



Alice Springs – Esther Nunn and Gem Walsh

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Speakers: Esther Nunn and Gem Walsh

Esther Nunn: My name is Esther Nunn, and I'm a registered nurse, living and working in Central Australia for the last 10 years. I'm currently working in the emergency department in the Alice Springs Hospital, and as a care coordinator for Western Desert Dialysis, working with indigenous Australians with chronic kidney disease. And this is my colleague, Gem.

Gem Walsh: Hi. My name is Gem Walsh. I'm also a registered nurse, living and working in Central Australia for the last two-and-a-half years, and I'm not here on behalf of my organisation. But through that organisation, I do work with aboriginal people, and it is called the Western Desert Nanapa Palyantjaku Tjutaku Aboriginal Health Corporation.

Esther Nunn: Or Purple House, for short.

Gem Walsh: Or Purple House.

Hon. Justice Rachel Pepper: That's a lot easier to spell. And no, thank you very much, yes.

Gem Walsh: Here as a concerned health professional.

Justice Pepper: Thank you, thank you.

Esther Nunn: And we're also representing Health Professionals Against Fracking NT, which is a recently formed group of independent self-funded collection of health professionals working in all fields of health care provision, who are concerned about the negative health impacts of the fracking industry, and the government-led processes, which allow the industry to invade our landscapes and communities, without appropriate health impact assessments, and against the growing evidence that supports a total ban on this disastrous industry.

I'm grateful for the opportunity to contribute to this scientific inquiry into hydraulic fracturing in the Northern Territory, and acknowledge the vital importance of the community consultation process. When decisions like this are being made, the impact on our lives impose such complex risks for our future health and wellbeing, our voices deserve to be heard.



I'd also like to acknowledge the Arrernte people of Mbantua by recognising that we are on land that was stolen from them, and that the impacts of colonisation continue to negatively affect indigenous people's health and wellbeing, and I feel ashamed that the fracking industry is yet another looming burden of colonisation. The inquiry has already mentioned the majority of people who will be affected by the introduction of fracking into the NT are the indigenous populating living in remote areas. It is vital the panel understand the NT is not a vast wasteland that can be exploited. It is a living country, kept alive through culture, and connection.

I became a nurse because I care about people, and I want to spend my time and energy improving the health picture of our community. The fracking industry makes me feel angry and cheated because instead of being able to help people directly by promoting health, I'm having to spend my time and energy protecting my community from further harm. However, my practise is motivated and inspired by the code of ethics for nurses, as outlined by the Nursing and Midwifery Board of Australia. Using principles and standards set out by the United Nations and World Health Organisation towards the commitment to respect, promote, protect, and uphold the fundamental rights of people, they help guide ethical decision-making and best practise, and indicate to the community the human rights standard and ethical values it can expect nurses to uphold.

There are eight value statements in the Nursing Code of Ethics, and I would like to read out the one, which I feel is most relevant to this presentation.

Value Statement Eight: Nurses value a socially, economically, and ecologically sustainable environment, promoting health and wellbeing. Nurses value strategies and preventing, minimising, and overcoming the harmful effects of economic, social, or ecological factors on the health of individuals in communities. Commitment to a healthy environment involves the conservation and efficient use of resources, such as energy, water, and fuel. Nurses value and contribute towards strategies aimed at preventing, and overcoming problems such as environmental pollution and degradation, and how they contribute to ill health in the community, as well as working at minimising their harmful effects.

This statement demonstrates we, as health professionals, have a moral, ethical, and even legal obligation to our communities, and the environment to ensure they are protected from harm, and it is this that it motivates me to be sitting here today. It's heartening to note that the opening line of Chapter 10 in the Inquiry's interim report, acknowledging the rapidly growing number of scientific literature into the risks to human health associated with the fracking industry.

For those in the audience, a categorical assessment of 685 peer-reviewed literature published in 2016, found 84% of the public health studies indicate a risk to public health, 69 of water studies show actual or potential water contamination, and 87% of air quality studies indicate elevated air pollution. It would seem in layman's terms a no-brainer that the fracking industry



poses far too many risks to the health of humans and the environment to be suitable for anything besides a total ban.

I'm grateful the [inaudible] government called for a moratorium and this scientific inquiry, which buys us precious time to provide the proof required to ram our point home, and save us from the fracking industry. But it does seem ridiculous somehow, when they are already states in Australia, and entire countries in the world who've been through all this, and come to the same conclusion we're pushing for, to ban fracking. Below are a list of health-related organisations and experts who have already provided strong scientific evidence stacking up against the industry, and who Health Professionals Against Fracking NT align themselves with.

