Darwin – Katherine Marchment

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Speaker: Katherine Marchment

Katherine M.: My name's Katherine Marchment. I'm appearing on behalf of myself and the residents of the northern territory.

Justice Pepper: Thank you. Yes, when you're ready.

Katherine M.: Okay, first off I'd like to acknowledge the Larrakia and the land on which we stand and speak, and elders past and present. I would like to thank the panel for giving me a chance to speak again. Thank you. I sent a summary through of a few issues that I will be talking to you today. Radiation was one thing where I came up with some new information, and I didn't see it in the last presentations, and a few other things. Again, I do spend quite a bit of time on health, and I do speak to the interim report findings about that. I also have a few little things on the economics. I think I'll just start. I'm concerned about the use of radioactive materials such as depleted uranium by drillers; Such as Halliburton and Schlumberger and their fracking operations. I'm also concerned about naturally occurring radioactive materials, found naturally in shale, being brought to the surface with the extraction of petroleum gas when they go down targeting the methane.

I can provide sources of evidence that radioactive materials are used in gas extraction, partly taken straight from the Schlumberger and Halliburton websites. I think that's pretty good source material. I will provide these to the inquiry. Also, I note from articles in the Brisbane Times, and the independent media of Schlumberger being fined for workers exposed to radiation. I also note that Halliburton has licences and patents to use depleted uranium for industrial purposes. The patents include using depleted uranium in perforation guns used in fracking. Also, I note that the Australian government is well aware that radioactive materials are used in the unconventional gas industry as they have set up regulations for this. I copied the following paragraphs straight from the Australian Radiation Protection and Nuclear Safety Agency. Those pages have since been pulled. I haven't been able to find this again, so I'm lucky I did the quick copy and paste. I'll read this out to you. The requirements for bore hole logging and well-logging include the licence must require the licensee to comply with the

AIPINSA/NO HSC standard for limiting occupational exposure to ionising radiation RPS1 2002.

The licence must require the licensee to comply with the code of practise for safe use of sealed radioactive sources in bore hole logging, 1989. The licence must require the licensee to ensure the direct supervision of any field site while radioactive sources, or radiation apparatus are in use, to ensure that unauthorised persons do not enter the site. What's interesting about this is I do have photographs of a box of caesium-137 that was found completely unattended by locals in the Pilliga. That was about three years ago now I think. I have photographic proof of that too. I'm stating that these… And also, natural radioactive elements in shale gas I pulled that from a peer reviewed paper called Radon in Natural Gas from Marcellus Shale by Marvin Resnikoff radioactive waste management associates. I can provide you guys with that link. Because I was questioned last time about radiation in the tanks. Like where it came from and whether it came from this industries operations. I've followed up on that. I've also sourced YouTube footage of a fellow with a very sensitive Geiger counter actually with shale rocks measuring the ... comparing the background radiation to the radiation in shale rock.

So, to me that's evidence that not only do they use radioactive material in fracking, but there is also radioactive in their target shales as well. Okay, also I don't know if you saw these people when I went down to Queensland, but there's a family, David and Brian Monk. They make videos about their experiences living in the gas fields. They've since pulled it for the time being, but they filmed Geiger counting readings of radiation in produced water sprayed onto roads. To me that's evidential that this stuff does come up with produced water. Whether it's part of what they use in fracking or whether it's part of naturally occurring in the coal seams there is a radioactive problem. There's also numerous articles about the shales around Pennsylvania and the disposal of radioactive waste. I can supply links to those as well. I think that makes that point fairly clear. An Apia person I spoke to at the Darwin show told me that the lead found in ... Oh hang on. I'm sort of missing a bit.

