -- has clearly a much -- much bigger risk of -- of spills.

Why does it have the lowest risk in the long term? I explained that earlier. In the ground

frozen, it'll -- it'll stay frozen by itself, even if we neglect it.

And why does it have the lowest worker health and safety risk? Well, again, the -- the same as the first point, we don't have to go down there and move it. We don't have to send miners underground to move it. We don't have to have processing plants with people handling it.

So that -- that was our objective, was to go through the -- these analyses very carefully, with full rigour, but to present them in -- in plain English in terms that people could understand.

So we may have to provide some other backup documents if -- if you're looking for that rigour. But I -- I assure you it's there and that -- that the

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transparency at the end, I think, is -- is what's needed for this type of communication.

THE CHAIRPERSON: Louie Azzolini, Yellowknives Dene First Nation...?

MR. LOUIE AZZOLINI: With your permission, Mr. Chair, just a point of clarification. Was that a no or a yes about the analytical transparency and sensitivity, et cetera?

THE CHAIRPERSON: Developer, Bill Mitchell...?

MR. BILL MITCHELL: All right. I'll defer this one to our technical advisor.

THE CHAIRPERSON: Please proceed.

MR. DARYL HOCKLEY: It's an emphatic yes. We believe that our process has been fully transparent.

THE CHAIRPERSON: Thank you.

Louie Azzolini, Yellowknives Dene First Nation...?

MR. LOUIE AZZOLINI: Thank you, Mr. Chair. My -- my last question. And I respectfully disagree with the proponent on that transparency component.

There's -- the proponent -- or, Mr. Mitchell, you make the suggestion that this environmental assessment should judge the significance of its success

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on how badly your worst component does, in terms of its impact on the environment.

Is that a -- it may be a backhanded way of saying it, but is that really what you're asking the Board to do? We're going to fix the environment up, is

what you're saying, but judge us on how badly we do it as opposed to how well we do it.
Because you're saying only determined significance of what we do, rather than what we achieve.
THE CHAIRPERSON: Okay. Thank you for your final question.
Moving on to the developer, Bill Mitchell...?
MR. BILL MITCHELL: I -- I'm not really sure we -- we understand the -- the question. Certainly, in terms of the significance that we -- we talked about, we're not talking about how good or bad the -- the results are going to be.
We are looking at the remediation plan and how -- how, in terms of significant aspects, would be essentially the various elements that we've described during -- that we will remediate.
What we're saying is we -- we're looking at improving the existing state of the site. In all cases, protecting the environment, protecting through --

protecting the environment through limiting any discharge -- future discharge of arsenic. And we said that we expect that this remediation plan will significantly protect -- signi -- significantly improve the receiving environment. We talked about the numbers there.
So I'm not sure if I totally understand the -- the question. Certainly, we're not looking at this as, you know, judging success on how badly we do. We're -- we're looking at this is being a very robust remediation program or project. And I -- I think that almost all of the elements on the site -- I went through them all, both surface and underground -- we've addressed.
And there is a monitoring component that we've also indicated that we wanted to proceed with that would measure the effects of -- or the success of -- of the remediation itself.
So if -- if there's any clarification that Mr. Azzolini might care to supply on his question, we could try and answer it further. Thank you.
THE CHAIRPERSON: Okay, I want to allow this last question, maybe, to Mr. Azzolini. But maybe if you could help clarify your question a little bit more.
And at the same time, I was going to ask that when we pose our questions that -- I like to show

that, you know, we need to show respect and that everybody that's sitting on the table and that everybody's having the time to sit here and to listen to everybody else's concerns.

So I appreciate maybe if we could just take a look at that and move on to the question. Mahsi.

MR. LOUIE AZZOLINI: Thank you, Mr. Chair. Just for point of clarification, in a normal environmental assessment, where there's a -- a project which will affect the environment, the Board seeks to find areas where there will be significant environmental impacts and then provide recommendations to mitigate those impacts below significance thresholds.

In this case, in this project, the only -- one of the only ways where the Board can find significance is in the areas where you least do benefit to the environment.

I guess my question, to be succinct, is: How do you define significance, good or bad, that the Board should be providing recommendations for, in your opinion?

THE CHAIRPERSON: Thank you, Mr. Azzolini, for your final question. I am going to put it over to the developer, Bill Mitchell.

MR. BILL MITCHELL: Well, we -- we have

stated what we plan to -- to do, in terms of environmental impacts.

We've already stated that we expect that this project, as Mr. Azzolini collect -- correctly points out, is different from normal development in a grassroots area, which generally would cause negative impacts.

We -- we see that the -- this project actually would cause a lot of positive impacts, if you like. And so, you know, our feeling that, in terms of determining significance, that's really the -- the Board's jurisdiction.

And I don't want to really comment anymore on significance aspects at this point. Thank you.

THE CHAIRPERSON: Thank you very much for your answer. Want to move on to the next party on the list I have, is the North Slave Metis Alliance.

(BRIEF PAUSE)

THE CHAIRPERSON: If there is nobody here from the North Slave Metis Alliance, then I'm going to move on to public at large, people in the audience.

Anybody from the public that want to ask questions? Behind me? Okay.

Please state your name and answer -- ask

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your question.
Sorry. Okay. Sorry, I want to ask the -- the gentleman from the public at large to take a mic at the side table here. And, again, once again state your name for the record.
MR. GARY VAILLANCOURT: My name is Gary Vaillancourt. I'm a citizen in Yellowknife. Just -- I talked to a lot of people about this over the years as it's been developing and have my own opinions about this and I got -- I was just going to have a couple of quick comments.
And then as I listened to the explanations coming, I realized that I got more to say but I'm not going to do it here right now.
What I would like to comment on is the general feeling of the citizens of Yellowknife. Now I know a lot of you people are experts. You've seen a lot of this stuff before. This is the way industry does it.
But my reading of the situation is the people are not happy with the principle, the scope, whatever. They want a permanent solution that doesn't require knowing that there's a bomb in their backyard. That's my reading of it.
And all of these solutions, like some gentleman has suggested, are management solutions in

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perpetuity and, of course, that's the out of sight, out of mind philosophy. If you bury it, we won't see it and it's okay. In perpetuity is a long, long time and I think people are thinking in those lines, not this management scenario that I've been hearing now.
The question of whether the management scenario is the proper one (1) seems to me to be based on generally a risk assessment that was done with a large amount of a priori assumptions based on -- and ultimately, it looks like the entire conclusion of this project was based on we got three lows in a row, that's the one we're going for.
I agree with Mr. Azzolini that the transparency of the alternatives weren't integrated into this system so that these lows and highs and moderates might turn out differently with a different look at things if the a priori principle of the project, that is permanent solution, was factored in where it should be.
So that's my general conclusion. I don't want to go any further than that now. I have a lot of questions. I could keep this place busy all night. I

used to work for the government on remediation projects on DEW Line projects, so, I'm quite familiar with a lot of the technology and techniques that are being discussed here.

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So I just wanted to tell you that the citizens of Yellowknife are not happy. It's obvious they want something better than this. And the cost, you already spent a lot of money, a lot of this work that has been done will not be lost, but I would think that from what I'm hearing and my own personal opinion, that a general change of direction is required before you'll get the approval of the public, certainly my approval anyway.

Okay, thank you. That's my comment.

THE CHAIRPERSON: Thank you very much for your comment. I want to pass it to -- to the developer, Bill Mitchell.

MR. BILL MITCHELL: Well, we -- we certainly -- we certainly share the -- the -- the concern. I mean, we -- way back even before I started with the project, you know, there was a very thorough review of various methods that might be used to deal with the arsenic trioxide. That was all a very public process, transparent process in coming up with those.

There was a workshop 2001. A lot of people attended that workshop, some from the city. A lot of experts there too. It broke out into small discussion groups and discussed these methods.

And coming out of that, essentially, were the twelve (12) technically and economically feasible

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alternatives that the independent peer review panel and the technical adviser worked on.

If there was a permanent solution, that would be great but I know it's very hard to -- to accept the fact that, as we indicated previously in my talk, there's no walk- away solution on this thing. It will have to be managed and we really are dealing with the existing technology and, again, we feel that the -- the frozen block is the most robust of these technologies for various reasons that Daryl and I have discussed already.

And so it's -- obviously, it would be nice to put this thing to bed, get rid of it and never think about it again. But it's one of these things where the site is going to be -- have to be managed in perpetuity.

And in reality, that's no different than

various other mining sites in the country that there's going to be -- there's going to have to be certainly long term if not perpetual management at other sites as well.
So I -- I share the concerns but I do believe that this specific alternative has been reviewed thoroughly. It's a robust technology that will work and I think getting back to the statement that I made earlier, it will protect the human health of citizens, it will protect the environment and it really will prevent

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the illusion of a ticking time bomb in the backyard.
And that, essentially, concludes my answer there.
THE CHAIRPERSON: Thank you, Bill Mitchell. Is there anybody else in the public that wants to add questions? Okay there's one (1) more. I'll allow the one (1) more question then I'm going to move on. Please proceed.
MR. GARY VAILLANCOURT: Thank you, Mr. Chair, Bill. Just a followup on that last little comment there.
I understand like from what you're saying that the feasibility of the project was determined on technical and economic aspects. What I was just mentioning previously is the philosophical aspect and the technology should follow from that; that was my original comment.
But just off the top of my head when I hear these types of things then I start to question, you know, were all of the scenarios looked at?
And I've been on a lot of jobs where the obvious got missed. So I'm wondering from -- just as an example of what I'm talking about and I'll be very brief.
I've heard nothing but horror stories about the solubility of this arsenic and it strikes me,

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as a non expert, that if arsenic is so soluble and that is the issue, then why can't you use that to remove it and process it with water in a closed-loop system?
So I -- not I'm sure you've got a technical analysis of that but just off the top of my head, it strikes me that would be a very hands-off convenient way to deal with a highly soluble substance which you are then going to process because you're processing water anyway in perpetuity.
So why not get rid of it that way? Now we could go on forever but that's the kind of thing that I

think Mr. Azzolini was talking about.
These sort of other ways of looking at things that -- that get dismissed right in the very beginning and never get a chance to get going. But ultimately, the philosophical point is sound. It must be permanent.
People don't want to live with this in their backyard, you know, that's going into the 21st century, we want a clean planet and we're trying to make the North clean and we're going to pretend this stuff is going to be okay.
We got climate change; we got nuclear war which we've just written off as a non-existent possibility; we got a lot of problems. So the idea that

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it should be done quickly is important.
A resting tank is not a justification for proceeding ahead of a sound philosophy. So that's my final comment. Thank you.
THE CHAIRPERSON: Thank you for your comment. I'm going to ask Bill if he wants to respond.
MR. BILL MITCHELL: Actually, I would like Mr. Hockley to respond to that question, Mr. Chair.
THE CHAIRPERSON: Yeah, please proceed.
MR. DARYL HOCKLEY: Daryl Hockley. We didn't look at the suggested option specifically but we looked at some -- some very similar variance of it and I -- I don't want to go into a lot of detail but only to a couple of details just to show you how complex this -- this is.
Let's assume for the moment that we could get all the dust out -- or 99 percent of the dust out of the ground and make it soluble and put it in water. We would then have to put it through a water treatment system.
The best technologies for water treatment these days involve adding iron and lime to arsenic. What you create is sort of a half stable sludge. It's called water treatment because it improves the water. It gets the arsenic out of the water, but it creates this sludge

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of which we -- we have some on the site now. And creating 237,000 tons of arsenic by that process would create something like a million -- a million odd tons of this -- of this sludge.
And that sludge would end up -- where would it end up? Well, now we have to choose what we do

with the sludge. Would we put it back underground? Well, that hardly seems to be fruitful. You -- you can't really put it underground because it's -- I won't go into the chemistry.

You'd end -- you'd end up putting it on -- on the surface somewhere. You'd create this great big impoundment somewhere on surface. So you now would have taken 99 percent of the arsenic trioxide out of the ground, but you would have converted into a million tons of half stable arsenic sludge that has to sit on the surface somewhere.

And -- and when we went around the community five (5) or six (6) years ago with options like this, and we showed them these things, they all came to the same realization that -- that we had, that -- that there aren't a lot of better places to keep that arsenic than where it is right now.

And I think that -- philosophically we would all like a solution that -- that makes it go away,

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and we did look for them. We came the conclusion that regrettably there aren't any things that make it go away, and the choice on the arsenic trioxide is -- you know, given we have to live with it, how is the best way to live with it.

That's the choice. And believe me we looked through that option and -- and dozens more, and they all came out to the same sort of problem. You end up creating a bigger problem somewhere else. And I forgot to mention that you've still got the 1 percent of arsenic trioxide in the ground at Giant Mine which is soluble enough to create just as much contamination as the original -- original problem.

So what are you going to do with that? You are going to freeze it down and deal with that, so. Unfortunately, there is no way to deal with arsenic trioxide that doesn't create a perpetual management problem. What we're trying to do is -- is create the least burdensome perpetual management problem. That was -- that's what our alternative -- that's what the frozen block alternative does.

I just want to add a comment on the transparency, as well, that a lot of these things -- a lot of these things are highly technical in nature, and that's one (1) reason why that DIAND decided very early

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in the project to -- to bring in an independent peer

review panel, completely independent of ourselves, independent of DIAND.

Many of the -- the people on that panel were nominated, in fact, by -- by other community groups. And -- and if you -- if you want a sense that we are -- we have done our job without perhaps digging through thirty (30) or forty (40) volumes, a good place to start is with the peer review reports, and even the executive summaries in the peer review reports.

These are independent people who come in and -- and they, I think, will -- I think you'll find there that they -- they believe we have done a thorough job of analyzing these options and -- and have come down to the -- to the best one for the arsenic trioxide. Thanks.

