MANITOBA CLEAN ENVIRONMENT COMMISSION

BIPOLE III TRANSMISSION PROJECT

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Brian Kaplan - Member
Ken Gibbons - Member
Wayne Motheral - Member
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Tuesday, October 30, 2012.

Upon commencing at 9:03 a.m.

THE CHAIRMAN: Good morning. Welcome back. Mr. Madden?

MR. MADDEN: I will let you do morning introductions, and I just have a comment to make.

THE CHAIRMAN: What is it in relation to?

MR. MADDEN: It is in relation to, we have had some time to digest the proposed routings that were put on us yesterday, or tabled by Manitoba Hydro yesterday. We have some significant concerns about having a fair opportunity to respond to them. As you know, our, this has been an issue the Manitoba Metis Federation has been interested in, and been raising in these proceedings since they began, and even prior to them beginning. Yesterday we had route changes tabled, and we have to file our expert reports, by next week.

And we also have some concerns about these are significant changes to the route. They aren't minor adjustments, and they are in some of the most sensitive areas that have been raised by participants. And I think rather than having them presented on a slide deck, we would want Manitoba Hydro to consider whether this changes any of their

EIS, as well as updates their EIS. We are essentially being asked to say here is what we have put on the back of a napkin changes, and we don't know how that affects the EIS. With respect, we don't think this is etch-a-sketch transmission routing, you change the route and yet the EIS still stands. We have no understanding of whether Manitoba Hydro has any considerations, about that.

So, we want to raise it, that we feel we are prejudiced by virtue of having to file our reports by next week. We think there should be an adjournment to essentially allow for parties, as well as Manitoba Hydro to consider whether this requires any changes to the EIS. These are not just nominal changes.

And, I find it quite disconcerting that less than three weeks ago, in my cross-examination of Mr. McGarry, and Mr. Dyck they are standing up saying, no, this is absolutely the best route. They dismissed many of our concerns about fragmentation, and about actually what the final preferred route in relation to moose habitat was, they were irrelevant, or that we just simply didn't understand, and now they used that same rationale, to justify the changes.

We have real concerns about the credibility of the CEAA process, and the credibility of these new changes. And we need the opportunity to have fairness. They haven't met the 14-day rule, we have been preparing our expert reports to be filed next week, and less than seven days, I just received the power point presentation this morning, from their legal counsel, Mr. Bedford. Last night I had to have discussion with our experts, not having maps in front of them, but just saying this is where we think they have moved things.

So, we would ask that there be an adjournment of the CEC hearing to allow us to digest this. We are walking through an EIS. And we don't know whether the proposed changes have any effect to that analysis in those sections of the route that have been significantly altered.

The second, in the alternative, we would ask that we be allowed fairness to have our experts actually digest the proposed changes. Manitoba Hydro has known that we have been on about these sections of the route for sometime. And now our experts, less than a week before their expert reports are due, have to essentially figure out what the implications of these new routes are. And so those

are our points for this morning.

THE CHAIRMAN: Those are valid points, Mr. Madden. Although, I won't agree to an adjournment I would -- as I said at the outset, we tend, we try to be as reasonable as possible. We will not expect you to have comments on these route changes in your final presentations next week. We will allow at least a couple of weeks for that to be done.

I did note yesterday that I didn't see much point in going further until we have heard from TAC on this, going further in this room, until we have heard from the TAC, and their comments. I would expect, I would hope that once Manitoba Hydro has seen what the TAC has to say about these route changes, they would advise us PDQ as to what effects this might have on the Environmental Impact Statement.

You will also note that, or recall, that a number of times throughout this process, I have said that within reason, we won't adjourn, or we won't close the record on these hearings until everybody has had a chance to fairly canvass their concerns, although, I would again say within reason.

MR. MADDEN: I guess my concern is, Mr. Chair, is we are proceeding with Manitoba Hydro

outlining their environmental assessment process, outlining their approach on mammals, all of these things, and we don't necessarily know whether they even consider, based upon their route changes, that they are going to have to update their EIS. We need to know what project is being reviewed in the hearings, and I guess what we are saying and we want on the record is we are prejudiced because right now we don't really know. We have supposed route changes, we don't know if the TAC is going to agree with them. We don't know if the EIS needs to be updated.

I will say my piece of essentially saying we want that on the record, we want it noted that we believe we have the right to know exactly what we are reviewing in the EIS process, but I defer to the Chair, our objection has been stated on the record, and, I will defer to the Chair's I guess way to address this.

THE CHAIRMAN: And we will know before the record is closed on these hearings the specifics around these route changes. And, as I said, hopefully from Manitoba Hydro -- well, we won't close the record until we hear adequately from Manitoba Hydro of modifications to the EIS related to these

route changes.

You will also recall when Mr. McGarry made that presentation the indication then was that Hydro wasn't even going to bother addressing these until after these hearings closed, and it was because of objections raised in this room that we heard about this this week. Not only in this room, I should say, there were also significant concerns in the Department of Conservation and Water Stewardship.

MR. MADDEN: Right. I guess our only point is that wasn't, our objections were dismissed, or the use of the CEAA process, was put out as well, clearly you can't comprehend what we did, or proposed changes because the CEAA process answers all of those. We just want to point that out that it does, we think question the credibility, or the veracity of that system of being sacrosanct and can't be touched. I think I have made my points and they are on the record.

THE CHAIRMAN: You will have many opportunities to raise those over the next few weeks. We now turn to, we have a number of presentations from Manitoba Hydro today on their environmental assessment. I believe first up is on mammals; is that correct? Sir, I will ask the Commission

secretary to swear you in.

Doug Schindler: Sworn

MR. SCHINDLER: Good morning, Chairman, Commissioners, participants, ladies and gentlemen. My name is Doug Schindler, I am a wildlife biologist. I work with my company Joro Consultants. I am the senior biologist at Joro.

I have been a biologist for 30 years working in the wildlife field. I have worked in government, and in private industry. I have worked on a number of projects of transmission lines. I have worked in areas, on generation station assessments on birds and mammals. I worked a lot with the forest industry as a consultant dealing with various issues relative to moose management, trapper management, caribou management plans et cetera.

Today I am going to talk to you about mammals with the Bipole III project which was conducted jointly by our company, and Wildlife Resource Consulting Services. And, I am going to put you through the, what was accomplished for the Bipole III project.

So I guess I will start out with the outline of our presentation. I am going to talk a little bit about mammals as a Valued Ecosystem

Component, what criteria we used in terms of establishing our list of mammal Valued Environmental Components, pardon me, as VEC. I am going to give you an overview of the mammals that we selected, and then talk a little bit about their ecology, and biology, and how that relates to how we assess the effects of the project on those mammal species.

I will discuss the predicted effects of the project on mammals. And look at how we reviewed the alternative routes and segments in the selection of the FPR, how that was incorporated. I will give you a summary of the evaluation of the FPR effect on those mammal VECs, and give you a summary of the results.

When we are talking about selection of a VEC species, we look at a number of different factors. One of the first things is the importance to people. Species that are important for hunting and trapping as well as those species that are culturally significant, and important to people across all walks of life.

We also look at what type regulatory requirements are, have effects on species, are there federal and provincial regulations, are there regulations, are there protected or critical habitats

for rare and endangered species, so we take that into consideration.

Keystone species, species that is critical in maintaining the structure of an ecological community and whose impact has some impact on, although it may not be a very numerous species, something like beaver would be a good keystone species, where it affects its environment and has implications to other species in the ecology of the area.

Umbrella species are species that we consider, species that, in making conservation related decisions on, on an area. A species such as moose reflects the broad habitat requirements for many, many species, so it could be termed as an umbrella species.

We also have indicator species that are indicative of a particular habitat niche, or type of habitat that exists on the landscape. An indicator species could represent the species for that suite of species that live in that particular habitat.

So, as we went through this, as our team of biologists, this is the list of VEC species that we came up with. Caribou, moose, we are going to be talking about tomorrow I believe. I am going to

discuss American marten, marten, beaver, elk, wolverine which is a special concern species under the Species At Risk Act. And grey wolf as a linkage species. And I will discuss a little bit about grey wolf, and how we brought that into the matrix of our evaluation.

So we are going to really talk tomorrow about moose and caribou but I thought it would be good today to introduce you to the moose and caribou. I mentioned earlier the habitat requirements for moose. Moose are very, very important species. They meet the needs of a great deal of boreal forest species. The habitat requirements of moose, and I will go through those very detailed. There are a lot of species that live in the same types of habitat and area that you would find moose.

Caribou is the same way. Caribou we are going to describe to you tomorrow the differences between moose and caribou in terms of their resilience, in terms of their population, ecology and habitat types. But I can tell you that moose and caribou are definitely part of the mammal suite that represent a broad, broad spectrum of habitat requirements that we have assessed.

So, I am going to start off showing you a

little picture of a marten. This is the American marten that we picked up on a trail camera photo. I guess I can start by saying the marten is probably one of the most valued fur bearer species by trappers, it is very actively trapped across the landscape. He is a member of the weasel family. And martens are an indicator species in that they, they are associated with mature coniferous forest, and they are known to forage in open spaces, open areas. And a lot of people think of marten with trees, but actually they spend a great deal of time on the ground foraging for small rodents such as voles, and mice. And they breed in summer and they bear their kits in early spring.

THE CHAIRMAN: Mr. Schindler, how large are marten?

MR. SCHINDLER: Martens, if you relate it to a mink they are probably the size of a mink, just a little bit bigger, little more bushy tail, little more pointier ears. And they are, there is another species called fisher which is a little bigger, more cat like than marten, they are the size of a big, big mink.

THE CHAIRMAN: Okay, thank you.

MR. SCHINDLER: Here is our friend the

beaver. I think he is everybody looks at him every day, when they reach into their pocket and get a nickel. Icon of Canada.

One thing about beavers, they breed during the wintertime in their lodges, and I think we all understand that they can really manipulate their environment, they build their lodges. The dams that they build, and the habitat that they create really adds to the ecology of an area.

Areas that have a lot of beaver in them are sometimes, they can be a scourge to those that maybe have a property, or they have a riverbank property where the beavers will actively harvest trees, or take down someone's favorite aspen tree, or I have seen nice big oak trees come down. But they definitely are a significant component of the environment in terms that they manipulate the, their surroundings, in creating floods, creating riparian areas. When we talk about riparian areas, we talk about the transition between water and forest. Creating willows, forage for things like moose. Lot of nesting habitat for birds. Beavers play a very strong ecological role on the landscape, and probably one of the biggest manipulators naturally of landscapes.

One thing that is interesting too, beavers, lot of these old floods that sometimes break away, and the beavers have moved out or the colony had died out, these flood areas can provide very unique habitats in terms of meadows and create diversity in itself. Creating edge effect for other species. So they are a very important part of the ecological community.

Another main VEC species that we dealt with was elk. And we, when we talk about ungulates, they are grazers, and browsers. Browsers would be those types of animals that eat a lot of twigs, and leaves high off the ground. When we talk about elk, they are browsers, but they are primarily grazers, so they like open areas, grasslands prairies. If you think of Yellowstone National Park, these huge herds of elk, often see elk very associated with wide open prairies. They do very well on prairies. As well as young deciduous forest habitat. Young sterile state, young aspen deciduous type growth is what they like. Elk, are very highly resilient species, in terms of they are very productive. When allowed to procreate and breed, and with low mortality from hunting, elk populations are known to increase very rapidly.

It is also interesting to note that although the elk do cause problems for lot of farmers in agricultural Manitoba, there has been a great deal of effort over the years in dealing with elk, in terms of trying to protect stored hay crops, and so on. They are a bold creature that do take advantage of food, if agricultural products are left untouched, that there has been just kind of an interesting point about elk, they do cause problems in terms of depredation on agricultural products.

Just a slide showing you the areas in Manitoba where elk hunting is allowed. And you can see it sort of corresponds with the prairie parkland regions. In the particularly the Duck Mountain, and the Porcupine Mountain areas, and also in the southwest areas of the province, in around Brandon Spruce Woods area.

We don't need to memorize all of these numbers, but the fact is there is healthy elk populations throughout Manitoba. There are seasons throughout all of those game hunting areas. The provincial population is estimated at about 7350 animals, according to Manitoba Conservation, a report that they have released. And, there are small satellite herds in other areas as well, that are

scattered throughout the Parkland region of Manitoba.

Now, here is a, an interesting little fellow, he is, there is a lot of interest in wolverine. The wolverine is a member of the weasel family, and just for the, the wolverines can be much, much larger than a marten, kind of almost like a size of a small bear cub, or maybe even a little bit bigger than a small cub. They have been locally called skunk bear, because they have kind of an odor, and it is kind of an affectionate name for the wolverine.

They are carnivores, but the thing about wolverines they are mainly scavengers, they depend a lot on carrion, and, they depend a lot on the efforts of things like grey wolf, that kill a moose, and, caribou. And they will depend quite heavily on the presence of carrion on a landscape.

They have extremely large territories. They are very secretive animal, and, they are extremely hard to study because of their low densities, and their large territories. And, the fact that they do move great distances as well. They breed in summer, and, through a process what is called delayed implantation, they have their, they regulate when they birth, and it is usually in late

February, to early March.

And interestingly enough, they don't necessarily make dens into the earth, most of their dens are relative to maybe brush piles, or areas where there is rock and cobble, where snow accumulates. And they make what they call a natal den where they will bear their young. It is not unusual for wolverines to move their young into maternal dens as the winter progresses.

So, they, and wolverine kits are known to become relative to other members of the weasel family they grow pretty quick, and they become fairly mobile more so than some other species in the weasel family. Wolverines because of their secretive nature, and so on, they are known to avoid disturbed areas, particularly, when during the denning period.

They are solitary. So in terms of the Bipole III, routing close to existing right of ways, or disturbance, you would expect that perhaps there would be the chance of finding wolverine close to areas that are disturbed would be much, much less than in areas that are way off into the wilderness. And wolverine are actively trapped in Manitoba. And although the production of wolverine is not very high just due to their density levels, there are seasons,

and they are actively trapped in Manitoba.

Now, just briefly, on the grey wolf, the linkage species. We incorporated wolf into the, into our assessments because of the, in some ways the effect of, of, that there could be increased predation on certain wildlife, in particular elk, and moose, because of linear access. But, I must tell you, and we will discuss this more tomorrow, there is not a great deal of, of conclusive evidence in terms of the wolf effects on a number of different wildlife species. Some of it relates more to caribou, and moose, so the real link between linear development, particularly transmission lines, and reduced populations of various wildlife due to predation is somewhat unsure in the literature, and science. But having said that, I think we included, you know, the fact that we wanted to incorporate that particular concern in our assessment.

So for mammals, as a group, we looked at mortality, population reduction, what are the effects of the Bipole III transmission line through overharvest either through hunting or trapping, and predation by wolves, as I mentioned earlier.

Habitat alteration, what is the direct loss of habitat? Looking at the amount of available

habitat that is available to these species, what is the effect of that? What about fragmentation, and functional habitat loss, disturbance during construction and trying to avoid areas that are intact, reducing fragmentation for all species.

And of course, loss of unique habitat, dens, and mineral licks, those types of things that are very specific, would be assessed as well. And, things like these unique types, dens, mineral licks would be more in terms of pre-construction monitoring, some of our recommendations to, in terms of our technical reports in the EIS you got to get out and find these sites specifically prior to construction, so that is one thing that we assessed.

Sensory disturbance, displacement. Do some of these animals move away? Are they moving during construction? How long do they stay away relative to the life cycle of the various species? How long does it take them to come back? Will they be disturbed for long periods of time, short periods of time?

I will talk a little bit about the evaluation of the alternative routes, route selection, and and the potential effects on the final preferred route on VEC species was conducted using available literature, and field data collected by

ourselves, and Wildlife Resource Consulting Services.

We also utilized a habitat database land cover data to do modeling of habitat. We looked at evaluating the amount of high quality habitat within the various segments and alternative routes and what the project components overlapping with the, with those particular habitats.

We assessed historical data, government documents. We also looked at fur production records. We recognized that in some areas, that communities, and, and registered trapline districts, there is a lot of production that occurs. And, I believe Mr. Kuzdak will be talking about the trapping program.

We also know fur production records are not necessarily indicative of the value of an area for fur. We definitely know there are some areas that are trapped more often than others, because of economic conditions, or perhaps their location might be a little more remote, and trappers are not able to get out to those areas. But we did incorporate the knowledge of the types of species that were being trapped, and at the volumes in the areas that we actually were able to get information.

I am going to present to you the results of

a, of a particularly interesting project that we conducted as part of the Wuskwatim transmission line project, results of Traplines and Transmission Line Project, working with trappers to look at the effects of the Wuskwatim transmission line.

So, route selection for mammals, when we ranked for our mammals component, we tried to, it ranked higher for route selection that favored avoidance of intact non-fragmented habitats. Those got a higher risk ranking. And also the amount of modeled habitat for each species, as well. So if we had segments with higher degrees of high quality habitat, we would incorporate that into the matrix. Areas of known fur harvest, as I mentioned early, consideration of areas not being trapped, so this was, we had to consider the fact that there may be good habitat in areas, but if areas were within really good trapping areas, it was considered.

And, general avoidance of known elk areas was a main criteria, as well. Avoiding those known elk ranges, and areas that I have previously identified.

So, here is an example of from a landscape scale looking at the project area, utilizing our, our habitat models. And you can see, that the various

dark areas represent areas of general concentrations of high quality habitat modeled for, in this case, marten. And you can see in, for example, in the western region, we know there is a lot of good marten habitat within these areas. So, from a, from the larger scale perspective, we can see that the predictions are fairly constant with, with the results of our models.

And looking up close, as we assess the alternative routes, you can see that using a GIS system, we could calculate the amount of area within the various segments and get a picture of which areas had more habitat for the particular VEC. Now, we have to recognize here that we modeled for a number of VECs, so the map would look different for each area. We collectively looked at all of the habitat types and incorporated that into our evaluation of the alternate routes and the segments.

Here is a bit of a close up for the elk areas, as you can notice the high quality habitat in the Duck Mountains, and up into the Swan Pelican Lake areas, obviously, and the Duck Mountains and Riding Mountain, and are Spruce Woods area, as well, shows up very well.

And, again looking at route avoidance with

those, with the -- oops, sorry, the avoidance of the FPR to the majority of the large elk areas, with the exception of this little range up through the Swan Lake area as identified by Manitoba Conservation.

Again just a close up of some of the routing. All of the information on mammals was incorporated into the evaluation matrix which you have been presented with earlier by Mr. McGarry, and Mr. Dyck. And again, the criteria that we used to rank those segments was high quality habitat, trying to reduce fragmentation, avoiding areas that were intact, and following existing disturbance where possible, would assist in reducing some of those effects, disturbance effects, and avoid known concentration areas.

Now, another thing we did, in terms of evaluating the FPR, we did surveys of the Final Preferred Route, and we did it for moose, and, all of the VEC species. And, amazingly enough, for example, marten tracks are actually quite distinguishable from the air, and you can map marten activity as such. Now the purpose of these surveys, was not to define, or develop an absolute number or density of the various VEC species, but more to define areas that had activity relative to the FPR.

Where perhaps we could begin to focus in the development of the Environmental Protection Plan.

Looking at areas that had high concentrations of marten, for example, would help to assess, in relation to perhaps riparian corridors, this is a work in progress, but this data will be used, and will be very valuable in the fine tuning of the Environmental Protection Plan process.

Now, to the very interesting part of my presentation here, the Traplines and Transmission Line Project. We worked with three trappers up in the Snow Lake area. Myself, and Vince Kuzdak of Eagle Vision Resources was part of this project. Our objective was to work with trappers to assess the effects of transmission line construction, and operation on fur bearers, and trapper's success. So, it had a bit of a social component in terms of what is happening in terms of the trappers' success, is it affecting their ability to conduct their operations, and what effect is it having on fur bearers. And, that was part of the Wuskwatim line project in terms of the monitoring for Wuskwatim.

So, over a two-year period monitoring was conducted to investigate the effects of transmission line construction on fur bearer movement, that was

one component of it. Some of the activities that were associated with the project included, we actually looked at small mammals. I mentioned earlier, that marten thrive on voles, and mice and things like that. We actually did small mammal trapping on the right of way, and away from the right of way just to see, if there was any difference, of the amount of small mammals that were occurring within the disturbed area, and away from the disturbed area.

These were trials. The data would not be scientifically defensible, however it was information that was very interesting to the trappers and ourselves. And we found that the small mammal community was very similar between disturbed areas, and areas away from the transmission line.

The trappers were very involved assessing during construction, you know, fur bearer movement, we gave them GPS units, and they were able to, to create a significant log of fur bearer movement near the transmission line, and again away from the transmission line.

We also did a limited fur bearer aerial survey looking at marten tracks, and wolverine and wolf tracks, in around the project between Snow Lake,

and pretty much Highway 39. That would have been the area.

The trappers themselves really enjoyed some of the activities, such as the trail cameras that they put out. It was a good learning experience for them, that they could see when animals were coming to and from some of their trap sites, and also looking at wolf movement on some of the snowmobile trails, and also interestingly enough, they got a lot of pictures of people, which was quite interesting, on their line. And in one instance, one of the trappers had some vandalism occur, and he was quite interested in trying to figure out on this trail camera, who that particular individual was to no luck. But, very interesting, very good participation.

So, again the whole thing was looking at near, and away from the transmission line. So the preliminary results of this particular project, you know, looking at trapping, and fur bearer activity adjacent to, and away from the Wuskwatim lines, indicated there was no real residual effect of fur bearer avoidance on trappers' success after construction.

So the trappers observed that fur bearers

avoided areas during construction, there is no doubt that when things were happening on the landscape, things scattered, and success was much less. But they did notice that once the disturbance settled down, that the animals moved back in fairly quickly.

Now, I just wanted to show you a couple of pictures of transmission lines. This is a picture of Bipole I up near, I or II, up near Wabowden. You can see some of the vegetation, the slide is a little bit out of focus, but nonetheless, you can see the structure that can accumulate after a transmission line is cleared.

Here is another example, this is the Wuskwatim line, this was taken this fall, and if the leaves were on, you would see that there is a fair bit of structure and what I mean by structure, is sort of, if you consider a marten that is quite short, I mean, he does like large trees, he does like cover, but he will travel short distances across openings. But we find that the transmission line right of ways, particularly in remote areas, re-vegetate quite quickly, and you do get a response of animal movement in a relatively short period of time.

Here is another example of a less

productive habitat, in terms of, you can see that there is a spruce trees, and yellow ones are tamarack trees, and you can see lichen on the ground. In photographs it shows up as quite white this time of year. So, you can see even in an area that is somewhat sensitive to lichen, that, that lichen does regenerate quite quickly on transmission lines.

So, in terms of evaluation of the FPR, overharvest of fur bearers through increased access is not really expected. We know trappers manage their catch, and harvest is regulated by Manitoba Conservation. As indicated earlier the sensory disturbance is expected to be during construction, with animals returning, returning afterwards. We would, we expect that the effect of fragmentation on marten and other fur bearers, would not be expected.

Regrowth of the right of way following construction provides natural structure for mammal movement. In terms of beaver, overharvest of beaver would not be anticipated. Again, trappers typically manage their traplines, and we would expect that there would be no effects on beaver populations in the project area. The protection of riparian habitat, and maintenance of those areas as part of the Environmental Protection Plan would be expected

to reduce the effects on beaver.

In terms of elk, as I showed you, the main elk areas are away from the final preferred route, and, associated with Duck Mountains, and Porcupine Hills, so they are away from those areas in the Ducks, and the Porcupines. Elk, if present along the FPR, and there is little evidence that even if those small areas that there are any concentrations of elk, but if they are there, during construction, it would be expected that they would return once disturbance has ended.

Also, I guess in terms of habitat within a right of way, typically a right of way, if there is a good cover adjacent to the transmission line right of way, that habitat would essentially favour elk. It is also important to note that elk have very large home ranges and FPR constitutes a small portion of habitat for all life stages of elk. We are going to talk a little bit more about this tomorrow, when we get to moose, describing all of the life requisites for moose, and what percentage of that transmission line represents the components of that particular habitat for moose.

So, potential for overharvest of elk is not a concern due to the location of the area. We are

not going through major winter concentration areas of elk, we wouldn't expect that incidental harvest of elk would occur in those areas, the core elk areas are away from the FPR, and that those major elk areas are not being affected.

For the most part, following the lineal development and disturbed areas really helps, those areas are already disturbed, and so it negates the effect of new development through unfragmented habitat.

Wolverine. Wolverines, have very large home ranges, and occur at very low densities, as I indicated. The majority of wolverine observations during our surveys were outside of the local study of FPR. Local study area, three mile corridor, there was lot of wolverine observations in areas near the Snow Lake area, and areas west of Setting Lake in the Wabowden region. And that is where, based on some of the reports from trappers, as well as results of aerial surveys, and observations, that major wolverine area, is away from the FPR.

The fact that wolverine do not den, or typically would not den near disturbed areas and, with the FPR following existing linear features for the majority of the areas, particularly, in the

Wabowden area, north from the Wabowden caribou range following the existing Wuskwatim transmission line, that the possibility of encountering a denning wolverine, would be very, very slim.

Talked earlier about predators and wolves and coyotes were observed, there is no doubt that study staff did observe wolves, and coyotes both in right of ways, and intact forests. Some of the preliminary results from wolf collaring in the north, as part of the caribou program, has provided some insight, although preliminary, into wolf use of transmission line right of ways. We are finding that wolves are more associated with younger forests, water bodies, frozen water, and, also to a lesser extent with transmission lines.

We did incorporate ATK into the, Aboriginal traditional knowledge into our evaluations. Information from interviews and workshops that were provided to us outlined that marten were actively found and trapped in areas that overlapped with areas that we saw as high quality habitat. So, a lot of the information, particularly some examples in the Duck Mountain Provincial Park areas, there was areas that were identified through some of the interviews and reports, people said they trapped martens in

these areas, and they showed up as high quality habitat. So, in some ways helped validate some of our assumptions.