All right, I do have a few questions around this. When the panel did go to Queensland I'm curious; I've just been told that you guys did speak with John Jenkin during your visit. I'm just wondering, given that this was a field trip, like whether you did go out into the field. Is there any Geiger counter readings made around any of the infrastructure in Queensland at all or was that made available to you at all? Any ratings of methane and background methane in the gas fields? Was that made available to you at all? Lead in water sources where they're drilling, and in the aquifers they're drilling in, elevated levels of lead in tanks, and in water sources. Was there any testing done or any of that information made available to you at all? Here we go. I ask these questions because I got quite a reaction when I said there was

lead in rainwater tanks. I was asked to provide more evidence of that, which I did.

I'm wondering if you checked the veracity of what I was saying, and followed up on my allegations of elevated levels of lead, and to check the veracity of Apia's statements that there is no radiation or lead admitted in their operations. I thought that scientifically a bit of hard evidence there wouldn't go astray given that the gas industry's saying one thing, and I'm saying another. Who's telling the truth here? Okay, an Apia spokesman I talked to at the Darwin show, told me that the lead found in rainwater tanks in Queensland was from the tanks themselves. The photographic evidence of John Jenkins rainwater tank I provided to the inquiry clearly shows that the tank is plastic not metal, and has a corrosive substance over it that appears to have come from the air and the rain. It is a plastic tank similar to millions of tanks used around Australia. I drank water for years from similar, yet there have been no recordings or complaints of lead in these tanks in other parts of Australia where there is not a gas industry present and operating.

When I pointed this out to the Apia rep, that the tank was plastic, his response was to let me know that it is a petroleum product. Then he grinned like a loon over this very serious heath issue thinking he had somehow scored a point. I have no idea how the fact that John uses petroleum products including rainwater tanks, along with every single other person in Australia, somehow disproves that the lead in his rainwater tank is most likely caused from gas industry operations such as flaring near his home. The onshore gas industry is drilling for the petroleum product of methane gas. They have petroleum licences to do so, and are subject to petroleum regulations. It has been well publicised, since I was a kid, that petroleum gases naturally contain lead and this is toxic to human health. This is why there was a huge national campaign in the 70s to convert all motor vehicles to unleaded fuel because this toxin in exhaust emissions was causing health problems. Particularly in urban areas. It also became compulsory for smoke stacks to have scrubbers and other technology, so that the lead and other toxins were not emitted straight into the air.

From what I've seen in Queensland there are no filters or other technologies used on the wells, or flares, or vents. Particularly not on the vent because the vent looks like a poly pipe and it just goes straight out into the air from it. Now, I'm just wondering if the panel could investigate this further as I'm not an expert in gas field infrastructure, and can only give personal observation based on the naked eye view. Also, I have asked the question of the panel in my last presentation that I wanted to know what gases were evaporating off the holding ponds. Has the panel made any further investigation in respect to this given that I made some serious allegations as to the harm these ponds were causing to wildlife and humans? How is it that the gas industry can claim their activities can be done safely and that they have safe emissions levels when, One; The toxicity of the unprocessed petroleum gas they are extracting has been well documented as dangerous

to human health, highly flammable, and dangerous to handle. This gas is known to contain betex, nitrous oxides, sulphur dioxide, formaldehyde, and other toxic elements as well as methane.

Shales are known to contain radioactive substances. Where does all this stuff disappear to when they extract the gas, which they then process into pure methane to export. It was safely trapped underground so when the petroleum gas is extracted what happens to all the unwanted toxins? Do they pollute the air perhaps, and make their way into rain clouds and subsequently show up in peoples rainwater tanks and surface drinking water sources? Does the gas industry capture these toxic gases? From my conversations with Santos and Apia reps they refuse to admit that these toxins even exist. Even though my main source of information on the types of gases that are emitted from the petroleum gas, apart from the methane, which is what they're targeting, is from gas company declarations to the National Pollutant Inventory. Two; They're punching straight through our water table to extract toxic petroleum gas. How does a few layers of cement guarantee well integrity for the next few thousand years? By drilling, they have created a pathway for migration, which is a risk in itself, without the added risk to well integrity through fracking the well a number of times over the productive cycle of the well.