THE CHAIRPERSON: Okay. Thank you for your answer. I still have to go through Kevin O'Reilly and the staff and Board. And we are supposed to be stopping at five o'clock. I think what I will do is we would like to go to 5:30 just to wrap this up, and then we will need to come back at 7:00.

So I would like to just call for a ten (10) minute break. And then I am going to go into Kevin O'Reilly. And I think, Kevin, I am not really sure

exactly how many questions you have, but can you let me know?

MR. KEVIN O'REILLY: Thank you, Mr. Chair. I probably have twenty/thirty (20/30) minutes worth of questions, if I may.

(BRIEF PAUSE)

MR. KEVIN O'REILLY: Sorry, if it's any easier I can come back again this evening, if that will -- will help you in any way? And I apologize for my absence. My hot water tank went at home and there will be a mess when I get back, too. Thanks.

THE CHAIRPERSON: Okay. Kevin, what we will do is we will take a ten (10) minute break, and we will come back in exactly ten (10) minutes. And if you could take a look at your questions and then we will do the ones that are very important to you, and then we will move on.

But at the same time, there is still an opportunity for this evening and also tomorrow as well, so if you cannot catch it all right now we can do it either today or tomorrow. Thank you.

--- Upon Recessing at 4:29 p.m.

--- Upon resuming at 4:38 p.m.

THE CHAIRPERSON: Okay, I would like to call the Hearing back together. Thank you for coming back in ten (10) minutes. I would like to move on with the agenda. The time is -- we are off a little bit here, I would like to try and get back on track, so -- but I would like to give the opportunity to Kevin O'Reilly and for your time to go ahead and put questions to the developer.

And the floor is yours, mahsi.

MR. KEVIN O'REILLY: Thank you very much, Mr. Chair, and thanks to the Board for the understanding. As I mentioned earlier, I had a hot water tank go at home and my son gave me a call just as you were beginning your remarks, so I had to scurry off home for a couple hours and...

The questions that I am hoping to ask today really relate to the -- the scope of the development and the scope of the assessment. I don't really want to get into a whole bunch of questions, technical questions, about the actual plan and what the developer intends to do and so on.

I -- I don't think this is probably the time or place to do that, but I -- I hope that the

questions that I ask provide some clarity on being sure that the right areas get covered in the environmental assessment, and the right kinds of questions get asked and so on, and that they help you with your work in that way.

The first question I wanted to ask was I noted in the presentation, and I'm sorry the pages weren't numbered, so it was the -- the first slide close to the end where it says, "Scoping Recommendations" and it's the first slide after that that has some text.

And the second bullet on that slide says -- and I'll read this,

> "The interim necessary activities and freeze optimization should be excluded from this assessment."

And I noted that earlier in the presentation there was a -- a slide on freeze optimization as well. And I -- I just wanted to better understand what freeze optimization is really all about, and whether it involves any physical work at the site or is this just some research or studies.

I'd just like to know more about that if I

-- if I can, Mr. Chair? Thank you.
THE CHAIRPERSON: I would like to go to the developer, Bill Mitchell.

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MR. BILL MITCHELL: Yes, Mr. Chair, I think I -- I went through the discussion on the -- on the slide of the -- the freeze optimization test and why we need it. It -- it essentially is a test of the ground freezing.

The plan is to try and freeze part of one (1) of the chambers, specifically chamber 14, and this work would help to, essentially, prove out the models that I showed you to -- it would help us determine if we can actually freeze as fast as the modelling shows.

In addition, I -- I mentioned during my talk that the bulkhead 68 is one of the worst in terms of leakage. We would plan to freeze that as part of the test as well, and eliminate a very large source of leaking arsenic in the mine.

It -- we also felt that going on through this EA, that that test could actually inform the EA in terms of, you know, establishing the certainty that these things can be frozen as quickly as we say they can, and will stay frozen.

None of the -- the work that we would be proposing in terms of the optimization test is irrevocable. We will have to drill some holes for freezing pipes and that sort -- sort of thing, but it doesn't mean that we have to proceed fully with freezing.

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It's -- the -- the pipes, ultimately, can be decommissioned if for whatever reason we don't proceed with the freezing option and go with some sort of fall-back option instead, which likely would be a pump and treat system.

So none -- none of the activities that we are proposing are in any way irrevocable. As -- and the same would be said of the interim activities that I talked about that we would like to proceed with. None of those activities are irrevocable in any way or would affect, ultimately, the implementation of the -- the remediation plan.

I hope that answers the question. Thank you.

THE CHAIRPERSON: Thank you. I'd like to go back to Kevin O'Reilly.

MR. KEVIN O'REILLY: Thank you, Mr.

Chair.
I'm wondering if the developer can tell me what the time line is for this freeze optimization work? Is it something that would be carried out over one (1) year or does it involve several years? I'm just trying to understand what the time line is. Thank you.
THE CHAIRPERSON: The developer, Bill Mitchell.

MR. BILL MITCHELL: Mr. Chair, this project really is in the conceptual stage at this point. We -- we have looked at preparing engineering drawings so we would expect that, assuming we proceed with this optimization test, that we could complete it, the -- the work within a year and a half, possibly longer.
And we would only probably use a very small portable freeze plant to implement the freezing. It would be something likely on wheels or skids that we could drag onto the site, again, could be moved off.
So we would see that running for the next -- well, essentially being commissioned in the next year and a half and then running for a period of time to give us the required information that would help to optimize the engineering design, help with our cost estimates again that we would have to give to Treasury Board, along with our request for an effective project approval.
Thank you.
THE CHAIRPERSON: Thank you. I'd like to go back to the party status, Kevin O'Reilly.
MR. KEVIN O'REILLY: Thank you, Mr. Chair.
I apologize, I wasn't here for the presentation so I didn't get any of the details of this beyond what's in the -- the presentation that was filed.

But I don't think there's anything on this optimization or freeze optimization work in the remediation plan that I could find or that I recall seeing is -- so this is something new.
Is this something that the developer could submit some further information on?
I'm just trying to understand the scope of this and really look at why they want this removed from the scope of your work. And I think there's probably some value in having it done but I just want to know more about it and the time lines and so on.
And so I'm just wondering if the -- the

developer would be prepared to submit some -- something in writing about this beyond what we have here in the one (1) slide in that presentation. Thank you.

THE CHAIRPERSON: I'd like to go to the developer, Bill Mitchell.

MR. BILL MITCHELL: Yes, Mr. Chair, we would certainly be willing to undertake to submit something in writing that outlines the reasons for this and why we want to go ahead.

THE CHAIRPERSON: Thank you. That would be note -- that would be undertaking number 1, for the record.

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--- UNDERTAKING NO. 1: The Developer to submit a document that outlines the reasons for the optimization work and why they want to go ahead.

THE CHAIRPERSON: I'd like to move back to the party status, Kevin O'Reilly.

MR. KEVIN O'REILLY: Thanks, Mr. Chair. And I want to thank the developer for agreeing to give us some further details about that. I wanted to move on to -- I see that it appears to be the position of the developer that the road alignment should not be part of the scope of the development and I'm just trying to understand this a little bit better.

But what I -- what I -- and what I -- where I want to go with this is, I want to understand what the role of the Territorial Government is in -- in implementing the -- the development. I think I saw on one (1) of the slides that -- that the Government of the Northwest Territories did review and approve the -- the remediation plan at some point. Can -- and I see that there are representatives of the Territorial Government here so I don't know if I should be addressing this to Mr. Mitchell, or if someone from the Territorial

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Government could tell me how they reviewed and approved -- and if, indeed, they approved the remediation plan that was submitted?

THE CHAIRPERSON: Okay, thank you for your question. I would like to go to Bill Mitchell, developer.

MR. BILL MITCHELL: Mr. Chairman, in

terms of the road realignment, I think our reasons for treating that as a separate project were outlined in my talk and also in the presentation, and really then it's up to the Board to decide how they want to deal with that issue.

In terms of the GNWT involvement in reviewing the plan, it was certainly reviewed by the Department of ENR, and maybe I could field this question to Mr. Ray Case with the ENR for a response.

THE CHAIRPERSON: Okay. Thank you for your answer. I move back to the party status, Kevin O'Reilly.

Oh, sorry, Ray?

MR. RAY CASE: Thank you, Mr. Chair, it's Ray Case, the Director of Environment and Government of the Northwest Territories.

The Government of the Northwest Territories' role in this project I think is what Mr.

O'Reilly was referring to is set out in the cooperation agreement that we have with Indian & Northern Affairs, and that -- that sets out our role.

In development of the remediation plan and -- and options, the Government of the Northwest Territories has brought their expertise where -- where needed by the project office, as well as taking a somewhat larger role in looking at options and ways to accommodate some of the remedia -- service remediation aspects of it, so I hope that answers the -- the question.

THE CHAIRPERSON: Thank you, Mr. Case.

Mr. O'Reilly, with party status.

MR. KEVIN O'REILLY: Thank you, Mr. Chair. Perhaps -- I'm just wondering through you if Mr. Case could tell me whether the Minister of Transportation had any role in reviewing or approving the plan, or officials in the Department of Transportation?

THE CHAIRPERSON: Thank you. Mr. Case, with the developer?

MR. RAY CASE: Thank you, Mr. Chair. I'm afraid I cannot answer the -- the question at this time as to the role of the Minister of Transportation. I can clarify however, that the Department of Transportation was aware and -- of the need to a minor modification of

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the Ingraham Trail alignment as -- as indicated in the presentation to move that portion of the Ingraham Trail

over top -- from over top of where the arsenic storage chambers were.

THE CHAIRPERSON: Thank you. Back to the party status Kevin O'Reilly...?

MR. KEVIN O'REILLY: Thanks, Mr. Chair. I think I heard that the representative of the Territorial Government wasn't aware whether the Minister of Transportation actually reviewed the plan.

Can he undertake then to find out if, indeed, the Minister of Transportation did review the plan?

THE CHAIRPERSON: Thank you. Mr. Case, with the developer...?

MR. RAY CASE: Mr. Chair, yes, we will get that answer.

(BRIEF PAUSE)

THE CHAIRPERSON: Thank you very much, I will take that as noted as Undertaking number 2, and the Board will look at this, thank you.

--- UNDERTAKING No. 2: To advise if the Minister of

Transportation did review the plan. Also, that any completed public consultation work on the Ingraham Trail realignment be submitted to the public registry.

THE CHAIRPERSON: Mr. O'Reilly...?

MR. KEVIN O'REILLY: Thank you, Mr. Chair. This may be a bit more of a hypothetical question, but is it the expectation then of the Territorial Government representative that officials in the department of Transportation would continue to be involved in this environmental assessment in some way?

THE CHAIRPERSON: Thank you. Mr. Case...?

MR. RAY CASE: Ray Case. I guess I -- could I get a clarification on -- on the question as to in what -- in what way -- in some way refers to?

THE CHAIRPERSON: Mr. O'Reilly...?

MR. KEVIN O'REILLY: Thanks, Mr. Chair. I don't want to put words in this representatives mouth, but I -- I get a sense then that the Department of Environment and Natural Resources perhaps serves as a -- the one window into the

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Territorial Government in that they may have some informal committee or something that -- or a process of getting input from other departments as they perhaps move through the environmental assessment.

So I'm wondering if it's the expectation -- or that the Department of Transportation staff would continue to be involved in -- in this environmental assessment and, indeed, in this development as it moves along.

THE CHAIRPERSON: Going back to the developer, Mr. Case.

MR. RAY CASE: Thank you, Mr. Chair. Ray Case.

The Environment Assessment Unit within Environment and Natural Resources is the window to the Government of the Northwest Territories for environmental assessment, this project and -- and other projects.

If there are issues, concerns, or questions related to the mandate of the Department of Transportation, the Environmental Assessment Unit will take those questions and such to the Department of Transportation. And -- so in that -- in that way they will continue to support this environment assessment as -- as they do to -- as -- as all government departments do to the environmental assessments conducted in the NWT.

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THE CHAIRPERSON: Mr. O'Reilly...?

MR. KEVIN O'REILLY: Thanks, Mr. Chair.

And I want to thank Mr. Case for his response on that one. I want to move on now to just perhaps better try and understand what roll there would be in moving the road with the freezing -- frozen block option that's on the table.

It's my understanding that the -- to implement that particular alternative the developer would have to move the road for the active freezing system that would initially be put in place and to accommodate the therm -- thermosiphons that would keep the frozen block that way for a number of years, perhaps.

So I just want to confirm whether, indeed, that is the case that for the frozen block alternative to be implemented the road has to be moved?

THE CHAIRPERSON: The developer, Bill Mitchell.

MR. BILL MITCHELL: Yes, Mr. -- Mr. Chair, it's unfortunate that Mr. O'Reilly missed the presentation because I pointed out where the road goes on top of two (2) of the arsenic chambers and indicated that yes, indeed, the very small portion of the road would

have to be reallocated away from these two (2) chambers.
THE CHAIRPERSON: Thank you. Mr.