So, some of the mitigation that was proposed in our EIS, and as we base some of our final predictions of residual effects on VEC, were based on clearing of the right of way during winter months, to minimize disturbance during birthing months and rearing of their young. So clearing during winter, mitigates that critical birthing period.

We feel that the mitigation measures for the protection of riparian habitat is very, very important. Protecting those specific habitats that are important to very many species. Riparian habitats are known to be an ecotone that will provide lot of cover in relation to food. And also provide travel corridors back and forth across the right of way as well.

And provincial harvest strategies managing trapping, and hunting activities, we expect that the Manitoba Conservation to continue to manage those wildlife populations in a sustainable way. And that the effects of the transmission line, will not result in significant residual effects.

And access, obviously, is one of the larger

concerns. And Manitoba Hydro will manage access during construction. And, I know this is a work in progress, and the resource, the access plans, are being developed and fine tuned. And working with local resource users, trappers, working with Manitoba Conservation on effective access management.

Just very quickly, just, in terms of looking at the mortality, some of the potential effects that we assessed, overall, this is overall, and at a very high scale, looking at mortality, I mentioned earlier that, you know, we, the environmental indicators are regional population, population scale, what is happening at the population level. There sometimes is regional effects as well. The parameter could be hunting statistics, population status, the potential environmental effect would be the overharvest as a result of the increased access. And I reflect again that there is not solid, there is not a great deal of defining information suggesting that the effects of access on some of these VEC species, would result in a reduced population.

The one thing to remember here, as well, is that the FPR follows areas that are, that have existing linear development, and the effects of access are already occurring in those particular

areas. So by paralleling other areas, there is usually access there, so any effect as a result of people using those areas is, is already felt.

Habitat alteration, you know, we can model the habitat, the environmental effect would be habitat loss. I think we have described that. But in the end populations will be maintained within their natural range of viability. The habitat being lost is very minor in comparison to their home ranges and available habitat within the region.

Sensory disturbance, back to that, you know what is the animal abundance. I think we can admit there will be short term avoidance or displacement during construction, but again coming back, these populations will be maintained within the natural range of variability.

We are in the process of assessing these, these new route segments within the Wabowden, Moose Meadows, we have conducted preliminary investigations, we have, we have done some habitat models, we are in the process of looking at that. And based on some of our preliminary assessment, which will be fine tuned at this time, we feel that there, there will likely not be any major conclusions in the EIS as a result of these route changes.

But, I suggest that this is, this is draft in nature, but this is a work in progress, that we are working with Pat McGarry, and Manitoba Hydro on developing an assessment for these routes, these revised routes.

So, I am into the conclusions now. I would just like to state that the area of the right of way, is a small part of the annual life cycle for these VEC species, it represents a small portion of their annual range.

The avoidance criteria used in the FPR reduced the effects on mammal VECs. Sensory disturbance is expected during construction, as I have explained. Fur bearers, and other mammals will return once construction is complete. Wildlife will forage, and utilize right of ways, and we expect that the right of ways, will not be a barrier. You can see a picture of a lynx going across a beaver flood there, at the lower side.

Increased predation by grey wolf is not expected as a result of the FPR on elk in particular. And, we will talk about moose tomorrow. Increased mortality due to excessive harvesting and trapping is not expected, as for the reasons that I described. And, the avoidance of the areas to those elk concentration areas, we have avoided those high use

areas, so we are not expecting increased mortality to elk populations to reduce those populations.

I would like to conclude that the conclusions in the EIS are based on a summary, or on what I have just described, and we know that successful mitigation is necessary, and monitoring of those mitigation efforts, will help validate the predictions that were made for mammals in the Bipole III EIS.

Thank you very much. Appreciate you taking the time to listen.

THE CHAIRMAN: Thank you, Mr. Schindler. We may have a couple of questions of clarification at this point. We won't get into the meat of it today. I do have a couple of questions. You mentioned a couple of times that trapping is regulated by the province, by policy, are there limits on the amount of fur bearers that can be trapped? How is it regulated?

MR. SCHINDLER: Well Manitoba Conservation has a system in place where they monitor fur production, and they also have feedback from trapper organizations, like if there is declines in populations, or if they think that there should be some, for example, there was concern with marten a

few years ago in terms of adult female marten become very active in February. So through their season setting process, they have a regulatory system, where the regional wildlife managers, will bring forward regulation changes, and they may adjust seasons, based on abundance of species. But as far as limits, or there is really no limits on any particular species that can be trapped. There is an annual review they go through.

There is a lot of communication between the Manitoba Trappers Association, and the various local Fur Councils that communicate issues to Conservation, so, if there are conservation issues, they generally show up in the trapping regulations.

THE CHAIRMAN: Thank you. Also, you mentioned, in respect of the evaluation of the FPR, and elk. You said that the main elk areas are away from the FPR. But on your map you did show us one area north of Swan River where the FPR cuts right through an elk range.

MR. SCHINDLER: Yes, that particular is very close to the Porcupine Hills there, 14. It is delineated on the map, I am not so sure there is, that that is a major concentration area. They are showing it as an elk range, but within the area of

the FPR, the evidence of elk were not observed, and, that, that, area is identified, I agree. But the majority of those elk, are probably up in the Porcupine Mountains, the Duck Mountains, and the Riding Mountain as indicated. There are satellite bands of elk that do occur throughout the area, they can occur, and they do shift their range from year to year, as well.

THE CHAIRMAN: Thank you, do any of my colleagues have questions of clarification? Mr. Gibbons?

MR. GIBBONS: Thank you, Mr. Schindler. It is just some clarification, if I may, because it is something I have been struggling with during this process, is the regrowth in the ROWs. On Slides 29, 30, and 31, in particular. Any ball park of how long that growth took to come back, in other words, from the clear cut stage, to what we are seeing on the slides, is that five years growth, ten years growth? And some sense, perhaps, of what the height might be of some of the structures you referred to. I am thinking here in case of trees, as structures. They are typically, what, 15 feet or lower? Those -- when they are in the ROW?

MR. SCHINDLER: I am having trouble hearing

you.

MR. GIBBONS: Two things, one is how high would that growth be in those slides you showed us, 29, 30, particularly, and how long does it take to get to, about that level?

MR. SCHINDLER: Let me see if I can find them here. In this particular, this would be the Wuskwatim transmission line, and that is probably three years of growth. Might be two, but I think it is three years. So, those birch trees, are probably up over your head. And it is not uncommon, and it really depends on the site conditions. Like when you are talking transmission line as long as Bipole III, there, you have got everything from, you know ericaceous, what we call ericaceous bogs, and swamps, where you find a lot of very slow growing material. Those areas take quite a long time to regenerate. Some of those trees could be two hundred years old, and as tall as me. Those types of sites, are very brushy and then in some cases those trees, are not even, they don't even need to cut those trees down.

But in other areas, where you have some soil, you know, particularly clay soils, you can get aspen regeneration, you know, it can be, it can go four, three, four feet in the first year. You can

have very thick aspen regeneration very quickly. And in my past experience working as a wildlife biologist with the province, in forest areas that have been harvested, particularly if there is an aspen component or hardwood component, you get regeneration very quickly. Particularly, if things are sheared off in the wintertime, and all of that energy is stored in the roots of that plant material, particularly trees, and shrubs, willows, alders, you can get a fairly significant flush of growth in the first year.

And so in this particular -- some of this might be, I would suspect that might be five, or six years since that has been, pardon me, maybe more like about seven, eight years maybe, because that is a slower growing site, and those tamarack trees are, take a little bit longer to grow. In an area like this it could be eight or ten years, maybe ten years of regeneration. They can come fairly quickly from an animal perspective.

The other thing too, is interesting, is brush piles, is if there is course material left on the ground, lot of animals use brush piles and debris on a right of way. Particularly marten, and create some micro environment for small mammals. That can

create some benefits, as well, and that is in terms of some of the forestry management prescriptions, leaving brush, and debris. Woody debris is very important to wildlife. Things like everything from cavity trees that fall over, they form snags that fall down, dead logs, it is all very important to wildlife habitat. There are some opportunities to augment some of the wildlife capability. After, after clearing, you have to clean, brush piles, I think you can see some brush piles on that particular picture right there. That would provide some good micro habitat for a lot of species.

MR. GIBBONS: One other quick question, on the slide regarding the lichen, that is slide 31, I think. Do you know offhand if caribou will graze in this area that close to the power lines? Is there some, do we have some record of them not being concerned with the power -- this right of way is, is this one from, this is not Wuskwatim, you are saying, this is older?

MR. SCHINDLER: I believe that picture was taken up on Bipole I or II.

MR. GIBBONS: With six or seven years of experience, do we know that caribous will graze in that area?

THE WITNESS: Actually tomorrow's presentation we are going to get into that in quite detail about the use of right of ways, and effects of right of ways on caribou. But I can tell you boreal woodland caribou will forage in are or near transmission line right of ways.

MR. GIBBONS: They will, thank you.

MS MACKAY: Question about the biology of the marten. You say that it breeds in summer, and the kits are born in early spring. Is this a species that is delaying implantation?

MR. SCHINDLER: Yes.

MS MACKAY: One other quick question, can you remind me of why in your final conclusions you are saying that increased wolf, grey wolf predation is not expected. What, what data are you basing that on?

MR. SCHINDLER: The effects of grey wolves on things like elk and moose, there is a great deal of uncertainty in the literature one way or the other. In terms of the effects of predation on limiting particular moose, elk, or population of fur bearer due to that particular facility. There is evidence of wolf use, and movement. There is probably better literature in terms of some of the

caribou studies that have been done on wolf and caribou. But it is not definitive, and it is somewhat weak, perhaps, to suggest that every linear corridor is going to result in a significant decline of a wildlife population. We are not seeing that. We are seeing lots of areas that were very fragmented currently, through things like forestry, existing linear development, where populations, where linear development exists, and we are seeing sustainable populations within those areas.

MS MACKAY: At this point you don't have the negative data, you just don't have positive data; is that correct?

MR. SCHINDLER: That would be a good assessment, the science community, in that particular area is, is, the literature is somewhat lacking in terms of definitive effects of a particular transmission line on reducing populations. Correct.

MS MACKAY: Thank you.

THE CHAIRMAN: Thank you very much, Mr. Schindler.

MR. SCHINDLER: Thank you.

THE CHAIRMAN: Next.

MS MAYOR: Next we have the trappers presentation. And just perhaps while we are doing

the turn over, we have got a couple of documents to file by way of answers to undertakings, that were provided.

There was, last week, in both Portage la Prairie, and Niverville, some questions relating to the Corporations steps that it would take to subrogate against farmers, so we have an answer to that particular document, so we will file that as an answer to undertaking.

The question in particular, we can locate at page 1754 of the transcript, I will have that filed.

As well yesterday there was a request that the Corporations reimbursement policy be filed as part of the record, we will file that as well.

And, finally yesterday morning, you had asked a question about Aboriginal workshops, and the dates of those workshops, and in particular the question that was put to Ms Zebrowski, at page 460 of the transcript during the first week. The answer to the dates of the workshops was filed as Manitoba Hydro Exhibit No. 52. At page 932. Of the transcript. If there is anything in addition, excuse me, that you require, perhaps you can advise.

THE CHAIRMAN: Thank you, Ms Mayor. Mr.

Kuzdak, I remind you you are bound by the affirmation you made in Gillam when you presented there.

MR. KUZDAK: Yes. Good morning, Mr. Chairman, members of the Commission, and members of the audience.

As the Chair had indicated, we presented this presentation, to the Commission, and members of the Gillam Fox Lake community area. And there has been no changes. And, it was suggested that we bring this forth to the Winnipeg hearings to bring others, who may not have been, obviously, available to attend in the Northern parts of Manitoba.

I would like to first off say this is not specific to Bipole III. Manitoba Hydro's Trapper Notification and Compensation Policy applies to all new transmission lines. So, if for example, another transmission line was being constructed, or being proposed in another part of the province, the same policy would apply.

This slide here, I think, again, we are getting rather used to. The only difference is here, is I just wanted to illustrate to the Commission, and the audience, that we have layered in registered trapline sections in red. There are approximately -- well, there are 46 RTL sections in

Manitoba, and upwards of 800 registered traplines in the province. So there are basically, wherever Hydro is planning, or operating transmission facilities, we are almost likely to be working with, with trappers.

Little bit of background on the policy. Manitoba Hydro brought this forth before my time obviously, but it was brought in, in the 1980s. And it was brought in to compensate trapline holders that were being impacted, or disturbed, if you will, by transmission planning, and development. After I started working with Hydro about ten years ago, I was asked by the licencing environmental assessment department to review the policy, and see if there was any opportunity to improve the policy.

At that time, through my research, and looking at other examples that were taking place across the country, and across North America, for that matter, we moved to include a notification component, or a communication component. And I would like to add as well, since 2002, we have, I believe, done our due diligence, and reviewing and researching, once again. If anything new came on stream, especially, with all of the oil and gas activity in the west, and to date we, we are pretty comfortable with what we have here as a product.

When we brought in the notification, communication component we wanted to build stronger relationships with trappers. We wanted to work with trappers to gather more information, so we can reduce any negative impacts. We were looking at assess locations for future trapline development if needed. In some cases, and very few cases, I might add, trappers are required to relocate, and Hydro certainly works with the trapper to do that.

The goal would be to reduce project related impacts. And, as Mr. Schindler had indicated, he went into fairly good detail in his presentation on the pilot study in Snow Lake, and certainly, we initiated that pilot study, so that we can better understand, you know, fur bearer behavior as well as trapper success. And a goal, again, would be on going continual improvement.

Manitoba Hydro certainly wants to respect trapper's values. Trappers are very unique in a sense, that they are always out on the land. Mr. Schindler, again indicated that in some cases, fur prices, weather may dictate when, or how much a trapper will go out and, conduct a trapping activities. They have a unique traditional, and cultural lifestyle.

And I think the way we are going to gain that respect is ongoing two-way communication, as with any, as with any good relationship, there needs to be that two-way dialogue.

The policy programs, of course, there is two parts of it. There is the Compensation Program, and the Notification/Communication Program. The compensation program, is for registered trapline holders that are affected by new transmission facilities. And that, of course, is 115 kV and greater. Compensation may include trapline improvements, employment opportunities, equipment replacement, and or monetary settlement. And I will get into that a little further here.

Notification program we direct that at all licenced trappers in the vicinity of a transmission line. So, we attempt to contact all trappers, and, those, of course, I refer to as trapline helpers, out on the line.

The purpose would be to contact local trappers, would be to keep them up to speed on new development projects. I will explain a little bit, as we get into the compensation aspect of it with regards to helpers.

So the notification/communication program

you know, participation, what does that do for us? We go out, as this map would illustrate on a trapline, we go out and we try and identify where that trapper's activities actually are. Where their trails are, where their cabins are, where they consider high value habitat areas are. And we would certainly during the planning stages of a transmission line take those into consideration and, do our best right at the Environmental Protection Plan stages to try and minimize the impacts to the trapper.

On the right hand side in 2002 for the Wuskwatim project, we brought in what we called the Trapper's Handbook it is basically a diary of the Trapper's day-to-day activities. So he or she could record various weather observations for example, or anything else of significance. Caribou movement, and the trappers could also track their expenses, and so forth.

There is three parts to the notification program. We have an initial notification, and this occurs during the latter stages of the Site Selection Environmental Assessment period, or after the Environmental Impact Statement has been filed. Hydro will contact the Manitoba Trappers Association,

the various local Fur Councils in the project area, and, of course, the individual trappers themselves. And at that time, we could begin to initiate any critical information.

The intermediate notification is basically where we are today, this is occurring during the public, and government review of the Environmental Impact Statement. Manitoba Hydro will contact trappers to review project plans, record additional information, discuss any employment or business opportunities, we would explain timing of the project, and begin discussing a settlement if eligible. So, as I sit here, and present to the Commission today, we have people, in fact, out in the field working with trappers.

And, then, finally, we would have the pre-construction notification. And this would occur before construction activities. And certainly hopefully not hours before, but hopefully days, or maybe weeks before. We would look at determining a fair and reasonable type of compensation. For eligible trappers, monetary settlement for the disturbance period would be offered, and I indicated earlier that helpers are also included in the notification component, however, helpers are not

offered monetary compensation. Simply because helpers could, from year to year, they could trap -- they need the permission of the registered trapline holders, so, ideally, we want to work with a consistent trapper on a particular trapline.

We look to, we look at a release agreement signed by the trapper, and Hydro. Trappers again would be up dated on project schedules. And trappers would be requested to remove any trapping equipment as required in hopes of not damaging any of their equipment.

Trappers maybe compensated for any damage during construction activities, so hopefully, from the previous slide, we will have, avoid having to replace equipment and so forth, if we do our job properly. But the replacement could include equipment, buildings trails used for trapping.

Then we have the compensation, or the monetary settlement part of the program. When does this occur? When there is an anticipated reduction in trapping income due to construction activities. Settlement packages maybe provided for the disturbance period based on a formula which, I will do my best to explain. And line holders, of effected registered traplines would be included here.

So, again it would be for the registered trapline holder, and not for the helper.

We, would hope that when we do this, that the registered trapline holder would take into consideration their helpers, and share the compensation for the disturbance.

How do we determine the monetary settlement? We look at the total trapline area that the trapper is working on. We know that we have a final preferred route, or a right of way. And, we expand that to five kilometers, on either side so, what we call is a ten kilometer disturbance zone. We look at the trapline production over the last ten years. As Mr. Schindler indicated, Manitoba Conservation's Wildlife Fur Management Unit is responsible for this.

So, we go to that body, and, request trapline production for the registered trapline in question. Once we retrieve that, we take the best three years average, we come up with a, a gross income. We subtract 50 percent of that for anticipated expenses, so that would give us a net income. Half of the net income, we add on, for domestic losses, which, would be for say, if a trapper is out on the land, they are typically using

country foods such as upland game birds, perhaps moose, and whatnot. So, they are compensated for any domestic losses.

So, that gives us a total loss for one year, and we multiply that over a five-year period, and, typically it is one year for clearing, one year for construction, and we add on three years, which we anticipate the animals will be moving back. And, hopefully the pilot project at Snow Lake is going to give us a little more insight into, you know, the timing of when this occurs.

So the settlement agreement, once agreed to, details of the compensation is confirmed in a written agreement. And line holders, of course, indicate their approval by signing the release. And if anybody would like further information on this policy, here is the information for Hydro in Winnipeg here.

THE CHAIRMAN: Thank you, Mr. Kuzdak. I think just on a procedural note. The way I reminded you that you had appeared before us before, we sort of skipped over an introduction of you. So, for the benefit of those who weren't in Gillam, perhaps you could introduce yourself, and, your firm?

MR. KUZDAK: My apologies, Mr. Chairman.

My name is Vince Kuzdak, I am the principal owner of Eagle Vision Resources. It is my own consulting company focusing on natural resource development. I come from the southeast shore of Lake Winnipeg. Band member of the Hollow Water First Nation. I grew up commercial fishing, trapping, I spent a lot of time in the bush with my grandfather.

Eventually, I went onto post-secondary schooling in University College of the North where I graduated from the natural resources program there. I have been working with Hydro for ten years, and basically focusing on trapper relations, however, I also do some environmental related monitoring for the licencing Environmental Assessment Department.

THE CHAIRMAN: Thank you. Questions, Mr. Motheral.

MR. MOTHERAL: Thank you, for the presentation, Mr. Kuzdak, if I was wanting to become a trapper, a registered trapper, what is the process? I mean, do the trappers' association allow just so many traps in an area, traplines in an area, or can you get in there, without disturbing existing trapline operators?

MR. KUZDAK: In the, mostly in the northern part of Manitoba extending down to The Pas area, as

well as taking in the Porcupine, Duck Mountain, and Turtle Mountains, we have a registered trapline system there, where the 800 registered traplines exist. Typically, they are all all active, as far as I know, at this point. Some of them are non-active because of the remoteness, and the lack of access to get into these areas.

But the first process, would be to become certified under the Manitoba Trappers Association. They have a program to educate trappers. Typically younger trappers, who want to get into the trapping industry, and they teach them to trap humanely, survival skills, and so forth. And, so, once you get to that level and a registered trapline opens up, you would then apply just like you would for a job.

You would fill out your experience, what type of equipment you have, capabilities of going out and working your trapline, and that would be reviewed by local fur councils, the Manitoba Trappers Association, and ultimately the decisions would be made by Manitoba Conservation. So, there is a little bit of a process. It is just, you don't jump on your Skidoo, and you go out, and you trap where you like.

In open trapping areas, it is a little

different, and that basically focuses in and around agricultural Manitoba. It is not as managed, you know, as, as it is in the RTL system. So, it is a little easier, to go out, and buy a licence, and, typically farmers, and local community residents, in those open areas trap those areas. And from what I understand, it is basically -- it is respect by trapper, so there are no boundaries, there is no boundaries, to say, I am on Joe Trappers trapline now I shouldn't be here, it is a little bit different in the open area.

MR. MOTHERAL: And if I may, thank you. If I may too on your compensation, on the compensation policy, I like to see examples of the, what would an average trapper receive, with a line going through his area? Can you, is that possible?

MR. KUZDAK: We can certainly follow-up with an undertaking on that, Mr. Motheral. I will, I will let you know, though, that it varies from trapper to trapper, because of the two main factors that come into play, one is that trapper's past production, and the amount of area or percentage of the trapline affected by the kilometer zone, so, it really jumps all over the map. For the --

MR. MOTHERAL: That is fine, in other

words, right now, you can't do it, it would take a while for, to get that information.

MR. KUZDAK: There are so many different variables, I would appreciate following up with an undertaking to get you up to speed.

THE CHAIRMAN: Perhaps you could provide us with three or four examples, obviously without any identifiers, this agreement allows so much compensation, that agreement allows so much compensation, would that be possible?

MR. KUZDAK: We can certainly put something together. If there is no production, for example, we offer a minimum payment of $500 as a gesture to the trapper. However, if the trapper is out there, and he is very active, it could be at the other tip of the scale. So, I could certainly provide some tables, and to give you a little better indication of what numbers we are dealing with for Bipole III.

THE CHAIRMAN: Mr. Gibbons.

MR. GIBBONS: Yes, thank you for your presentation. And, I hope I I didn't ask this question, in Gillam, I don't remember if I did. But it is just a clarification of terminology. Slide six in the left hand column, you indicate that the compensation, that the compensation program is for

RTL holders only, so this is a registered trapline holders. In the right hand column under notification, you mention all licenced trappers. What, percentage of all licenced trappers, might be RTL holders? Just a ball park figure, if I may. Presumably they are not the same. I mean, a person, can be both, but not all, I am assuming that all licenced trappers, are not necessarily RTL holders?

MR. KUZDAK: Yes. That's correct. For Bipole III with our final preferred route right now. There are 60 registered traplines, that we have, that we are going to be working with. 57 of those are active, three are vacant, due to inactivity, or perhaps a passing. So, there would be 57 registered trapline holders right now we would be working with.

Typically in most cases, each RTL has one, or sometimes in the northern, especially in the northern part of Manitoba there are two helpers. So, we attempt to contact all trappers, including the RTL holder and helpers to let them know of the project activities, and details, and locations, and so forth. So I couldn't give you a percentage, because I wouldn't, I wouldn't know off the top of my head how many helpers there are working with those 57 registered traplines.

MR. GIBBONS: When you refer to helpers, you are referring to those who are licenced trappers, but not RTL holders?

MR. KUZDAK: A helper is required by the Province to purchase a commercial licence to trap even though he, or she may be on another person's registered trapline. And that helper needs permission from, on an annual basis, from the registered trapline holder. And that is in the form of a written permission. And so therefore when we come to our compensation, and our monetary compensation, that helper may not be on that line from year to year, so our focus then is to work on the trapper who is consistently working the trapline.

MR. GIBBONS: Thank you.

THE CHAIRMAN: Thank you very much, Mr. Kuzdak. We will take a break now, for 15 minutes, and, then proceed with the next presentation.

(Hearing recessed at 10:30 a.m.
reconvened at 10:46 a.m)

THE CHAIRMAN: I would ask the Commission secretary to affirm the witnesses, before us.

Jim Nielsen: Sworn.
Elisabeth Hicks: Sworn.
Virginia Petch: Sworn.

THE CHAIRMAN: Thank you. We want to bring, given our commitment to absolute transparency, there is a very distant, and old link between one of our panelists and one of the witnesses, Mr. Motheral.

MR. MOTHERAL: Thank you, Mr. Chairman. Mr. Nielsen, and I went to university, probably 45 years ago. I hate to say that. We did have some connection, at that time. And our daughters in, more recently, have bonded, and are very good friends. So I just thought I would bring that forward, that Jim was about three years ahead of me. That means, I am a little younger than I am, that is what I want to say.

THE CHAIRMAN: So three years behind you. Go ahead. I just note that, just ask you to speak fairly close to the microphone, so that, we can all hear you. Go ahead.

MS HICKS: Good morning, Mr. Chairman, commissions, ladies and gentlemen, my name is Elizabeth Hicks, I am president of EH & Associates, which I founded in 2006. I have a Masters degree from the University of Toronto and my field of

expertise is environmental impact assessments.

I have been working with Manitoba Hydro on site selection environmental assessments since about 1989. I was consultant project manager for the Riel Reliability Improvement Initiative which established the site for the Riel converter station which is part of the Bipole III project. I was also project coordinator for the Wuskwatim transmission facilities, as well for numerous other stations, and transmission line projects for Manitoba Hydro, including the Glenboro Rugby Harvey international transmission line.