What is the risk of these extra layers of cement creating a much larger surface area for a migration pathway, than the smaller surface area of just a drill hole and a layer of cement? Multiply it by the wells, how much further does it increase the risk? I'm hearing from Apia that all these layers actually make it safer. To my mind if you've got a way larger surface area for a migration possibility that actually increases the risk, not decreases the risk. That's just my logical thought. I'm not a scientist on this. Three; They're using toxic chemicals in the frack fluids. They produced water from this process is supposed to be put into storage as it's considered too dangerous to be released straight into the environment even though in Queensland they do allow environmental flows in times of high rainfall. But I won't go into that. Does the toxicity suddenly disappear when these elements evaporate into the air to be breathed in by humans and animals. Given the evidence of harm from Queensland has the panel made an effort to procure any readings of radiation and methane near current wells and gas infrastructure in the northern territory?

Has water near flares and other infrastructure been tested for higher than usual concentrations of lead? What information has been provided to the panel by the gas companies who have already drilled wells in the northern territory with respect to their emissions. Does the inquiry intend to make a recommendation to include this testing in any proposed regulations? I would like to make, also, a comment on some of the statements made by others to this inquiry. Particularly there is plenty of gas in Queensland. We don't need to drill in the NT, or that it is too late for Queensland. Statements of this, not in my backyard nature, highlight that people know that this

industry causes harm where it operates and are afraid of these impacts. These type of statements also give the onshore gas industry a free pass to keep committing harm elsewhere. It is the people of Queensland who had provided much of the evidence, and presented a compelling case for this industry to be banned in the northern territory, and in doing so make a compelling case for the onshore gas industry to be banned in Queensland as well.

It is the people of Queensland, who are living in the sacrifice zones for this industry, suffering harm, and providing evidence of that harm to this inquiry. I would like to remind people that, although our states are governed differently due to lines ruled on a map, in the real world water, wildlife, and air don't adhere to imaginary human borders. Drilling in the Great Artesian Basin not only affects Queensland. It also affects other states that use the Great Artesian Basin as their water source. My friends and family are no less important to me because they live in a different state. After their efforts to help others facing the threat of fracking do not deserve to live in a sacrifice zone so that other areas of Australia can be gas field free. The evidence of harm has been studied in detail by the panel I assume. I think the individuals conducting this inquiry need to do the right things and act on the evidence of harm that is come to light through this inquiry.

After this inquiry is finished, open an investigation into the business practises of this industry, and their conduct in the places they operate, and bring forward charges against individuals responsible where they have caused harm. The interim report states that there is a low risk to human health because of remote locations. I believe that this is imposing a southern densely populated perspective on the northern territory, and does not take into account how our overall small population uses the country. It is also very much an assessment of heath risk from a non indigenous perspective, which I think inappropriate given that most of the people living in the areas to be impacted by this industry are indigenous. Some of this is a bit cheeky. I might strike it. Okay, these people are drinking from the same water the frackers are using, hunting animals, and fishing, and going about their business in the same areas where these operations are occurring. Pastoralist are running cattle for human consumption in this area. If you ever live in a remote area you will know that you roam over an extremely large area conducting your daily business.

I have lived remote for many years. My parents were remote area teachers. I lived the on the Tiwi Islands and most of our food came from the bush. Not just the indigenous, everyone that lived out there. We'd wait for a hard tack to come in on the barge, but we used to catch our dinner. I'm just saying. Anyway, if you ever live in a remote area you will know that you roam over an extremely large area conducting your daily business. You don't just stick to the homestead. In urban areas humans have a much smaller area as regards to the businesses they patronise, and they work outside the home, but still larger than simply their place of residence. People in the NT take

their boat up the river for days and weeks and still consider themselves to be in their home territory. Plenty of people get around conducting their business flying helicopters. They too still consider themselves to be at home given that their property covers hundreds of square kilometres. The differences between the non-indigenous concept of wet and dry also determine where people may be on country at any given time.