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O'Reilly...?
MR. KEVIN O'REILLY: Thanks, Mr. Chair. And once again, I do apologize for having missed the presentation. I want to understand precisely what the position of the developer is with regard to the road realignment.
Is it their position that the road alignment within the surface lease should be part of this environmental assessment, or the whole thing, or any portion of it? And where -- where is the cutoff? Thank you.
THE CHAIRPERSON: Thank you. Developer, Bill Mitchell...?
MR. BILL MITCHELL: Again, Mr. Chairman, I -- I think we talked about that.
What -- what we would see is that the road alignment -- realignment, as proposed in the remediation plan, would form part of this EA. But only that -- that portion that we have proposed in the remediation plan. As I indicated, the other corridors really are independent of the remediation plan.
We -- we certainly don't need these extensive realignments that are being proposed by GNWT. In fact, as I pointed out, those proposed corridors realignments are to address other issues, primarily the

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sharp turns at the 'A' shaft area down near the town site, also at the Vee Lake Road, and they -- they are to deal with the continuing problems that -- that roadbed experiences through the site with subsidence and various other issues. Thank you.
THE CHAIRPERSON: Thank you. Mr. O'Reilly...?
MR. O'REILLY: Thank you, Mr. Chairman. I appreciated the answer, but I'm not sure it's really what I asked.
Is it the position then of the developer that it's just the one (1) little portion of the road realignment that should be part of the scope of this environmental assessment?
Or, all the road realignment that would take place within the surface leases, or something else? Thank you.
THE CHAIRPERSON: Thank you. Developer,

Mr. Bill Mitchell...?
MR. BILL MITCHELL: Well just to reiterate, the -- what we would see being included is simply the small realignment as described within the remediation plan. And only that -- that portion. Thank you.
THE CHAIRPERSON: Thank you. Mr.

O'Reilly...?
MR. KEVIN O'REILLY: Thanks, Mr. Chair. I'm not quite sure where to go with this. The unfortunate part is that we don't really have anything on the public registry about what this road realignment really is all about, and potential routes and so on.
I'm wondering if the representative of the Territorial Government could undertake to give us something for the public registry so that we could actually understand what -- what's being proposed, and the precise location with regard to the -- the development and the surface lease? Thank you.
THE CHAIRPERSON: Thank you. I am going to direct that question to Bill Mitchell, the developer.
MR. BILL MITCHELL: The -- I may be able to start the answer here, but certainly the proposed realignments of the Department of Transport are a matter of public record, they've been publicized.
I believe they're also on the -- the website, and they -- they're going ahead essentially with those realignments as a totally separate project.
Now as I indicated, certainly, the -- because of the proximity of these potential realignments, there may be cumulative impacts that could also combine with the impacts of the work that we propose for the

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site, and so we'd certainly, in terms of cumulative impacts, we -- we would certainly evaluate the impacts of the -- of whatever corridor is ultimately chosen.
And maybe I could just pass this on to Mr. Ray Case for further clarification?
THE CHAIRPERSON: Please proceed.
MR. RAY CASE: Yes, thank you, Mr. Chair.
As indicated by Mr. Mitchell, there is no formal proposal for the realignment. The information that has been put out has been for -- to obtain public input on a potential for a realignment.
That information has been collected from the public, and the Government of the Northwest

Territories is now looking at the pros and cons of the different corridors at -- that were looked -- were looked at.

Also, just reiterate that the driver behind the Government of the Northwest Territories' interest in realigning the Ingraham Trail is not the remediation of the Giant Mine site.

The primary driver is to improve the overall safety of the highway, and to provide an efficient and effective transportation system in the area. This includes the safe movements of goods and services required for current and future mineral

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development beyond the end of the Ingraham Trail. So the key here is that while parts of the dangerous portions of the site do fall out of the -- Ingraham Trail do fall on the -- the Giant lease site, the other linkage, a potential linkage, is that given that there will be significant levels of redevelopment and activity on that central site, would the expense of redeveloping a major portion or a portion of that on -- on the site now and then at some point in the future, once again, using taxpayers' funds to develop a new corridor be wise?

So the linkage, I would suggest, is an attempt to look at fiscal prudence but, as I say, the -- there is no -- not yet a proposal to -- to move forward with that and the options are -- are still being looked at within -- within government.

THE CHAIRPERSON: Before I turn the mic over to Kevin O'Reilly, Kevin, a little bit earlier you have asked roughly about thirty (30) minutes of time. We've got another fifteen (15) more minutes.

Are you able to get through your questions in -- in this period?

MR. KEVIN O'REILLY: Thanks, Mr. Chair. I've got one (1), two (2), three (3), perhaps four (4) other areas of questioning, not as detailed as the last one (1), that I -- I would like to pursue. So probably

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say, fifteen (15) -- I'm sure I could finish by 5:30 if I -- if that's okay.

THE CHAIRPERSON: Okay. Mr. O'Reilly, we'll proceed with your questions.

MR. KEVIN O'REILLY: Thanks, Mr. Chair.

I couldn't help but notice that Mr. Case seemed to be actually reading something when -- in responding to the question and I'd asked if it might be

possible for the Territorial Government to actually give us all some better information about what this road realignment is really all about, because there's nothing on the public registry right now.

I understand they have done some public consultations around this. There's been some newspaper coverage, radio coverage and so on but there's nothing on the public registry about the scope of what it is they want to do.

So could they undertake to file something with us for the public registry in terms of what this road realignment may look like and why they're doing it and so on? We don't really have anything on the public registry about it. Thank you.

THE CHAIRPERSON: I'd like to ask Mr. Case that this question here could be part of his undertaking number 2 we had put forward a little bit

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earlier? Mr. Case...?

MR. RAY CASE: Thank you, Mr. Chair. Yes, I will secure the -- the public consultation material prepared by the Department of Transportation for the public registry.

THE CHAIRPERSON: Okay. Thank you.

Mr. O'Reilly...?

MR. KEVIN O'REILLY: Thank you, Mr. Chair. I'd like to move on to a different area now. This is really about the scope of the -- the development, I guess, scope of the assessment, as well.

And I would like to know whether, in the developer's opinion, the remediation plan actually deals with all the impacts from the Giant Mine?

Thank you.

THE CHAIRPERSON: Okay, thank you. I'd like to go back to the developer, Bill Mitchell.

MR. BILL MITCHELL: I -- I -- Mr. Chair, I -- I think that's a bit of a loaded question. I mean, there -- there are legacy impacts from the Giant Mine that have happened and really there may be little way to deal with these.

But in terms of the existing environmental state of the mine, we've studied that. Our technical adviser group, our consultants have studied that

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exhaustively and we feel that the remediation plan certainly addresses all of the environmental impacts on the site that -- that we are aware of.

And I might just pass that over to Mr. Hockley for some other comment -- some further comment on that as well.
THE CHAIRPERSON: Thank you, please proceed.
MR. DARYL HOCKLEY: I think that was a loaded pass as well as a loaded question, so I'm going to think carefully here. I agree, it's -- it's a hard question to answer there.
There -- there's a lot of -- you know, the -- the word "impact" can be defined to include many things that have happened over the last fifty (50) years, and it certainly was not our intent.
It was never -- no one asked me to -- to try to fix all those and -- and I think -- think Bill -- Bill's right, we can't -- we can't address all of those. We have tried to address all of the environmental impacts on the site today, and all the future environmental impacts, the potential future environmental impacts of the site.
In fact, more importantly, I think, the potential future environmental impacts of the site. The

fact is, at the moment, the site is relatively well managed. The -- the problem is that going into the future, this -- without -- without active closure measures, we -- we can't guarantee it will be stable.
And -- and that has really been our highest priority to make sure their future environmental impacts don't exceed those of today. Secondly, to do what we can about those of today.
And we haven't -- with respect to some of the -- the past discharges from the site, it's from the -- from Giant, from Con and from several other sources, there is -- there is area-wide arsenic in -- in the area.
That's been studied by a number of other -- other groups. We took those into account in terms of our impact assessment, but we did not set out to try to resolve all of those -- try to deal with all of those.
THE CHAIRPERSON: Thank you. I would like to just maybe ask Kevin to keep your question to a point and direct, and -- so that it is clear and defined. Thank you.
MR. KEVIN O'REILLY: Thank you, Mr. Chair, I'll attempt to do that.
I just want to be clear, are some of these effects from the Giant Mine, do they occur off -- off site, off the surface lease, and potentially on Crown

lands?
The reason why I ask this is earlier I believe I heard Mr. Mitchell say that one (1) of the -- one (1) of the issues was that the inability of perhaps through a mediation team to deal with some of the -- the effects, because they may occur on private lands.
I'll leave aside the issue of private lands now, but -- so I'm just wondering, 1) are there some effects that occur off the surface lease, and would that be an area of Crown land or water? Thank you.
THE CHAIRPERSON: I would like to go to the developer, Bill Mitchell.
MR. BILL MITCHELL: Well just as a start, certainly we know that in the past there were emissions, airborne emissions from Giant Mine. There were -- were also airborne emissions from the Con Mine, because it also had a roaster that operated up until 1972.
So I would expect certainly, that there is a certain amount of contamination that was airborne and got distributed outside the limits of the -- the mine site but it's very difficult to determine where these areas are.
We -- and -- it's also very difficult to distinguish the effects of what might have derived from the Con Mine as opposed to Giant. And in addition, we

know that the area in general has a high background arsenic. The -- the rocks tend to be high in arsenopyrite, and so there is generally high arsenic background.
So it's very difficult to discern, you know, what effects might have occurred off the site. That being said, we know that even on the site, close to the -- the operations, the centre of operations, there are some areas that are relatively -- relatively clean, and we -- we have certainly analysis that indicate that the arsenic in various soils on the site is well below the 340 milligrams per litre cutoff requirement.
So maybe I could pass the mic over to our -- or Mr. Hockley for further comment on this.
THE CHAIRPERSON: Yes, go ahead, please proceed.
MR. DARYL HOCKLEY: Thank you. The -- it -- it's -- I -- I think it's undeniable that some -- that a lot of arsenic escaped to the Giant Mine site in its early years, in particular. People wonder maybe where the 237,000 tons of arsenic trioxide came from.
It -- it came from an attempt to stop an air pollution problem. Prior to putting that arsenic underground it was going up into the air. So it's

undeniable that -- that mine had -- that that generation

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of mining had impacts on -- or had effects, let's say, on -- on the environment. And you can see that in a pattern of -- of arsenic now.

You can see sediment contamination, in -- in Back Bay, Yellowknife Bay you can see soil contamination. We didn't study those directly. They have been the subject of many studies. I think there's been nine (9) studies of soil contamination in the area, and there has been probably half a dozen or so studies of sediment contamination of one form or another.

We did do ecological and human health risk assessments that extended as far south as Dettah. And it included ecological receptors and people living in the Yellowknife area, living even at the Giant Mine town site, as far as -- as Dettah.

And -- and under assumptions that they would hunt, and fish, and -- and collect berries, and collect medicinal teas and that on the -- on the mine site. The conclusion, in general, of those -- of those studies -- and I'll ask Bruce to qualify this, but my understanding the conclusion is that the risk to -- to ecological receptors and -- and people decrease the farther you get from the Giant Mine town site.

And once the remediation plan is -- is in place, the risks will be within commonly held acceptable

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ranges in the rest of Canada. So if I could sum up, it's undeniable that -- that the Giant Mine has had effects off -- off the site.

Does it have impacts now to the community? Has it been the subject of our study? Will it have impacts in the future, that's the big emphasis? And our -- our analysis shows that, no, it won't once if -- once the remediation plan is complete or once remediation is -- is carried out according to the plan.

THE CHAIRPERSON: Thank you. Mr. Kevin O'Reilly...?

MR. KEVIN O'REILLY: Thanks, Mr. Chair. I want to move on to a -- a different area.

I'm aware that the developer and even in their presentation there's a table showing some of the relative rankings of some of the different options for dealing with the underground arsenic.

I'm curious then to know though in -- were there -- was there any attempt to really look at the

distribution of costs and benefits amongst various parts of Yellowknife community? An example, I think there was some attempt to look at the workers that might have to carry out the remediation project, but was there any attempt to look at distribution of costs and benefits amongst various groups within the community and also

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across generations?
THE CHAIRPERSON: I would like to go to the developer, Bill Mitchell.
MR. BILL MITCHELL: I wonder if I could have clarification from Mr. O'Reilly if he's talking about costs and benefits involved in the implementation of the remediation plan going on into the future or whether he's referring to costs and benefits that may have occurred through the operation of the -- the mine over its lifespan?
THE CHAIRPERSON: Thank you, Mr. Mitchell.
Kevin O'Reilly, can you help clarify your own question, please?
MR. KEVIN O'REILLY: Thanks, Mr. Chair. I can try to -- and, sorry, once again, there's no numbering on these pages, but there's a -- a slide here that says "assessment of risks." And there's a number of alternatives in one column.
There's a probability of significant ars - - arsenic release, short-term/long-term, worker health and safety risk. Those are the titles on the other columns. And I think this was largely the basis for the developer in identifying the -- and proposing the frozen block methodology as the preferred option.

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So I'm trying to understand what role or whether the developer actually tried to consider that there might be different costs and benefits with these various options for various groups that may be involved in this environmental assessment, or have to live with the consequences of this.
And, whether there was any consideration of costs and benefits through time in the cross-generations? I hope that'll help, thank you.
THE CHAIRPERSON: Thank you, Mr. O'Reilly. We will go back to the developer, Bill Mitchell.
MR. BILL MITCHELL: Yes, Mr. Chair, I would like to -- to defer that question to Mr. Hockley

for -- for answer.
THE CHAIRPERSON: Yes, please proceed.
MR. DARYL HOCKLEY: Okay, thank you, Daryl Hockley.
I think it's a -- it's a good question. There is a lot of debate amongst -- in the environmental assessment world about the significance of inter-generational transfer of risk and costs, and -- and also the distribution of risks and costs amongst the various affected parties.
We -- you will not find anywhere in our

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documentation those words. But what I think you will find there is the information that -- that any affected party needs to determine if they are likely to be at risk.
And specifically we only talked about short- term risks. We're, of course, talking about our generation or the next generation. While we're talking about long-term risks, we're talking about all future generations.
So although we don't use the term "inter-generational risks," I think the -- the information is there for people to -- to do that.
Worker health and safety, again, is pretty obvious. Some -- some people would imagine themselves being risk workers, or -- or I guess, being more concerned about worker health and safety than others. We -- we tried to make that category clear for that reason.
Costs, in all cases, are going to be borne by the Federal Government. I -- I think, again, our objective here is to give people the information they need to make their own assessment of -- of whether these risks are significant or not to -- to them.
I realize it is possible to develop quantification of inter-generational and inter-group transfers of these things. I don't find those helpful

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myself. I find they obscure the -- the real information.
I would rather present the real information in a plain enough terms that the people can assess those risks and costs for their own -- on their own. That's the approach we took.
THE CHAIRPERSON: Okay. Thank you, I will go back to Kevin O'Reilly. We have ten (10) more minutes left, so please proceed.
MR. KEVIN O'REILLY: Thank you, Mr.