With regard to Bipole III, I was retained by Manitoba Hydro in June of 2011 to compile the socio-economic effects assessment for the EIS filing that was completed in November of 2011. My involvement was focusing on finalizing relevant sections of Chapters 4, and 8 relating to the socio-economics effects assessment. What I am planning to do today is provide an overview of the socio-economic effects assessment for the Bipole III project.

Outline of my presentation. I will first do an overview of just generally the presentation. And then I will talk about each of the three

components of the project individually, the first being Riel converter station, and associated facilities, the second the Bipole III line, the third is the Keewatinoow converter station and associated facilities. And finally, I will wrap up my presentation with the summary of the residual environmental effects of the project.

So, in terms of the overview, what I want to talk about very generally is what the purpose of socio-economic impact assessments as we call them, SEIAs, are. SEIAs examine the effect of a project on people who are part of the existing socio-economic environment in vicinity of the project. Changes in the physical and biophysical environment can affect the well-being of people, lands, and resources they use, and their ways of life. Also direct project effects can occur as a result of project expenditures including business and employment opportunities.

We talked, Mr. Osler, had talked about VECs, in his presentation. VECs, Valued Environmental Components, are valued by people, and help characterize the effects of the project on people. VECs, are not specific to individual groups of people, they tend to characterize the concerns and issues of importance and thereby the potential

effects of the project on people. As I think Mr. Osler noted, there are 21 socio-economic VECs for the project. There are six land use VECs. One economic VEC. Two VECs for Culture and Heritage resources, seven VECs for resource use, two VECs for services, and three VECs for personal, family, and community life.

At this point, my colleagues sitting beside me, because of the amount of attention three VECs have gotten during the project, the SEIA process, there is going to be a separate presentation following mine on the Cultural and Heritage resources by Virginia Petch sitting beside me, and a separate presentation on agricultural land use and productivity, by Mr. Nielsen sitting to my left.

This is just a general slide about route and site selection. Mr. Osler had said similar in his presentation yesterday, the one good thing about SSEA projects, is that you can route, and site to minimize potential effects of the project. You can avoid adverse effects through your routing process.

Also, with respect to transmission lines, and site selection the range of issues, and related impacts will vary for different project components, for example, HVdc line versus the converter stations,

as well as for specific areas in the project area. For example, northern resource use, are different from southern agricultural lands.

Further management and mitigation through the site Selection Environmental Assessment Process, is minimized through suitable design, and construction standards, and practices; use of local, and traditional knowledge; and Environmental Protection Plans, and Access Management Plans, that outline management measures that will be carried out through construction and during the life of the project.

One slide here, that talks, about Health Impact Assessments, and Human Health Risk Assessments, given the nature of the Bipole III project mitigation measures and short term duration of construction for the project a Health Impact Assessment is not required. There are no pathways to effects, project will not have health effects on local communities and residents. Similarly, Human Health Risk Assessment are not required.

Health Canada has identified a number of criteria for projects that pose potential risk to human health. And they have identified three criteria, and I quote, Potential for emissions or

release of contaminants of concern, COPCs, secondly, potential human receptors, and existing pathways, for human exposure to the contaminants of concern. In the case of Bipole III project these occurrences would only be contingency events which are not expected to occur, and therefore Human Health Risk Assessment is not required for the project.

Okay, now starting with the first of the three project components, Riel converter station and associated facilities. As noted, I think by Mr. Osler yesterday, the property for the Riel converter station was obtained for the development of Riel station, which was part of the Riel Reliability Improvement Initiative, which I indicated in my introduction that I was project manager of.

When they bought the site for the Riel converter station, or Riel station in this case, they also purchased, Manitoba Hydro also purchased adjacent properties, and residences in the vicinity of that site. The converter station, the Riel converter station footprint has been established through the construction of Riel station, hence construction related effects, are expected to be small in terms of the Riel converter station.

Riel converter station, and associated

facilities, and looking at VECs, under land use. There are no residual effects on land use with the construction of the converter station, because as I said the site has already been established. However, a section of land is required for the ground electrode, and the electrode ring will be sited at the center of the property. The portion of the site for electrode is permanently taken away from the land base, it can't be used. But lands outside the ring can remain in agricultural production.

In that full section of land that Manitoba Hydro is purchasing, there are are two residences, and I believe two shelter belts. Those residences, and shelter belts will need to be removed, and, they are likely going to be sold, because Hydro doesn't want residential development in that site.

In terms of Riel, and associated facilities, there is no issues of concern with respect to resource use.

And in terms of economy, construction employment is estimated at approximately 640 person years, but that doesn't include contractor, supervisory, management staff, nor Manitoba Hydro staff. The work force, obviously, will ramp up, and taper off gradually, and the peak is estimated to be

about 350 workers. So overall the effects on economy during the construction of Riel, and Riel ground electrode is positive.

Riel converter station and associated facilities looking at the groups of VECs, under services. In terms of community services, given the proximity of the Riel site to the city of Winnipeg, and relatively small work force effects on community services are expected to be small. And this has been the case with the Riel station which is currently being constructed.

In terms of travel, and transportation, the major roads through there are PR 207 is where the site is. And PTH 15 is another major road where materials are being delivered. Traffic generated by the construction of Riel is within the design capacity of those roads, but we have identified some mitigative measures to minimize potential effects. One being that agencies, and infrastructure operators will be notified regarding schedules, for equipment and material deliveries.

There is a rail crossing, across Highway 15 to bring heavy equipment, to the site. And as is being done for the Riel station project, flag persons, and warning devices will be placed at the

railway crossing to make sure that traffic travelling along Highway 15 is safe. Movements of dangerous goods, will be subject to regulations on the transport of dangerous goods, and also road restrictions would be adhered to. And further discussions, will be held with the RM of Springfield, and MIT regarding schedules for deliveries of equipment.

Public safety. The station security infrastructure such as fencing, and security building at the entrance to the site have been installed as part of the Riel station, so that is all in place. There is a remote control gate, and vehicle barriers located primarily at the station entrance. In addition, video cameras will be used to monitor site activity. And the station has a lighting system, or perimeter lighting system for safety and security measures.

Riel, again, Human Health, which we have looked at in terms of noise, vibration, and dust. As I indicated earlier, site preparation for the Riel converter station was done as part of the development of Riel station. The location of the ground electrode, in the center of a station will minimize these effects. The effects at any rate during

construction, are short-term, temporary, and intermittent. Noise generated from the construction of the facilities will typically fall within provincial noise level guidelines.

And, other mitigation, mitigative measures we have identified to minimize effects, include relevant by-laws, and regulations regarding noise will be reserved -- will be observed where possible. If implosives are being used to splice conductors, advance notice will be given to adjacent property owners, and local authorities at the start of the activity and will involve using an air horn every time a charge is set off. As well as posting signs, to advise travelers along PR 207. And this same mitigation was being used for the Riel station, as part of the Riel Reliability Improvement Initiative, and as far as my understanding is, that has worked quite well, in terms of, as a mitigation warning people in advance of the loud boom that they might hear. And of course, dust control measures will be required, or will be applied to the site as required.

Now, we are going to talk briefly, about the operation of the station, and associated facilities. Once commissioned the converter station will operate 24 hours a day, year round, and have a

permanent Manitoba Hydro staff on site. The total operations and maintenance staff for the converter station, and associated facilities, which would include the feeder line to the ground electrode, and at the ground electrode, is estimated to be about 45 persons. So, not a large work force.

Aesthetics, purchase of the adjacent properties under the Riel Reliability Improvement Initiative minimizes the visual effect of the converter station, because there were, prior to Manitoba Hydro acquiring the properties, there were a number of residents right across the street from Riel, and in the general vicinity, and those have been purchased. And Manitoba Hydro has also tried to minimize the aesthetic effects by site lighting design focuses on the site itself. They are also planning earth filled berms that are planted with native grass, and planting of trees around the perimeter of the site to break site lines, and also serve as a noise barrier.

And, in terms of the bigger switch yards, 250, and the 500 kV switch yards, they are actually removed from PR 207 which makes them less visible to people driving along PR 207. As I said before the ground electrode is buried and it is located in the

center of a section of land so you are not going to be able see it at all. And the feeder line is a little distribution line, and it is located on existing facilities.

So, in summary, for the Riel converter station and associated facilities residual environment effects, the socio-economic impact assessment did not identify any VECs, with significant adverse effects. With the mitigative measures I have outlines, adverse visual effects are not expected to be significant from a regulatory perspective and the facilities, will result in positive effects on the economy during construction, not so much during operation and maintenance as the work force is much lower.

Okay, our second component, is the Bipole III line. In terms of land use I will talk about land tenure, and residential development. The Bipole III line as with all transmission lines, high voltage transmission lines, Manitoba Hydro's process tries to maximize the distance between residences. So, the route selection process for Bipole III definitely tried to avoid residences to the maximum extent possible. There is one residence located within a hundred metres of the route. And,

mitigations, for this include subject to the detailed engineering analysis, tower spotting may be used to reduce effects on that property. Municipal protocols, by-laws, and appropriate methods will be applied to comply with regulatory standards. And, care will be taken not to impact neighboring properties during construction.

As well, I think you will hear a bit more about this later, Manitoba Hydro has a compensation policy in place for land acquisition for residences within 75 metres of the center of the right of way. And, my understanding, there is, if land owners were within 75 metres of the right of way, but didn't want to stay in their residences, that Manitoba Hydro would buy them out and relocate them.

Private forest lands which are basically managed private wood lots and shelter belts, with respect to the Bipole III line there is a direct impact, the direct impact is limited to three of 337, which is 0.36 percent of registered wood lot management plans in the province for a total of 21.24 acres. Approximately 19 hectares of shelter belts will be affected by the Bipole III line. Mitigative measures include meeting with each land owner to discuss mitigation measures such as replanting. And

we are also planning to identify the locations of the shelter belts and managed wood lot plans in the Environmental Protection Plans to avoid inadvertent additional damage during construction.

Designated protected areas and Protected Areas Initiatives, PAI. The route does not cross any designated protected areas. It does cross one area of special interest, and that is Stephens Lake in the northern part close to TCN. And, it crosses that, crosses Stephens Lake ASI, which is Area of Special Interest, it is not designated protected yet. But it crosses that area for approximately 76 kilometres. And also, wildlife management areas are not formally protected, the route, Bipole III route, preferred route, does cross 14 kilometres of the Churchill WMA and 50 kilometres of the Tom Lamb WMA. With respect to the portion of the route crossing the Churchill WMA Manitoba Conservation PAI has indicated plans for the portion of the route crossed, that they want to exclude it from any restrictions. And through the Tom Lamb WMA, the route parallels, an existing rail line, and transmission line for approximately 20 kilometres.

There is also two proposed -- so they wouldn't be protected, the proposed Red Deer WMA, and

the Summerberry RMA which the route crosses through, for the proposed Red Deer RMA, the line crosses through for 27 kilometres. For the Summerberry RMA the route crosses through that proposed RMA for approximately 46 kilometres of which only 17 kilometres are protected. So basically, ASI, WMA, proposed WMA, none of them are formally protected yet. So that is why we can say, as it stands, the route does not cross any designated protected areas.

We have identified some mitigation measures, and terms of protected areas, and PAIs, discussions with Manitoba Conservation with respect to structure placement will continue in these areas where Manitoba Conservation PAI might have an interest in terms of ASIs, and WMAs. Construction in the winter, will help protect site specific features that need to be protected in those lands. No off right of way activities will be allowed within unique terrain and soil features, and those will be identified in the Environmental Protection Plans.

Movement of equipment, construction equipment, within unique terrain and soil features, will be limited to minimize disturbance of these areas. And existing access routes will be utilized, and machinery won't operate outside of the project

areas, where there are areas with unique terrain and soil features. As I mentioned all of these will be detailed in the Environmental Protection Plan, so workers are aware what they can, and can't do in these areas.

Resource use for Bipole III. In terms of trapping, the route crosses 45 registered traplines. Mitigation measures, Vince did a presentation that I am sort of touching on some of the things he has said at that point. But ongoing discussions, with directly affected registered trapline holders with respect to the route and the project. Prior to clearing construction activities, registered trapline holders will be notified regarding clearing, and construction schedules. And, registered trapline holders will be notified to remove trapping equipment as required, and that would be in the case that their trapping equipment could get damaged through the construction activities. And also, compensation, will be held, or compensation will be paid to registered trapline holders where the route is crossing a registered trapline.

Resource use continued for Bipole III this is to do with recreation and tourism. There are no lodges in the immediate vicinity of the preferred

route. The closest lodge is about 2.3 kilometres away from the proposed route. The route does cross through 20 game hunting areas, and there are approximately 99 outfitters operating in these 20 game hunting areas. Winter construction, which is planned for the northern part of the line, will tend to limit effects on the outfitters. In terms of adventure travel, and ecotourism activities, these kind of activities seem to be limited in the project area. And we also note that the route is adjacent to, or crosses designated snowmobile trails in a number of areas.

Mitigation measures for recreation and tourism, lodge owners and recreational resource users will be notified in advance about the construction clearing, and construction schedules. Information signs, and warning markers, will be used to identify where the right of way intersects recreational trails, and we did this, for example, with the Wuskwatim transmission project, in one particular area in Northern Manitoba, I recall up by Birchtree station, there were designated recreational snowmobile trails that Manitoba Hydro put up signage to warn the snowmobile users, so they wouldn't get hurt. And, that worked quite well in the case of

Wuskwatim.

Also, if a specific issue of concern arises, where possible minor route adjustments, or maintaining a buffer of trees between a site, and a trail, and the right of way, might be considered if it is possible. And again Environmental Protection Plans, and Access Management Plans, will note these facilities, the locations of these facilities, in the plans.

Resource use continued for Bipole III. And this talks about domestic resource use, the importance of domestic resource use to Aboriginal people was identified by a number of First Nation communities, Northern Affairs communities, and the Manitoba Metis Federation. Effects on domestic resource use, can arise from a direct impact on the resource as a result of clearing and construction or through undesired access by other parties. Areas of concern were identified to the study team through the ATK process.

Mitigative measures for domestic resource use, again winter construction in Northern Manitoba. Where winter construction is not possible, disturbance to plants, identified through ATK, will be minimized to the extent possible. Existing

trails, roads, and cut lines, will be used wherever possible, so as not to create new access to these areas.

Hunting and fishing by project personnel, will be prohibited, and fire arms will be prohibited in work camps. Manitoba Hydro will work with communities that have identified important resources that are in close proximity to their communities to minimize potential effects, and again, where access is important to a community, Manitoba Hydro will work with directly affected communities to prepare access management plans prior to construction of the project.

Transmission lines economy. This is a bit of a different slide, because of the way the economy assessment was done. The economy took all of the transmission lines together, so they took the northern transmission lines, the northern collector lines, so this is not just Bipole III, this is the all of the lines related to the project. So, again, with transmission lines construction, clearing and construction, it involves personnel of varying skill levels.

Economic opportunities, are available from contracting, and other business, and employment

opportunities. As well as indirectly, through the provision of goods, and services to the work force. The total project transmission line employment, this is project direct in Manitoba, is estimated to be 4819 person years during construction, that would be of the northern collector lines, and the Bipole III line. Hence, effects on the economy during construction are positive.

Bipole III Community Services, workers may be housed in mobile construction camps, along the right of way, or where feasible and practical, in accommodations in local communities. Regional health authorities, and the RCMP detachments were spoken through a series of key person interviews, and through those interviews they have advised that they have the capacity to handle potential temporary increases in demands for health, emergency, and policing services.

Travel and transportation. Development of the Bipole III line will obviously generate additional traffic on extensive area of the province road network. Use of mobile camps will reduce the number of trips on the surrounding road network. Because you won't have workers going to, and from different facilities, the mobile camp will be located

obviously, close to where the construction is. Roads likely to notice increase in traffic, are those used to transfer materials. Out of all of the roads looked at, only Highway 10 between Highway 60, and. PR 268 is likely to experience marginal volumes in excess of the design capacity. Right now MIT is planning to upgrade older sections of Highway 10, and if this is completed prior to construction, the design capacity along Highway 10 in that area between PTH 60, and PR 268 likely will not be exceeded because of the project.

Bipole III, now, public safety. Access to the right of way is limited to those who need to be there, and will be closely monitored. Anyone coming into the construction site will require an orientation, and must check in, and out of the construction site at the start, and end of every day. Protection measures include informational signs, and placement of warning markers, to identify the right of way. And, again similarly with Wuskwatim transmission lines, when they were being constructed this protocol was in place, and it worked really well.

Human health, with respect to the Bipole III line. And again we are talking about human

health in terms of noise, vibration, and dust. Construction can obviously result in noise, and disturbance effects to people in the vicinity of the right of way. Through the routing process, we tried to avoid First Nation Reserve lands, communities, and residence right to obviously try to minimize the effect on people. Much of the northern part of the route crosses through areas that are fairly isolated, with limited developments. Noise generated from construction will be temporary, and intermittent, and will typically fall within provincial noise level guidelines.

In built up areas, and other areas, where noise and vibration may create undue stress, work may be limited to daylight hours, to not disturb people in the evening.

Transmission lines operations. And this again, it relates to all of the transmission lines, the northern collector lines. Obviously, transmission lines are designed to operate continuously. Manitoba has to inspect their transmission lines aerial -- annually, either by air, or ground. They also sometimes need nonscheduled patrols, either by ground, or by air, should unexpected repairs to the line be required.

The average annual work force for operations and maintenance of all of the lines associated with the Bipole III project, are approximately 11.5 persons, so it is fairly small.

Now, again, Bipole III operations, aesthetics. Portions of the northern part of the line crossed through lands with limited development. The route, actually the final preferred route parallels existing infrastructure in a number of areas, and I estimated this was, this estimate was without the revisions, to the route that Pat talked about yesterday, or Mr. McGarry talked about yesterday.

The old route it was around 300 kilometers, now in the Wabowden area, where you are paralleling Highway 6 I believe, and some of the other highways, this number will go up. I don't have a number for that, it would be more than 300 though, more than 300 kilometers. And also, subject to detailed design analysis tower spotting can be used to reduce effects on sensitive land uses in proximity to the right of way. And, Manitoba Hydro intends, through its, when it comes to talk to people about their site specific issues, to obtain the land, they will discuss site

specific circumstances of tower placement, preferences, with land owners, where land owners have concerns.

In terms of residual environment effects for the Bipole III line, the socio-economic impact assessment did not identify any VECs, with potentially significant effects. With mitigative measures I have identified, and monitoring, adverse residual effects are not expected to be significant from a regulatory perspective. The facilities themselves will result in positive effects on the economy during construction.

Keewatinoow converter station, and associated facilities, land use. The converter station and associated facilities are not located on, or do not cross any existing First Nation Reserve lands, or federal lands. And as has been noted previously, there are ongoing discussions with Fox Lake Cree Nation respecting the facilities, and these discussions are expected to continue.

Trapping. In terms of resource use, Keewatinoow converter station, and associated facilities, one registered trapline is directly affected by the converter station. Routes for the Northern AC collector lines, and the construction

power line also cross through two registered traplines. Mitigative measures, in terms of trapping, and Mr. Kuzdak talked about this a little bit too, in his presentation.

Ongoing discussion with directly affected registered trapline holders in advance of clearing and construction. Prior to clearing, and construction, registered trapline holders, will be notified regarding the schedules, for clearing, and construction. And, the registered trapline holders, will be notified to remove trapping equipment as required, if it could get damaged during clearing, and construction activities. In addition, compensation will be paid to the registered trapline holders of those traplines.

And, again, Keewatinoow converter station, and associated facilities, domestic resource use. Construction of the construction camps, and converter stations will remove land from use, obviously. As a result of plant loss Aboriginal people may have to travel further to find sites with suitable quality plants. An increase in people in the area during construction, and as a result a potential for increase in harvest of wildlife and fish in the area is a concern.

So, in order to mitigate some of these issues, the Keewatinoow camp, will have camp rules that will present workers, from having fire arms on site, and will limit them from existing the camp to harvest resources. Manitoba Hydro, in conjunction with Fox Lake Cree Nation is planning to develop, and implement a Keewatinoow Access Management Plan to minimize the effects of of some of these potential issues. And also, Manitoba Hydro is planning to develop, and implement a number of environmental reclamation, and rehabilitation measures following construction.

In terms of economy, again, this would be the converter station, and it would be the ground electrode, not the lines, not the collector lines, or the construction power line. Construction employment is estimated, at approximately 920 person years, not including contracts, supervisory, management staff, and Manitoba Hydro staff. As with the case of Riel, the work force will ramp up, and taper off gradually. The peak work force is estimated right now to be about 350 people. The effects on the economy during construction, are expected to be positive.

Now, Keewatinoow, converter station, and

associated facilities, community services. During the construction of the main camp, workers at Keewatinoow will be housed at a start up camp. Workers with moderate, and serous injuries, will have to be brought to the Gillam hospital. But the camp itself will have an ambulance service, and a fire truck for use. Gillam Hospital, is likely to experience an increase in emergency care, the situation should be manageable, as the services at the Gillam hospital are currently not strained.

Medical, emergency medical ambulance services continued. Once the main camp is in place, it will have a first aid building, and an ambulance, this will limit the need to use the Gillam Hospital to, to severe, and or multiple injuries. Existing resources at the houses, at the hospital, should be able to to handle these cases. And coordination system, is being established between the camp, the main camp, Gillam, and, other emergency services in the area such as the, at the Henday converter station.

Policing services. Existing policing services may not be able to meet the needs of the detachment service in the area. So, therefore the RCMP may need to assign additional staff to Gillam.

Mitigative measures on the part of Manitoba Hydro, visits to Gillam by workers will be reduced. Transportation will be provided to workers, to and from the construction site rather than them taking their own vehicles. Camp security will be trained to deal with impaired driving, and intoxication. Camp behavior, and disciplinary policy will be established at the camp. And, at the camp in force, there will be enforcement for impaired driving implemented between the camps, and Gillam.

Okay, again, in terms of services, we are now on housing, only a small number of workers might choose to live in Gillam, and they are going to be likely Hydro employees, not other workers. And, we feel the majority of workers will not be be expected to live in Gillam, because the daily commute to and from the site, the Keewatinoow site, is about two hours. Reduced time off due to long workdays, and daily commuting time will tend to minimize that. Room, and board at the camp, is free. And, as most jobs are short-term in duration, it would be impractical for most of the workers to relocate their families to Gillam any way.

In terms of Keewatinoow travel, and transportation, and in particular traffic.

Additional traffic during peak construction is estimated to be between 64, and 78 percent higher on PR 280, and, 175 percent higher on PR 290. The total daily volume along both roads, both PR 280 and 290, will still be within the daily design capacity for those roads, regardless of the increase.

So, now, additional measures, because of the busyness of the roads, that we have, we have identified additional mitigative measures to reduce workers travelling to and from Gillam. So, Manitoba Hydro intends to have lounge and recreational facilities at the camp. They tend to, they will restrict the use of company vehicles for leisure, for people's leisure. The length of the shifts, and shift rotation will make it more difficult for people to have the time to get into Gillam. There will be a controlled entry, and exit through a staff security gate. And, Manitoba Hydro is planning to have a shuttle bus to transfer workers that may want to go to Gillam to, and from Gillam.

And, in addition, in terms of traffic, again, we have identified some additional mitigative measures for traffic to minimize effects. There will be ongoing monitoring and communication of road weather conditions at the construction camp. There

will be ongoing awareness initiatives regarding save driving habits. There will be traffic signage along the access road. There will be rigorous enforcement of consequences at camp for impaired driving. And there will be ongoing awareness initiatives regarding the ramifications of impaired driving.

We have also put together a monitoring plan to be implemented in discussion with First Nations in the vicinity. One would be wanting to track the vehicles going through the access gate, including the type of traffic. Secondly, tracking a number of vehicle accidents through coordination with the Gillam RCMP. Tracking of incidents involving impaired driving at the security gate, and through RCMP incident reports. And, implementation of a traffic monitoring program.

Public safety worker interaction. Some workers, obviously, despite all of the mitigation in place, can be expected to visit Gillam during their leisure time. Bird, Fox Lake's community is closer to the project, but it lacks a lot of the amenities that workers might be seeking. So we feel workers, are more likely to go to Gillam than to Bird. Some mitigation in terms of worker interaction. Manitoba Hydro has already incorporated a number of features

at the camp, for example, recreation at the facilities, at -- recreation facilities at camp will tend to keep people there during their leisure time. Preventing undesirable interactions through initiative targeted at workers, and community members.

Implementation of cultural awareness training and that was done with the Wuskwatim project as well. Assessing the incidents of when such interaction occurs. And, again, continue liaison with Fox Lake Cree Nation, to implement programs to manage worker influx effects, as well as monitoring, and adaptive management plans in terms of these effects.

Public safety, gang and drug activities. Concerns, have been raised about the influx of workers, and increased disposable income of community residents that get jobs, and that could result in an increase of gang and drug activities. We consider the prospects to be low in Gillam because of the RCMP and the size of the community. However, we have identified a number of mitigation measures to lessen this. The number of visits by workers, will be reduced through measures that I have already discussed. And regular communications between the

Hydro, and Gillam RCMP regarding drug, and gang related issues at camps will be maintained.

And then human health, again, in terms of this, I am talking about noise, vibration, and dust. Noise generated from construction, will be temporary, and intermittent, and again, will typically fall within provincial noise level guidelines. Given the location of the facilities, noise, and dust levels, are not expected to be a concern. However, in terms of mitigation, Manitoba Hydro has committed to have ongoing discussions with Fox Lake Cree Nation about this issue. The site, as with the Riel site, will be watered as required to keep dust down to a minimum. And, again, as with Riel, if implosives are going to be used to splice conductors, advance notice will be given to stakeholders, and local authorities in the area at the start of the activity, so nobody it taken aback, or taken by surprise.