Aboriginal people map their seasons according to different food sources abundant at different times of the year. Sometimes on their home country these sources are hundreds of kilometres apart. Pastoralist also setup stock camps in far apart places according to season. These people might pick up their mail at [inaudible], and according to government be a resident there, but may actually live most of the time in much more remote places. When I look at the exploration drilling in the northern territory it is in remote areas according to southerners and gas companies, but may not be considered remote in local terms. Have you ever noticed how humans tend to spread out to fit a space when going from a smaller space to a larger one? The same applies on a macro level in the northern territory. If the general store is a few hundred kilometres from the nearest recognised town then that place is where the locals, that really are living remote, go into town to collect their mail, pick up some fuel, and socialise.

In remote areas according to the core maps of the drilling most industry infrastructure remains close to existing roads and infrastructure such as airstrips, water sources, fuel communications, and a general store. Because of the long distances in the NT these places are used for a variety of so-called non-residents as important rest stops to refuel. Even though Elliot has a small resident population, it has always been a crucial rest stop for people travelling between Alice Springs and Darwin, for indigenous and non-indigenous alike. Someone may not be a resident of the place, but that place may still be critically important to their survival and well-being. For example I know plenty of people that don't live Nooka, but they still travel and stay there every year for family holidays and reconnection to country. There is no exclusion sign around Nooka I noticed. These so-called remote areas, that the frackers are happy to use the existing infrastructure of, are where they are because of their critical importance to resident survival. The services they provide and the location are far more important to the health and well-being of locals than similar facilities in a more densely populated area.

It can literally be a case of life and death, yet this inquiry has rated the risk to health as low because of the small population density. The disruption caused by gas industry operations, and gas personnel, and ecological damage in areas where peoples primary source of food is through hunting is actually far worse. Why is it considered less dangerous for kids to suffer from seizures, and migraines, and bleeding from all orifices from exposure to this industry when they are hundreds of kilometres further away from medical care, because there is less of them living in that area? No child should ever have to go through what I've seen children go through as a

result of this industry. Out of sight out of mind is just not good enough. It's not a good enough reason to determine the health impacts as low risk. I still fail to see why you are determining health risk based on population and distance rather than on the actual toxicity to humans and animals. I'm also surprised with the Interim's report finding of dilution being the solution to pollution.

I quote, "Airborne, dust-borne, and waterborne contamination would be expected to undergo dilution as it spreads away from the site, resulting in a lower potential for human exposure." Do the gas companies intend to setup an exclusion zone of 800 metres around their wells then, around their vents, around their compressor stations, all of their infrastructure? What about all their other infrastructure that impacts on their health? Where does this 800 metre figure come from? I personally know impacted people in Queensland that are affected by airborne pollution from flaring 10 kilometres away. The exclusion zone for the link disaster in Hopeland stretches 300 kilometres. Weeping eyes, sore throats, headaches, nose bleeds, water that is unusable and undrinkable. How does distance from surface infrastructure make a difference if the gas companies are using water and or contaminating water from the same aquifers that the locals are using and drinking from? Also, some of these airborne contaminants are so toxic as to cause serious health problems at extremely low concentration. How diluted do these pollutants have to be to be considered safe to humans? Is this measurable given the vagueries of wind flow and direction?