Chair, and I'm very conscious of that. I just want to make one (1) point.

I think it's really crucial that we need to look at the issue of tradeoffs amongst alternatives, and across generations, and I don't think that was done well. And I think that's one (1) of the main reasons why I'm here.

I want to move on to something completely different, the issue of participant funding. And I want to know what the position of the developer is with regard to provision of participant funding for this environmental assessment? Thank you.

THE CHAIRPERSON: Thank you, Mr. O'Reilly.

I will go back to the developer, Mr. Bill Mitchell.

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MR. BILL MITCHELL: We would view the issue of participant funding, certainly a Board issue decision. But for other projects in the north, particularly Nunavut, in the past, INAC has considered participant funding for specific groups on a case-by-case basis.

And we haven't received any requests so far for participant funding.

THE CHAIRPERSON: Thank you. We will go back to Mr. O'Reilly with the party status.

MR. KEVIN O'REILLY: Thank you, Mr. Chair. I think you know what my next question is going to be.

Whether the developer then is prepared to entertain proposals for participant funding for this environmental assessment? Thank you.

THE CHAIRPERSON: I would like to go back to the developer, Mr. Bill Mitchell.

MR. BILL MITCHELL: Mr. Chair, yes, as I indicated previously, I think we'd certainly entertain receiving proposals for participant funding from specific groups that are interested. These would be reviewed on a case-by-case basis.

THE CHAIRPERSON: Thank you, Mr. Mitchell.

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Mr. O'Reilly...?

MR. KEVIN O'REILLY: Thanks, Mr. Chairman. I'm very pleased to hear that response.

I'm wondering if the availability of

participant funding would be any different if this development went to an environmental impact review rather than an environmental assessment?

And I'm sorry, I'm just trying to understand if the department has a different position with regard to provision of participant funding for an environmental impact review versus an environmental assessment under the MacKenzie Valley Resource Management Act? Thanks.

THE CHAIRPERSON: I will go back to the developer, Mr. Bill Mitchell...?

MR. BILL MITCHELL: Mr. Chair, I'm sorry, I -- I can't answer that question. I don't know if the department would -- would take any different view whether it was a straight EA or a panel review.

THE CHAIRPERSON: Thank you. Mr. O'Reilly...?

MR. KEVIN O'REILLY: Thanks, Mr. Chair. Could Mr. Mitchell then undertake to provide a written response to that question? Thank you.

THE CHAIRPERSON: The developer, Mr. Bill

Mitchell, that would be undertaking number 3.

MR. BILL MITCHELL: We could certainly entertain of providing a response, or undertake to provide a response to that question.

--- UNDERTAKING NO. 3: The Developer to provide a written response to the question: If the availability of participant funding would be any different if this development went to an environmental impact review rather than an environmental assessment.

THE CHAIRPERSON: Thank you, Mr. Mitchell.

Kevin O'Reilly, please...?

MR. KEVIN O'REILLY: Thanks, Mr. Chair. I know I've got five (5) minutes left, so I'm going to try to do a double dunk here, I guess, perhaps with two (2) issues, and try to see where I can go with this, but...

I couldn't really find anything in the remediation plan that deals with two (2) really critical

issues that I've raised in my written submissions to you already.

One (1) is the -- one (1) is the issue of long-term funding for research and development, a commitment to long-term funding for research and development, and the second is independent oversight.

And I'm just wondering -- I see that there's some mention of the issue of independent oversight in the presentation. There's one (1) slide where I think a number of options were -- were suggested.

Those options weren't even really contained in the remediation plan, so it looks like the developer may have moved a little bit on this, but can they offer any comments on the -- this notion of commitment to long-term funding for research and development for, particularly, remediation of the -- or treatment of the underground arsenic.

And secondly, this issue of independent oversight? Thank you.

THE CHAIRPERSON: Thank you. I would like to go back to the developer, Mr. Bill Mitchell...?

MR. BILL MITCHELL: Mr. Chair, in terms of the -- or I guess I'll answer the first question, the first which was the commitment to long-term funding.

As I indicated in our presentation, we

derive all of our funding from the Federal Contaminated Sites Action Plan, which is specifically funding directed towards cleaning up of abandoned and contaminated sites in Canada, primarily in the North.

And so we have no authority to spend that money for research; that being said, I would also add that the proponent essentially is INAC, but it -- in a sense it's the federal government. And the federal government does have extensive research programs underway. NRCAN I know have had programs doing research on arsenic-related issues associated with -- with abandoned mines.

So I would submit that certainly the -- the government is carrying on research at the moment. And since this is a problem, not just related to Giant, it will likely continue that type of research ongoing into the future.

Now the -- the second section, the question in terms of oversight, we view that the monitoring requirements, essentially, are a regulatory requirement that would be defined by the Land and Water Board during the regulatory process. And we also have suggested various options for independent audit and monitoring that have been used elsewhere. And obviously, we -- we are certainly open to these types of audit going

forward.
And I think it would only be due diligence on the effectiveness of the remediation plan. And again, it talks to our comfort level in believing that this remediation plan will achieve its subjective, that we would be willing to entertain this independent arm's length -- independent oversight for the project in the future. Thank you.
THE CHAIRPERSON: Thank you, Mr. Mitchell. It is just about 5:30.
Kevin, did you want to have one more question?
MR. KEVIN O'REILLY: Thanks, Mr. Chair. Actually, it's not a question, it's a comment.
I did want to thank the developer for answering the last couple of questions. I didn't hear a specific commitment to long-term funding for different work that needs to be done on treating underground arsenic or arsenic trioxide, whatever.
And so I'm not particularly comfortable with the response. I think that's something that needs to be really examined closely in your environmental -- in our environmental assessment of this development.
Secondly, I'm pleased to hear that the department is open to looking at different options for

independent oversight. And that's another area that I think needs some further work to flush out some options and some advantages and disadvantages. And I hope that's another key thing that this environmental assessment will focus on. And I think I've managed to finish all of my questions.
I do want to thank you, again, for your patience and allowing me to come in at the end after my earlier absence. Thank you very much.
THE CHAIRPERSON: Okay. Thank you very much for that. And I would like to thank everybody for being here and being patient throughout this Hearing. I think what we will do is we are going to break right now, and we are going to come back at 7:00.
And once we return I want to go to our staff and our Board, and I want to open up to the public, as well, at that time. And for now I think we will start at 7:00 sharp. Thank you.

--- Upon Recessing at 5:31 p.m.

--- Upon resuming at 7:04 p.m.

THE CHAIRPERSON: I would like to call this Hearing back to order. It is now 7:04. I would like to continue on with the agenda we have in front of

us. Before I go to staff and Board, I have a quick comment for Bill Mitchell, the developer. I would like to get a commitment from you in regards to the three (3) undertakings. If we could set a date to have that information to us. I was going to propose to you probably about August 15th.

Would that be sufficient time to get that information?

MR. BILL MITCHELL: Mr. Chair, I -- I think that would be sufficient time. Also, I -- would we expect a written confirmation of exactly what these undertakings are, from the record?

THE CHAIRPERSON: Thank you, again. We will have written submission to you, submitted probably in the next few days, and to let you know exactly what we are talking about.

Okay, mahsi. Moving on. John, is that...

MR. JOHN DONIHEE: John Donihee. Mr. Chairman, I'd just say that the transcripts will include a list of the undertakings, and the transcripts should be with us within a couple of days. And so hopefully, that will clarify anything that Mr. Mitchell needs to supplement his notes.

THE CHAIRPERSON: So, Mr. Mitchell, will that work?

MR. BILL MITCHELL: Yes, thank you. That's adequate.

THE CHAIRPERSON: Very good, thank you. Okay, moving on. Before I go to the staff and Board and questions for the developer, I would like to give this opportunity to any public that are here today to raise the issue of concerns with the developer in regards to this Hearing.

Is there anybody from the floor that would like to speak? And all you have to do is put your hand up, come up to the mic, and say your name, and put your question forward.

Please step up to the mic. Oh, you have got a mic there. Okay. Please proceed.

MS. LOIS LITTLE: Oh, okay. My name is

Lois Little and I live in Yellowknife. And I just -- I have a couple of concerns I just wanted to -- to raise.

First of all, I -- I'm really happy that this project is subject to assessment. You know, I think that the -- the assessment process is a way to improve our decisions. And we've been living with this, the legacy of the Giant Mine, for a long time. And from what I understand, we're going to be living with it forever. So I think that by going through the assessment process, we're going to make some really good decisions. So I'm

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pleased that that's happening.

And I guess I -- I'd also like to say that I -- I hope that, as a result of this process, that in the future regulators will never allow any citizens in the Yellowknife area, or anywhere in the North, to -- to inherit such a -- such a mess, because it is a mess. So I'm grateful for this process.

I have three (3) concerns that I -- I would just like to put out for your consideration. And I'm, you know, certainly not a technical person in -- in making any judgment at all about the -- the frozen block method. But if that is what is deemed to be the preferred option, I strongly believe that the assessment process needs to focus on monitoring and management, because if success -- as I understand that option, the suc -- success of that option is highly dependent on the whole monitoring and management process.

And so that says to me that we need very detailed monitoring and management plans. We need to be able to understand what is proposed, in terms of monitoring and management in virtually every possible scenario.

You know, our climate is changing rapidly. Government priorities and policies and commitments change almost as quickly as the weather. And what is committed

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to today might not be in place five (5) years from now, twenty (20) years from now, fifty (50) years from now.

So I -- I think that this whole assessment needs to -- to really focus on some ironclad commitments, in terms of responsibilities, in terms of commitments, and in terms of contingencies.

We have to ensure the safety of the water. We have to ensure the safety of the people. And we have to ensure the safety of the land. And changing of governments or changing of policies or backing away from

commitments, is just not acceptable, especially when we're into this for the long term, forever.

I guess the other thing that I'd like to see is that we need to have regular public reviews of the monitoring and management plans, given the volume of the arsenic trioxide that we're -- we're talking about here and the complexities of the environment surrounding the moni -- the management of that arsenic trioxide, and also given, I think, the potential impacts associated with climate change and the new opportunities that are possible, the new technologies that are -- are on the horizon all of the time. So regular public reviews are -- are a critical part of the -- the monitoring and management process.

A second concern I -- I want to raise is

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around INAC's role in this whole process. When an organization, regardless of who it is, is in -- is wearing a lot of different hats -- and in this case is both the proponent and the regulato -- regulator, I think that conflict is inevitable.

And whenever agencies, public agencies in particular, come into conflict, it's always the public that tends to lose. And as a resident of Yellowknife, I am not prepared to take on the burden of this as a result of conflict amongst -- within these agencies wearing too many hats.

So I think that it's -- excuse me -- I think it's really important that we have some independent -- an independent function in this, an independent oversight or some kind of body that is taking charge of this and is representing -- truly representing -- the public interest.

The third comment that I want to make, and I'm not -- I'm not exactly sure how to frame this. But I do a lot of work in community and social development, and I think that there is a great deal of human stress associated with this project. I know that there has been human stress for generations in the past. And as we move into the future -- well, forever into the future -- this stress is going to continue.

I don't think that we understand that. I don't think we know enough about it. I don't think we know what the threat to public safety means to the populations around the -- the cause of that -- of that threat.

And, you know, I wish I had some -- you know, I didn't have -- certainly didn't have time to do a lot of research on this. But I -- I think that that's something that we really need to be paying attention to. And just seeing whatever I've read, I haven't -- I haven't really seen that issue addressed, certainly not to my satisfaction.

Certainly, peop -- members of the Board and others involved in this process are widely aware of other situations where human populations have been under stress for some reason, some threat to public safety, their personal safety, the safety of their families, and safety of communities. And I think we need to understand that better before decisions are made in this -- in this process.

So that's -- those three (3) comments I -- I wanted to put before the Board. And I thank you for the opportunity to do so.

THE CHAIRPERSON: Thank you, Lois Little, for your comments. And those are very good comments. I

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was wondering if maybe Bill wanted to respond to those comments or we could move on. Thank you.

MR. BILL MITCHELL: I -- I can respond to the comments. I mean, we -- we certainly recognize there's, you know, a high level of public concern. There has been for a long time. In our meetings in the communities, we've detected the -- the levels of concern regarding the Giant project. So we know that's out there.

And just in terms of one of the comments, the -- I don't -- independent reviews and monitoring, we -- we've already indicated our openness to periodic audits, totally independent audits, of the project going forward.

And also in terms of INAC's role in the -- in the project, well, certainly the Mackenzie Valley Resource Management Act envisages that the Minister of INAC can essentially fill different roles. Obviously, the regulatory role is part of INAC's role.

But I would also add that it's not just INAC inspectors that inspect the site. Environment Canada inspectors and enforcement folks inspect the site as well. And in addition, we have the Northwest Territories mines inspectors. So there's -- there's quite a bit of in -- inspection that goes on.