Operations for Keewatinoow station, and, associated facilities, again, as with Riel station, once commissioned the converter station will operate 24 hours year round, and have a permanent Manitoba Hydro staff on site. The total operations and maintenance staff for the converter station, and associated facilities is estimated to be at about 42

people, with about 30 on site on a daily basis.

Aesthetics, for Keewatinoow converter station and associated facilities. There are no residents in proximity to the converter station or the ground electrode, the right of way for the collector lines cross through lands that actually, currently have limited development.

Now, finally, the last part of my presentation, summary of residual environmental effects. And, as Mr. Osler stated yesterday, in terms of the socio-economic assessment, they all related to Keewatinoow. In terms of community services, travel, and transportation, traffic in particular, public safety which was worker interaction, and gang and drug activities.

So the Socio-Economic Impact Assessment, identified three VECs, with potentially significant effects, all during the construction phase, as I just mentioned. And community services, travel, and transportation, which would be traffic, public safety, in terms of worker interaction, and drug, and gang and drug activities, with the mitigative measures I have outlined, and ongoing monitoring, and adaptive management, we expect that adverse residual effects are not expected to be significant from a

regulatory perspective.

THE CHAIRMAN: Thank you, Ms Hicks. I know, I have a few questions, of clarification.

MR. MADDEN: I have a clarification.

THE CHAIRMAN: No, at this time, clarification questions only come from panelists that has been our practice throughout the hearings, and it will continue.

MR. MADDEN: Prior to you moving onto the next section, can I ask the question of when we will be getting the list of mitigation measures from Manitoba Hydro? Because, once again, the language in the presentation is different than the EIS.

THE CHAIRMAN: You have obviously already asked that question. But, that will be a concern that will be raised throughout the review of, of these presentations. There will be cross-examination starting perhaps later this afternoon, certainly early -- first thing Thursday morning, on all of the Hydro presentations, you can ask that question, at that time.

Ms. Hicks, you talked about Health Impact Assessment, and Human Health Risk Assessment, and said that Health Impact Assessment is not required in your definition of health, is mental health included?

MS HICKS: No.

THE CHAIRMAN: How come?

MS HICKS: Again you have to look at the pathways to effects, and what the project is doing.

THE CHAIRMAN: I am sorry, could you speak into the mic.

MS HICKS: I am sorry, I was looking for my notes. One second. No, basically in terms of human health we looked at EMFs, we looked at noise, we looked at vibration, and dust.

THE CHAIRMAN: Okay. Thank you. Bear with me, as I --

MS HICKS: Sure.

THE CHAIRMAN: This is just for information, PR 280, and PR 290, can you identify those a little more? Which is, or what is PR 280?

MS HICKS: They are the roads, I don't actually have a map of them. Maybe I can, is, one the road.

MS HICKS: They are the roads in the north basically.

THE CHAIRMAN: So, would one be the road from Thompson, to the general Gillam area, and the other one, from Gillam, to I guess Limestone?

MS HICKS: Yeah. They are in that area.

THE CHAIRMAN: Does anybody know that?

MS HICKS: Marked on the map.

THE CHAIRMAN: We don't need a lot of information, I would just like to know which they are.

MR. MCGARRY: Mr. Chairman, Commissioners, the main road is from Thompson to Gillam, is 280. That terminates northeast of Gillam, and then returns back into Gillam up there. 290 goes from that turn off, where 280 comes around and crosses the Nelson. It then turns left at that point to go to Limestone. And that is PR 290.

THE CHAIRMAN: Is 290 the road from Gillam to Limestone, or the road north from where 280 turns to Gillam?

MR. MCGARRY: I believe it is where that turn off occurs, 280 goes right to Gillam, and 290 is the one that goes towards limestone.

THE CHAIRMAN: Okay. Thank you. You mentioned the controlled entry, and exit, do you know where on the road that security gate will be located?

MS HICKS: No. I would have to get that information.

THE CHAIRMAN: Okay, we can find that out at a later time.

MS HICKS: Sure.

THE CHAIRMAN: You mentioned at Wuskwatim there was a cultural awareness training program?

MS HICKS: Yes.

THE CHAIRMAN: Do you have any idea how successful it was.

MS HICKS: I have not heard anything bad about it. Based on my current knowledge I thought it went very well. Probably one of the Hydro people can tell you more. My understanding is it went well.

THE CHAIRMAN: Were all employees required to take this program? All new employees?

MS HICKS: I believe so. But, I am not a hundred percent sure on that. But, I believe so.

THE CHAIRMAN: Perhaps somebody from Hydro could get us some basic answers on that. Again, we don't need detail, but at least, in response to the questions I just asked. And finally, from me, any way, your last two words, you talk about with mitigative measures residual, adverse residual effects are not expected to be significant from a regulatory perspective. Does that mean, they might be significant from some other perspective?

MS HICKS: No. I don't believe so, I

just, it is, with all of the measures, and all of the, you know, there is a lot of things I think you heard from the first week of presentations, there is a lot of things that Manitoba Hydro has committed to, because there are a lot of things going on in the North. And I basically think when you put the package together, there is enough going on here, in terms of mitigation, and people being wise, and doing the monitoring, that I don't believe it will be a significant impact.

THE CHAIRMAN: Thank you.

MR. KAPLAN: Ms Hicks, I have a couple of questions, first one is very simple, I hope. Referring to page 6, under Riel converter station, and this is just for my clarification, if you would. Where it states, at the bottom, would be bullet four, Construction related effects expected to be small. If you look at that. And take into account that I have read the EIS, and much of the conclusions reached by Hydro with respect to various conditions as a result of the Hydro line are considered either small as far as change, insignificant, et cetera, et cetera. Can you just give me some examples of what small means as far as construction-related effects that are expected?

MS HICKS: Well in terms of Riel converter station, because with the Riel Reliability Improvement Initiative, basically what Hydro did, is they bought the land that they would need for Riel station, as it is called, plus Riel converter station. Because it is the ideal site for the converter station. So when they started to build the Riel Reliability Improvement Initiative, what they did is they basically did all the sort of groundwork that were required to put the converter station on the site. So, all of the site prep stuff, is done.

So, like, the station as it is, Riel converter station, the equipment is not in there but the site has actually been established. So therefore, the nuisance factors that you get when you are constructing, like you get dust, and you get noise, a lot of that, especially the noise component has been taken away because it is basically been prepared to construct Riel converter station on that site.

MR. KAPLAN: So the examples you are talking about would be noise, and dust possibilities?

MS HICKS: There would still be noise, because they have to splice the conductors, or whatever, there will be noise. But it will be

temporary, but like particularly noise, for sure, in terms of people being around the site because sites were purchased in the vicinity, like properties were purchased. And the whole dust thing because the site is there, it would be very minimal.

MR. KAPLAN: All right.

MS HICKS: Because the site has been established.

MR. KAPLAN: If you could follow to page 19 of the presentation, at page 19, under Bipole III line operations, Aesthetics. You can assume, if you don't know, that this particular Commission has been travelling for the last couple of weeks in various spots outside of Winnipeg, up north, and closer to Winnipeg locations as well. If we look at bullet No. 4, under aesthetics, Manitoba Hydro will discuss site specific circumstances, or tower placement preferences with land owners. My recollection, and, I don't believe you were there, to hear this, but a number of land owners felt strongly, in coming to testify before the Commission to the effect that no compensation is going to change their minds, as far as not having anything, by way of Hydro towers, on their property. My question to you is, what does one do in those circumstances?

MS HICKS: Well, obviously, what this is meant to do, if somebody is affected by, lets say their house, you can see from your window the line, and you dont' want to, the intent of this is to work with the owner on that property to spot towers to the extent feasible, based on the detailed engineering design, to spot the tower in a better place for the property owner, so, it is less visible.

MR. KAPLAN: And what if the owner, the land owner, and I am not a land owner anywhere up north, or just outside of Winnipeg of any lands, but what if the land owner concludes, I just don't want anything to do with the tower on my property, for a number of possibly valid reasons. What happens?

MS HICKS: At that, I would think Manitoba Hydro would just continue to negotiate to see if they could come up with a deal with that land owner, and, if not, although, I think it is very rare, if not, Manitoba Hydro does have the right to expropriate, in my career in doing these types of projects since 1989, I actually don't recall one case that Manitoba Hydro has expropriated. They will continue to talk, and work, and meet with land owners.

In terms of the work I have done, I have met a lot of people at open houses and individual

meetings that aren't happy that something has to be on their land, and in my experience, Manitoba Hydro has gone above, and beyond to keep talking to people to come to some sort of how would this be better for you? If it has to go on your land, how can we make it better for you?

If a deal can't be struck, then Manitoba Hydro does have the right to expropriate. In my experience, in my career, I don't recall one example of when it got to that point. Manitoba Hydro will just continue to negotiate, and try to do the best they can for that particular land owner in addressing their concerns.

MR. KAPLAN: Okay. I think on that point, perhaps, I can be corrected, but I think we are still waiting for an undertaking or an answer to that question that was asked outside Winnipeg sometime ago.

MS MAYOR: I think that answer was provided yesterday, and there was one in our history. Dating back to, I believe it was 1997.

MR. KAPLAN: Okay. Thank you.

MR. MOTHERAL: Just a point of clarification on page 9, and it, when you make a kind of a ball park statement as dust control measures applied as

required, someone has to make that decision. Would that be a decision by land owners, would it be the municipality, the RM of Springfield, or, would it be Manitoba Hydro? Somebody has to make that decision.

MS HICKS: What page are we on?

MR. MOTHERAL: Page 9, on the Riel converter. The very last bullet in the top square says Dust control measures applied as required.

MS HICKS: Let me just find it. I am sorry. It would be my understanding, the people that we are talking about here, I am sure, well, I don't know for a fact, but this has been going on with Riel Reliability Improvement Initiative, and, they have had issues, because of dust, and all of that. And that being said, I think it would be Manitoba Hydro must have, subject to checking with Manitoba Hydro, they would have some sort of, I would think protocol in place, that would say it is getting too dusty it is not good for their workers, either, that we need to do dust control measures, I am sure they have protocol in place. But I would have to check with Manitoba Hydro.

MR. MOTHERAL: It would be nice.

MS HICKS: I would take that as an undertaking, for example, in Environmental Protection

Plans, things like that are listed, if you have ever been at a construction site, it is getting dusty it is not happy for the workers, not good for the equipment, not good for anybody. I am sure they, I shouldn't say a hundred percent, but I am sure they probably have a protocol in place, as to when they would undertake those activities to minimize effects, so we can probably find something out about that.

MR. MOTHERAL: Thank you.

MS MACKAY: On page 118, the top slide, you indicate that noise generated, will be temporary, and intermittent, and will typically fall within provincial noise level guidelines, it is my understanding, that we don't actually have noise guidelines, what is it that you will be using there?

MS HICKS: Actually, I would have to look that up, there was an IR we mentioned on that, there are noise guidelines for residential, it is 45 -- we did answer an IR on that, I don't have that with me.

MS MACKAY: Okay.

MS HICKS: There was something put out by the province, it was a few years ago now, Manitoba Environment, there was something. I can check into that.

MS MACKAY: Would you check into that for

me please. Another question, just on that same page, at the bottom of the page, you indicate that the average annual work force for operations and maintenance will be 11 and a half people. How does, how was that number arrived at? Do you know anything about that?

MS HICKS: Are you talking about Keewatinoow? I am sorry.

MS MACKAY: No, I am sorry, it is transmission lines.

MS HICKS: What they do with transmission lines, they basically do by aerial, air or ground, once a year they fly, they need helicopter pilot and linesmen on there. I don't think the 11 and a half takes into account any emergency situations, but that is all it would take for the Bipole III line. If you are going to fly, and, if they spot issues where they might have to do work on a line, they might come in on the ground, and I can't imagine it would take longer than that.

MS MACKAY: Could I assume from that then if the number for Bipole III is 11 and a half, combined with Bipoles I and II, it would be 23? Is that the crew needed just for Bipole III?

MS HICKS: I would consider what is being

suggested for Bipole III, would be similar for both Bipoles I and II, it might be 11.3 or 11.5 times three. You still have to look at each Bipoles I and II. You still have to look at them independently, in terms of some of their equipment to make sure something wasn't failing. So, but, in terms of operations, and maintenance for transmission lines, again, it is a once a year thing, and then you might have to get on the ground to change some equipment. It is not really an intrusive thing. That is the the way the system is run, you do ground air, and ground every year, and, if there is something to change you have to get in there to change it. It is not really intensive in terms of people work at all.

MS MACKAY: But some of those people would be used in clearing vegetation, and things of that sort?

MS HICKS: Right.

MS MACKAY: I have one other question, on page 29, you refer to operations, and, the Keewatinoow with about 30 people on site daily, are those people going to be commuting from Gillam, or, will the work camp be converted into permanent?

MS HICKS: I don't know. I think we would have to ask Manitoba Hydro that. I assume when the

station is operational, they probably would be coming in from Gillam, but I would have to confirm that with Manitoba Hydro, I am not a hundred percent sure.

MS MACKAY: Thank you.

MR. GIBBONS: Yes, thank you. I have two questions, one, perhaps now narrower, it is a clarification of Slide 22. You don't have to put it up on the screen, but in the second bullet it says there was one residence located within 100 metres of the route. And then the last bullet says compensation policy for land acquisition for residences within 75 metres of the center of the ROW. I am just wondering in this context, does that mean that there were no residences, that will receive compensation, because none of them are closer than 100 metres.

MS HICKS: I think the one that is under 100, is what I believe it says, I think the one under 100, that there will be some discussion with Hydro on that. I believe.

MR. GIBBONS: The second question on a different matter, page 6, I think it is slide 12. It is a reference to land use in regards to Riel, and it strikes me that the question relates not only to Riel, but to the entire project.

And in terms of socio-economic considerations, it strikes me that the amount of arable that might be lost because of a project is of some consideration. You mentioned here that there is a portion of land that will be permanently lost from the land base, because of the electrode. In the case of the Riel electrode, that would be a relatively small piece of land no doubt, but do we have a sense of what the entire package of lost arable might be for the project, including the ROW for the line itself, as well as Riel?

MS HICKS: I believe when Mr. Nielsen, probably this afternoon, does his agricultural presentation he will have a lot of detail on that.

MR. GIBBONS: Okay, I can wait until then thank you.

MS HICKS: I did an overview, we had two topics which were of real interest, one was Heritage and Culture, and one was agriculture. We thought we would do more detailed presentations on that. Culture and Heritage is the next presentation, and Ag would follow that. I am sure Jim has your answer, or Mr. Nielsen has your answer.

MR. GIBBONS: I can wait until then, if it is part of the presentation you are going to make, I

will leave it until later.

THE CHAIRMAN: Thank you. Thank you Ms Hicks. I think, given the time, we obviously, won't turn to starting another presentation right now. It is about five minutes to 12. So, we will break, now, or in a moment, for lunch until one o'clock. Ms Johnson, are there any documents to register at this time, or?

MS JOHNSON: I will register them all at the end of the day.

THE CHAIRMAN: Thank you very much, so we will adjourn until one o'clock.

(Hearing recessed at 11:56 a.m.)

(Proceedings reconvened at 1:00 p.m.)

THE CHAIRMAN: Just a couple of procedural matters before we carry on with the presentations. I want to remind participants of the requirement to file their final submissions and presentations. We will start, on our current schedule we will start to hear presentations from participants beginning next Wednesday. That means that whoever is scheduled for next Wednesday has to have their submissions in by the end of the business day tomorrow, which means about 4:30 tomorrow afternoon. And that applies, subsequently, whoever is up next Thursday will have to have their submission in by Thursday afternoon. And I'd remind participants that there are no exceptions to this. If it comes in the next morning, it's too late, you will not be able to use that material in your presentation.

One other thing, we have three presentations scheduled for this afternoon. I'm not sure how long they will take. It is possible that we may have some time for cross-examination this afternoon. We'll just wait and see. I do know that at least one or two participants are not ready to cross-examine this afternoon, but I will

invite others who may be ready to do so rather than going down the order, the typical order.

I think that's it for introductory comments. Mr. Meronek?

MR. MERONEK: Thank you, Mr. Chairman. Given your severe admonition about getting evidence in, you were suggesting that the evidence will be starting next, you expect next Thursday?

THE CHAIRMAN: Next Wednesday.

MR. MERONEK: Next Wednesday. So that if someone was, for example, wild example, our people were up on the 19th, then it would be now the 21st?

THE CHAIRMAN: Just hang on a second. If you are scheduled for the 19th, you have to have your final submissions in by the 12th, end of the business day on the 12th, so 4:30 on the 12th.

MR. MERONEK: I see. Okay. Thank you.

THE CHAIRMAN: Mr. Williams?

MR. WILLIAMS: Just a question of clarification, sir, and good afternoon. The intent of our witnesses would be to file a complete report for the, in their case, the 8th. A Powerpoint may be developed from that report,

which would be a summary of it. And so the question is, so the full -- the complete report will be filed on the 12th, and excerpts from it will be presented via Powerpoint.

THE CHAIRMAN: That's fair enough. What we don't want is the opposite, that you give us a Powerpoint on the seven days ahead of time and then come in with a much fuller document. I don't want that. If you come in with a complete document, that's what we need so that other parties can prepare. If the Powerpoint is an abbreviation of that, that's fine.

MR. WILLIAMS: And we'll instruct our witnesses to make sure that the Powerpoint is only a precis or an excerpt from the complete document.

THE CHAIRMAN: Nothing new in the Powerpoints.

MR. WILLIAMS: Okay. Thank you.

THE CHAIRMAN: Anything else on that? Okay. We will now turn to, I believe it's Ms. Petch, you're first up?

MS. PETCH: Thank you, Mr. Chairman, members of the Commission, participants and ladies and gentlemen. My name is Virginia Petch. I am the owner and president of Northern Lights

Heritage Services based here in Winnipeg. My company was responsible for conducting the aboriginal traditional knowledge workshops, the archeological field investigations for the assessment process, preparing the respective ATK workshop and heritage technical reports, and preparing sections of the EIS that concerned culture and heritage.

I hold a Ph.D. in Anthropology from the University of Manitoba. My dissertation was entitled "Relocation and Loss of Homeland, the Story of the Sayisi Dene in Northern Manitoba."

I am a member of the Register of Professional Archaeologists and International Registry for Best Practice. I also hold environmental professional status with Eco Canada. I am adjunct professor with University College of the North, The Pas and Thompson.

Prior to establishing Northern Lights, I was employed by the Historic Resources branch as field archaeologist for six years. And then by the Manitoba Archives, where my schedule was split between the Hudson Bay Company Archives, as a researcher, and Moving Images and Sound, where I managed the oral history program. I have served

in several appointments, appointed capacities such as the Manitoba Heritage Council, East Side lake Winnipeg Initiative, and Manitoba Model Forests. I am a recipient of the Prix Manitoba award for heritage, communication and education.

This presentation has two parts. The first will discuss the ATK workshop process and the effects assessment for culture. The second will discuss heritage resources and the effects assessment for heritage resources.

This outline shows the topics I will discuss regarding the ATK and heritage resources components of the presentation. I will examine purpose, definitions, scope of ATK and heritage, the approaches or methods that were used, the existing environment, route selection process, effects assessment, mitigation and residual effects.

Because interrogatories regarding the ATK have been concerned with process, I believe it is apropos to explain the process that was followed for the gathering of ATK.

First of all, the purpose of the investigation of ATK within the Bipole III Environmental Assessment and EIS processes was to

inform Manitoba Hydro of the presence of ATK within the Bipole III study area. There were four objectives that we have endeavoured to complete. Creation of a mutually respectful relationship with communities for incorporating ATK into the environmental assessment process and the EIS. Meaningful involvement of communities in the identification and use of ATK. Integration by other disciplines of ATK throughout the Site Selection Environmental Assessment and EIS to the extent feasible. And where possible, the project sought to provide evaluation of the effects of the project on culture through the cultural effects assessment.

I'm going to begin by providing the working definition of ATK that was used to complete the ATK workshops. This is based on Peter Usher's 2000 definition. Keep in mind that there are other definitions and words that are used to describe the knowledge of Aboriginal peoples and each community of Aboriginal people will have their own definition of ATK according to their cultural perspectives. In this instance, Aboriginal traditional knowledge or ATK is a knowledge system that integrates indigenous and

local world views, values, and experiences into a complex framework by which harmony and balance of humans and the natural environment are sought. It is based on a tradition of past knowledge, but is not static. It is both evolving and current. And this is taken from Usher's article in Arctic, volume 53, number 2, pages 183 to 193.

Within the supporting document, traditional knowledge has been identified under the formalized term of Aboriginal traditional knowledge. For the Bipole III transmission line Environmental Impact Statement, ATK is used as the over arching term for the knowledge gathered and is used in this document in a general manner to include Aboriginal and other persons who participated in the workshops.

We were very aware going into this process that we could only scratch the surface of ATK within the Bipole III study area. However, the individuals, who were selected by their community leaders and who agreed to be interviewed, freely provided us with a snapshot of things that were known at the time of interview. As noted, this process was to inform Manitoba Hydro of ATK, not to conduct ethnographic studies.

Forty-nine invitations were sent out by Manitoba Hydro to First Nations and Northern Affairs communities. Nineteen of those communities chose to participate in the ATK workshop process offered by Manitoba Hydro. Seven, including the Manitoba Metis Federation, preferred to conduct self-directed studies.

Please note that on this map it contains areas where the ATK workshop studies provided ATK information.

For those interested in the question, what was the difference between the ATK workshops and the self-directed studies; the ATK workshops were conducted by the Manitoba Hydro ATK study team using a standardized set of methods for all communities. Self-directed studies were conducted by individual First Nations and the Manitoba Metis Federation using methods that were comfortable to each community. These self-directed study communities took up the challenge of conducting their own traditional studies.

For the scope of the ATK workshops, 96 interviews were conducted within the 19 communities. Twenty-eight of these were group interviews, 68 were key person interviews or one

on one interviews. A hundred and seven hours and 37 minutes and 35 seconds of interview recording occurred. And 2584.5 hours of transcription, quality control, summary sheets, coding and code entry were completed, 5,869 pages of transcript were produced. And staff days for the above totalled 336.5 days, almost a full year. As well, 90, one to 50,000 NTS, National Topographic System, maps were digitized and replicated for interview purposes.

I am going to take you through the process of the ATK gathering, and I'm going to begin just by mentioning the research strategy and methodology that were used. A research strategy is an action plan that directs research in a systematic, thoughtful manner. Methodology can be described as a set of ethics and procedures which establish the framework within which a particular topic is to be studied and understood. The methods are the tools that are used to complete a prescribed task. For the Bipole III project, multiple methods were used to collect and manage ATK. The study followed a cultural ecology methodology, which is based on the relationship between humans and the natural environment that

they inhabit.

For this project, the research strategy consisted of three stages, process development, ATK data collection and ATK data management. This chart provides you with sort of the streamlined approach for the project.

I'll begin with discussing the ATK work plan. The work plan was an approach to achieving incorporation of ATK into the EIS, and this was developed and presented to Manitoba Hydro on June 17, 2009, and on approval, to the Bipole III study team which included all disciplines on September 2, 2009. To follow the upper stream of activity, Manitoba Hydro drafted and sent out letters of invitation to 49 communities, First Nation and Northern Affairs. As the communities' letters of intent to participate were received, Manitoba Hydro and the participating communities entered into participation agreements. And from that point on, workshops began to be scheduled.

We forwarded -- at that time we were forwarding draft questions to the communities through Manitoba Hydro for any cultural sensitivities that may arise from the questions that we were proposing to ask.

At the same that this above process was taking place, we began a gathering existing and available documents, archival, academic, primary and secondary maps, anything that we could find that would assist us in understanding the -- through the bare bones of the community and the area.

The original draft questions from the study team workshop were reworked and the various disciplines reviewed the draft questions and offered suggestions for change relative to their area of expertise.

This process aided in identifying the gap between the current situation of knowledge and the future state of knowledge required. Knowledge gaps included that the availability of existing ATK was minimal, and two, there were limited academic studies related to the specific communities.

Studies outside the Bipole III area were briefly reviewed, mainly for methods comparison. But the contents were not used as the cultural experiences were unique to those communities.

Once the challenge of gaps was better

understood, we again refined our methods.

Keeping this in mind, the study chose to follow Peter Usher's categories of ATK because of their practical nature. Working from your right to left of the diagram, the process was as follows: An existing baseline code book previously developed by my company formed the basis of the code book for the project. A code book is a dictionary of code words that has been developed over time to identify certain recurring words that are considered to be meaningful to people being interviewed. The code book is considered organic in that it continually evolves as new code words become apparent.

Once the interviews were completed, recurrent words were sorted into themes. These themes were considered to be things of value that are held by individuals and communities. Themes identified for the project were things of value, language, family, traditional knowledge, land, plants and animals, activities, ways of doing and ways of thinking.

From there a set of nine universal cultural indicators were selected to represent these practices. We have kinship, language, world

view, traditional knowledge, cultural practices, cultural products, leisure, health and wellness, and law and order. And each indicator is described in detail in the EIS ATK report number one.

Now, the category ATK is taken from Usher, and he established four categories of ATK. Category one, knowledge of the environment is defined as factual or inferred knowledge of the environment, which is typically based on the empirical observations of events, generalized observation over time, and generalized observations based on personal experience.

Category two, knowledge of the use of the environment, relies on factual knowledge about past and current use of the environment, including social and historical statements that affect rights of traditional use of the environment.

Category three, value of the environment, includes the culturally based value statements related to ethical behavioural practices.

Category four, cosmology or world view is the foundation, the cosmology or understanding upon which the first three categories are

grounded. It is the framework by which people construct knowledge from facts.