Doctors for the Environment, who describe fracking as an uncontrolled health experiment, and that the rash to exploit this resource has outpaced regulations to protect public health and the environment, and to adequately assess the health impacts. The Australian Medical Association, who urge governments to use rigorous and independent health risk assessments. Australian Nursing and Midwifery Federation Victoria and New South Wales, who called for a permanent ban on the industry, and Professor Melissa Haswell, who you are all aware is regarded as an expert on the topic of potential risks and impacts of fracking. The Public Health Association of Australia, who urges the government to use the precautionary principle, which I'll describe shortly. Trade Unions Against Fracking, who are coordinated by Trade Unions for Energy Democracy, and have released an inspiring statement calling for a global moratorium on fracking. They have an extensive list of unions across the globe, which include Nurses Against Fracking, and Unions NT. Physicians, Scientists, and Engineers for Healthy Energy, and the 1,000 health professionals who delivered a letter to Barack Obama in 2014, urging for a ban on fracking, and Physicians for Social Responsibility, who put together an extensive compendium of scientific, medical, and media findings, demonstrating risks, and harms of fracking.

I think it's important to note here that this is a relatively new industry, and when attempting to determine the extent of the risks to humans, and the environment, both now and into the future, it is impossible to evaluate long-term data, which cannot exist until the industry has been operating for a time that could be considered long term. We only have reliable data that dates back perhaps 20 years from when the industry took off in the U.S. We need to make sensible decisions based on what we're seeing, and what can be predicted, and use extreme caution. Because of the potential for long-term effects of even low doses of environmental toxicants, and the cumulative impacts of exposures to multiple chemicals by multiple routes of exposure, often with incomplete information from fracking companies, not legally obliged to disclose all ingredients, and no known understanding of the consequences of these interactions, only time and research will tell. And this is exactly why health care professionals are increasingly calling for bans or moratoria until the full range of potential health hazards from fracking are understood.



The evidence is mounting, but without the baseline health assessment you require, mentioned in the Interim Report, I have to pose the question back to you. Are you actually saying that in order to obtain the data you say you need to prove the extent of the health risks associated with the fracking industry, that you would require baseline before and after data from specific sections of the community? Is that what you're inferring? Who would put up their hand to be a guinea pig to test the health impacts of this industry? Besides that, it's completely unethical. However, I will continue my presentation by addressing the four main potential risks to public health categories, as identified in the Interim Report.

Impacts associated with contamination of aquifers.

Fracking threatens drinking water. Contamination of aquifers happens due to well casings corroding, faulty construction, and repeated fracturing. One study suggests 6% or 7% of well casings seams fail immediately, increasing to possibly 50% over 20 years as well casings naturally corrode and degrade. If there are no long-term studies available to a relatively new industry, how can we feel comfortable with these statistics into the unknowable future?

Methods for handling and disposal of the millions of litres of chemical-laden wastewater that are brought to the surface in fracking operations remain problematic. In fact, Professor Haswell points out that there are no demonstrated long-term solutions for this hazardous wastewater management. There are many instances where spills, failures of holding dams, and accidental of contaminated wastewater have already happened in Australia. This poisons the environment directly, and can contaminate waterways and aquifers through leeching.

When the fracking industry tries to tell us about the tiny percentage of chemicals used in fracking fluid, they frequently omit to the overall volumes they're talking about. If one fracking operation, which commonly uses 15 million litres of water, and only 0.5% to 2% is chemicals, that still equates to 80 to 330 tonnes of chemicals. These chemicals aren't just found in household products. They don't like telling us about the toxic chemicals commonly used in fracking operations, of which that the tiniest amounts of some of these toxins is enough to cause harm to human health. These include carcinogens, neuro toxins, irritants, sensitizers, reproductive, and endocrine disruptors. Endocrine disruptive chemicals interfere with the body's reproductive system and have been found in water at heavily-drilled sites at concentrations high enough to adversely affect humans and animals. In one U.S. study on several herds of cattle who were directly exposed to fracking fluids or wastewater, farmers reported increased reproductive problems such as failure to breed, failure to cycle, abortions, stillbirths, and birth defects above what they have ever seen in many years of raising cattle.