Occasionally we've had DFO inspectors as well. So there are -- are non-INAC departments inspecting the site.

Certainly, the -- in terms of the comments about stress, I -- in the -- the modelling we showed today, that shows how robust this frozen block is, in terms of a -- a way to manage the -- the arsenic.

And we would hope that, given time, with the monitoring we do -- we've talked about possibly even putting the thermal monitoring that would be in place around these chambers, putting it on some sort of website so that it is publically available. So it gives people a level of confidence that yeah, these things are frozen, and the arsenic is trapped in there.

So I just really use these comments to expand on Lois' comments earlier. Thank you, Mr. Chair.

THE CHAIRPERSON: Thank you, Mr. Bill Mitchell. Is there any further comments or questions for the developer from the public?

Okay. I do not see any hands up up on the -- sorry? Okay, I am sorry. There is one behind me. Can you state your name again for the record?

MR. GARY VAILLANCOURT: Thanks. My name is Gary Vaillancourt. I'm a citizen of Yellowknife. I've got a lot of questions. I'll try to -- I've been sort of listening and writing here all afternoon. But

there's a few that I'd -- I'd like to just discuss, if I could.

I'm going to start at the beginning. Bear with me here. Now, I'll just go on the list that they sort of came up. They may not be in a -- in a comprehensive order.

But one of the concerns that I heard raised is it's going to take a tremendous amount of energy to do this project. Where -- where is that energy coming from?

Is that part of the cost assessment of the project? Is that something that's going to -- another government level has to take care of? Are the citizens of Yellowknife going to be subsidizing a mahsive power project? What -- what is happening in that department? So that was one.

That's part of a comment that I have in a larger sense that I noticed there's a deliberate downplaying of the negative sides of this plan. Like you would think power would be right at the top of the list in the presentation, but I didn't hear anything about it.

Can I stop -- should I stop there, and just leave that question to go? Is that how it works?

THE CHAIRPERSON: Yes, I could stop you there, Gary, and --

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MR. GARY VAILLANCOURT: Okay.
THE CHAIRPERSON: -- and we will put the question to Bill here. And then if you could answer it, and then we will come back.
But I just want to know, how many questions do you have there, for the record, Gary?

(BRIEF PAUSE)

THE CHAIRPERSON: Okay. I will allow that question. And if we could, if you have about fifteen (15), I think we could try to work it out so we could try to listen to --
MR. GARY VAILLANCOURT: Sure.
THE CHAIRPERSON: And now go ahead, Mr. Bill Mitchell, the developer...?
MR. BILL MITCHELL: Mr. Chair, I mean, obviously the -- the act of freezing will take a consider -- considerable amount of power.
The power is not constant over the time that we'll be freezing. It actually peaks out in Year 2 of the implementation, at about 2.8 megawatts of power. We have about -- a potential for about 1.5 megawatts of generation power on site with the old generators on site. And we've already talked with the NT Power Corp.

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The beauty of the -- the act of freezing is that we can cycle the freezing on and off, the freeze plants on and off, so that we take advantage of off-peak power. And we've already had discussions with the NT Power Corp on this aspect.
MR. GARY VAILLANCOURT: I understand there's enough existing capacity --
THE CHAIRPERSON: Excuse me.
MR. GARY VAILLANCOURT: -- here -- I'm sorry.
THE CHAIRPERSON: Gary, just --
MR. GARY VAILLANCOURT: That's all right.
THE CHAIRPERSON: -- just direct your questions to me, and then I will get Bill Mitchell to --
MR. GARY VAILLANCOURT: All right.
THE CHAIRPERSON: -- so thank you very much, Bill Mitchell, for your comments and questions on that. I will go back to Gary from the public.
MR. GARY VAILLANCOURT: Mr. Chairman, did I understand, Mr. Mitchell, that you said there is enough existing capacity, or there's -- nothing has to be built

to handle this demand, this short peak demand?
THE CHAIRPERSON: Thank you, Gary.
Bill Mitchell, developer...?
MR. BILL MITCHELL: Mr. Chair, we have

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had discussions with NT Power Corp. They feel that -- the last time we talked to them, that they can meet the demands, spec -- especially with -- if we use the freezing plants in an off-peak basis. Thank you.
THE CHAIRPERSON: Thank you, Mr. Mitchell.
Gary, your next question please?
MR. GARY VAILLANCOURT: A lot of this discussion on arsenic and background levels, I was wondering, has it been specifically evaluated as to what the biological uptake of arsenic versus just the -- the forms that are unavailable for biological uptake, and if that's all been factored into the risk assessment?
I know arsenic trioxide is very hazardous, but lots of other forms aren't, like arsenopyrite. So is -- is it just all lumped together as arsenic?
Or are we talking about specific forms?
THE CHAIRPERSON: Thank you.
The developer, Bill Mitchell...?
MR. BILL MITCHELL: Certainly, the -- the risk assessment, we -- we had speciation of arsenic in some of the -- the samples, but I would prefer to pass that question onto Mr. Bruce Halbert for further answer.
THE CHAIRPERSON: Please proceed.
MR. BRUCE HALBERT: Thank you, Mr. Chair.

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Bruce Halbert, for the record.
Yes, we account for all arsenic in the -- in the assessment. Arsenic does exist in different forms and different media. But for the purposes of the risk assessment, all arsenic is assumed to be taken into the body that's associated with foods, whether that be game, fish, vegetation, as well as in drinking water.
The one area where we do take into account the availability of arsenic is with respect to dust or dirt ingestion, in which case, only a part of the arsenic is -- is considered to be transferred from the stomach into the body as a whole.
But in large part, all the arsenic is considered to potentially enter the body and be taken in -- into consideration in the risk assessment.
THE CHAIRPERSON: Thank you very much.

Next question from Gary?
MR. GARY VAILLANCOURT: Thank you, Mr. Chairman. Sir, I can assume that all the arsenic that's in the area, including the hot spots and the not so hot -- including all around town here -- more or less, we're all facing -- we're sitting in the middle of the problem, even though it's over at the mine. That's what I hear, basically. Because of the high levels here already, we're already in a high uptake situation, even though

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some of it's not biologically available.
So is that -- that would -- that's my conclusion. Would that be correct?
THE CHAIRPERSON: Thank you.
Developer, please proceed. State your name again.
MR. BRUCE HALBERT: Bruce Halbert for the record, Mr. Chair. Yes, indeed. To -- to actually clarify on this point, we take into consideration all pathways of exposure for arsenic intake by -- by people in the area, whether they're living in Yellowknife itself or in Dettah. Unlath Mount, et cetera. We've considered various groups in the assessment.
It should be noted that the largest portion of our intake of arsenic comes, actually, from market foods. And that applies to people living anywhere in Canada as well as in the Yellowknife area.
And just to clarify on another point, with respect to arsenic in soils, the soil contribution to the total intake is typically less than 10 percent and, in many cases, less than that. So arsenic in soil is not really the major pathway of exposure.
THE CHAIRPERSON: Thank you very much.
Your fifth question, Gary?
MR. GARY VAILLANCOURT: Thank you, Mr.

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Chairman. So I take it from -- I'm concluding from that that there is no health risk -- excuse me -- associated with this arsenic, per se. It's -- it's all over the place. Not -- we don't get a lot of it from the soil anyway, whether it's in town or out there. So actual fact, the premise of this cleanup is based on, maybe, some mixed levels of evaluation.
Would that be a correct assessment?
THE CHAIRPERSON: Please proceed, the developer. State your name again.
MR. BRUCE HALBERT: Yes, Mr. Chair.

Bruce Halbert, for the record. Could I just ask for a point of clarification on your question again?
MR. GARY VAILLANCOURT: Yes, yes.
THE CHAIRPERSON: Please proceed, Gary.
MR. GARY VAILLANCOURT: The -- the premise of this cleanup is based -- especially on the surface, not so much underground -- was based on high levels of arsenic at site. As it turns out, that immediately around the roaster is a bit of a concern, but the general sites, not any different than anyplace else.
And then I thought I heard that soil -- arsenic in soil was not considered a significant source of internal uptake anyway. So I'm kind of -- what I'm wondering is, yes, there's a serious problem out there

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but some of this arsenic is being classified as a -- as a danger when the -- the risk is actually not that high.
That's what I understand from what I'm hearing, and I'm wondering if that's a correct assessment.
THE CHAIRPERSON: Yes, thank you for that clarification.
I go back to the developer, Bruce...?
MR. BRUCE HALBERT: Thank you, Mr. Chair. Bruce Halbert again. Yes, much of the arsenic on surface exists in -- as an arsenopyrite, which is a very stable form of arsenic and not readily transported through the environment, whether that's in water or, indeed, within the body itself if we ingest it.
So the arsenopyrite fraction is -- is only partially available, if you want, for intake, if you happen to inadvertently consume dirt in the process of eating vegetables or putting our hands in our mouth or whatever.
The other arsenic forms, such as the arsenic -- arsenic trioxide that's underground, of course, is highly soluble, as we've talked about. So that really has to be dealt with in a different manner. Thank you, Mr. Chair.
THE CHAIRPERSON: Thank you very much.

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Moving on again.
Gary...?
MR. GARY VAILLANCOURT: Mr. Chair, I -- I can turn the microphone over to anybody else if they wanted to go, but I -- I can keep going.
THE CHAIRPERSON: Okay, hang on a second.

Is there any other comments from the public? Questions? Okay. Again, go ahead.

Can you state your name again for the record?

MR. GARY VAILLANCOURT: My name is Gary Vaillancourt. My next question is, I noticed on one of the presentation sheets you had monitoring points around the tailings pond. I understand the technology you're going to use. They proposed it at Colomac. I was there.

What I'm wondering, from the monitoring well pattern that I saw, it looks pretty thin. I didn't see anything near the water, per se. And I'm wondering, did you evaluate the position of those wells and the density of them from the point of view of the potential channels through that rock, the fracturing, et cetera?

So what I -- I guess my question is: Is there any seepage out of those tailing pond areas under and around what you're monitoring? And by -- and we all know they're above lake levels, so the -- the tendency

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will be they'll hydraulically flow towards the lake.

So is there any information about how much of that material is moving where you can't see it, and is that part of the remediation plan?

THE CHAIRPERSON: Thank you very much for that question.

We will go back to the developer, Bill Mitchell.

MR. BILL MITCHELL: To -- to try and answer the question, certainly there is seepage from some of the tailings impoundments. We generally know where the seepage is. In fact, we have a series of containment dams outside the tailings areas, which right now we capture any contaminated seepage in and pump it to the -- the effluent treatment plant.

Now, as part of our ongoing work on the property, we've established these ring of hydrogeologic wells all around the property and between the tailings ponds and the water in some cases. And we have been routinely monitoring the water quality within these holes over the past several years, and that will continue in the future.

Ultimately, the -- the whole issue of seepage from the -- the tailings ponds, we -- we would hope that that would decrease over time after we put on

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the covers and are able to establish adequate surface

drainage on the tailings so that we can essentially direct the surface overflow into drainage channels. That way we would limit infiltration into the tailings and also limit any possible seepage out of the foot of the tailings.

But to reiterate that the monitoring around -- of that seepage is under way at present, and that will continue. Thank you, Mr. Chair.

THE CHAIRPERSON: Thank you very much for that answer. Going back to Gary Vaillancourt.

Please proceed.

MR. GARY VAILLANCOURT: Thank you, Mr. Chairman. So your -- followup question to that, you are satisfied that there is no seepage out of those ponds underground in any way at all?

THE CHAIRPERSON: Mr. Mitchell...?

MR. BILL MITCHELL: Well, I won't say there's no seepage from the tailings ponds underground, because we do get a very large amount of seepage from the northwest pond that goes directly into the mine and reports into the mine underground.

So we know that this is going to be part of the -- the ongoing seepage that will enter the mine. And that's why we have opted to continue drawing down the

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water level in the mine, so that it prevents any movement of groundwater from the mine area into the external environment.

And through that pumping system and ongoing water treatment system, we will be treating all of that seepage that seeps from the tailings ponds down into the mine workings.

And Mr. Hockley would like to add a comment to that response as well, please.

THE CHAIRPERSON: Please proceed.

MR. DARYL HOCKLEY: Daryl Hockley. I just want to -- I think there's been a slight confusion here. The earlier slide that -- that Bill showed, with the red marks on it, those are deep groundwater monitoring installations. So they -- they're 100 to 150 metres deep. They're not really there to monitor the tailings.

So the -- the question would be correct if that was what we were using to monitor tailings. They're not correctly positioned and there's not enough of them. But that's not the intent. Those are deep groundwater wells.

At the moment, as Bill pointed out, all the groundwater under the tailings flows into the -- into the mine area. So at the moment, we don't have a -- a

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groundwater monitoring system -- a general groundwater monitoring system for the tailings.

It's -- they are actually on the figure, but I don't think they were -- they were pointed out. They're very faint yellow dots on the -- if you have a copy of the report, you can see it's figure 7.31, the full figure, and it has more of those wells on it.

THE CHAIRPERSON: Thank you for that answer, again. I'm going to go ahead to Gary's questions.

MR. GARY VAILLANCOURT: Thank you, Mr. Chairman. One of the issues that we had at Colomac, when we were developing the -- the plan for the tailings ponds, was the collection basin for that area, the inflow was larger than the evaporation output. So basically, they had an accumulation problem, and they ended up having to deal with a large amount of water to avert a catastrophe, basically.

What I'm wondering, here because there was such a large discussion on how to get rid of this surface water so they wouldn't create hydrological pressure, is that -- do you have that problem under control? The surface water will run away from that site and not sit there, because it's a pretty big, flat area.