What about contamination of our fish, and the roo, and the magpie geese that these people eat? What is the impact on climate which directly relates to human health by pumping pollutants into the air? Again, it is the out of sight out of mind solution, but I suggest that these emission are no less toxic because they are happening in a remote area rather than a urban area. The Beetaloo Basin, as it is now called, like all other areas rich in minerals and gas is also rich in wildlife, and fishing, and the breast graze country and the biggest cleanest rivers; Like Queensland and New South Wales where the richest gas resources are also found on the richest prime agricultural land. I think, as regards to the Beetaloo Basin as it's now termed, I don't think it is just a gas resource. It's rich country. I think it can be used better for other things quite frankly. A lot of people use this area for food and food production, or simply for their mental health. Why has Coffee Services, a gas services company, [inaudible] for the social impact study…

I want to know why a company with no experience in the social and cultural life of remote aboriginal people likely to be most affected by this industry run this tender? I noticed they're being supported by Cross-Cultural Connections to provide a framework to do this study, and a company which does in fact have the necessary experience. Why didn't you just use Cross-Cultural Connections to do the whole thing given that, that's their area of expertise? Using a gas services company for a social impact study appears to me to compromise the independence and integrity of this inquiry. On

economics I've looked internationally to see how the onshore gas industry operates given that this is a worldwide industry. My primary source for that is an American economist called Deborah Rogers. I will provide links. It appears to me that they come into town with promises of big money and all you have to do is invest in this industry to get a slice of the pie. They flatter and seduce politicians and other leaders of the community with promises of big money contracts from setting up gas services for them.

They even offer to help these poli's and businessman get a great deal with a major bank like Macquarie to offer favourable terms and loans to setup accommodation for workers by trucks, catering, et cetera. They stroke the egos of these people and lavish attention and luxury on them. Yahoo at the Darwin Casino. We're seeing plenty of that here, anyway, I'll go on, encouraging them to go into huge debt on the promise of a big money return. I personally know, now an ex-station owner in Katherine, who has invested up to his neck in this industry through his political contacts. Once they have captured the politicians this way it becomes easy for them to get these people to then use tax payer money to invest in this industry that is going to make everyone rich. My reading of the NT budget for 2017-18, and analysis of that including the forward estimates over the next five years, on what we have borrowed to invest in this industry, and calculation of how much we've invested since 2008. I got those figures from the Australia Institute, highlights this scenario.

A whole heap of workers are brought in for a construction, and a few local jobs for good measure. Increased cash circulates in the economy, people are spending, and things are looking good. Trouble is it's like having a spree on your credit card. The actual return on investment does not add up. I will explain that in more detail in my written submission too. It doesn't. Basically we're paying more interest than what we're going to get as a return. It just doesn't add up. That's on my basic math. I'm sure there's economists and accountants that could go into in more detail than I can.

Justice Pepper: You've got about three minutes left Ms. Marchment.

Katherine M.: All right, inevitably this artificial boom turns to a bust within 10 years as they have taken as much gas as they can without having to pay tax, because of the deductions they receive for exploration and drilling. They've drained the local economy of cash from suckers who invest in their scheme. They tend to move on very quickly before the bust bites too hard in the area, and becomes too noticeable. This to me is why they're in such a hurry to get most of their operations out of Queensland and setup shop in the NT. The Queensland economy is going downhill fast. It's very similar to the way they move from county to county in the USA, particularly in the Barnett Shale in Texas. What is the risk or likelihood that a number of our NT members of parliament and business people have been captured this way? Also, regulatory capture, or the risk of regulatory capture I'm worried about as

well. You know given my rating of the NT budget. We know our politicians here, but anyway.

Companies like Halliburton make obscene amounts of money from their profitable business model of stripping countries of their resources and cash, and leaving behind a destroyed landscape. You only have to look at their operations including their reconstruction projects in Iraq. They get paid to drill whether gas is found or not. If you look at their area of expertise it is in the manufacture and sale of nuclear weapons and disposal of nuclear waste. How handy is it for them that they have patents for the use of depleted uranium to conduct their fracking operations. They can sell frack-rods and chargers, get paid for drilling, and at the same time be paid for the disposal of depleted uranium. They are long gone by the time the nuclear contaminated wells stop producing. I'll leave that bit out. Anyway, from my perspective just looking at it today and a couple of the film, to me, it looks like the inquiry is asking how the gas industry can proceed, rather than whether it should proceed.