I just want to talk a little bit about the methods development. It was important to develop a set of methods that could be applied to all communities regardless of cultural ties. And this was at times a daunting task. There was also concern amongst the ATK team about the potential mass of ATK that could be shared with the study team. Another concern from a social science perspective was to maintain objectivity and to have a system of qualitative control in place to ensure that minimal personal research or bias was introduced to the process, that the question guideline was consistent for all communities and that ethics were maintained.

To this end, a methods decision was made to utilize the ethnograph, a social science program applied to facilitate the analysis of textual data collected during qualitative research such as interviews, field notes and surveys.

Question development and review determined that the semi directed interview process would be used for the Bipole III process for both the group interviews and the KPI's for

ATK. This approach is a flexible and relaxed method of interviewing and allows for new questions to be raised as the interview proceeds. In this format there are generally a series of themes to be explored.

We were cognizant that the questions had to be constructed in the manner that would elicit a full response. Open-ended rather than closed questions were designed for this purpose. Further, the questions had to be easily translatable into Cree, Ojibway, Siouan and Michif, if it was required. The questions were reviewed and approved by Manitoba Hydro and the Bipole III study team members. Community leaders were provided with the questions prior to the workshops for cultural input, however no input was received from the communities.

A set of one to 50,000 NTS maps were produced for each community study area through which the Bipole III transmission line would pass, or could pass. The initial process used clear acetate plastic over each map, with the interviewer assistant tracing the interviewers' life experience and knowledge as they chose to share it. The interviewer at the same time was

outlining with his or her finger different areas of experience and knowledge, and at different points where cabins and other interesting things were occurring.

We quickly switched this technique to micro dot or software generated maps and the use of the Capturx GIS pen because it was considered to be more efficient in the production of maps.

The stage two, the ATK data collection, there was again a process that was followed. For the interview process, interviewees were selected by the community leadership, and the request was made for a balance, men and women, elders and resource users. We did not have the names of the participants available prior to the actual pre-meeting before the interview.

For the pre-meeting immediately prior to the ATK workshop, an information session was held. This served two purposes. It provided an opportunity for community members to ask technical questions of Manitoba Hydro regarding a range of topics such as employment and routing. It also provided the ATK study team the opportunity of informed consent, that is to explain the interview and the mapping process, including the kinds of

equipment that would be used, provide copies of the consent to interview document for review, and describe the verification process that would give each person an opportunity to ensure that what was being transcribed was what was said.

A language specialist was contracted by Manitoba Hydro to provide translation during the meetings and interviews for the purpose of explaining the process in the first language, and translating questions and phrases when required.

We used digital recordings, the tape-recorder is defunct now, so we moved on to digital recordings. And immediately prior to the interview, the process and purpose of signing a consent form was reiterated. Interviewees then each signed the consent sheet. For those who wished to remain anonymous, this was noted on the consent form.

The group interviews were between three and four hours in length, and individual interviews were between 45 minutes and one and a half hours. During this time a member of the ATK study team, with the assistance of the interviewee, marked out specific areas of resource and cultural importance, sharing knowledge of

plants, and animal behaviour and use, and historic use of areas. All knowledge was recorded on the recorder and on the maps.

At the end of the interview, Manitoba Hydro representation was available to present the interviewees with an honorarium in token of appreciation for sharing knowledge. The maps and the audio data were downloaded onto computers in Winnipeg.

In summary of this process, the table in this slide provides a list of the communities that participated in the ATK workshops and those that chose to conduct their own ATK studies. The map indicates areas of ATK derived from the workshops only. For our mapping purposes, the ATK areas were delineated as regions one through five, and this was for internal purposes only, to help us keep things straight.

For the third stage, data management, two processes again took place simultaneously. The data recorded in the Capturx GIS pens were downloaded into the GIS for mapping and digital recordings were downloaded into Express Scribe for transcription. For the GIS process verification of map data and GIS pen data took place and the

maps were evaluated and subjected to quality control and quality assurance.

Following this, the production of maps for review by individual interviewees was completed.

Prior to transcription, the consent to interview form was reviewed in the office to ensure that anonymity and any other requests were noted. A master list of interviewees for each community was created. The interview was transcribed verbatim and transcriptions were spot checked for accuracy.

A summary of each interview was prepared for quick reference purposes. And what is usually the practice is that the summary precedes the actual transcription.

Copies of the transcription of maps were sent to the individual interviewees who requested them so that they could quality control, verify and provide feedback as to the accuracy of the documents. And a period of one month was allowed for this feedback.

All interviewees were given the opportunity to review their interview and the group interview that they participated in.

The interview summaries and the composite maps were sent to community leadership for review and verification. A period of one month was allowed for feedback.

Once this was completed, the transcription summaries were sent to Bipole III project specialists. Further details and maps were sent for review only if requested.

Once the one month feedback period was reached, we began the process of coding and code entry. Trained staff at Northern Lights performed the coding and the code entry. A code book of over 200 code words was developed, through which the indicators acting as themes were quantitatively and qualitatively examined.

Because a concern was raised during the interrogatory process regarding intercode reliability, I believe that an explanation of this is required. Intercoded reliability requires the same segments of text are coded independently by two or more individuals. Intercoded reliability was not measured for the Bipole III ATK technical report one. Rather, this was minimized using an acceptable process outlined by Hruska et al. This involves segmentation of text, code book creation,

coding, assessment of reliability and code book modification. Within the assessment of reliability stage a priori coding was utilized by means of iteration between coder comparisons and revisions to the code book. For a priori coding, Steadman notes that professional colleagues agree on the categories and the coding is applied to the data. For the iterative between coder comparisons or revisions to the code book, Hruska et al note that the procedures described in this article do not actually generate a code book for which all coders will have high intercoder reliability, but rather create an interpretive framework that may only be specific to the current team of coders.

As part of the content analysis, certain areas that were identified during the ATK workshops and which were noted on the maps and in the recorded interviews were selected as environmentally sensitive sites. As the workshops and analyses were completed, the information was forwarded to the Bipole III route selection and facilitated in the PPR, the preferred preliminary route, and ultimately the final preferred route selection.

Five specific areas of concern emerge

from the ATK studies in relation to the PPR and FPR. The Keewatinoow Converter Station, where hunting, trapping, gathering were noted by the First Nation, heritage resources have also been found at this station. And this was -- these sites were found during our HRIA investigations of the site. Cormorant area between Dyce Lake and Mawdesley Lake, caribou, moose, trapping, fishing and heritage resources were noted by people of Cormorant. In addition, a petroform that had been identified by Northern Lights during the Wuskwatim Transmission line HRIA was again noted. And I must go back and say that we had given a presentation to Cormorant and to OCN regarding this petroform several years before.

The Red Deer River crossing was also seen as an area of concern. What we learned from the ATK was that fishing, leisure, heritage resources, especially salt flats, were especially important to the local community. The salt flats were recorded by myself during thesis investigation in the late 1980s.

Cowan/Briggs Spur, there were several areas again that were important and identified by the ATK. The Kettle Hills blueberry patch, over

and over again we were told of this wonderful coveted area that contained not only sources of economic opportunities for the community, but also provided social and cultural experiences that continue to be used.

The Assiniboine River crossing, again to the First Nations to the south, was also identified through their ATK studies as important ceremonial and sacred sites where medicines, heritage resources and burial sites occur. And we know of the heritage resources records from the Provincial inventory.

We learned from the ATK workshops and self-directed studies that 156 occurrences within a three-mile wide buffer of the proposed FPR were described by participating communities as being areas that were important in consideration for the route of the Bipole III transmission project. These were included in the list of environmentally sensitive sites, or the ESS, for mitigation.

As the ATK transcripts and analyses were completed, the locations of points, lines and polygons representing the ATK were forwarded to Manitoba Hydro and incorporated into the ESS table. As self-directed studies were completed,

they were reviewed through the ethnograph and summaries of community concerns were highlighted to Manitoba Hydro.

Culture was identified as a single VEC for the Bipole III project. Culture is a repertoire of behaviours and themes that define the identity of a social group. It is a medium by which groups of people collectively know, understand and express their natural and social experience.

For the EIS, culture is described as a VEC because it is an expression of the relationship between humans and the natural environment, and is captured through the recurring themes and cultural indicators that were used by the ATK study team.

A recent UNESCO report on an international workshop document concerning the links between biological and cultural diversity notes the notion of the inextricable link implies not only that biological and cultural diversity are linked to a wide range of human nature interactions, but also that they are co-evolved, interdependent and mutually reinforcing.

Each culture possesses its own set of

representations, knowledge and cultural practices which depend upon specific elements of biodiversity for their continued existence and expression.

Cultural groups develop and maintain significant ensembles of biological diversity with knowledge and practice as the medium for their management. And this is from a UNESCO 2007 document, page 7.

The approach taken for the Bipole III project independently paralleled the methods and indicators identified in the UNESCO framework.

Using culture as a VEC, content analysis of the nine indicators identified certain community cultural concerns which were entered into the table of ESS.

Generalized potential effects described by the communities included increased access to cultural resource areas by non community members, fragmentation of customary lands and natural habitat, and employment and creation of jobs. Specific potential effects derived from the cultural indicators representing the collective results of the ATK studies include loss of language due to altered cultural landscapes and

the mnemonic meanings associated with them. Deterioration of traditional knowledge and spirituality associated with the Kettle Hills region. Changes to the cultural landscape and the negative impact on the cultural practice of trapping. Health and wellness of communities potentially impacted by potential changes to aspects of traditional country foods, supplies, and potential fragmentation of animal habitats that are hunted or trapped as alternative subsistence and traditional food sources. Use of herbicides and groundwater contamination is another health issue. And potential for conflict with non-community resource users because of increased general access. Increased access by non-residents into culturally sensitive areas that form world views may result in loss of traditional use by community members. Changing cultural landscapes and the potential effects on kinship and leisure wherein the act of resource harvesting brings kin together. And loss of the ability to engage in activities related to cultural products such as creating works of arts and crafts, economically benefiting from the gathering of berries, gathering uncontaminated medicinal

plants, and to locate areas of alternative fuel supplies.

The effects of the project on culture specifically: Construction activities such as excavation and clearing cause changes to the physical environment which could potentially affect any of the indicators which were selected to represent culture. Potential effects include, changes to the cultural landscape such as excavation of soils which can potentially inhibit certain activities that sustain culture, desecrate areas of cultural and spiritual value, and destroy landmark and mnemonic features that sustain continuity of cultural expression.

Direct and indirect effects on culturally sensitive sites such as areas where medicinal plants are gathered were identified during the ATK studies. Some medicinal plant gatherers view transmission lines and EMFs as contaminants to the power of the plant. And permanent loss of cultural landscapes that would inhibit the ability of Aboriginal and local people to orally recount history, which in turn could affect culture and spirituality.

The operations phase has the potential

to cause ongoing and/or inadvertent disturbance to cultural processes, and the associated historical record that has been identified through the Bipole III ATK workshops and self-directed studies.

Briefly, the ATK process reiterated that Aboriginal and other people with cultural ties to the land seek to ensure that they, their children and future generations will continue to enjoy a good life. There are strong cultural ties to the land, and ATK is inherent to Aboriginal and other people.

Mitigation measures: With respect to the Bipole III line, the following mitigation measures were recommended to minimize potential effects of the project on culture and heritage resources. Culture and heritage resources are inherently linked in that they represent the cultural legacy associated with self-identification. They are in fact part of living history.

So the following lists outline mitigation measures to ensure those impacts and the effects to culture and heritage resources are addressed in a manner that is culturally appropriate.

Avoidance is always the best mitigation, however, this is not always possible. Environmental protection plans for the construction and operation phase of the project will include mitigation measures to minimize potential cultural effects. Further liaison with communities that have identified cultural concerns will occur to assist in identifying additional mitigation measures to be included in the EPP's. In addition, Manitoba Hydro anticipates opportunities for employing local people to assist in monitoring project construction.

The EPP's will contain heritage protection measures which will be developed in collaboration with Aboriginal and locally interested parties for the project components that will ensure protection of Aboriginal and non Aboriginal cultural interests.

The Bipole III ATK process brought to light the traditional knowledge that exists within Aboriginal and other communities. In addition, through this process communities identified concerns and issues important to them regarding the project.

Again, Manitoba Hydro will continue to

liaise with Aboriginal and other communities to review concerns that arise about the project and opportunities for cultural preservation occasioned by the project. Manitoba Hydro anticipates that in the case of some Aboriginal communities, the ongoing liaison and communications will occur through existing forums and protocols.

Concerns regarding the effect of EMF on the natural environment and on humans was expressed through the Bipole III ATK process and the EACP. Manitoba Hydro continues to explore ways to share information about EMF in a meaningful way.

The loss of the ability to conduct traditional activities such as hunting, trapping and fishing was noted in the ATK workshops and self-directed studies as potentially impacting culture. It must be understood, however, that culture goes beyond these subsistence activities. As far as is practicable and in accordance with established laws and regulations overseen by Manitoba Conservation, Manitoba Hydro will respect and abide by local hunting protocols.

Culturally, the project may be viewed as another impact on Aboriginal traditions,

culture and practices. The ATK workshops and self-directed studies indicate that many aspects of traditional culture may be lost if the opportunity to carry out certain activities is removed. The ongoing liaison and communications Manitoba Hydro intends to maintain with Aboriginal and other communities with respect to the project will facilitate the identification of potential lost opportunities and mutually agreeable ways to avoid such loss, and to maintain important cultural activities. As a result of the mitigation measures that will be developed, residual environmental effects are expected to be as noted on the table.

For both the transmission line and the -- pardon me, for both the construction and the operation phase for the transmission line and the associated facilities, given that the ongoing communications and liaison is occurring, that there will be an overall not significant effect on culture.

I am now going to move on to the heritage component. The main role of the investigation of heritage resources within environmental assessment and EIS processes is to

identify the presence of heritage resources within the study area, determine the effects that the project may have on heritage resources, and offer recommendations for mitigation of resources that may be affected by the project.

In Manitoba, all heritage resources are protected under the Heritage Resources Act, regardless of their cultural affiliation. The Act ensures that any heritage resources, known or unknown, are protected in some manner from the effects of impact caused by development.

As such, a heritage resources impact assessment, or HRAA, is required to address any potential impacts.

Associated with the Act are human burials which are located outside of registered cemeteries. These are further protected by the policy concerning the reporting, exhumation and reburial of found human remains.

What are heritage resources? Heritage resources are defined by the Act as a heritage site, a heritage object, any work or assembly of works of nature or of human endeavour that is of value for its archeological, paleontological, prehistoric, historic, cultural, natural,

scientific or aesthetic features, and may be in the form of sites or objects or a combination thereof.

Further, part four of the Act further defines human remains. Human remains means remains of human bodies that in the opinion of the Minister have heritage significance and that are situated or discovered outside of recognized cemetery or burial grounds in respect of which there is some manner of identifying the persons buried therein.

Some further facts. All heritage resources are owned by Manitoba for the benefit of all Manitobans. Heritage resources may be held in custody by the finder or landowner. Heritage resources cannot be sold or mutilated. Heritage resources are considered a valued environmental component, or a VEC, because they are non renewable resources. Once they are gone, they are gone.

The Bipole III transmission project study area is a complex patchwork of human occupation and adaptation that has over the past 11,000 years served as a record of cultural land use and occupancy by human populations. As of

2010, there were 5,012 registered heritage sites within the Bipole III study area. This number includes 525 centennial farms, 1299 commemorative plaques, 139 municipal sites, 62 provincial sites, and 2987 archeological sites. These represent all time periods, from earliest pre European through historic and industrial occupations.

The geographic scope of the Bipole III study area is a crescent shaped area from the Keewatinoow Converter Station, north of Fox Lake Cree Nation, to the Riel Converter Station east of Winnipeg.

The temporal scope of the Bipole III project spans a record of human history beginning about 11,000 to 8,000 years ago in the south, and 8,000 to 6,000 years ago in the north.

And this map with all the little red chicken pox on it represents the general location of known registered sites within the Bipole III study area.

For the project within this geographic scope, five specific project components were scheduled for investigation of heritage resources, transmission lines and AC collector lines, the Keewatinoow Converter Station, Riel Converter

Station, the ground electrodes, north and south, collector lines, connections to the northern collector system, and preferred route access roads. And you'll note that preferred route access roads were not all investigated, mainly because of access into certain areas, and because there was uncertainty in some locations as to where the access roads would actually go.

The approach that we took contains several steps. For a desktop study, which was the initial process that we used in identifying the area of investigation, we reviewed the existing archeological, historical and geological documents. We looked at soils, cultural and archival literature, maps, and provincial site inventory that included the archeological, the history, and the historical architectural components at Historic Resources Branch.

We conducted a literature review consisting of publications and reports concerning First Nations, pre-European and post-European contact, Metis, fur trade, Euro-Canadian homesteading, and industrial heritage resources.

We acquired shape files from the historic resources branch regarding the location

of registered heritage resources. We also reviewed the ATK maps and the appropriate transcriptions, as they became available, and incorporated specific knowledge of heritage resources and cultural sites into the shape files and resource inventory.

A simple predictive model was developed using certain stable physical variables that could assist in determining where heritage resources could be found within the study area. This consisted of proximity to potable water, soil types, slope vista, aspect, geographic features, water systems, water body convergence, proximity to documented heritage sites and elevation. We used a weighted ranking value and we identified sites accordingly as high, medium, and low potential site location.

We had the opportunity to test the model during the archeological field investigations related to the HRIA process. Results were variable due to the inaccessibility of many areas within the FPR.

We conducted systematic shovel testing, I believe 194 shovel tests. We recorded photographs. We collected and processed

artifacts. We downloaded our GPS tracks into the GIS so that we knew where we had been and it would be, for the record, people could actually see where we had walked on the ground.

We also did a geophysical survey using an electromagnetic ground conductivity in one instance where burials were suspected.

For the route selection process, all three alternative routes were assessed prior to field work. All heritage resources outside the three-mile buffer of the alternative routes were eliminated, leaving 599 registered archeological and heritage sites. The five general types of interactions between heritage resource sites and the transmission lines that were identified earlier were evaluated. These consisted of registered archeological sites, designated centennial farms, designated commemorative plaques, municipally and provincially designated sites.

And just for your information, I have some very basic definitions of site types. Archeological site is any site or object that shows evidence of human endeavour. The Historic Resources Branch has identified 26 site types

based on different human activities and time periods. Isolated burials, abandoned cemeteries, and found human remains are also contained in this category.

Centennial farms represent any active farm that is a hundred years old and has been held by the same family. This is a Provincial designation. Plaques, across the province the events and historical occasions are marked with cairns and plaques to commemorate the significance of a particular event or happening.

Municipally designated heritage sites are sites that are considered to be of municipal significance and which are acknowledged for the contribution they have made at the municipal level.

Provincially designated heritage sites are those that are considered to be of Provincial significance in that they reflect an event or happening that is important to the development of the Province.

And a value was assigned to certain categories of sites. This became a weighted value which was assigned to each category. And within the archeological category, there was a scale of

weighted values depending on the nature of the site. So you may have a burial, or a campsite, or a pictograph or a petroform that would be more highly ranked than say an isolated find of one flake.

The preliminary preferred route was initially based on weighted value of known heritage resources.

Once heritage resources identified through ATK were mapped, some areas were considered to be of greater heritage value because of the cultural values ascribed by participating communities.

Knowledge of heritage resources was provided by both the ATK workshops and the self-directed studies, and these were equally important. Once heritage resources were identified to the ATK workshop, they were plotted on the GIS maps and were included in the ESS tables. Knowledge of 30 areas of heritage resources, including trails, homesteads, industry, burial, culturally sensitive sites, and general areas of artifact deposits were identified through this process. These sites, along with the existing record and those identified in the

predictive model were placed in the table of environmentally sensitive sites.

As noted earlier, the HRIA is a process used to identify the presence or absence of heritage resources within the study area. It determines the effect that the project may have on heritage resources and it recommends mitigation measures in order to protect the resources.

Once the preliminary preferred route was selected, the entire route was aerially surveyed.

For the PPR only, six separate investigations along the PPR between Keewatinoow and the Riel Converter Station were carried out with limited success. There are many areas in the north that were inaccessible because of poor drainage patterns, wetlands, and dense vegetation. The helicopter in most instances could not or would not land on floating bogs.

Most areas in the south were inaccessible because of private land constraints. Only those areas that were accessible Crown lands were examined.

The Keewatinoow Converter Station footprint associated with camp structures --

pardon me, associated camp structures, lagoons and bog areas, the northern and southern ground electrode sites, construction and collector lines were all investigated.

Based on the ATK and the archeological record, five areas of concern were identified; the Keewatinoow Converter Station, Cormorant petroform, Red Deer River crossing, Briggs Spur/Cowan area, and the Assiniboine River crossing. And I must say that for the final preferred route, we were able to narrow it down to 94 heritage resource sites that occur within the three-mile corridor.

For the Keewatinoow Converter Station, an archeological site -- two archeological sites were identified during our HRIA process. For the Cormorant bottleneck area, an archeological survey, as part of the Wuskwatim transmission line HRIA, identified a petroform that was formally unknown, and it was not known to the communities. The Red Deer River bottleneck, we had both the archeological inventory and the ATK, which contributed to our knowledge of the historic salt works. For Cowan/Briggs Spur, it was ATK that brought to our attention burials. There is also

an archeological site for this area which has been identified as a Metis site. The Assiniboine River, both the archeological inventory and the ATK self-directed studies and the workshops identified several areas where there was a concern for specific heritage resources, including the Yellow Quill Trail, burials, archeological sites, sundance sites and ceremonial sites.

For the Keewatinoow Converter Station, the initial HRIA investigations of two raised gravel deposits resulted in two archeological sites being identified through surface features and controlled artifact collection. Very briefly, site HDKL-1 contain two components, Palaeoinuit or Arctic small tool tradition tool making area, and a series of identifiable stone features. HDKL-02 was noted to have been disturbed by exploratory drilling and road access trail. The site contains two visible stone tepee features with surface scatter of stone chips and tools.

Just a couple of pictures of the sites. The one on your left upper left is the aerial survey of the site. The one on the upper right is the same area after it has got the temporary fence protection in place, along with

the clearing of the interior.

The lower left is a small projectile point. The one in the middle is a stone feature which represents a potential grave. And the feature with the people is another feature. The one at the bottom, the slide at the bottom is the geophysical survey taking place just as the snow is falling.

For this process, Fox Lake Cree Nation was immediately consulted regarding both sites, and a community meeting was held with Fox Lake Cree Nation. The focus was on HDKL-01 which was important because of the burial like features. The elders provided advice and recommended that there be an immediate stop to drilling and access around the two sites, that barricades be erected around the sites with appropriate signage, and that site be visited by the elders.

Site visitation to HDKL-1 with the elders was arranged and the elders investigated the site with myself. During this time, they shared freely their knowledge of the historical landscape. With support of Fox Lake Cree Nation recommendations for mitigation, they were established. As recommended by the elders, a

temporary fence with signage around the site, clearing of the deadfall from HDKL-1, and geophysical survey of the possible burial feature were undertaken immediately with the assistance of Fox Lake Cree Nation, Manitoba Hydro, and Northern Lights.

Because of the potential for human remains, the historic resources branch was contacted and Northern Lights was further advised as to the appropriate steps to take should this be identified as a burial.

Permanent fence will be constructed around the feature, around the site prior to the construction of the Keewatinoow Converter Station. And that was a recommendation from the Province.

The geophysical survey data was inconclusive regarding the features. The very thin soils, the fact that the area had been subject to forest fire, negated some of the readings that we were hoping to receive as we proceeded through this process.

In addition, these areas were recommended as off limit to exploratory drilling and water pumping, and other ground disturbance activities. And this is being followed to date.

A draft heritage resources protection plan was developed for the Keewatinoow Converter Station in 2002, based in part on the active participation of Fox Lake Cree Nation elders and the Heritage Resources Act. This was drafted because of the urgent need to protect the two discoveries found during the HRIA. And I haven't discussed the second site, but it is equally -- received equal protection.

As I mentioned, the Cormorant petroform was identified during 2003 investigations associated with the Wuskwatim transmission line. Shortly after this discovery, an information meeting was held with the community of Cormorant and members of OCN also attended. The purpose of this meeting was to inform the communities of the presence of the petroform, its location in relation to the Wuskwatim transmission line, and determine additional appropriate mitigation. The site was protected with signage and has been visited annually by Northern Lights.

When the site was visited in 2010 as part of the Bipole III HRIA, it was found that the petroform was within the 66 metre right-of-way of the final preferred route. This raised the level

of site priority to highest, as the site will be impacted by the Bipole III transmission line. Recommendation for permanent fencing and signage has been made, with further discussion and recommendations for a minor route alignment in this particular area.

Here is an aerial shot of the petroform.

The Red Deer River crossing is located east of the historic salt flats. Field investigations indicate that this and other heritage resources sites are outside the transmission line right-of-way.

The ATK shared by Camperville, Duck Bay, Pine Creek, Pelican Rapids, Dawson Bay and the Barrows communities indicates the importance of the Kettle Hills to the communities for social, cultural and economic purposes. Knowledge of heritage resources within this area, including burials, was provided through the ATK workshops. The area has not been field investigated for heritage resources as the lands were either at the eastern edge of the FPR, or were inaccessible due to private land ownership. There is an existing record of sites for this area housed at the

Historic Resources Branch.

The crossing of the Assiniboine River and surrounding areas is of cultural and heritage concern to the Aboriginal people who live within this area. This has been expressed by Swan Lake in particular. Manitoba Hydro continues to work with the First Nation to address their concerns.

For the final preferred route, 94 registered heritage resources occur. There are 30 locations of ATK, and 194 other ESS locations which are made up of some of the predictive modeling for archeological sites throughout the area. All these sites are being entered into the ESS table.

There is a potential for the project to disturb heritage resources, sensitive sites and burial sites, known and unknown. Construction activities can cause irreparable changes to the physical landscape resulting in disturbance with destruction of known and unknown heritage resources.