I'm just wondering how you're planning on

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doing that.

THE CHAIRPERSON: We'll go back to the developer, Bill Mitchell.

MR. BILL MITCHELL: Mr. Chair, yes, there certainly is a component of our remediation plan that will deal with that. When I talked about the robust covers that we plan to put on the tailings ponds, I didn't really have time to indicate that these tailings ponds will first be graded and sloped. And the covers will -- will also be graded and sloped so that there -- any rainfall or precipitation will be directed towards drainage channels, which will eventually drain into the Baker Creek area.

Now, also, since we -- we're not sure what the quality of that water will be in the early stages, the plan is to continuously sample the water. And if it in any way, shape, or form exceeds discharge criteria, that water would be then directed into the mine and become part of the -- the mine water, which would be pumped and treated over time.

And then the treated water from the effluent plant would be -- would then be discharged.

Thank you.
THE CHAIRPERSON: Thank you.
Gary, you had another question?

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MR. GARY VAILLANCOURT: Yes, Mr. Chairman. I noticed in the water treatment plan you had wastewater coming out of the mine, going through the whole loop, into a treatment plant, and discharging into the bay. I assume there's more to that plan than just a little building and a pipe.

The water quality that's coming out of this plant, now, I've heard conflicting opinions in terms of solubility, hazards of, and what can be done about it. And I'm wondering if there's -- I imagine by the time this water takes a trip through the tailings pond, the mine, all the pipes and backup, it's going to be pretty loaded.

So you're going to have what -- I was wondering what technology exists and how it exactly works so that the citizens of Yellowknife are happy that what's coming out of that box and going into their drinking water, basically, is okay and not just below some number, like three hundred and forty (340) milligrams per kilogram or something like that.

So has that been addressed? I don't think there's a lot of information out there. But exactly what's going to happen there? And I know that it's -- when you direct discharge into a body of water, there's a lot of attention paid to that.

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So I'm wondering what exactly that part of the system... Are we going to be happy with it when it's done?

THE CHAIRPERSON: Thank you.
And I will go back to the developer, Bill Mitchell.

MR. BILL MITCHELL: The -- Mr. Chair, the remediation plan includes a new water treatment plant that would be built on the site. We indicated that that plant would be built using best available technology.

Currently, the best available technologies essentially use iron to combine the arsenic trioxide and precipitate out of solution. And even with the old plant that we're running at the site, we are -- we are able to achieve very large drop in arsenic levels. Some of the effluent water qualities not very good in terms of the amount of arsenic it contains. And just with the

existing plant which is old -- no where near best available technology, we are able to effectively remove most of the -- the arsenic from the water before discharge.

So the -- the discharge would not happen directly to the bay. There would be a holding pond or a -- a holding tank. That water quality would be monitored before it is discharged through a diffuser pipe into the

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-- the bay. And the diffuser -- the studies that we've done shows that the -- the small amount of arsenic remaining in the water that's not extracted very quickly disappears in -- in the diffuser system. And you wouldn't even detect it a few metres away from the actual diffuser itself.

And the discharge would be in the bay and that would be nowhere near the intake for the Yellowknife city water supply. And so there'd be no -- no impact on the drinking water to -- to Yellowknife. Thank you, Mr. Chair.

THE CHAIRPERSON: Okay. Thank you to Gary, public at large, this is your tenth question coming up.

Can you let me know exactly how many more questions you have because we still need to go through staff and Board?

MR. GARY VAILLANCOURT: Okay. I would turn the mic over again if anybody wants to use it.

Mr. Chairman, another question. I noticed in the -- when you were explaining the licensing -- water licence and that type of thing, there was a number of exclusions - one of them was the road work and that type of thing.

The one that didn't get real lot of

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explanation was, Why were there certain water processes that needed to be excluded from the water licence?

THE CHAIRPERSON: Thank you, Gary.

To the developer, Bill Mitchell.

MR. BILL MITCHELL: So just -- just for clarification, I think the question was asking why we wanted some of the interim monitoring excluded from the EA process.

Was that correct?

MR. GARY VAILLANCOURT: What -- my questions -- and again, this might be my misunderstanding of what happened there but I -- I got the distinct

impression that there was certain water uses that were planned for the site that were to be excluded or were requested to be excluded from the application for the water use licence.

But if I was incorrect in that, then I will withdraw the question but there was no explanation about it. It just went by quickly.

So I'm wondering was -- first of all, is there anything that you want to do with the water that is not in that licence -- should be -- or is there some reason for excluding certain parts of what you're doing from this licence? I don't understand that. That's...

MR. BILL MITCHELL: Well, I think --

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THE CHAIRPERSON: Thank you, Gary.

Go ahead, Bill Mitchell.

MR. BILL MITCHELL: Sorry, Mr. Chair.

I think the questioner may be referring to the fact that when we discussed interim activities at the mine, we indicated that we had to continue water management at -- at the mine site in the interim. Now we do this, essentially, to collect all of the contaminated water from the underground mine. We pump it to keep the level of the water down well below the arsenic chambers.

In addition, we collect contaminated surface runoff in various sumps and that water is currently run through the effluent treatment plant.

So right now, we -- we want to be able to continue that work. Obviously we have to continue that work because if we didn't, there would be releases of -- of arsenic into the environment if we didn't treat the water, and so we want to be able to continue doing that while the EA is in process.

Now that does not preclude the fact that ongoing into the actual implementation we have included the need for the water management on the site to be included in the -- within in the water licence. So I hope that answers the question.

THE CHAIRPERSON: Thank you, Mr.

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Mitchell. Gary...?

MR. GARY VAILLANCOURT: Thank you, Mr. Chairman. Yeah -- yeah, sort of. My next question is one (1) that's always puzzled me when I heard it.

One (1) com -- Miramar purchased the mining rights to that site. I understand they -- they managed to avoid all the liabilities. So I was wondering

why. Is there any justification, or what happened there?
Why Miramar got all the goodies, but they didn't pick up any of the liability costs on this project. Was there some -- is that some -- like is that a Federal policy to do it that way on cleanups, or -- I didn't understand that.
THE CHAIRPERSON: Thank you. Developer, Bill Mitchell...?
MR. BILL MITCHELL: Mr. Chair, the Royal Oak mines went into receivership in 1999. At that point the Federal government really had no capability, no expertise, to manage a site like this with the issues involved.
And, so it -- it was prudent at the time to bring in Miramar Giant Mine. Of course, Miramar operated Con, so they had a skilled work force. They -- they had the knowledge to be able to handle the care and maintenance of this site.

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Now Miramar Giant was brought in there to look after the interim activities, more or less along the lines that I referred to.
The other part of this was that they were -- they were brought in under a reclamation security agreement. In other words, INAC completed a reclamation security agreement with Miramar whereby Miramar agreed to provide these care activities in the interim at the site, and Miramar were allowed to mine at a very reduced rate some of the -- the minor amount of remaining ore on the -- on the mine.
But fundamentally, they undertook these care and maintenance activities, and continued doing that during that period. And, so that -- the only way that Miramar Giant would have come anywhere near that site was if they were indemnified for the current site condition.
They weren't going to pick up the liability of Royal Oak and the previous owners. It would have been -- it would have been impossible to get them in there. There would be no chance, no way, shape, or form that they would have taken on that responsibility of providing the interim care to the site.
So I hope that answers the question. Thank you.
THE CHAIRPERSON: Thank you, Mr.

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Mitchell.
To Gary before you go on, I am going to

allow three (3) more questions, and that will be fifteen (15) questions in total, and then I am going to move on to staff and Board.

So if you could help summarize your three (3) questions.

MR. GARY VAILLANCOURT: Thank you, Mr. Chairman. No, I don't -- I'm almost done.

I was wondering, Bill, I -- I hope you guy -- you don't think I'm after you guys, or anything. It's just that -- what would the -- would you consider the primary reasons for proceeding in haste on this project?

THE CHAIRPERSON: Developer, Mr. Bill Mitchell...?

MR. BILL MITCHELL: I would contend that we are not proceeding in haste in any way, shape, or form. This -- this work on developing the remediation plan started way back in 2000.

We had developed the arsenic trioxide management alternative in 2003. So it's -- it's been eight (8) years since the start of this process. So there's no -- there's no real haste here. I mean, we've been very methodical in all the studies we've done. Extremely methodical in developing the remediation plan;

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had it reviewed by many different parties or independent peer review or Health Canada, DFO and such like. So, there really has never been any haste in moving -- moving this thing ahead.

What we've tried to do is develop a very good plan; that's why it's taken so long. And we hope we can implement it very soon because of -- obviously the infrastructure issues, the decaying infrastructure concern about bulkheads and just other issues at the site that we have to deal with on a regular basis. Thank you.

THE CHAIRPERSON: Thank you, Mr. Mitchell. Gary?

MR. GARY VAILLANCOURT: Thank you, Mr. Chairman. I didn't -- actually I would like to compliment all of you on a very comprehensive take on this project. I was really impressed.

What I actually meant was, did -- excuse me for a moment here. I have too many things going on in my head. I'm sorry. I've -- we'll just leave that for now.

My final question, I guess, I could -- I have a whole other group of technical questions for engineers like why this would work and why this didn't get evaluated this way and did you try this and that and the other thing. But I won't go there.

I'm just wondering -- I was talking before about the philosophical approach to this project. Was it -- so this is -- be kind of my last question but kind of a compound one.

Was the project ever evaluated outside of the parameters of costs and risk? Was it ever evaluated from the point of the human factor, i.e., like what Lois was talking about? People don't sleep at night and not worry about these things. They're worried about a dirty planet. The -- the -- this -- the idea that their public -- this committee -- these -- you -- you've -- all of you have jobs to do with the public wants. And what I think the public feels is somehow they got put in the backseat here. Experts took over, laid out the plan and then it's like a done deal. That's why I'm just getting involved now. I just thought it was a done deal and I see it's not.

So my -- my final question is and is -- the follow-up, is it possible that it could be this way, was the project ever or could be evaluated from the point of view -- fix it forever so we can all sleep at night? And that would be my final question. Thank you.

THE CHAIRPERSON: To the developer, Mr. Bill Mitchell.

MR. BILL MITCHELL: I'm going to pass

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that question to our technical advisor group, Mr. Hockley.

MR. DARYL HOCKLEY: Daryl Hockley. The -- I was involved with -- with the project early on when Dave Nutter was -- was in Bill's position and probably the first two years or so of -- of public consultation on this, the discussion was almost always about why can't we fix it forever or can we fix it forever. And broadly speaking, there was sort of two (2) groups at the time.

One (1) group was saying, you know, the -- can't we just take that arsenic away? Take it back where it came from. And I can remember Dave explaining patiently meeting after meeting after meeting, the arsenic came from here. It was arsenopyrite before but it came from here. It has no place to go.

And when -- when people realized that -- that -- that group of people who -- who were thinking in those terms, sudden -- it was like a light bulb went on and many of those people said to us, Well then, we don't want you to send it anywhere else. We want to manage it here. It's our problem. We're going to manage it here.

There was another group of people who -- who always thought there was some better solution and

that we just weren't being honest with them. And I -- I don't -- I -- I think a lot about why that is. Suspicion

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about engineers in general, I suppose. I don't know. Possibly it's because there were some salesmen running around the Territory you heard about -- two hundred thirty seven thousand (237,000) tons of arsenic and they were quite happy to come up here and promise they could do anything. I think they were a very bad influence on the process.

But it was a long and very patient communication with people for about two (2) years to get the community to realize that this community is going to manage arsenic for the long term. The choice is how you manage it for the long term, not if.

The choice is how you manage it for the long term. And -- and I -- I want to bring that up because I -- I hope in the scoping of this we -- I mean, it's not up to me how -- how things get scoped, but it -- thinking about the amount of time we went in, two (2) years, to get people to the point of realizing it's -- we have to talk about how we're going to manage it not if we're going to manage it.

And if there's something that we can do to -- to stay focussed on that, I think -- I think it's important.

There's been a characterization earlier tod -- today, about this being a -- a management measure as opposed to a remediation measure. And we've been very

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careful throughout to refer to our work as the Arsenic Trioxide Management project. And it's not because we weren't trying to remediate the place, it's because we wanted to be bluntly honest with people that there was no solution that makes it all go away.

We wanted people to realize that every option involves long-term management of the arsenic by this community. It might be on the surface, it might be deeper underground, but it's going to be managed in -- within this community.

So I think it's -- so the answer to the question, absolutely, yes. We started off this project hoping that there was a way to make it completely disappear, and it was two (2) years of -- of working with the community to -- to get us all to the point of understanding that -- that really wasn't an option.

Now we have to move on and talk about how we were going to manage it, not -- not if we were going

to manage it. Okay, thank you.
THE CHAIRPERSON: Okay. Thank you very much. I'd like to thank Bruce Bulenberg (phonetic) and I believe I got the last name right. Vaillancourt, I'm sorry.
I would like to thank you for your comments, and at this time I'm going to ask for a ten

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(10) minute break, and what I'll do is if there are no more comments from the public, I'm going to go to staff and to Board members in the last hour here.
We will probably meet till 9:00, so at this time I'm going to take a ten (10) minute break, thank you.

--- Upon recessing at 7:56 p.m.
--- Upon resuming at 8:09 p.m.

THE CHAIRPERSON: Thank you, I want to continue on with this hearing this evening. And in case there were other people that might have questions, there will be an opportunity for tomorrow as well, and I believe we're going to go tomorrow evening. No, we are not?
Till 5:00, okay. So tomorrow we will still have an opportunity in case there are members that have missed questions, we will be here till 5:00 tomorrow, and we will start at 10:00 tomorrow.
For now, I am going to go ahead and -- like I said, we are going to be here till 9:00, so I want to give the opportunity to our staff, MacKenzie Valley Environmental Impact Review Board staff, to put forward questions to the developer.