Unborn babies and children are at increased risk from the fracking operations through things like EDCs. Many studies on foetus and babies have been made available because of vital records maintained by state health departments. So the records show a clear picture of the health the



child was born with, and show babies born in close proximity to fracking operations demonstrate alarming statistics with low birth weights, preterm births, and birth defects. A study on over 100,000 live births reported babies had a 30% greater prevalence of congenital heart defects, and marked increases in neural tube defects if their mothers were pregnant within 10 miles of fracking wells. Stillbirths and infant deaths, six times above the normal average in non-fracking areas over a three-year period have also been reported. Can you possibly imagine the distress you would experience if your baby was born dead? And worse still, if it could be attributed to an industry, which emits responsibility because there supposedly isn't enough evidence. To me, it would seem then that the only way to guarantee our aquifers and our communities can be safe from fracking operations is to ban the industry completely.

Impacts associated with fugitive emissions and airborne chemicals.

Climate change has been termed the most important public health issue of the 21st century. Unconventional gases, predominantly methane, which is 85 times more potent in trapping heat than carbon dioxide over a 20-year period, which is a critical period for emission reductions. Professor Haswell states around 7.9% of gas extracted is released straight into the atmosphere.

Haswell suggests that to continue this industry may accelerate the severe health impacts of climate change. The Public Health Association of Australia has stated that we need to focus on fulfilling our obligation to the Paris Climate Convention to mitigate climate change by urgently reducing fossil fuels, and methane emissions as part of the fracking process need to be examined with the utmost urgency.

Drilling and fracking emissions contribute to toxic air pollutions and smog, ground level ozone at levels known to have health impacts such as respiratory symptoms, sore or burning nose and throat, stuffy nose and coughs, exacerbation of asthma and COPD, chronic bronchitis, and wheezing, and difficulty breathing. Vascular symptoms include nosebleeds and stroke, dermatological conditions, rashes, and hair loss, gastrointestinal symptoms like vomiting, diarrhoea, and cramping, and neurological symptoms like headaches, dizziness, difficulty concentrating, short-term memory loss, skin numbness, and tingling sensations, incoordination, inability to stand, and seizures have all been documented.

Imagine if you were suffering strange symptoms that doctors couldn't put their finger on to give you answers, relief, or help, and that again, if it could be attributed to an industry, which admits responsibility and transparency because there supposedly isn't enough evidence and it's your job to prove it. Is it really worth the risk to wait and see just what emerges when the picture is looking so bad?

Impacts associated with increased road traffic.



The fracking industry will dramatically increase road traffic in the Northern Territory. It requires the use of heavy vehicles in all aspects of the industrial process to deliver equipment like bulldozers, graders, and pipes, as well as chemicals, sand, and water needed for well construction.

Fracturing and management of waste products.

One study reports up to 1,000 trips for an average multistage well. The Northern Territory already has the highest road toll in Australia, at least four times the national average, and heavy vehicles are around six times more likely to be involved in a fatal and serious accident in Australia. And when these trucks, often carrying highly toxic fracturing fluids or flow back water, this also has the potential for catastrophic environmental damage. It is noted in the Interim Report that some industry submissions say driver training and promotion of safe work practises is a priority for the industry in addressing this potential risk. That sounds lovely on paper, but it does nothing to reassure us as road users in the Northern Territory, as no amount of promoting safe workplaces is going to stop the inevitable as accidents do happen. The Bureau of Labour Statistics also states that a third of all fatalities of oil and gas workers were due to traffic accidents.

From a health perspective, the impact of motor vehicle accidents have on the emergency departments are enormous, and our hospitals are already understaffed and overcrowded. This can only increase pressure on the health system, including staff stresses, longer waiting times for patients in ED waiting rooms, and longer stays in ED beds, as staff attend to high priority injuries, such as those seen in MVAs.

I cannot understand how the panel claim that they are unable to draw any conclusion about this specific risk, when surely a great increase in road use and truck traffic on top of the worst national road toll statistics would point in only one direction.

Impacts on social cohesiveness, mental health, and wellbeing.

I note the panel has been unable to find any firm evidence that supports an evaluation of the magnitude of this risk, and that available studies of psychological impacts of this industry only allow the evidence to be graded as either insufficient or failing to show an association. It is insulting and upsetting to hear this because we feel it ourselves, and we see the impact it is having on other members of the wider community, such as in Queensland, where fracking has taken hold with disastrous consequences for rural communities. A study of 239 Southern Queenslanders describes how the fracking industry negatively impacts on their mental health with increased depression and anxiety about health impacts, loss, or contamination of water supplies, falling property values, and the polarisation of families, and entire communities in for and against.