Many communities expressed concerns about the potential for the project to disturb sensitive sites and burial sites.

Manitoba Hydro will deal with heritage

resources in accordance with the Heritage Resources Act and will ensure that all sensitive areas are identified in its environmental protection plan.

Discussions will also continue with communities regarding their ongoing involvement to ensure that sensitive sites are identified and properly protected.

Manitoba Hydro will deal with all heritage resources in accordance with the Heritage Resources Act and will ensure that all sensitive sites are identified in its Environmental Protection Plan. There will be compliance with the Heritage Resources Act in the form of avoidance, protection and/or removal.

The Heritage Resources Protection Plan, as part of the Environmental Protection Plan, will provide guidelines for field personnel, both Manitoba Hydro and contractors, to assist them in their field activities when it comes to any heritage resources that may be uncovered during in-ground operations.

An in-field environmental officer will ensure that the Heritage Resources Protection Plan and Provincial legislation are followed during

construction, and the environmental officer will work closely with the project archaeologist to accomplish this. There will also be ongoing community discussions concerning any needs or concerns that the community finds affecting them.

Residual effects of the project on heritage resources are considered not to be significant considering that the Environmental Protection Plan and the HRPP will be designed to mitigate any residual effects to heritage resources that may occur as a result of the construction phase of the Bipole III project. Additional field work may be required to determine areas of concern within various components of the project, especially as they relate to Aboriginal communities. During the construction phase, monitoring of key areas of heritage resources is recommended. While no residual effects are expected, there is always the potential, given the nature of heritage resources, for the discovery of unknown heritage resources and found human remains, particularly during the construction phase.

The Heritage Resources Act and the HRPP, as part of the Environmental Protection

Plan, will address these issues and findings as they occur.

An archaeologist always ends with the sunset, so I had to end with a sunset. Thank you.

THE CHAIRMAN: Thank you, Ms. Petch. I have a couple of, I think fairly basic questions. Early in your presentation you mentioned Peter Usher a few times. Could you tell us a little bit more who he is?

MS. PETCH: Yes. Aside from being my hero, he is a cultural geographer who has been very instrumental in setting the course of the way that ATK is examined and managed using very ethical methods, working closely with communities to, not just provide their knowledge, but also taking it a step further and using it for the benefit of the communities that he is representing. He is well-known internationally and writes very well and is very informative and convincing in the arguments he puts forth with regard to ATK and natural resources and subsistence living.

THE CHAIRMAN: Is he associated with the university?

MS. PETCH: I believe he may be now

retired. I believe he lives in southern Ontario, but I know that he provides consultation to UNESCO.

THE CHAIRMAN: Thank you. You mentioned the ATK study team?

MS. PETCH: Yes.

THE CHAIRMAN: Who or what is or was that?

MS. PETCH: Well, on the road we call ourselves the dream team, but it consisted of myself and two of my staff, actually three of my staff, Hani Khalidi, Emily Linnemann and Amber Flett. They were the people who went out and did the actual interviewing and mapping. We had support from MMM in the logistical component with regard to getting the workshop set up and getting us on the road, and the logistics of getting to where we needed to go.

THE CHAIRMAN: Thank you. Near the end under litigation measures, you mentioned hiring of an environmental officer, and you also mentioned reporting to a project archeologist. Now, will this be Manitoba Hydro hiring an environmental officer?

MS. PETCH: That's correct.

THE CHAIRMAN: Would it be a full-time position for the duration of the construction period?

MS. PETCH: I really can't comment on that. I know that for Wuskwatim and for components of Keeyask, there are environmental officers that were hired full time. For the Wuskwatim transmission -- or pardon me, for the Wuskwatim Generating Station, there were two environmental officers that managed the day-to-day environmental issues, including heritage resources on site.

THE CHAIRMAN: And who is the project archeologist?

MS. PETCH: C'est moi.

THE CHAIRMAN: So you will be engaged to some extent by Hydro throughout the construction period?

MS. PETCH: As required, if things arise.

THE CHAIRMAN: Thank you. Questions, Mr. Gibbons?

MR. GIBBONS: Yes. Thank you for this report. A couple of points just for clarification so I am up to date and so forth on these matters.

One is that -- on slide 12, you mentioned that there was about 30 days given for feedback. But what I don't think I heard, and I may be wrong about this, was whether or not you did get feedback --

MS. PETCH: No, we didn't.

MR. GIBBONS: -- and did you get it from most of the communities?

MS. PETCH: No, we did not receive any feedback. We phoned individuals, we attempted to have people tell us if there were things that were missing or that were not correct. The calls that we were able to get through to people were, no, we have no -- we don't have any concerns. We sent packages out to each person that requested, and we also sent packages out to the community leadership, which consisted of the summary sheets, sort of an overview of each interview, and a composite map. And the reason we did a composite map for them is that in certain communities people were requesting anonymity. And in order to respect that, we did not let maps with people's names, and we did not let interviews or summary sheets with people's names who wished anonymity, to go out. That was protected. That's why the

composite maps went out. It was just a general map. This is where the people that you chose to be interviewed have told us that they are using the land, and some of the reasons why they were using particular areas as opposed to other areas.

MR. GIBBONS: On a related matter to the methodology -- sorry, I do have a background in methodology so maybe that's why I'm twigging onto this. Two things I guess relating to intercode reliability, number one, how many coders were there? And could you tell me what the intercoder reliability actually was? You did a statistical test, I imagine, to establish that there was good reliability between coders?

MS. PETCH: We had two coders, two of my staff, and between the two of them and myself as working with them, we identified and made sure that the codes that we were using were not our own personal bias, that this was actually, these were words that were being used during the interviews. We did not do any statistical analysis as to the sense of reliability, we just used our experience, and the code words that we had developed and we all agreed upon were appropriate for the analysis.

MR. GIBBONS: This may bore everybody

else, I'm sorry, but in the context of the coding, did each person -- did you have multiple coders of the same information, in other words, or was it the case that coder A coded some material, coder B, let's say some interviews, and coder B different interviews? The reason I ask is if the latter, then there is some question as to whether or not coder A and coder B are coding the terminologies in the same way. On the other hand, if they are both working on the same documents, then agreement can be reached between them. So I'm curious as to the method.

MS. PETCH: We used both ways. We occasionally would have one person doing the coding and the second person doing the quality control. If there were questions that the coder maybe was having a difficulty with some particular component, we would have a group meeting and we would determine at that point what the best code for a particular word would have been.

MR. GIBBONS: Okay. Thank you for that. And one last quick question, on slide 14 you mentioned that there were 156 occurrences of ATK. I'm not quite sure what occurrences of ATK means, but assuming that it refers to information

that was useful in your process, do you have a ballpark idea, and just a ballpark, I'm not looking for exact figures here, but a ballpark idea of how often those kinds of occurrences lead to some kind of mitigation action?

MS. PETCH: We did do a frequency analysis, which is in our reports, and that also provided further information as to areas. That's how we sort of came up with our areas of concern, where there was a high frequency of response to a certain area and a certain type of activity. For example, the Kettle Hills blueberry patch was quite overwhelming because there were so many different communities, that without any interaction between each other, were saying the very same thing about the same area, that it was highly valued for its economic values, that it was a place where people gathered in the summer time, it was a social institution almost, that burials, weddings, births all took place in this area. It's a very special spiritual area, aside from the fact that it also provides a cottage industry of economy.

MR. GIBBONS: Last point, and mitigation then was arrived at in order to

maintain that area?

MS. PETCH: I'm sorry, I missed the first part?

MR. GIBBONS: Sorry, there was some mitigation undertaken to ensure that that area was undisturbed?

MS. PETCH: Oh, yes.

MR. GIBBONS: Okay. Thank you.

MS. MacKAY: Could you go to slide 11, please? I was having trouble with the size of the font, both on the screen --

MS. PETCH: Yes, I'm sorry about that.

MR. PACIOCCO: -- and in the handout. And there's some material in brackets after some of the Aboriginal group names, and I can't read that.

MS. PETCH: It says self-directed studies. So it's identifying those communities that chose to conduct their own workshops, their own ATK.

MS. MacKAY: Got it. I can even read it now that you've told me.

I have one other question. Slide 45, right at the end, the Cormorant petroform, could you just tell us what we're seeing there?

MS. PETCH: Certainly. The white stones that you see, those little white things are a part of a circle which is, when you are on the ground it makes, it seems to make more sense because it does have some pattern to it. It is more than a circle. It's been partially destroyed or damaged. That occurred prior to any development that went through this area, and it could be the result of animals going through and knocking stones around. It may represent a medicine wheel.

MS. MacKAY: I'm sorry, a which?

MS. PETCH: Medicine wheel. And medicine wheels are quite prominent in the plains area, and down as far as Wyoming where we have the grand medicine wheel. There is considered to be a connection between that medicine wheel and others that are across Turtle Island, or North America.

MS. MacKAY: And the stones are white in that photograph because, in the wheel being damaged, the lichen has come off them or something like that?

MS. PETCH: The stones are of limestone for the most part. There may have been a forest fire that went through the area and

burned off the moss. It's very difficult to identify these by dating because there are no techniques that will look at the growth of moss. You can do some preliminary, but different kinds of moss on different kinds of stone will grow at different rates.

MS. MacKAY: Of course. Thank you.

MS. PETCH: You're welcome.

THE CHAIRMAN: Thank you very much, Ms. Petch. I'm going to propose that we take a break right now, in part so that I can straighten out my body from these chairs. When we return at about 10 to, we'll hear the final two presentations. And then if there is sufficient time, for cross-examination, we'll take a very short break while the cross-examinees assume their place and we'll carry on. So please come back at ten to.

(Proceedings recessed at 2:36 p.m. and reconvened at 2:50 p.m.)

THE CHAIRMAN: Thank you. Different faces at the table. I think everybody has been affirmed, have you not? Yes. Okay. I think we're going to be hearing from Mr. Nielsen first, and Ms. Mayor, you're going to do it by way of

eliciting evidence?

MS. MAYOR: Yes. Thank you.

Mr. Nielsen, you are the author of the agriculture technical report.

MR. NIELSEN: I'll have to apologize, I have had my voice box removed a while ago. If you can't hear me, let me know. I have some other ways and means of speaking out.

Yes, I am the author of the ag technical report.

MS. MAYOR: Can you tell us what your educational background is?

MR. NIELSEN: I have a degree in agriculture and masters degree in soil science.

MS. MAYOR: What university are those from?

MR. NIELSEN: University of Manitoba.

MS. MAYOR: Now, we filed already a much more detailed resumé with the Commission, but if we could just go through and I'll ask you a few questions about your background.

First of all, I understand that you were a farmer for over 30 years and you still own a farm. Can you tell what type of farming operation you have?

MR. NIELSEN: Well, we grew continuous cropping, wheat, canola, peas, lentils, and sunflowers occasionally.

MS. MAYOR: And how big was your farm?

MR. NIELSEN: 2,720 acres.

MS. MAYOR: Now, you have worked as a consultant for Manitoba Hydro for a number of years doing work similar to that which you did for Bipole III. What projects did you work on previously for Manitoba Hydro?

MR. NIELSEN: I started in 1992, and we did the loop from Riel around to Dorsey, and we followed 602 to the Ontario border. And after that we did Dorsey, Neepawa, Brandon, I did the Silver line and the Glenboro line and the Riel sectionalization.

MS. MAYOR: Now, I understand you have also worked as an agricultural consultant in other parts of the world. Can you tell us what work you were performing while abroad, focusing in of course on the type of agricultural work that you were doing?

MR. NIELSEN: I went overseas in '78 and became the team leader of the production for 70,000 acres of farms in Tanzania. And then I

spent 10 years as a project monitor in Sudan. And then I spent three years as a project director in Kazakhstan, growing canola and trying to sell farm machinery. And during that period of time, we evaluated projects in Kenya, Tanzania, Ethiopia, Burundi, and did a potash study in Indonesia.

MS. MAYOR: Now, you have described in your resumé for us some work that you have done for the Provincial Department of Agriculture. I'd just like to focus in on one of those positions as the chief of field operations. Can you tell us about your work there?

MR. NIELSEN: Well, when I graduated with my masters degree, I moved to the Department of Agriculture, became chief of field operations for Crown lands, and then we directed a land improvement program, and all of the land inspectors throughout the Province of Manitoba, particularly, some of the largest areas we had were in the Interlake or the West Lake, which is the west side Lake Winnipeg, or Lake Manitoba where the preferred route is going, and that the east side of the Swan River Valley and in The Pas. And I also was a liaison for PFRA Pastures at the time.

MS. MAYOR: So you indicated that some of the work you would have done would have involved then land on which the Bipole III transmission line is now being proposed?

MR. NIELSEN: Yeah. Well, I knew the area really well because we spent all kinds of time out there.

MS. MAYOR: Would that have assisted you in the work that you were doing on the Bipole III project?

MR. NIELSEN: When I was in the Department of Soil Science, I did the economics course of farm business planning, and what we did there was we went and we got aerial photography of all the students' farms. And we met the students in various places across the productive area of Manitoba where it's cropped, dug holes in their fields, and classified the land, and then attempted to make their operation profitable so that they could pass the course.

MS. MAYOR: So that was work you said you had done while you were working for the University of Manitoba?

MR. NIELSEN: Yeah, when I was at the Soil Science Department, yeah.

MS. MAYOR: Now, just turning to the next slide, you were retained to assist Manitoba Hydro in the Bipole III project. And we put up a couple of points on here, but can you just describe at a high level what you were to achieve when you were retained?

MR. NIELSEN: When I was contacted by Manitoba Hydro in November 2007 to put together routes through Ag Manitoba from Riel, and then we would have to go east and south around the Dorsey site, and then develop lines to get to -- well, basically to Mafeking, and then there's a little bit of agriculture at The Pas but we didn't have to do a lot there. So we developed two lines on the west side of the Riding and Duck Mountains, we developed five lines south of the Riding Mountains, one of them being south of Brandon and coming in along number 2 highway, and we developed two lines past Dauphin and two lines that went past Winnipegosis. Some of those lines began along the edge of Lake Manitoba, or close to it, not along the edge. But to get there we still had to go from Riel and find a way to get through the intensively farmed areas in Manitoba.

MS. MAYOR: So now when you were

developing those particular line options or corridors, part of your work would have involved understanding the soil types?

MR. NIELSEN: Yeah.

MS. MAYOR: How was the information gathered in terms of the soil types?

MR. NIELSEN: Well, I guess in some respects I knew the soils in Manitoba quite well by then. And so we simply developed a bunch of lines and -- well, I guess we tried to identify the agricultural activities on them.

We had a bunch of aerial photography from around 2000, plus or minus a few years. And I think later on we did have new aerial photography that Manitoba Hydro flew the final preferred route, and so we did have good photography later on to finish the project.

MS. MAYOR: Now, when you talked about identifying agricultural activities, what types of activities are you talking about?

MR. NIELSEN: Well, I guess at the initial operation we tried to avoid the irrigation pivots, farmyards and intensive livestock activity areas, and yeah.

MS. MAYOR: Now, after you had

gathered information, and we talked about, or you talked about the soil types and some of the agricultural activities, you talked about the number of lines that were developed. Over what period of time were the line options developed?

MR. NIELSEN: Well, from November '07 to March '09, during that time. We drove all the lines and looked at where they were ground truthed, and wherever necessary, if we were heading over a farm house or something, we moved it at that time.

MS. MAYOR: Now, we have heard, ground truthing was mentioned actually in an earlier presentation yesterday. Can you tell us what ground truthing involves?

MR. NIELSEN: Well, it involves taking a look at where the line had been placed to see what kind of impediments it ran into.

In relation to the impediment process, we started in the summer of '08, and we began at Riel, and we went right around past Carman to highway 34, and up the Assiniboine River, and we marked every impediment that was there. The list of impediments is in appendix B of my report. So we had these maps that had been developed with all

the impediments on it. And it was basically as a result of these maps that we tried -- well, specifically in the east of the Red River, you tried to find a way through the area because there's so many livestock operations, so many farms, and so many rural residential activities going on there, that routing through that area was not easy. And a little later on that in the whole process we actually moved the line east of Dufresne, like we were trying to get through that Lorette/Dufresne area, and it's of course heavily populated. And so a little later on we actually moved the line east of Dufresne, and then brought it back in and took it around.

MS. MAYOR: Can you explain what was being avoided and what you were trying to achieve by avoiding those items? I think we have a couple of slides that you can refer to in terms of the items that were being avoided?

MR. NIELSEN: First of all, we tried to avoid communities wherever we could, airports wherever we found them, and so dwellings being rural residential dwellings, farm buildings, farm yards, you know, you tried to stay away from all of that so you stay away from those activities.

We tried to stay away from intensive livestock operations, because there's all kinds of hog barns and that sort of thing, especially east of the Red River. And we tried to stay away from row cropping and intensively annually cropped areas. But if you have driven from Riel to north of number 1 highway, west to Portage, you can't go through that area without going over intensively farmed lands, period. They are all intensively farmed.

The other thing we avoided when the original line went in, where all lands under -- with the irrigation pivots on them, we avoided those, really avoided those ones because they are very difficult. But we still had to pass through the lands that have potential for irrigation, so therefore there will have to be some discussions with landowners as to tower placement in those lands with the potential for irrigation.

Initially I had put a bunch of diagonal lines in, but we decided a little later on that they weren't acceptable for either farming practices or irrigation, and so we changed them all. Out of the final preferred route, we took out 47.4 kilometres of diagonals. We left 14 in.

We took out 151 kilometres on routes B and C -- no, A and C. Then we took out about 99 kilometres of diagonals on the Arden Ridge, and we modified the line too there.

MS. MAYOR: Now, in terms of all the work in the way of avoidance and all of the ground truthing, was your work further reviewed?

MR. NIELSEN: Yeah. Well, at the time we were doing the final routings, I was working for MMM, and Bill Krawchuk would take our lines and he would check them against all the emcumbrances against the line. And if he found something where there was an encumbrance or something was scheduled to be done there, then he would tell us and we would have to go move the line.

MS. MAYOR: And so then you have indicated further adjustments may have been made after he had done his work. Can you give us an example of the type of encumbrances that he would have been looking at?

MR. NIELSEN: The type of thing that we would change, well, when we were going by Long Plains, we weren't too far away from Long Plains to begin with, and then we found out that a bunch

of the lands that we were going over had entitlements on them. So therefore we had to move the line. We moved it west and away from lands with entitlements. And if there was a conservation easement or whatever, we would move it.

MS. MAYOR: Now, once the various line options were developed, you had to assess the various lines, and you have outlined for us some of the factors considered in your assessment. Can you describe each one of those for us and the importance of each factor?

MR. NIELSEN: Yeah. In all of the work that we had done before with Manitoba Hydro, we hadn't actually put together a point system. And in this time we were asked by Mr. McGarry to put a point system together. And so we took the tower alignment, which at that time was on the edge of the road allowance, and then we took the agricultural productivity map which I developed from the soils maps of the area. And initially, we had done, initially Bob Bylers (ph) and I had done a detailed map, which is appendix A of my report, really quite a detailed map of the whole area. And they decided they'd rather have the

past style of map that I had made with seven categories. So we developed it, we put the land into those categories. And then we counted all of the areas where they went over and scored the line where there was a diagonal in a certain area. A diagonal line in areas where it was only going to be grazing, we would give it a one. A diagonal line next to a pivot would have had a 10 scored against it. So we didn't really know just how this was going to turn out, but when we did the scoring for it -- and we didn't add length to the line. If we would have added length to the line, we would have had even greater distance differences. But if you take the line A, which is the longest line, and went on the west side of Riding and Duck Mountains, the score that he had had was 39/59. If you took the next line, which was on the east side of the Duck and the east side of the Riding Mountains, but went through by Dauphin and up, it scored 24/19. And if you took line B, which was the shortest line, it scored 17/83. So there was a marked difference with just the two factors between the lines and they were quite predictable. I mean, I would have said right from the beginning that line B was the

shortest and passed over the least amount of productive agricultural land after it got by number 1 highway.

MS. MAYOR: If we can just go back, so what you're explaining to us is that you have used these factors, and you had a point system. So you rated each of the different corridors or the various options, is that fair to say?

MR. NIELSEN: Yeah, we rated. In fact, it's in the map. It's map 200 on page 24 of the technical report is the Ag map that we actually used to rate the soils. And then in appendix 3, or actually in my report, we did two line analysis, one in '09, which is in the appendix, in C. And then we did one at Christmas of '10, which is actually in the body of the report, which shows you what the ratings were for the various line angles and the rest of it.

MS. MAYOR: And if you had, in terms of your assessment of the different line options, if you had a higher rating, what did that mean?

MR. NIELSEN: Higher rating meant it went over more good soils and had more line, more diagonal or more lines that were not necessarily advantageous for the farmer. So the lowest score

was the best score.

MS. MAYOR: Now, you had talked about the totals and you had given us some of the totals for A, B and C. Those are found in table six of your report?

MR. NIELSEN: Yeah, that's in table six of my report.

MS. MAYOR: Now, you totalled the ratings, and if we can maybe break down the line options north and south of highway 16. So in terms of the preferred route selected, from an agricultural perspective, north of highway 16, how was that particular route selected relating to agricultural land?

MR. NIELSEN: Well, north of highway 16, the land is much less productive than south of 16. The dividing point of the lines actually was at Long Plains, where we finally took the route that -- we put it west of Dufresne, took it around the bottom, and then brought it up to Long Plains. We went straight west with lines A and C there. And then they headed north towards Dauphin and towards Riding Mountain. And from that point, line B, it became line B from thereon too. But the irrigation potential only goes, it's almost to

the railroad track, it's between 16 and highway 1. There's a bunch of new irrigation there, and we actually slid east to avoid it. And then we took out some diagonals and then followed the road allowance to highway 16. And then from there we crossed a lot of, what one would call less productive agricultural lands.

MS. MAYOR: So in that area that you talked about north of highway 16, were you able to select the route that had the lowest rating and the shortest length?

MR. NIELSEN: Yeah, for sure, definitely.

MS. MAYOR: Now, in terms of south of 16 to Riel, were you also able to choose the one with the lowest rating and the shortest length?

MR. NIELSEN: Well, initially we scored B in there, but there were a number of issues that actually made us change the line. So we basically had route A, we moved route A east and then brought it back and around. And so for A, B and C, at Long Plains they all had the same route to get there, there was only one route. When we finally got around to completing the line from Riel to Long Plains, there was one line, and

then it split off from there.

MS. MAYOR: So now turning to some tower placement, and we've done the divider north of highway 16 and south of highway 16. So let's stay south, which is what we were just talking about. Can you talk about, in terms of tower placement on the agricultural lands, can you explain what was decided for towers south of highway 16 that were adjacent to roadways?

MR. NIELSEN: Well, just before I put my final report in, the engineers at Hydro decided they were going to move the line into the field 42 metres. That would be at the centre of the right-of-way. Now, that was not a surprise at all because every other project we have done, the line was always in the field. And the only disappointment that I did have was that had we been able to do all of the analysis based on that -- we decided not to do any more analysis because we thought that the outcome would be the same.

MS. MAYOR: And why was it two metres into the field? Why was it so far infield?

MR. NIELSEN: Well, I was at the farm progress show this year in Regina, we were looking

at hundred foot seed drills, I mean, zero till feed drills at 100 feet, and John Deere had a hi-boy sprayer out that was 120 feet. I mean, it took up the whole building. So, you know, you have to be in a position to allow these types of machines to go by.

MS. MAYOR: If a line in the south is not adjacent to a roadway, can you describe to us how the tower placement was to go? You talked previously about avoiding diagonals, so can you tell us what is being done in terms of agricultural land south of highway 16 where it's not adjacent to a roadway?

MR. NIELSEN: Well, I guess it was just put 42 metres into the field. I guess if you've got a 130-foot sprayer, you can get by it. There are probably other ways you can get by it as well, but it's probably okay for now at 42 metres.

MS. MAYOR: It's the half mile section or the quarter section when it's not adjacent to a roadway?

MR. NIELSEN: Yeah. Well, we went to the quarter or third mile or half mile line in quite a few instances so that we could avoid yards because -- especially east of Red River -- because

there is everything, there are just so many places there. So we placed the line in the field so we could avoid being too close to houses and barns and farm yards.

MS. MAYOR: In terms of tower placement north of highway 16, is there a difference in terms of how far infield the tower will be placed?

MR. NIELSEN: Yeah, north of 16 they were just going to go 33 metres from the edge of the road allowance to the centre of the right-of-way. And that's probably due to the fact that there's much less intensive agricultural activities as you go north.

MS. MAYOR: Now, can farmers continue to farm the land around the tower that's been placed 42 metres into the field?

MR. NIELSEN: Yeah. Well, farmers will farm right up to the edge of the tower. We drove in to Winnipeg yesterday down number 1 highway. And if you look at the Portage Dorsey line, I mean, they farm within a foot of the towers there. And there's not a great deal of land underneath the towers, but they do create an inconvenience.

MS. MAYOR: What is the impact on production?

MR. NIELSEN: Well, I think we can go to the pictures. This is a slide of 602 from Riel going east. And I think you can sort of see that there's no cumulative effect between the towers, but the farmers farm right up to them.

Maybe give me the next slide. You can see here with this swathing pattern that there is no doubt that there is an income loss and there is definitely an impact from farming around the tower. If you went back to this field later on and he was actually putting fertilizer on, you can see that he circled the tower a few times. And so there is definitely an additional cost to doing this, and there's no question there is a yield impact.

MS. MAYOR: Perhaps the next picture shows what you were talking about in terms of the circles?

MR. NIELSEN: Well, this is a flax field. And once again, it hasn't been swathed, but you can see the wheel tracks around it, and you can be guaranteed that the yield won't be as high around that tower. You can also see that

they farm right to the edge of the tower. Yeah, anyways, they farmed, they'll farm right to the edge of the tower.