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Then I want to go to my Board members, starting off at my far left, working our way down to my far right. And then I am going to wrap up for the evening.
So with that, I am going to go ahead and put my first question to John Donihee, legal counsel for MVEIRB.
MR. JOHN DONIHEE: Thank you, Mr. Chairman. My name is John Donihee, and I'm Board counsel.
I have two areas that I'd like to explore with the developer. The first one relates to the roles of the developer -- co-developers and -- and some of the

other Federal and Territorial departments in relation to what the Board has to do in this impact assessment.

And the second area that I will explore, briefly, relates to some of these interim activities that the developers have requested be excluded from the -- from the EA.

So to go back to the first area of enquiry, Mr. Mitchell, I just, for the record, I would like to be clear, I note that the -- the slide deck that you showed us afternoon had logos for both Government of the Northwest Territories and Indian and Northern Affairs Canada. And that in the materials that have been

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submitted to the Board that you're described as -- or those two (2) organizations are described as co-developers.

But so I just want, for the record, it's perhaps a little formal but nevertheless your confirmation that the presentation, the answers that you gave today and the positions that you've expressed on behalf of the co-developers are intended to bind both the Government of the Northwest Territories and the Department of Indian Affairs and Northern Development.

THE CHAIRPERSON: Thank you, Mr. Donihee, to the developer, Mr. Bill Mitchell.

MR. BILL MITCHELL: I guess, Mr. Chair, there's not really a simple answer to that. The answers I gave were answers from the perspective of the joint remediation project.

I can't, essentially, give answers that would specifically bind the GNWT to some aspects whether it's involved in this project or -- or something else.

The way things are structured is that under the Co-operation Agreement which we actually have submitted a copy of -- it's one (1) of those supporting documents, it clearly outlines the -- how the two (2) governments will share the -- the responsibilities for the site, both financially and also in terms of working

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as co-proponents.

So I would refer you to that document and if the answers aren't adequate in there, then we would endeavour to clarify any further questions in the future. Thank you.

THE CHAIRPERSON: Thank you, Mr. Mitchell. I'll go to MVEIRB legal counsel, Mr. Donihee.

MR. JOHN DONIHEE: Thank you, Mr.

Chairman. John Donihee again.
Well, Mr. Mitchell, I'm -- I will read and I've read that agreement. I guess what I'm trying to find out is, you know, when you say this is the way that we propose to do something, you were -- there were a number of questions this afternoon, for example, about the realignment of -- of -- well, the realignment of the Ingraham Trail and when you say "this is the way we propose to do this" and "we only want the portion that's on the Giant Mine site that needs to be moved in order to protect the arsenic chambers underground," now you're speaking there on behalf of both co-developers, aren't you?
THE CHAIRPERSON: Thank you, Mr. Donihee.
Mr. Mitchell, developer...?
MR. BILL MITCHELL: Yes, in that respect the -- just going back to the reviews -- the GNWT,

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Environment and Natural Resources reviewed the remediation plan and the remediation plan specifically states that we need that very small realignment of the highway.
And that is part of the reason we were considering the -- the other corridors that subsequently the GNWT proposed as a totally separate project because we really have no say or no control in those specific corridors that they have proposed for realigning Highway 4 into.
I hope that answers your question.
THE CHAIRPERSON: Thank you, Mr. Bill Mitchell.
Mr. Donihee...?
MR. JOHN DONIHEE: Thank you, Mr. Chairman. And -- and thank you, Mr. Mitchell.
I guess I'm -- I wasn't really so concerned about, you know, which of the corridors or -- I was just using that as an example of a -- or that example as -- of a situation where, you know, you were asked a question about what form the proposed development might take.
And obviously, the Government of the Northwest Territories may have other interests in terms of fixing that portion of the Ingraham Trail, but when

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you answer in respect of the development you're proposing your answer is on behalf of both co-developers, that -- that's what I'm trying to get at here, that when -- you

know, when this panel that you've put forward speaks in response to the -- all of the questions that we've heard today that, in fact, those -- that evidence is provided on behalf of both co-developers.

THE CHAIRPERSON: Thank you, Mr. Donihee. Developer, Mr. Bill Mitchell...?

MR. BILL MITCHELL: Yes, just to -- to clarify, in terms of the technical aspects of the project, then the responses I give are essentially the responses of both proponents, but that relates only to the technical aspects of the project.

Obviously I can't talk to policy aspects of the GNWT and so, in that context, certainly in terms of technical aspects of the project I, essentially, have been given the authority to -- to talk on behalf of both governments.

MR. JOHN DONIHEE: Thank you.

THE CHAIRPERSON: Thank you, Mr. Bill Mitchell.

Mr. John Donihee...?

MR. JOHN DONIHEE: Thank you, Mr. Chairman. John Donihee. Thank you, Mr. Mitchell, I

think we've connected.

I -- I want now to explore just for a few moments the roles of some of the other government departments that have been involved in the development of the remediation plan.

You showed us -- I -- I don't have the slide up, but you showed us a diagram that had a lot of bubbles attached to sticks and, you know, there was a whole list, a smorgasbord let's say, of government departments that had been involved, and I'll tell you why I'm asking, and that is just that, you know, normally -- and I think a number of the questioners today have made it clear this is anything but the sort of normal run-of-the-mill environmental assessment.

But normally, the Review Board relies on the technical expertise of INAC, of Department of Fisheries and Oceans, of Environment Canada, and of the Government of the Northwest Territories to assist it in analysing proposals for development that are put forward by developers but, in this case, I understand from what I've seen of the record, and it's -- it was I think made fairly clear in your presentation, that INAC by enlarge is a proponent or the developer here and likewise GNWT.

So to -- I guess to get to my point, I could ask a simple question.

Would the technical expertise of the Water Resources Division of INAC be available to the Board to assist it in dealing with this application that you've put forward?

THE CHAIRPERSON: Thank you, Mr. John Donihee.

To the developer, Mr. Bill Mitchel...?

MR. BILL MITCHELL: Mr. Chair, yes, in -- in terms of the expertise of the water section, INAC of course will be the proponent and we would expect that if there was specific expertise that would help to answer questions, that that would be made available by the pro -- proponent; if that expertise resided in -- within waters, then likely it would be made available as well, but INAC, as a whole, is acting as a proponent in this case and will not act as an Intervenor.

Having said that, the -- certainly the -- if there were specific questions, I don't see any reason why the expertise of, say, the water's group would not be available. And I hope that answers the question.

THE CHAIRPERSON: Thank you, Mr. Bill Mitchell.

Mr. John Donihee...?

MR. JOHN DONIHEE: Thank you, Mr. Mitchell. I -- I'm going to just assume, to -- to move

on with my questions, the same applies for the Government of the Northwest Territories and I -- I guess the issue here is not, of course, whether or not the developer has expertise and -- and whether or not we can't ask for that explanation from them but, rather, you know, the -- in the public interest there may be some concern about a situation where the only expertise available to address the development proposal that's being advanced actually resides with the developer.

And so I -- I just want to make it clear that, you know, there -- you've heard calls and -- and in fact, your own presentation made reference to the need for independent auditing, for example, of monitoring results in the future.

And so, I -- I'm just going to summarize by saying, what I understand from your question then is that the expertise of Indian Northern Affairs Canada and of the Government of Northwest Territories is all tied up on the developer's side of the ledger and that if the Board were to want independent advice in order to assess the development you're putting forward, it would have to find it somewhere else. Is that correct?

THE CHAIRPERSON: To the developer, Mr. Bill Mitchell.

25 MR. BILL MITCHELL: Mr. Chair, I -- I'm

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1 not sure I can actually answer that question at this
2 point. Certainly, the -- the expertise could be made
3 available in -- in addressing certain questions regarding
4 this project or clarifying questions that the Board might
5 have.
6 So I wouldn't rule out the fact that, you
7 know, it might be available at some point. But I think I
8 would like to confer with some of my colleagues within
9 INAC before being totally firm in that answer.
10 THE CHAIRPERSON: Thank you, Mr.
11 Mitchell. So maybe if you can't answer that question,
12 then maybe we could have that as Undertaking Number 4.
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14 --- UNDERTAKING NO. 4: To answer the question:
15 Where the availability of
16 independent expertise might
17 come from in a situation
18 where all of those divisions
19 of INAC and GNWT are actually
20 developers.
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22 THE CHAIRPERSON: Sorry, yes. So I will
23 turn the mic over to Mr. John Donihee.
24 MR. JOHN DONIHEE: Mr. Chairman, I'm
25 quite content to take an undertaking but I do want to

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1 emphasize that the question was in relation to the
2 availability of independent expertise. I am not
3 challenging the expertise or credibility of the team
4 assembled by INAC and the GNWT. I'm simply asking about,
5 you know, where -- given that these parties are usually
6 available to assist the Board, you know, where this kind
7 of independent advice may come from in a -- in a
8 situation where all of those divisions of -- of INAC and
9 GNWT are actually developers.
10 THE CHAIRPERSON: Thank you, Mr. Donihee.
11 Mr. Bill Mitchell, developer?
12 MR. BILL MITCHELL: Well certainly, we
13 would undertake to get a response. We would like, you
14 know, specifically to know what level or what sort of
15 expertise that the Board might require and what specific
16 fields so if -- if we could get that, then we could
17 endeavour -- we could undertake to get a response back.
18 And certainly it is -- it is an issue
19 because, I mean, obviously a lot of expertise resides in

-- in INAC and you already allude -- alluded to the fact that we have had other expert departments, the Health Canada, Environment Canada, DFO, have actually reviewed the plan. They didn't really play a part in the development of the plan. They -- they reviewed it. They, at that point, let us know what their concerns were

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and we modified the plan on that basis but they weren't -- they weren't actually involved in the -- in the development of the plan. Thank you.

THE CHAIRPERSON: Thank you, Mr. Bill Mitchell.

Mr. John Donihee?

MR. JOHN DONIHEE: Thank you, Mr. Chairman. Mr. Mitchell, if it will assist you, I'm sure that we can do this by way of an exchange of letters. So we'll perhaps write to you from the Board asking a specific question and we'll make it as clear as we can based on my questioning and you can simply respond on the record if that's acceptable to you, sir.

THE CHAIRPERSON: Thank you, Mr. Donihee.

Mr. Bill Mitchell...?

MR. BILL MITCHELL: Yes, that's acceptable. Thank you.

THE CHAIRPERSON: Okay. Thank you, Mr. Mitchell.

Any further questions from Mr. John Donihee?

MR. JOHN DONIHEE: Yes, Mr. Chairman, just a couple.

Mr. Mitchell, I don't know -- could you describe to me the role that Environment Canada and the

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Department of Fisheries and Oceans played in -- you know, in that process of reviewing the draft remediation plan. I'm just curious about where they sit in all of this.

THE CHAIRPERSON: Thank you, Mr. Donihee.

Mr. Bill Mitchell, developer...?

MR. BILL MITCHELL: Well, as -- as I indicated, they actually reviewed the -- the written documents of the draft plan. And, so we forwarded the -- the plan, and supporting documents, as required, to each of these organizations: DFO, Health Canada, and also Environment Canada.

And then we -- we met as a group with them and the technical advisor, and they gave us their concerns in terms of what issues they felt we needed to

address more thoroughly within the plan, and essentially they performed almost an independent review of -- of the -- the plan itself.

So subsequently after meeting with them, listening to the issues, we took these comments, and the technical advisor also was part of that initial meeting. The technical advisor went back, made the appropriate changes to the plan based on the input from the expert departments.

The -- I should point out that as well, and I think I mentioned it in the slides, that Fisheries

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& Oceans, Environment Canada, and Health Canada are so-called expert departments for this Federal contaminated site's action plan.

And, so they're involved in that sense in terms of approving funding for the project and -- so getting back to the -- the thread then.

And after the technical advisor had reviewed -- had revised the plan to take into account the comments of the -- these expert departments, we then gave the revised plan back to the expert departments. They reviewed it again and indicated they were satisfied with the revisions that had been made.

And we met with them as a group to review these changes, and to determine if they had any further concerns. So essentially they -- they preformed an independent review of the remediation plan as well. Thank you.

THE CHAIRPERSON: Thank you, Mr. Bill Mitchell.

Mr. John Donihee...?

MR. JOHN DONIHEE: Thank you, Mr. Chairman. John Donihee.

And thank you, Mr. Mitchell. What I take from that then is they are not co-developers. They were reviewers, and provided expertise.

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And, sir, I guess my question then is: To your knowledge, and I'm -- I'm only asking what you know, is there any reason why those two (2) departments cannot provide technical expertise to assist the Board in its environmental assessment?

THE CHAIRPERSON: Thank you, Mr. Donihee.

Mr. Mitchell...?

MR. BILL MITCHELL: Mr. Chair, the -- just to reiterate, the -- these departments essentially

performed a review function. They were not at all involved in the development of the plan, and so I see no reason that they could not assist the Board in the -- the review exercise in front of us. Thank you.

THE CHAIRPERSON: Thank you, Mr. Mitchell. Mr. John Donihee...?

MR. JOHN DONIHEE: Thank you, Mr. Chairman. Mr. Chairman, we had correspondence on July 15th from DFO, Mr. Mogay, and from Environment Canada from Ms. Loman, and I would like to ask these questions about provision of expertise to them tomorrow if they're here.

I know Mr. Mogay's here tonight, but I don't want to catch him by surprise. I actually don't know Ms. Loman, but -- and I realize they didn't intervene, but in their Federal departments, they have a

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role as experts to assist the Board, and I'd like to get them on the record on this question.