When people can smell strange things in the air and they are experiencing strange health symptoms, how can you expect anxiety to not increase, when



we know how little is actually known as to the ingredients and interactions of these potentially toxic substances we are breathing in? Even reports of suicide have emerged, directly linked to pressures from the fracking industry on farmers, and their distress in seeing their livelihoods ruined. Can this evidence be insufficient or failing to show an association?

Solastalgia is a term referring to the distress people experience by environmental change in their home environment. Exacerbated by a sense of lack of control over unfolding change, solastalgia was the main finding highlighted by the Queensland Department of Health Assessment of the population with regard to fracking operations in their area.

I would now like to read an excerpt from the submission into fracking inquiry in March, from Dr. Rosalie Shultz, who spoke on behalf of the Public Health Association. The issue describes the precautionary principle being of extreme importance with regard to the fracking industry. The precautionary principle describes when an activity raises threats of harm to health and the environment. Precautionary measures should be taken even if some cause and effect are not conclusively established. In this context, the proponent of the activity rather than the public should bear the burden of proof. Considering the uncertainties about health, environment, local, social, global warming potential, and economic implications, it would seem prudent to be doing more research, and do delay any development until we've got more data.

This sentiment has been repeated in many scientific health-related papers, and considering the issues the panel had described in the Interim Report being whether any of these public health impacts can be attributed to specific causal factors in the environment, resulting from activities associated with hydraulic fracturing in the NT. It would seem obvious that precautionary principle be imperative so that any panel can make informed decisions and draw accurate conclusions, which will affect us all.

No matter how many different ways the fracking industry tries to reassure us they have the capacity to adequately monitor and respond to the many hazardous chemical, social, mental, and physical health risks posed by the industry's operations, there is so much uncertainty, so many unknowns, we cannot accept this level of risk to our water, our air, our land, and our communities. The government and the fracking industry will never be able to convince us that fracking is safe, ever. The fracking industry in the Northern Territory will only increase the burden of health our communities face, and place increased pressure on services that we already struggle to staff.

I will conclude with a quote from Angie Giddis, a nurse from an emergency department in New South Wales in response to the fracking industry in her community. "Health promotion and disease prevention starts at the environmental level. There's no point patching people up if we're contaminating them at the source". Thank you.



- Justice Pepper: Thank you very much for that comprehensive submission. You've obviously got references attached to some of the things that you...
- Esther Nunn: Yeah.
- Justice Pepper: That's wonderful. Have we got a copy of that?
- Esther Nunn: I can give you this copy.
- Justice Pepper: Well, just hand it to either the individuals at the desk just on the way out, and then we will make sure that, (A) It's disseminated to the panel, and more importantly, it's up on the website as well.
- Esther Nunn: Excellent.
- Justice Pepper: Thank you very much. Now, any questions? Yes, Dr. Andersen?
- Dr. Andersen: A couple of questions. Yeah look, so thanks very much for that. I just want to ask a question about the health issues relating to coal seam gas development in Southeast Queensland. So the panel has spent a fair bit of time, talking with various communities, and we certainly have been aware of the mental health issues. And you quoted some statistics there, and I'm just wondering if you've got statistics on the physical health side that are being separated from the mental health side, and so things like water contamination and air pollution. Do you have any statistics from the coal seam gas experience in Southeast Queensland on that sort of more physical ...
- Esther Nunn: I think the only statistics that I can quote in my submission is the summary of the 685 peer review literature published in this last year, not specifically on Queensland. But as I've pointed out in my presentation, because it's such a recent thing that's come to Queensland, more and more statistics are going to be emerging as it becomes more clear. But if you need specific statistics about Queensland, I'm happy to go and find them.
- Justice Pepper: What about South Australia? You've got any information or statistics on South Australia? Because they've been fracking for a number of decades. It's shale fracking, which is [crosstalk]
- Esther Nunn: I've got no statistics on South Australia, but again, I'm happy to research and present it to you.
- Justice Pepper: That would be... We would be most, most grateful for that. I'll say that in absolute sincerity, that would be fantastic, and you are going to ideally placed to be able to find that information. Thank you. Thank you very much for that.
- I did have one, I mean it's been suggested by some of the ... Or at least some of the gas companies have obviously pointed to some of the benefits they claim would flow from this industry in terms of resourcing and



infrastructure, services, and so on. When we were in Queensland, I noticed that Arrow is providing resources and services with respect to various cardiac providers in the particular area. I think it was in Dalby that we were in. Did you want to make any comment on the ability of benefits?