MS. MAYOR: Now, Mr. Nielsen, there had been some discussion about the types of towers that would be used. So we have just included in your report, there was a picture of guyed towers. These are not being used in agricultural lands, they are using self-supporting towers. Can you just describe for us why a guyed tower is not recommended?

MR. NIELSEN: If you go back one, just go back to that last slide. This is a free-standing tower which is to be used in all agricultural area in Manitoba. And if you go to the next slide, this is a picture of Bipole I and Bipole II, just as you get to Dorsey. They forgot to use free-standing tower there and they have guy wires on, that would be absolutely impossible to farm with today's larger machinery. But you can see the tower in the centre and then the four guy things, and you can see how the swathing was not real easy. So the free-standing tower is the only thing you can do in intensively farmed agricultural land.

MS. MAYOR: Just a couple of more slides, and we wanted to cover just some of the topics that were raised over the past couple on areas of concern.

So aerial spraying, can you describe for us what farmers use by way of machinery for weed control?

MR. NIELSEN: Well, a lot of farmers these days have their own hi-boy sprayers. But during the process of doing an evaluation of aerial spraying I talked to a couple of aerial sprayers. One was Bob, Mr. Morris, who runs kind of basically 100,000 acres west of Winnipeg here. And then I talked to the fellow that I usually hire to spray my crops. And I think the dissertation in my report is pretty much verbatim to what I was told by those two aerial sprayers, because there's really no literature on it. So anyways, I guess Curtis will talk about aerial spraying a little later on. But you would aerial spray, I mean, in the Red River Valley for sure, in the Osborne, Red River, Osborne clays, when they are really wet then aerial spraying becomes an issue. And they can be wet now and again.

MS. MAYOR: Is it more costly as

compared to a farmer using his own machine if he has it?

MR. NIELSEN: Probably, it probably is more expensive. But hi-boy sprayers are expensive too, so it probably costs more to aerial spray.

MS. MAYOR: Are you aware of any trends in terms of farmers these days using their own machinery as compared to aerial spraying?

MR. NIELSEN: Well, I think that there is a great trend towards farms getting larger, and as they get larger, then people will buy their own sprayers, their hi-boy sprayers so that they can do more of it on their own.

Just to go back to the wet soils, you do wet soils, you do tall crops, and I think there's a fair bit of fungicide spraying that goes on with aerial sprayers.

MS. MAYOR: Now, use of liquid manure, can you tell us about the impact the towers and lines on property may have on operations using liquid manure?

MR. NIELSEN: Well, I sat out next to Niverville and watched a cultivator going back and forth with an umbilical tube on the backside of it. And he wouldn't like to have a tower there.

But if he had a tower there, he would simply have to go by the tower on one side and then go back on the same side, and then come up and do the same on the other side, or they may have some of the big tanks that have the cultivators behind them and to put the liquid manure in, or they can just spray it on. And then I will assume if they spray it on, then they probably work it in. But I didn't address it in my report because I just thought that it looked to me like a normal cultivation operation, and we weren't getting into that kind of detail.

MS. MAYOR: Now, you have talked a little bit in your presentation already about the future of farming. So if you can maybe talk about, from your years of farming, what changes have you seen and what changes do you foresee?

MR. NIELSEN: Well, I think that they will just get bigger, the farm size will get bigger, the machinery will get bigger, and there will be a tonne of technological advances that will improve the situation. Like I farmed up until '05, and we would have been really happy if we would have got 150 bucks gross an acre. I mean, now the young fellow that's farming my farm,

he probably gets 400, 500. I mean, just the price of product has gone up so high. And so there's all kinds of incentive to expand and buy the right kind of machinery and put the right kind of inputs in.

MS. MAYOR: Now, will the tower placement that we described earlier, will that, in your view, accommodate those type of changes that you talked about?

MR. NIELSEN: Well, I think so. Yeah, probably. Like you can, in all kinds of sprayers, if you had to go, you've got a bigger sprayer than would accommodate on 42 metres, you can normally back off one end of them to go around, which of course would take you some more time. But I don't know, the 42 metre decision, I think that was an engineering decision.

MS. MAYOR: Now, given your years of experience in the agricultural field, how satisfied are you with the final preferred route?

MR. NIELSEN: Well, I think the final preferred route is okay. I think it's fine. I mean, if you attempt to move it, you simply move it on to the same kind of soil, you just affect somebody different. I mean, you could move it

2 miles and then you're going to be on somebody else's farm. I mean, we tried to put together a line that avoided people, avoided farm yards, avoided rural residential stuff. And I thought when it was all done, we took out the diagonals, and I thought when it was all done that we had found some reasonable routing.

John Dyck and I flew all three lines with a helicopter. When we came back from that, we did a bunch of route alterations. And anyways, yeah, I think from my perspective we have done it -- well, if you take the rating system worked, the impediment mapping through the intensively cropped areas in Southern Manitoba worked. It allowed us to find a route which didn't run over top of everything. And in places where we got too close, we moved it. Anyways --

MS. MAYOR: If you were given more time to do more study and analysis, do you think a better route through the agricultural land could have been found?

MR. NIELSEN: I don't really think so We could have gone east a long way and we would have had to go out and around Ste. Anne and Steinbach and then come back in, we would have

gone on poor agricultural soils. But when we come back into the bottom of the study area, we still would be in a Red River, Osborne clay. And so once again, if you are going to move it, you just move it on top of somebody else. Anyways, no, I don't think any more study or that would improve it. We made quite a few line changes in the Red River Valley. And so I think that I'm quite satisfied with the line.

MS. MAYOR: Thank you.

Now, Mr. Sargeant, being that the two topics are related, do you want us to move on to the next presentation, and then your questions can all be together, or would you like it separated?

THE CHAIRMAN: I might like to ask some questions of clarification of Mr. Nielsen at this point.

Mr. Nielsen, in your agricultural technical report, there was a fair bit of time spent on irrigation systems and the avoidance of irrigation systems, or the difficulty of irrigation systems around towers, but you haven't mentioned that at all today.

MR. NIELSEN: Well, there actually is, in my literature review there's quite an extensive

section on irrigation. And then in the back part of my report, we talk about getting involved with irrigation systems where the -- well, it will have to be the engineering department of Manitoba Hydro would have to consider placing towers in a position so that you could irrigate underneath the line. It's not impossible. I mean, people irrigate underneath high voltage transmission lines. You just have to make sure that spray doesn't get onto the wires. So you might have to shut the end nozzle down slightly so it doesn't go up so high. But there is a fair bit in there on, I mean, I could give you the literature review. And then toward the end of the report, there is a couple of pages on irrigation systems and what you need to do so that you can actually operate them. And of course, I think Manitoba Hydro will find that when they get into Almisippi sands, which start at Carman and Elm Creek and go north to number 1 highway, they are going to find lots of people that are going to consider over time irrigating with a pivot irrigation system. And so it will be a consideration that they will have to make in relation to tower placement. I mean, you can't place a tower at the eighth mile. Like

you've got a mile line and a half mile line, you can't put it at the quarter mile line because that's where the end of the pivot goes. You're going to have to put your towers in a strategic location. So I don't think it's impossible. I think it might cost you more money but...

THE CHAIRMAN: Do you know offhand how many farms with irrigation systems on them currently the FPR goes over or traverses?

MR. NIELSEN: We didn't go near any irrigation systems with initial preferred route. What's happened in the last couple of years, I can't say.

THE CHAIRMAN: Thank you. Questions, Mr. Gibbons?

MR. GIBBONS: Yes, I had a question earlier and we put it aside for the agricultural discussion, and I don't know if you would have even a ballpark figure off the top of your head or not. And if not, we could certainly take an undertaking. But I'm trying to get a sense of the amount of arable, i.e. productive land that is either lost in its entirety or where there will be reduction in productivity. For example, in Niverville, we heard the argument made that there

is a patch of land, essentially a triangle on either side of each tower for which there is a typical 20 percent decline in productivity because of the way the machines must pass and so on. Do we have a ballpark figure as to, between the loss of the actual land or reduced productivity, the kind of impact the line might have on arable land?

MR. NIELSEN: Somebody did some stat for me at lunch time, or at coffee break. And I guess in the EIS, page eight, it says there 585 total kilometres that go through crop land. And they said that about half of that will be cultivated. It wouldn't be difficult, I mean, getting that more accurate figure wouldn't be that difficult. So it winds up if you take the tower, if you take that diamond shape, it's .075 acres per power, if there's 500 towers, then you have 34 acres taken out of production, and 15 hectares. Now, I could do an undertaking on that and just so that we could maybe get a little bit more accurate figure for that.

MS. MAYOR: We can certainly do that for you.

MR. GIBBONS: That would be helpful.

MS. MAYOR: I know there was some work

done over the lunch hour, but I think to give you a fully accurate answer, we could do that by way of undertaking.

MR. NIELSEN: I think that's a really good question, and it's probably worth doing a little bit more digging on.

The other question you had was about the house that was too close to the line. What they did was move the line north so that there probably is 125 or 150 metres from the house to the transmission line now, because they just moved the line. Like we knew that house, we knew the house was too close. And so you have to do something about it, and so they moved the line.

MR. GIBBONS: Okay. Thank you.

THE CHAIRMAN: Wayne?

MR. MOTHERAL: Mr. Nielsen, we just came back last week from Niverville and, of course, we heard most of the concerns there were agricultural concerns, and no doubt the aerial spraying being one of them with the lines crossing fields. In the part where you said avoidance, when you are trying to avoid things, did you ever consider in your works that you would avoid crossing any land that already has existing lines?

And I believe we have heard some now are being crossed again, which makes it virtually impossible for aerial spraying.

MR. NIELSEN: Yeah, there is, I think there's one place between Brunkild, east of Brunkild where there is a 230 line going south. And where they cross, there will be an issue. Like the aerial sprayer said that they can go within about a hundred feet of the line, you know. And so if they do 100 feet, that means you still have to ground spray under the line. There's no way that you can avoid that. But where they cross, then there's a larger issue and you're going to have more acres you can't spray. But how do you go from Riel around and miss some of those lines? I mean, you can't. But I think I'll leave that question and you can ask Curtis that question, because I think that there has been some consideration of compensation for the inability to aerial spray.

MR. MOTHERAL: It also complicates the fact when you are in river lots, the narrow river lots, it even makes it worse we understand too?

MR. NIELSEN: Yeah, it will make it worse, right. To get across the Red River we

actually followed the fabric of the river lot, but that still doesn't mean you're going to be able to spray right to the edge of it. You're just not going to. And because they got, well, you know and I know, they've got bigger planes. I mean, they used to fly underneath the lines but they don't do that anymore. That's long gone.

MR. MOTHERAL: Another concern too is with liquid manure. You did mention about, you know, there's the chance of spraying it on instead of using the, as you call it, the umbilical cord or whatever. Many municipalities, of course, don't allow that. There are lots of plans where direct injection is the only way that you can go. So that's another issue to look into.

MR. NIELSEN: The umbilical cord is direct injection. It goes in behind the cultivator, as does big tank with the cultivator on the back of it.

MR. MOTHERAL: I am sorry, I misunderstood you. When you said spraying, I thought you meant spraying it on the surface, I'm sorry.

MR. NIELSEN: Well, there are big tanks that you spray on the surface as well, but I

didn't see any of those working southeast of Winnipeg. I just saw the cultivator with the umbilical cord, and I thought it was a relatively neat operation actually, but it still was just going on an angle up and down the field.

MR. MOTHERAL: And one more issue, just back to spraying again. And I realize that you don't have to miss spraying if you are field spraying, if you are field spraying. But then the concern that we heard in Niverville was wet weather, unpassable, you can't drive on fields, where aerial spraying is the only option. And that's a huge concern.

MR. NIELSEN: Yeah. Well, I don't know. One of the recommendations I made in my report was that we, you know, somebody work on that thin track, like if you're going to use hi-boy, maybe you need a thin track hi-boy so that you actually can go into wider fields and stay up. I don't know, that would be one of the few things that I thought of that might be of value. Now, maybe somebody will develop that, I don't know.

MR. MOTHERAL: Thank you.

THE CHAIRMAN: Thank you very much, Mr. Nielsen. We will move onto Mr. McLeod now.

MS. MAYOR: Yes, Mr. McLeod is going to do a brief presentation similar to that which was done in Niverville, a little bit more lengthy, and we're going to try and ask some questions at the end to cover off some of the issues that were raised last week as well.

MR. McLEOD: Good afternoon, Mr. Chairperson, ladies and gentlemen. My name is Curtis McLeod. I have been with Manitoba Hydro for 16 years, all of them have been with the property department. My current title is property capital project supervisor and I report directly to the manager of the property department.

This short presentation I am about to give you is a high level review of Manitoba Hydro's landowner compensation program. There is four components to Manitoba Hydro's compensation program. They list from land compensation, to construction damage compensation, structure impact compensation, and ancillary damage compensation.

MS. MAYOR: If we can just take a minute? If we can just take a five minute break and we'll get that fixed up.

THE CHAIRMAN: Okay.

(Proceedings recessed at 3:45 p.m. and

reconvened at 3:51 p.m.)

THE CHAIRMAN: Okay, back over.

MR. McLEOD: As I said, our compensation package has these four main components, the land compensation, construction damage compensation, structure impact compensation and ancillary damage compensation.

Now, and just a clear simple statement, landowners will be compensated 150 percent of the market value of the land taken for the easement.

Now, again, I'd like to confirm to the people who maybe they were misinformed or misconstrued that we were using assessed values to establish market value for this part of our package, and we are not. It was just a tool for the public to be able to use to determine where their market value might be in the real world.

That being said, I would like to make sure everybody is aware that the property department staff that were determining the market value of the land are AACI accredited Manitoba Hydro property department appraisal staff. Now, for those who are not quite sure what that stands for, that stands for Accredited Appraiser Canadian

Institute with the Appraisal Institute of Canada. And basically what they do is they determine the market value of the land based on the most recent and current land sale information made available to them from the Manitoba assessment. So basically what happens is when a property is sold, it gets registered at Land Titles. That information then is pushed over to the Provincial Assessment for assessment purposes. Manitoba Hydro then gets a dump of the most current sales. And usually that happens on, every two to four months they get the most updated. So there is a little bit of a lag in some of the sales documents, that's unavoidable. But we do work with the most current that's available to us at the time.

Just as an item of interest, so far we have reached just over 5,500 land sales to work on comparables.

Construction damage is a fairly straightforward component of our package. And it's basically, if we damage crops, we pay you for the loss of crops. If something needs to be fixed, we fix it. We make good for the damages caused by the construction activities of the

building of the line.

Structure impact compensation is a one time lump sum payment for each tower located on land classed as agricultural. And we basically break up the four basic land types, natural, hay land, seeded hay lands, cereal crop lands, and row crop lands. It's all based on the type of structure, the base of it, and where it's located on the land and how it relates to other farm activities around that obstruction.

We use what we call Manitoba Hydro's structure impact compensation schedule. It's generated annually. So we have a model for a list of typical towers that are used, and we basically generate this schedule annually, and it's reviewed mid term for the cap rate that's used to make sure it stays current. All the information that we use to build this schedule is provided to Manitoba Hydro by the Department of Agriculture.

This is very similar to the sketch I had given or showed you on Friday in Niverville, but I saw some of the limitations on the one I had presented to you on Friday, so I tried to make it a little bit clearer and I broke it into two slides. This first slide is basically showing you

a typical location where the -- it's a tangent tower, going to be located at 42 metres off the property line into the field. So as you can see, I have got the width of the easement marked out there at 66 metres, and it shows that it's offset from the property line, the centre line at 42 metres. And the centre line of the tower is centred on the easement. And what I have done there is the box in the very centre is the actual footprint of an eight metre by eight metre tower.

Now, the next slide is basically the dimensions of the area of impact that we have calculated as part of the -- to try and feed into the structure impacts model. And as you see, we have given an area of 100 percent loss, quite a bit bigger than just the eight metre by eight metre footprint. We allow for a minimum of 6-foot buffer to the sides, and then greater for being able to curving around and coming back around the structure. On this typical situation, that works out to approximately .075 acres of 100 percent loss per structure. Now, the 20 percent crop loss area is the yellow area, and it totals up to .477 acres, which when you combine the two together, that means this structure has some form

of impact to farming activities totalling approximately .552 acres.

Now, all the components that are built into this model, the numbers that are given to us from the Department of Agriculture, they would include numbers associated with the following: Crop losses is on lands permanently removed from production; reduced productivity in the area of overlap around each area of the structure, that would be the yellow area; the additional time required to maneuver farm machinery around each structure; the double application of seed, fertilizer, chemicals in the area of overlap around each structure. So, again, that is that concern that had been brought up about the over-fertilizing of lands. We have already declared that as a 20 percent loss and taken that into account when we're trying to calculate out the structure impact payment.

And also the fifth item that's brought into the calculations is the costs incurred regarding weed control around each structure.

Ancillary damage compensation applies to where Manitoba Hydro's use of the right-of-way directly or indirectly impacts the use of the

property. So the typical example would be to irrigation and aerial spraying activities, or on places where there's established standing gravel pits. We are affecting how they are going to be using that property, so if it can be quantifiable and justifiable, we will look at some form of compensation.

To date we have never had anybody brought forward an aerial crop spraying claim, so this is new to us and we're working on bringing it in to our program.

As an example, to give you people here today what a landowner might expect, an example of compensation for agricultural easement. For this instance, I will not include ancillary or construction damages, this is just strictly how I have envisioned a structure payment and a land payment. And it's for one mile of line on cereal crop land where the land has a market value of $1,300. And there should be four structures in this instance located on the property. That would mean that the landowner would see a land payment equalling $51,168. So if you take that, that's your 26.24 acres times the market value, which in this case would be 1,300, times 150 percent.

Now for the structure impact compensation, on this typical alignment it's a tangent cereal crop. It's an eight metre by eight metre structure. So that works out to $15,000 for each structure as a one-time payment, multiplied by four equals to $60,000. So for this one mile of right-of-way, the landowner would see $111,168. Now, this is aside from any possible construction damages or ancillary damages related to possible irrigation and/or aerial crop spraying.

I would like to take this number here to give you, how I see it, if you want to drill it down to a per acre compensation. This $111,168 when you drill it down to a per acre of easement compensation, is relevant to a payment of $4,237 per acre. And if you want to drill it down even further to maybe applying that $111,000 as per the land directly affected by a structure, it's equivalent payment of $48,758 per acre.

In closing on this presentation, I would just like to state that we believe that Manitoba Hydro Bipole III landowner compensation package is comprehensive. It is on par with or better than electrical utilities of our neighboring provinces.

MS. MAYOR: Mr. McLeod, can you tell us what work is necessary to acquire the easements that you were talking about last week and today?

MR. McLEOD: Manitoba Hydro property department had to compile preliminary title searches as part of the various rounds of consultation, just for the consultation purposes. Then once the FPR was selected, we had to start verifying the ownership, just for the directly affected landowners. And we had to start compiling the information so that we can start determining land values. Then the easement descriptions and related sketches were developed. And then easement agreements needed to be prepared, and then finally a contractor hired to obtain the easements for Manitoba Hydro.

MS. MAYOR: Now, why did Manitoba Hydro seek the assistance from a contractor to do this work?

MR. McLEOD: The property department of Manitoba Hydro does not have the internal resources to meet the time frames required to meet the ISD of this project.

MS. MAYOR: Why did that work begin before a licence has even been obtained?

MR. McLEOD: Due to the time constraints to the ISD of the Bipole III project, and to be able to allow for flexibility in construction scheduling, we had to start acquiring easements as soon as possible.

MS. MAYOR: And why was an Alberta contractor used rather than a Manitoba contractor to acquire the easements?

MR. McLEOD: In April of this past year, Manitoba Hydro issued an open tender for the acquisition of the right-of-way, for the acquisition surface of the Bipole III. The contract was awarded to Evolve Surface Strategies in June. No tenders from a Manitoba company were received.

On a side note, Evolve Surface Strategies Inc., based out of Airdrie, Alberta, has since established a permanent presence in Manitoba by opening up an office in the City of Brandon, Manitoba, and that is to work on work outside of Bipole III.

MS. MAYOR: Now, you described for us, in fact the slide in front of us talks about the single up-front payment. Can you tell us why that was selected by Manitoba Hydro as opposed to an

annual payment?

MR. McLEOD: The one-time payment to landowners provides the owners immediate compensation. It also is a compensation to landowners that reflects estimated annual losses, annual loss of production regardless of weather conditions or future production limitations. It is also based on our past experiences of other transmission line projects, like the Rosser to Silver 230, the Dorsey, Neepawa, Brandon 230 kV, and the Glenboro to Rugby 230 kV lines. They all traverse through agricultural areas in Southern Manitoba, and we found the landowners appreciative and accepting of the one time up-front payment. And I worked on all three of these projects firsthand, in some form or another, and that is from my personal history on that.

MS. MAYOR: In terms of customization, can you tell us, will the payment be customized for individual landowners?

MR. McLEOD: Yes. All components of our comprehensive compensation packages are customized for the individual landowner to reflect the uniqueness for each parcel of land and how each parcel is being used. In a sense, they are

customized in some form another. We obviously are not going to pay $2,500 an acre for land that is a swamp in the middle of nowhere. Each parcel is looked at on its own merit and how the land is being used.

MS. MAYOR: With respect to aerial spraying, I believe earlier Mr. Neilsen volleyed this question over to you. So perhaps we can get you to discuss how aerial spraying will be taken into account, because it's obviously a very significant area of concern, as we heard last week in some of the communities.

MR. McLEOD: Restrictions to the use of aerial crop spraying would be considered ancillary damage. If the landowner can demonstrate that aerial crop spraying is part of their current farm management practice, they would be compensated accordingly. I would like to reiterate that this is new to us and we are in the midst of developing, but if a loss can be demonstrated, in the past Manitoba Hydro has always paid.

MS. MAYOR: Now, is damage compensation available to landowners who will not have the Bipole III transmission line on their

property?

MR. McLEOD: Yes, as long as the damage can be directly attributable to the transmission line impact on the use of their property.

MS. MAYOR: There was also discussion last week about an impact on the property value of properties that have a transmission line on them. Can you talk about that?

MR. McLEOD: Manitoba Hydro has and continues to conduct and research studies on the effects of the proximity of transmission lines on property values. All the studies that we have provide the similar message, which as I'll quote, "In general there is no decrease in market value of agricultural or residential property that is measurable by sales in the market-place."

We did, I think as part of the question to the CEC identified as MHV1-295, we actually provided copies of those studies for the record. They were the 1992 study which references residential property rates. There's a 2011 ongoing monitoring study of the same corridor, and then there's the Stenhouse report which is a study based on for agricultural lands.

MS. MAYOR: And my last two questions I'm going to refer to Mr. Gray, because he dealt with them last week in Niverville I believe. The question about single lump sum payments as compared to annual payments, would Manitoba Hydro consider changing from single lump sum payments to annual payments?

MR. GRAY: Firstly, good afternoon Mr. Chairman, Commissioners, ladies and gentlemen. My name is Glenn Gray and I am the corporate property manager for Manitoba Hydro. I have been with Manitoba Hydro for 33 years, two years in my current capacity as manager of property.

So Janet, the question is, would Manitoba Hydro consider switching? Manitoba Hydro will not consider switching from lump sum to annual payments. I'd like to just start with saying the lump sum payment methodology, as Curtis mentioned, was chosen based on feedback from consultations and from experiences in past transmission projects. You know, if the feedback was more favourable towards an annual payment, we may have chosen that methodology, however, there are some administrative challenges. And let me share with you and sort of recite what Curtis

said. As much as an annual payment is once a year, I believe it's on record there is 436 landowners, there is well over a thousand title searches that need to be done, that were done in determining the landowners. Those searches would have to be done annually. And our concern would be based on the lag of the Land Titles and transferring and the registering of titles, that the right landowner may not be necessarily compensated appropriately. So there are some challenges in making that kind of a process work.

We believe we have chosen a payment method that is proven and it's generally accepted both by landowners and by Manitoba Hydro.

MS. MAYOR: There was also a comment made earlier in terms of comparability to our neighboring provinces. Did that factor into your decision at all?

MR. GRAY: Yeah. Even other jurisdictions that we have obtained information from, their landowners in other provinces prefer lump sum one-time payments

MS. MAYOR: There was an undertaking that was given last week by Manitoba Hydro and it's found, just for reference, at 2012 of the

transcript. And it was with respect to river lots and the effect that a transmission line may have on neighboring lands that they themselves don't have a tower on it. Were you able to do any analysis on that? The question I believe was asked was how many potential properties could that impact?

MR. GRAY: Yes, I have. It was discussed earlier, it was brought up to Jim Nielsen. We had done further review, and the final preferred route took into consideration neighboring river and settlement type lots. We have identified about eight of them. We understand there are challenges with aerial spraying as it stands today. These lots will run perpendicular to our corridor. In addition to that, there is a buffer of a public road allowance and drainage. So as much as there may be no direct impact to these lots in terms of an easement and a tower located on property, there may be some indirect impacts that we don't understand. And they will be dealt with, and Manitoba Hydro is willing to meet and discuss these types of things as ancillary damages with these landowners.

MS. MAYOR: Thank you. Those are our questions.

THE CHAIRMAN: Thank you. I have a few questions. Just on the last point on river lots, will Manitoba Hydro be reaching out to these farmers? They don't have to come to you?

MR. GRAY: Yes. As Manitoba Hydro finalizes where each of the structures are going to be impacted, there will be dialogue both with the landowners in the area and there can be discussions with any landowners that feel it would be an impact.

THE CHAIRMAN: Thank you.

MR. GRAY: We have identified, we have their names and we have their locations and so on and so forth.

THE CHAIRMAN: As you may recall, one gentleman, I think he was the last person to appear that last week, didn't realize that he might be eligible for some kind of compensation under these circumstances.