So I'd just like to give notice to them and ask them to be here tomorrow in order to answer these questions, if that is acceptable to the Chair.

THE CHAIRPERSON: Yes, thank you, Mr. Donihee. I think that due to the time, I think it would be acceptable to the Chair here to have the people here tomorrow for questioning.

Is that okay with Mr. Mitchell?

MR. BILL MITCHELL: We have no objection to having representatives from Fisheries & Oceans and Environment Canada here tomorrow.

I presume you will contact them to make sure they do attend?

THE CHAIRPERSON: Thank you, Mr. Mitchell. And, yes, I think our office will contact them probably first thing tomorrow morning.

Moving on, is there any further question, Mr. Donihee?

MR. JOHN DONIHEE: Yes, Mr. Chairman. That's the first area I wanted to explore. The second area should be quicker.

And it relates to what you, I think, described as interim activities. Mr. Mitchell, there was

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a list of them on slide number 10 but I don't need to -- to have you pull that up.

There's been several questions about this by other questioners. I guess the first question I have

for you is: Is there anything in the water licence application that you've made that deals with these interim activities.

So, you know, are these activities part of the approval, have they been included as part of the activities for which water licensing approval is necessary at the end of this process, EA process?

THE CHAIRPERSON: Thank you, Mr. Donihee.

Mr. Bill Mitchell...?

MR. BILL MITCHELL: Again, this sort of highlights the unique nature of -- of this project. We have tried to distinguish what we've been doing in the past and what we're doing now by calling those activities interim activities.

But even after we start -- or implementation of the remediation plan, similar sort of activities will have to go on during the implementation for a period of time to ensure that the water is treated in the existing plant until such time as we get the new plant built.

So we've chosen to essentially call those

activities care and maintenance activities although they're essentially very similar to what we're doing at -- at present.

But with this overlapping nature of -- of the -- these activities, it -- it certainly is a complication and so we've -- as I say, we've termed the activities that we're doing right now "interim activities" recognizing that some of these activities will also have to be performed during the first few years of the remediation implementation as well. Thank you.

THE CHAIRPERSON: Thank you, Mr. Bill Mitchell. I have a question for Mr. Donihee.

In light of time we still need to go through the Board, how much more questions do you have? Two (2) more questions, please proceed.

MR. JOHN DONIHEE: Thank you, Mr. Chairman.

Mr. Mitchell, these interim activities that then -- are they currently authorized under Section 39 of the Fisheries Act? I mean, is that the authority that you're relying on to conduct them at this point in time?

THE CHAIRPERSON: Thank you, Mr. Donihee.

Mr. Bill Mitchell...?

MR. BILL MITCHELL: What we're currently

relying on is the Section 39 of the NWT Waters Act to conduct these activities because, as you know, when Miramar Giant left the site, the water licence that was in existence expired.

And so the -- the only way forward was to invoke the Section 39 of the Waters Act for the interim activities that we have currently underway. Thank you.

THE CHAIRPERSON: Thank you, Mr. Mitchell. Mr. Donihee...?

MR. JOHN DONIHEE: Thank you, Mr. Chairman. And thank you for correcting me, Mr. Mitchell. I said Fisheries Act when I was actually thinking about the Northwest Territories Waters Act.

Sir, the next thing I'd like to ask you to do for the Board will require perhaps that you consult with counsel. But I'll explain my concern to you.

The question I have is: Is the -- or are the interim activities that you've identified sufficiently distinct for the Board to be able to eliminate their consideration as part of the EA and I'll -- I'll -- the reason I ask it that way in terms of it being sufficiently distinct is that I'm concerned about Section 118 of the Mackenzie Valley Resource Management Act. And that was why I asked you the question about authorities as well.

If you have the authority to do it now, as you suggest, under Section 39 of the NWT Waters Act and they're sufficiently distinct and not covered by the Water Licence, it may actually be legally possible for what you've asked to happen -- to take place assuming the Board is convinced.

But I suggest that it would help us if you would confer with counsel and perhaps write to the Board subsequently simply indicating your position on this point.

Section 118 is a section that says:

> "Essentially the Board is not able to authorize anything that requires a licence or permit while there's an EA process going on."

So of course, if what you're talking about is distinct, it may be possible that's your case to make, sir, but I know you'd need to speak to counsel about it and I wonder if you would do that and simply advise the Board of your position on that, say, on the 15th of August when you get back to us on the rest of the undertakings.

THE CHAIRPERSON: Thank you, Mr. Donihee. Just so I'm clear as well, is that your final question? Thank you very much, Mr. Donihee. Mr. Bill Mitchell...?

MR. BILL MITCHELL: Yes, I mean obviously I -- I wouldn't be in a position to answer that question right now so we will confer and respond to the Board by August the 15th on -- on that issue.

THE CHAIRPERSON: Thank you very much, Mr. Mitchell. So I'll take that as Undertaking No. 5.

--- UNDERTAKING NO. 5: To confer with counsel and write to the Board subsequently indicating the position with respect to Section 118.

THE CHAIRPERSON: Okay, is there any further questions from Board staff?

MS. TAWANIS TESTART: No, thank you, Mr. Chair.

THE CHAIRPERSON: Very good, okay. Thank you very much. Moving on to Board Members starting from my far left, Mr. Danny Bayha, Board Member.

MR. DANNY BAYHA: Thank you, Mr. Chair. Yeah, I had just a couple of questions here for Mr. Mitchell. Danny Bayha for the Review Board.

Earlier on there was a question on this Ingraham Trail realignment. I just wanted to know,

basically, that you had to sort of move the road so that because it's going right over the -- the stopes and it might affect the -- where the thermosiphon is going to be.

So, is that an integral part, the removal, the realignment of the road, is it an integral part of this remediation plan?

THE CHAIRPERSON: Thank you, Mr. Bayha. Mr. Bill Mitchell...?

MR. BILL MITCHELL: Mr. Chair, the answer to that question is, yes. We -- we need to realign that small portion of the highway that crosses the two (2) chambers. But that small realignment is very different from what has been proposed by the GNWT Department of Transport for the larger corridors that they are proposing.

The remediation plan actually includes a description of the road realignment that we would require in order to complete this plan. And we need the -- the road aligned off the arsenic chambers simply because we

will have a series of freeze pipes and thermosiphons that are extending from underground to the surface at that point.

I hope that answers your question.

THE CHAIRPERSON: Thank you, Mr. Bill

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Mitchell.

Mr. Danny Bayha...?

MR. DANNY BAYHA: Thank you, Mr. Chair. Danny Bayha here from the Review Board.

And so who is going to be paying for the moving this alignment? If GNWT is not committing -- as far as I understand, there's no firm commitment from them to remove the road or realign the road.

I'm just curious who is going to be doing that, thank you.

THE CHAIRPERSON: Thank you, Mr. Bayha.

Mr. Bill Mitchell...?

MR. BILL MITCHELL: Mr. Chair, we -- we have a budget estimate, a cost estimate for the realignment of that small portion of the highway.

The -- I -- I should also maybe clarify that the GNWT as co-proponent of this project is also helping to fund the cleanup of the surface as well. But we would see that the -- the cost for that realignment is -- is certainly covered in our existing cost estimates.

THE CHAIRPERSON: Thank you, Mr. Bill Mitchell.

Mr. Danny Bayha, Board member...?

MR. DANNY BAYHA: Thank you, Mr. Chair. Danny Bayha, Review Board.

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The other question is, again, there's some questions on the requirement for power. There is -- you said there is some -- earlier in your presentation, or your response to some questions, that there was -- you were in negotiations, or you're talking with NWT Power Corp about them using -- or them be able to meet your demands when you're doing the active freezing of -- of this project.

And -- and without their commitment, if they don't commit to this, is this remediation plan going to work? Thank you.

THE CHAIRPERSON: Thank you, Mr. Bayha.

Mr. Bill Mitchell...?

MR. BILL MITCHELL: We -- we certainly have had discussion with NT Power on this, and they have

given us no indication that they would not supply the power or could not supply the power.

They have always indicated their willingness to work with us to supply the appropriate power for this project. Thank you.

THE CHAIRPERSON: Thank you, Mr. Bill Mitchell.

Any further comments, Mr. Danny Bayha?

MR. DANNY BAYHA: Thank you, Mr. Chair. Danny Bayha, Review Board.

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The other thing, this stems -- I just basically wanted to get some certainty from different organizations and different government departments.

Like Mr. Donihee earlier had questions, and Lois Little earlier had some issues on some level of comfort on the commitment of -- long-term commitment from government departments in funding this project to go on. And I hear one (1) of your advisors said we should be thinking about managing, not if we're going to manage this.

So I'm trying to -- and -- and I'm in the same thought process as Mr. Donihee, when we're talking about the role of different government departments in trying to make this thing work.

And I think in my mind, as one (1) Board member, is that I would think it would be worthwhile suggesting that to different government departments that were part of the review be part of this process, a public process, of trying to explain to the public -- assure the public that this process -- they're in agreement with this whole thing.

Now, the peer review that you mentioned earlier, I would -- I would think that that is on the public record. Am I correct? Thank you.

THE CHAIRPERSON: Thank you, Mr. Bayha.

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Mr. Bill Mitchell...?

MR. BILL MITCHELL: Just clarification, I presume that you're talking about the -- the independent peer review panel? Their work being on the public record, is that correct?

THE CHAIRPERSON: Mr. Bayha...?

MR. DANNY BAYHA: Yeah. Well, specifically to Environment Canada's comments, and DFO's comments, and Health Canada's comments is what I was mostly interested in. Thank you.

THE CHAIRPERSON: Mr. Bill Mitchell...?
MR. BILL MITCHELL: In terms of -- of those comments, I believe those comments are on the public record. They were submitted, I believe, by Environment Canada to the Mackenzie Valley Land and Water Board, and I think they're on the public registry there.
In addition, for the independent peer review panel that reviewed the arsenic trials, they've managed the alternatives, and also the remediation plan, their reports on each -- and both of these studies are available on the public registry as well.
And we do have copies of those reports, and -- if anyone is interest I -- interested, we can certainly bring the copies of the independent peer review panel report here tomorrow to have available to give to

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you.
And just as maybe an addition on -- going back to some of the earlier questions on the expertise that the Board might want to rely on, we would certainly endeavour to make our -- make arrangements to have the independent peer review -- peer review panel available to the Board to answer specific questions, possibly even attend technical sessions if -- if need be. Thank you.
THE CHAIRPERSON: Thank you, Mr. Bill Mitchell.
Any further comments, Mr. Bayha?
MR. DANNY BAYHA: Thank you, Mr. Chair. Danny Bayha, Review Board.
A final question I had is, earlier in -- in our current regulatory process of -- of water licencing and land use permits, there's certain limits on the length of permits that -- or water licence that can be applied for.
In this case, I'm -- I'd like to know, and -- and myself, that if -- what is the length of time when you apply to -- to this -- for the water licencing for this project? I -- I'm sure there's a definite time -- time on this, and in that time, would there -- I'm trying to envision what would happen after this licence expires at a certain period of time.

What would you envision happening? Would that be a period of time for review of -- of -- of re-evaluation of some of the -- the predictions and that sort of thing? So I just wanted to know if you had some thoughts on that. Thank you.

THE CHAIRPERSON: Thank you, Mr. Danny Bayha, Board member.
Mr. Bill Mitchell...?
MR. BILL MITCHELL: Mr. Chair, the -- it would -- the -- the water licence application that we submitted, we -- we -- I believe asked for term of the water licence that would cover the implementation and at least the first few years of monitoring.
Now as I indicated, we will require long-term water treatment at that site. And so even after that initial licence, water licence expires, we would need to have another water licence for the ongoing water treatment at the site.
And I also alluded to the fact that we're certainly open to the independent audit review and possibly that could be done in concert with the water licence renewals as the project goes on. And these audits would confirm that the project is, essentially, performing as anticipated or otherwise and give a level of confidence going in the future that things are working

as they should. Thank you.
THE CHAIRPERSON: Thank you very much, Mr. Bill Mitchell. Moving on to the next Board member, Board member Nora Doig.
MS. NORA DOIG: I have no questions.
THE CHAIRPERSON: Thank you very much, Ms. Doig. Moving on to Vice Chair, John Stevenson, Board member.
MR. JOHN STEVENSON: Lots of excellent questions today. No questions. Thank you.
THE CHAIRPERSON: Thank you, Mr. Stevenson. Moving to my right, Board member John Ondrack.
MR. JOHN ONDRACK: Thank you, Mr. Chair. I have no questions at this time. Thank you.
THE CHAIRPERSON: Thank you, Mr. Ondrack, Board member. Moving on to Board member Jerry Loomis.
MR. JERRY LOOMIS: Jerry Loomis, Mr. Chair. I have no questions at this time.
THE CHAIRPERSON: Thank you very much, Mr. Loomis, Board member. Moving on to Mr. Fred Koe, Board member.
MR. FRED KOE: Thank you, Mr. Chair. Fred Koe. I too have no questions at this time.
THE CHAIRPERSON: Thank you very much,

ladies and gentlemen. I would like to call this an evening. Tomorrow morning we start at ten o'clock.

And for tonight, I want to say thank you to the developers for your presentation, to the party status members, thank you very much for your time and your presentations and the public at large for coming in and listening and giving your comments and questions as well.

Also, I'd like to acknowledge the translators in the back. Thank you very much for your hard work, Mahsi. And to the organization MVEIRB staff who are here who help put the meeting together, thank you. And I will see you tomorrow morning. I would like to adjourn the meeting. Mahsi.

--- Upon adjourning at 8:49 p.m.

Certified Correct,

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Sean Coleman