This is, to me, exactly the same as the Chief Sign study in New South Wales at CMC, the ACCC and the other senate inquiries we've had. They're outcome to me is predetermined by the terms of reference when the inquiry is setup. I am losing a little bit of faith here people. Straight up if there's enough evidence to show that the risk can not be mitigated will you recommend to the northern territory government that fracking be banned?

Justice Pepper: Thank you very much Ms. Marchment for that detailed presentation. I just want to make one comment before I open up your presentation to questions or comments from the panel, which is the answer to your last question is no. We will not be making that recommendation. That is not within our terms of reference. I've stated this publicly on many occasions. It is up to the government to lift the ban or not. We can not make that recommendation. What we can do is identify the risks, which I think we've done, assess those risk, which is what we're in the process of doing, and then make recommendations based on that risk assessment. We can not and we will not be making any recommendation to the government to lift the ban, or otherwise.

Katherine M.: Thank you for clarifying that for me.

Justice Pepper: Thank you. Are there any questions or comments from the panel? Professor Priestly.

Prof Priestly: Yeah, thank you Ms. [inaudible]. I'll just make a couple of comments. In relation to the approach that was taken in the public health assessment I think that basically the approach was to recommend that site specific risk assessments be undertaken. So that the steps being that you identify chemicals, which may be released from those particular sites, identify the pathways by which people may be exposed, and then assess whether or not

those exposed represent a health risk. In doing so we certainly looked at some of the literature that was available primarily from the United States. That was, I think, what drove us to the idea that proximity, or distance, is an important factor for mitigating the risk for modifying the risk, if you like. In relation to your comment about the gas industry in Queensland, yes we did visit Queensland last week. We spoke to a number of residents including the one you mentioned. We also spoke to a medical practitioner who's worked in that particular area and we spoke to some government agencies as well. Yes, we're getting a better idea of what those issues were around those gas industry sites in Queensland. We also became aware that they're monitoring data, which we'd previously been unaware of, which we can look at in relation to that. There are certainly things we'll be following up on as a result of those meetings of last week.

Katherine M.: Just one thing; Did you actually take a tour of any of the infrastructure? Particularly in… Did you actually go to holding ponds? Did you go to Kenya? I'm just curious.

Justice Pepper: Yes, we did.

Katherine M.: Thank you.

Prof Priestly: Yes, we did.

Justice Pepper: Dr. Johnson.

Dr. Johnson: Ms. Marchment, in relation to comments about recently depleted uranium when you mentioned that in March, I think we had a last round of consultations, I think we were all surprised to hear that, that might be the case. Well, anyway we did follow that up. Indeed there is a patent.

Katherine M.: There's more than one. There's actually 186 patents.

Dr. Johnson: There are, there are. There might be patents, and yes technically speaking you could use your uranium as a nice dense metal, but we have found no evidence whatsoever from any source that depleted uranium is actually used as in the charges used to break open the well casing.

Katherine M.: It is used in logging though as well. Look, I know that caesium-137 is used because there's a box of it in Piliga forest. Not only that, how did these… why regulations from that Australian Nuclear Authority, why the five people that suffered injury from radiation, drillers in Queensland if radioactive substances aren't used in their operations?

Dr. Johnson: Radioactive sources are used as part of the well logging, and checking the integrity of the bore casings. That's absolutely correct and those are quite intensely radioactive sources. Cobalt sources are used for x-raying a lot of pipe wells and pipeline construction and they require very safe handling. If

you are directly exposed we can get radiation burns. That was the case for occupational health and safety exposure. It's not used in fracking per se.

Katherine M.: However, it is turning up in produced water and that's a fact.

Dr. Johnson: You're talking about [inaudible] that's a different thing… radioactive material.

Katherine M.: Look, the thing is whatever its source there's this excess radiation in the environment that wasn't there before this industry was there. It's causing injury, where before this industry turned up, we didn't have radiation problem in Southeast Queensland. I do think that to argue semantics with me is are the frack charges tipped with uranium, or is it the logging…

Dr. Johnson: [crosstalk]

Katherine M.: ... or is it the whatever that's causing this radiation problem the fact is there is a radiation problem.