MR. GRAY: Right.

THE CHAIRMAN: Mr. McLeod, Ms. Mayor asked you about these people from Evolve going out into the field before the licence has been

approved to get easements. I hope you have escape clauses.

MR. McLEOD: In what sense, sir?

THE CHAIRMAN: Well, if we don't approve the --

MR. McLEOD: Oh, yeah, definitely. The message from Evolve to the landowners that they were able to meet with and subsequently sign the easements, all of them were told this easement was strictly conditional upon Manitoba Hydro securing all necessary licences and permits. And it was a non-refundable deposit payment of $225 given to those people who did sign.

THE CHAIRMAN: And you may recall last weekend -- no, it was in Portage la Prairie we heard from two people on the record, and one or two more off the record during some of our breaks, about the approach that people from Evolve had made. And I think Mr. Joyal had promised we'd have somebody from Evolve here that we might ask them of this, but we heard that the Evolve representatives had said to these farmers that it was a given that the licence would be approved?

MR. McLEOD: And in my speaking with Evolve, they said their only message that they

ever gave the landowners was that anything they sign is strictly conditional upon Manitoba Hydro being successful at getting a licence. Nothing is for sure, especially that. That this is strictly a conditional agreement and it's all up to the Manitoba Hydro getting the necessary licences and permits.

THE CHAIRMAN: Thank you.

MR. GRAY: If I may add, even the letter for the landowners that were not interested in talking with us at this time, Evolve does have a strategy where they issued a letter to the landowner. And within the letter it's stated those same terms itself, that it was strictly just to pass on information to share with them what the easement was about, and anything would be subject to any type of licence.

THE CHAIRMAN: Thank you. The issue also came up last week about liability for damage to towers because of the farmer coming in collision with it. There was also the issue of whether farmers would have to take out additional insurance. Now, I think Hydro undertook to look into that. Will we get that in another --

MS. MAYOR: It's not in another

presentation, but that information was obtained from our insurance department. It was filed as an exhibit this morning.

THE CHAIRMAN: Thank you. I haven't gone through all the stacks of stuff we received today. So thank you.

Another question I had, when you were coming to these dollar figures, it strikes me, and I'm not an expert in this area, but it strikes me that this is an approach from a property side. Was agricultural economics considered? And you'll recall that in Niverville in particular we heard from a number of people who said very similar things, and they had even computed amounts of money that they thought were going to be additional costs to them, either because of more gas to drive around these towers a few times, or more diesel I guess, more time, what it would cost them in lost productivity over many years. So did you or somebody at Manitoba Hydro consider it from that perspective as well?

MR. McLEOD: The model that's created and the schedule that is related to the structure impact compensation takes all those factors into it when they work out the 20 percent loss area.

So they take into consideration crop rotations, fuel, labour. They even, I believe, include money to put in for Manitoba Crop Insurance.

THE CHAIRMAN: And just one question popped into my mind as you were speaking. When you -- the land compensation, the $51,000 up there, does Manitoba Hydro gain title to that piece of land or is it just an easement?

MR. McLEOD: It is strictly an easement. It gets registered as a caveat on the back of the title and it's a non-possessory right.

THE CHAIRMAN: Thank you. Anyone else?

MR. KAPLAN: If I can direct a question just for clarification to Mr. Gray? And my question is, and I'll give you the background as I have noted in my notes, going back to Niverville, do you recall that there was a witness named Wiens and Mr. Wiens asked about lump sum payment versus annual payment. And as a result of what Mr. Wiens said, I do recall, and I have a short note, that I asked you specifically whether or not there could be single versus annual payments, but if requested, annual payments for the length of the line as far as time. And I have

a note of the answer. Now I may be wrong, and it wouldn't the first time, but my note says that there is precedent for annual payments. I'm not sure that I have it correct then.

MR. GRAY: The example that I referred to in Niverville was equated to, if Manitoba Hydro was to lease a building that we would make those types of payments, we were capable of doing that. Payments are easy to apply, okay, but clearly they have some administrative difficulties. And in this particular case, the example that Mr. Wiens used, and I'll recite that, he quoted that they were just numbers, examples of $40,000 in $800 annual payments, and that would be a payment over 50 years. And the question I believe came to me is, could you do that? And I said Manitoba Hydro could do that, okay, and we have done it in terms of, not so much payments for easements like that, but we have done it for property.

My concern here with regards to these payments is, as I stated earlier, that there is Land Title searches that would be very challenging for Manitoba Hydro to do that.

MR. KAPLAN: But it could be done?

MR. GRAY: I would have to say I would

be very concerned with any kind of payment being done where I couldn't validate, I didn't have the information that was accurate and able to do so. Like it's because of other jurisdictions for the Land Titles, for the registering, for transfers of titles, for searches, that would concern me that it wouldn't be done well. I would be very concerned to do it that way.

MR. KAPLAN: But if you had the accurate information, it could be done?

MR. GRAY: I refer back to my initial comment. If the information that we got from landowners supported an annual payment with the experience we had, we may have considered it if we could work out the challenges. But the information that we did get was that they would prefer an annual payment, therefore we have chose than the annual -- I'm sorry, the lump sum payment. Thank you. My apologies.

MR. KAPLAN: No apologies necessary. Thanks.

MS. MacKAY: In terms of determining land value for land compensation, the appraisal is done by Manitoba Hydro staff. Could a farmer, if he or she wishes, get their own appraiser and

argue with you?

MR. McLEOD: I can't see that being a problem. Usually there is a mechanism that we can enter if there is some -- if we can't agree to the land value and if the landowner has knowledge of a sale that maybe we have missed, they may not have to go to that step of actually having to hire an outside appraiser, because they will know the current sale market in their area. And if they can give us the information ahead, we'll research it and confirm whether or not we see that as relevant. But failing that, third party's land appraisers have been used in other projects.

MS. MacKAY: Still on land compensation, in a situation where you either have to expropriate to get rights to a property, or where a landowner wishes to leave the property because of the line, how is that land value determined?

MR. McLEOD: Any property that goes through the expropriation process, whether it be for highway taking or any manner, always, the value has to be attributed to that parcel of land. And through the expropriation process, that land will be, or that value will be determined by the

Land Value Appraisal Commission, and they would set the land value to that.

MS. MacKAY: Would you then pay 150 percent of that or only 100 percent of that?

MR. McLEOD: It would be however it was determined by the Land Value Appraisal Commission. It could be a multitude of percentages or whatever. They would instruct Hydro what they would feel the compensation should be.

MS. MacKAY: I have just one quick question about ancillary damage around the issue of aerial spraying. In a situation where an owner, who does not have a tower on their property, discovers two years after the line is in that in fact they can't aerial spray anymore, and it's the first time they needed to, would you then be prepared to address ancillary damages with them, or is it too late?

MR. McLEOD: I'm not sure on that one. I would think --

MR. GRAY: The way it was viewed initially, ancillary damage would be if there was a pattern of application that was used that can no longer be used, they would be compensated. In

terms of somebody who, for reasons of crop height, as Mr. Nielsen mentioned, or wetness would normally use that application maybe once every five years or so, Manitoba Hydro would consider compensating them for ancillary damages.

For a landowner that has never used it, we would have to sit down and we would have to view that as a case-by-case basis.

MS. MacKAY: Thank you.

THE CHAIRMAN: Wayne?

MR. MOTHERAL: Thank you. Mr. McLeod, just as a hypothetical question on assessment, there is two neighboring properties side by side, and because of some previous sales, one sold for $500 an acre more than the other one. So there's a possibility when you say there's individual -- what I'm getting at is, could one have more compensation than the other because of that?

MR. McLEOD: Generally when it comes to market valuing of land, they wouldn't leave it just to the recent sale of that specific property. It's all based on soil types, as far as Manitoba Hydro would look at land values for bare land, agricultural land values. So they would compare the soil types and the proximity of the subject

parcel that we're looking at. So its recent sale history is not as important as the soil type that is contained on the property.

MR. MOTHERAL: But it's possible that there would be two different --

MR. McLEOD: You do get that in the rural areas, you can have potholes, right. You've got a nice perfect quarter, the next quarter has got potholes all over it, and obviously even though you are in the same section of land, there may be different soil factors and uses. And that's what I am saying, that's where the uniqueness comes in. We just don't slap that $1,300 an acre for the next 30 miles. We look at each parcel individually.

MR. MOTHERAL: I understand that. I'm just saying there is a possibility that one may get a little bit more than the other?

MR. McLEOD: Oh, yeah, but the 150 percent is the same.

MR. MOTHERAL: It could be coffee shop talk the next day.

MR. McLEOD: True enough. But basically we try, if we can see that value had proof that it should have been higher, Manitoba

Hydro would then be prepared to go back and adjust the other people to match it.

MR. MOTHERAL: Thank you.

MR. GIBBONS: Sorry to keep harping, I think on the same question, but mine is a variation of the last question, and that has to do with the notion of the four agricultural land types. I'm presuming that the $1,300 figure is a hypothetical example, so we can stick with that hypothetical if you like. When payments are grouped by four agricultural land types, it strikes me then that some land types are more valuable than others, presumably natural hay lands are worth less than others. But it also strikes me that, from what we have heard in some of the meetings last week that, for example, land that is cereal crop land one year may not be cereal crop land the next. Through crop rotation some of them might -- or for market strategy reasons -- might go from cereal crop land to row crop or vice versa. How do these questions affect the market value? Is there an assumption that the land is always cereal crop land or is always row crop land and so forth, and is there some significant variation in the value say compared to natural hay

land?

MR. McLEOD: Actually, the four land types that you are referring to are strictly relatable only to the structure impact payment and not the land payment, okay. Because you can get cereal crop land up around Swan River selling for $1,300 an acre. You take that same cereal crop land in Carmen is selling for $2,300 an acre. So when we talk about the land portion of the compensation package, how it's being used is not even a consideration. It would be based on the area sales and the soil types.

MR. GIBBONS: So when you speak of the four land types, as long as it's one of those four land types it may be entitled to structural impact compensation?

MR. McLEOD: Correct.

MR. GIBBONS: But if it's not one of those four types, it would not be?

MR. McLEOD: Well, it has to be zoned as an agricultural class area. So in theory if it was all bush and swamp, even though it's in what we call an agricultural area, those aren't farmed lands, so they in theory would not qualify. There has been some instances where our clearing has

actually created the farmland out of it because it's added on to a pasture. You know, before the farmer hadn't cleared the route in that area, and now once we clear through that area it adds up on to his pasture land or his native hay land, then even though we are bettering the land, we would still compensate him as a native hay land, because that's how he is going to be using it for the next 30 or 40 years.

MR. GIBBONS: Thank you.

THE CHAIRMAN: I think maybe just taking off on Mr. Gibbon's question. Structure impact compensation, I believe for row crops, it's 20,000?

MR. McLEOD: For this structure, it may be. Generally it escalates. I can't remember off the top of my head, but that's how it goes up in levels is natural hay land, seeded hay land, cereal crop lands and row crop lands. Now, with the category cereal crop lands in the rotation, they have allowed for a rotation of a row crop in there, but it's not the dominant crop of the rotation. So even though you may see wheat and canola as the dominant, and the farmer throws in a corn once every four or five years, that would not

automatically classify that land as a row crop. The land would have to be row crop dominant to get that classification.

THE CHAIRMAN: Thank you. I'm not going to ask Hydro to bring up their whole panel right now given the time, but I won't excuse these three gentlemen. I will invite participants who might have questions of these three gentlemen to come up and ask questions at this point.

Go ahead, Mr. Dawson. This way you get agriculture all to yourself rather than having to share it with all the other Hydro witnesses.

MR. DAWSON: Mr. Nielsen, if I may ask a quick question of clarification? You had produced slides on the paper handout on page four, so I think it's slide seven on yours, but it's page four of the handout, there's a slide entitled Avoidance. I'll give you a moment to find that.

MR. NIELSEN: There's two slides. Which one do you want to talk about?

MR. DAWSON: I have it at the top of the page on page four, Avoidance.

THE CHAIRMAN: Lands under irrigation.

MR. NIELSEN: Okay. Well, okay. Is it the land under irrigation, is that what you

want to talk about?

MR. DAWSON: No, but we're getting there. It's with reference to the next line is lands belonging to or entitled to First Nations. Do we have that on that slide?

MR. NIELSEN: Well that --

MR. DAWSON: I'm not asking you to say anything, I'm just asking you to find that. Do you have that, sir?

MR. NIELSEN: I do.

MR. DAWSON: Now when you make reference to lands entitled to First Nations, do you mean, among other things, TLE selected lands?

MR. NIELSEN: Probably. Well, what happened when we put the route in, Bill Krawchuk --

MR. DAWSON: I'm very sorry, the sound is bad at the best of times.

MR. NIELSEN: When we put the route in, and Bill Krawchuk from MMM reviewed the line, and if there was an encumbrance against it, like it was a piece of land that was an entitled piece of land to a First Nation, then he simply told us to move the line.

MR. DAWSON: Sure. I understand what

the notion is of avoidance, but what I'm trying to do is to find out what you mean in your slide when you make reference to lands belonging to or entitled to First Nations. So I'm suggesting, or just asking, is one category of those lands TLE selected lands? You're looking at people in the audience as if you need help. You can simply say you don't know.

MR. NIELSEN: Well, the question, what do you think?

MS. MAYOR: Mr. Nielsen referred this work to Mr. Krawchuk. We were asked to get one of Manitoba Hydro's representatives to come up because he would have the answer to you. So if you want to just defer that, someone is coming right now and they can answer that.

It's my understanding that it wouldn't be TLE selected land, it would have been ones that were previously selected, but not ones that were potentially. That's the way to answer it. We're just going to wait until Mr. McGarry gets here.

MR. DAWSON: The only reason I am posing the question to this witness is it was his slide.

MS. MAYOR: I perfectly understand.

MR. DAWSON: So I assumed that the witness understood what his slides meant.

Let me move to a different area then. In preparing your technical report, Mr. Nielsen, and giving your oral evidence, you have obviously focused on agricultural lands and their existing use. Am I correct that it would be beyond the scope of your inquiry to consider future, actual or future possible uses of those agricultural lands?

MR. NIELSEN: No, that's probably not beyond the scope of what I thought about. I mean, when it comes to things like irrigation or, you know, row cropping, those things are increasing all the time with farm size, but --

MR. DAWSON: Well, let me give you a very specific example. There are current agricultural lands that fall within TLE selection zones of Aboriginal groups. It is conceivable that some Aboriginal groups may select those lands and use them for agricultural purposes. Focusing on that specific example, am I correct that that is beyond the scope of your inquiry?

MR. NIELSEN: It's beyond the scope, because unless they were actually identified with

an encumbrance, Bill Krawchuk would not have found that encumbrance.

MR. DAWSON: Okay. Those are my questions for Mr. Nielsen, subject to whoever else might want to come forward and try and tangle with me. But I do have questions for Mr. Gray, if I may. And then I'll stop if you'd like.

I understood, Mr. Gray, that Hydro's paying easements to affected landowners. I've got that part right, right? You can't just nod, you have to say yes or no or the record.

MR. GRAY: Yes.

MR. DAWSON: And the reason you're making these payments, if I understood correctly, is the Bipole III project is undoubtedly going to affect the lands of those landowners?

MR. GRAY: Yes.

MR. DAWSON: The payment for these easements is intended as an economic benefit for those landowners basically to accommodate them because they are being affected by the project. Is that right?

MR. GRAY: It's a compensation package, a comprehensive compensation package to landowners affected by Bipole.

MR. DAWSON: Okay. And when you were trying to reach out to the landowners, I understood that Hydro didn't just wait for landowners to come to them, you said you actually went out to them. That was in reply to the question from the panel. Am I right?

MR. GRAY: Correct.

MR. DAWSON: And I also heard from the panel, and you were undoubtedly at that session personally, that some landowners didn't even apparently realize that they could be affected by the project, is that right, or did I misunderstand?

MR. GRAY: That's correct. The panel brought that to the attention today.

THE CHAIRMAN: Can I correct that? I don't think it was that they didn't know that they would be affected by the project, they didn't realize they could get compensation for it.

MR. DAWSON: Okay. And the witness seemed to agree with me, which is fine. So is it both, or am I just wrong?

MR. GRAY: The Chairman is correct.

MR. DAWSON: So I'm wrong? You can say that, it's fine. I have sometimes been wrong.

MS. MAYOR: Mr. Dawson, Mr. Joyal has come up just to assist on that particular question, as he was involved directly.

MR. JOYAL: The gentleman in question who came in Niverville, we did discuss with him at the landowner information centre in December, and notify him that we would bring his particular concern, as it was a different circumstance than most, that we would bring it back to our property department. And we spoke with him on the side at the hearing in Niverville itself. We hadn't outlined any expectation of compensation at that point in initial discussions, as no route was determined when we first spoke to him.

MR. DAWSON: Okay. So back to you, Mr. Gray, we have it now that some landowners didn't appreciate that they could be compensated. I'm just making sure that I got that part right?

MR. GRAY: There is a possibility that there are some landowners not directly affected by Bipole could in fact be compensated for some indirect.

MR. DAWSON: And they might not realize this?

MR. GRAY: I wouldn't know the answer

to that question. There were open houses that were conducted to all landowners. I will allow Trevor to expand on that, but there were several opportunities for any landowner to come forward.

MR. DAWSON: Sure. I'll call it an advertising blitz, but that's maybe too narrow. There was a blitz by Hydro to try and inform the public?

MR. JOYAL: We used a variety of notification methods, yes, Mr. Dawson.

MR. DAWSON: Sure. I just want to go back to what Mr. Gray said because this is where the basis of my confusion lies. Did I understand correctly, though, that you said that Hydro didn't wait for people to come to it, it reached out to those who were affected, or was that just a passing phrase, or did you actually mean that sort of thing?

MR. GRAY: I'll refer again to the open houses. Manitoba Hydro had several opportunities to introduce landowners to the Bipole project, and it was through a variety of media. And there were invitations, there were, I believe there were ads placed in papers in local areas inviting any and all. It wasn't a personal

invite.

MR. DAWSON: It wasn't going door to door?

MR. GRAY: It was not going door to door.

MR. DAWSON: And it wasn't picking up the phone and calling one particular resident saying, we have noticed you haven't come forward?

MR. JOYAL: Sorry to interject. There was a direct mailing sent to each individual landowner within half mile of the route, and was provided with each location of the landowner information centre and open house.

MR. DAWSON: I remember when you were on the stand. I'm just asking Mr. Gray for this. So Mr. Gray, you have clarified my point. I just wanted to know what you had meant when you said -- and you were just speaking in that figurative sense -- when Hydro reached out. So those are my questions for those witnesses.

And are we deferring, Ms. Mayor, are we deferring the other question to another time?

MS. MAYOR: I believe ultimately that was answered in terms of the -- if there was no encumbrance registered, then it wouldn't have

occurred. But Mr. McGarry is here if you wanted to. He wouldn't have heard the question but if you were to --

MR. DAWSON: Is this the slide question on avoidance?

MS. MAYOR: Yes.

MR. DAWSON: Okay.

MS. MAYOR: I believe it was the next slide, if someone could turn the page? And it was the lands belonging or entitled to First Nations --

MR. DAWSON: Mr. McGarry, I will bring you up to date. I had asked Mr. Nielsen a question about that slide which is now on the screen, which for the record is entitled Avoidance, the first line as lands under irrigation, et cetera. And I'm referring to the third bullet point, lands belonging or entitled to First Nations. And I had asked Mr. Nielsen, if only because it was his slide, to help me understand what that third bullet point means. And here is what I was asking: When there is a reference to lands belonging or entitled to First Nations, does that include TLE selected lands?

MR. McGARRY: We mapped First Nation

and TLE land, and avoidance did include those lands. I think we had an IR on that as well, that removing Federal lands and TLE lands from the project study area in no way restricted our routing opportunity, because it was such a small -- well, it did in some areas, but it was generally a small amount of land in consideration of a very large project study area.

MR. DAWSON: Sure. But on this particular slide, when we're talking about lands belonging or entitled to First Nations, some of those lands at least include TLE selected lands; is that right?

MR. McGARRY: Yes, we mapped TLE selected lands.

MR. DAWSON: And let me just ask if lands belonging or entitled to First Nations also includes lands that were identified through the ATK work as traditional lands?

MR. McGARRY: Traditional lands were not treated in the same way in terms of avoidance.

MR. DAWSON: Traditional lands would have been treated under ATK, it's not traditional lands in terms of avoidance meaning lands belonging or entitled to First Nations, as a slide

says?

MR. McGARRY: I would say that's correct.

MR. DAWSON: Again, I'm not trying to trap anyone, this is clarification. These are quick snappers. I'm wearing the jacket of jocularity today.

MR. McGARRY: No comment.

MR. DAWSON: And my last clarification point again relates to the meaning of this particular phrase. We have talked about TLE selected lands, which you know probably that there are also TLE notification zones, which is lands that could potentially be selected by a First Nation. Does lands belonging or entitled to First Nations that require avoidance include TLE notification zones?

MR. McGARRY: I'm not entirely sure of that. I would have to check. My initial thought would be -- actually, I'll reserve that until I check.

MR. DAWSON: All right. Can I have that as an undertaking then, the undertaking being do lands belonging or entitled to First Nations include lands that fall within a TLE notification

zone of an Aboriginal group?

MR. McGARRY: We'll get that answer for you.

MR. DAWSON: Thank you. And Mr. Chairman, with that, those are my quick snappers for this panel, and I'll defer the rest of my questions for whenever later. Thank you.

THE CHAIRMAN: Thank you very much, Mr. Dawson. We won't continue with any further questioning today. Oh, Chief Bucher, did you have some brief questions? Certainly.

CHIEF BOUCHER: Thank you very much. Chief Bucher, Pine Creek First Nations, Treaty four traditional territory.

Just a couple of questions on your compensation. Isn't it similar, your crop loss structure impacts, it's the same as our traditional crops?

MR. McLEOD: I really can't answer on that one. I'm not quite sure what you mean?

CHIEF BOUCHER: My traditional medicines I depend on, where the Bipole III is going through. As I recall the plant life, the Aboriginals will have to go travel further to get quality plants and herbs. What is the

compensation for First Nations? How much? You say you'll compensate four compensations to the landowners. Well, whom I? Tell me who I am? I am a nation in my territory, the language, the culture under the definition of the United Nations. Am I being ignored? What do I leave for my future?

River impacts, well, there is river impacts. Damaged crops, I have damaged crops. Our livelihoods are damaged. This is what you give us, people of this original land? Am I hearing individuals that go knock at landowners, here there's an opportunity here, sign here, here's a cheque. What about my people? What about my future? There has to be other considerations, panel. What about the First Nations? As you heard in Dauphin, as my people shared their knowledge, their tonnes of knowledge, $195 monthly, how can my people survive on social assistance?

ATK, there has to be meaningful processes. It's no disrespect to the ladies that instrumentally did their presentation, but there also have to be alternative solutions to accommodate the First Nations about ATKs.

As we said in Pine Creek First Nations to Manitoba Hydro, the watershed impacts, we are willing to spend for proper certified engineering to come to Pine Creek First Nations and actually assess. I'm willing to spend $250,000 from my band capital to do the assessment to prove we're at risk. Duck Bay is at risk. Pine Creek and Camperville is at risk. Our community is at risk.

I see seven First Nations, 10,000 First Nation members living on top of Duck Mountain, and that's my vision.

I am hurt. I cried.

THE CHAIRMAN: Thank you, Chief Boucher.

We won't carry on with any further questioning today. I'd just like to briefly discuss tomorrow. Tomorrow at least for the first half or more of the day will be devoted to caribou and moose. I just want all participants to be ready to, if we conclude on caribou and moose during the day, I want participants and Manitoba Hydro to be ready to turn to cross-examination of the last two days of presentations.

I'd also like to just make all parties

aware that beginning next week, we may at short notice have to carry on into some evenings to keep on track. And believe me, it will be on short notice. We might just decide on Monday afternoon that we have to sit from 7:00 to 9:00 on Monday evening. So be prepared for that. Be prepared for cross-examination tomorrow if we don't take the whole day on caribou and moose.

Ms. Johnson, you have a number of documents to register?

MS. JOHNSON: I certainly do. MH-63 is the mitigation commitment table from Hydro; 64 is Mr. Schindler's presentation on mammals; number 65 is Ms. Hicks' presentation on socioeconomic effects; number 66 is ATK report by Virginia Petch; 67 is the agriculture report by Mr. Nielsen; 68 is the landowner compensation presentation by Mr. McLeod; 69 is the undertaking response to the Chairman; and number 70 is undertaking response, which is corporate policies. Thank you.

(EXHIBIT MH 63: Mitigation commitment table from Hydro)

(EXHIBIT MH 64: Mr. Schindler's presentation on mammals)

(EXHIBIT MH 65: Ms. Hicks' presentation on socioeconomic effects)

(EXHIBIT MH 66: ATK report by Virginia Petch)

(EXHIBIT MH 67: Agriculture report by Mr. Nielsen)

(EXHIBIT MH 68: Landowner compensation presentation by Mr. McLeod)

(EXHIBIT MH 69: Undertaking response to the Chairman)

(EXHIBIT MH 70: Undertaking response, corporate policies)

THE CHAIRMAN: If there's no other business we need to deal with this afternoon, we are adjourned until 9:00 a.m. tomorrow morning.

(Proceedings adjourned at 4:54 p.m.)

OFFICIAL EXAMINER'S CERTIFICATE

I, Jill Proctor and Debra Kot, duly appointed Official Examiners in the Province of Manitoba, do hereby certify the foregoing pages are a true and correct transcript of our Stenotype notes as taken by us at the time and place hereinbefore stated.

Jill Proctor
Official Examiner, Q.B.

Debra Kot
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