Justice Pepper: I understand the submission. Thank you. Professor Hart.

Professor Hart: You posed a number of questions to us. In particular you're relating to contaminants in waste water.

Katherine M.: You have answered a couple of them. Thank you.

Professor Hart: It's not possible to do that, but could I say we've got transcripts that we put in a written version. We'll certainly take those on board. A number of those we would have answers to. Some of them we need to probably do a little bit more investigation. You'll see in the interim report that we have noted that we don't have a good handle on all of the potential contaminants in flow back water. We've got a way to go.

Katherine M.: That's why I'm here today. As I raised last time I am really concerned about what's coming off those ponds, mate. I really am. I've seen so much dead wildlife that it's not funny. It's ridiculous the death.

Professor Hart: Well you…

Justice Pepper: That's in Queensland?

Katherine M.: That's in Queensland. That's actually near John’a place. That's the pond nearest to his place. It's not just all the dead animals in the ponds. It's around them. John, himself, is complaining of sickness from the emissions. I'm thinking why aren't these emissions tested? Somebody please test what's coming off those ponds. It's a real worry to me.

Professor Hart: Well, all I wanted to do was give you an assurance that we're certainly looking at waste water contaminants, how they're retained, stored, and treated, and the monitoring requirements.

Katherine M.: From what I see I haven't actually seen ... this industry's been operating for 10 years now in Australia. I've yet to find a waste management plant apart from putting it into ponds and then going where? Then from what I have actually seen of the practises of this industry they have been illegally dumping it into creeks and onto roads. They don't know where to put the bloody stuff. What bury the salt? There's ideas around we'll use it in manufacturing processes. I haven't seen an actual concrete plan to deal with the waste. There is a lot of waste from this industry.

Professor Hart: I'll take your point.

Justice Pepper: Any further comments or questions? Yes, Dr. Ritchie.

Dr. Ritchie: Ms. Marchment, look, thank you. I've been really fascinated by just hearing the bits of your evidence that are from personal experience and in particular in Queensland. It's incredibly valuable to us to get personal accounts.

Katherine M: Thank you.

Dr. Richy: One thing just to reassure you about Coffee, they were the successful tenders in an open process. They do have and they were able to show us that they have, obviously a lot international, but national experience doing this sort of work. They are being monitored by a control group [crosstalk]

Katherine M.: What I'm saying is the expertise…

Justice Pepper: You do need to let Dr. Ritchie finish.

Dr. Ritchie: ... they got a good interpreter service, because obviously it's critical. We got stringent requirements on those, on them to deal with them, back through the lands councils and using the NT interpreter service.

Katherine M.: It's more than just interpretation. It's a world view. It's like I pointed out in this; The way we use the country is utterly different from a way an urban person uses their country. It's an utterly different way of thinking. I've lived with aboriginal people for years because I didn't have a choice. My parents lived there. I had to live there. I literally, when going from one culture to another, I literally have to think different in each.

Dr. Ritchie: [crosstalk]

Katherine M.: It's that far. I think I'm seriously doubting that using a western model, and okay we'll have interpreters, is really ... I do think that they're supporting people are great. I do know that some of them are aboriginal people

themselves. The know a lot of remote area people. They've grown up around a lot of the people in that company. I'm actually more trusting that they would understand the message than someone who just uses an interpreter, but has a, I hate to say it, a white western way of looking at the world.

Dr. Ritchie: I guess the thing is that we're very aware of that problem, and are continually talking to them. The NT interpreter service has got, for these, some locals that are working closely with them.

Katherine M.: Thank you.

Dr. Ritchie: We're onto it.

Katherine M.: No, I thank you very much. I appreciate it.

Justice Pepper: Thank you.