Esther Nunn: Benefits to the fracking industry for communities?

Justice Pepper: Benefits by way of services, resources to health providers. On one view, it's been argued that it will increase the amount of services, and as I said, resourcing available. And an example of that was the partnership in Dalby between Arrow and a local cardiac health provider.

Esther Nunn: I am unaware of that cardiac provider partnership. But again, I'm happy to look into that. Because I only had a 20-minute limit, I did have to chop out quite a lot. I was...

Justice Pepper: Well, feel free if there's extra information and extra things you want to tell us.

Esther Nunn: I did have half a page about the impact of the fracking industry on workers, and the way that the infrastructure can help or hinder communities. But again, I had to chop it out, so I can provide it to you later.

Justice Pepper: Have you got it there?

Esther Nunn: No. I've only got my ...

Justice Pepper: Okay, okay. All right, all right. Fair enough, you're all delivery. Well, again, please feel free to put [crosstalk]

Gem Walsh: Did you want to say something?

Esther Nunn: Yeah. I'd like to speak to your point, if that's okay?

Justice Pepper: Yeah, absolutely.

Esther Nunn: I think that it is unjustifiable to link access to basic resources that we should expect for our human rights, including proper access to health care, any kind of cardiac rehabilitation programmes. To link that to, I suppose, the exploration of people's traditional lands, there's a responsibility that all Australians have, and the Australian government has to improve their services to aboriginal communities, and remote communities, and to try and ... The term is, I suppose, bridge the gap. But it requires a totally different model of health care, and that model is oppositional to the model that could be the result of a partnership between a fracking company and a local community. It requires local community control. It requires solutions coming from the people who are affected by the health problems, and it should be funded not by ... Corporations can fund it if they want to fund it, but it shouldn't be linked to funding from corporations and conditional on the presence of corporations in aboriginal communities.



Justice Pepper: I don't think anyone here or on the panel would dispute in any way what you've just said, and indeed would agree with it. And I wasn't suggesting any linkage, it's just there are instances of ... I know of one just because I happened to actually get the brochure because I was interested in it. I thought, oh, this is curious, of where a gas company has provided resources that has then allowed a medical service to be provided. As I said, I'm not in any way suggesting that should monwealth from providing those services themselves. But I just wanted your comment on the potential for additional services to be provided with some resources coming from the gas companies.

Esther Nunn: I'd also have to say on that though I had to chop out of this presentation, like I said before, quite a lot of information, and I can present it to you later. But the statistics of what is emerging for people's cardiac, respiratory, gastrointestinal, all those things that people are experiencing, which is putting increased burden on the health care system, is any additional help to services that the fracking industry might provide, could it possibly equal or outweigh what's happening in a negative impact sense? That's what I'm asking you now, because it's nice. It looks nice on paper, or it looks nice that the fracking industry is going into partnership with a cardiology department to help people's ... But they're actually really negatively impacting on people's hearts, and their entire bodies, and entire communities. So how do you weigh that up for benefits? And there's a lot of information that talks about ...

Well, in fact, it's written in your Interim Report that the fracking industry claims that the industry is actually beneficial to the community. I cannot understand how that could be possible, and I'm sure it is ...

Justice Pepper: I'm sorry. Where in the report does it say that?

Esther Nunn: I don't have the report in front of me, but it is in the Chapter 10. It's in the health section.

Justice Pepper: I would appreciate you furnishing me in due course then, or furnishing the panel in due course with where in Chapter 10 that statement is made in the way that you just described it.

Esther Nunn: I think it's actually ... It's quite in the beginning of the chapter, and the reason why I had to omit it out of my presentation, which could only be 20 minutes is because it actually says that we are not allowed to talk about the health impacts of the fracking industry on workers in the industry, and I just find that astronomical because ...

Dr Jones: That's correct, I think. Occupational health and safety issues were specifically excluded.

Esther Nunn: Yeah.

Dr. Andersen: [crosstalk]



- Esther Nunn: Yeah.
- Justice Pepper: So the terms of reference were drafted by not us.
- Esther Nunn: I know, and that's why I had to chop it out of my presentation because I didn't have time. But it's challenging when an industry is actually reporting that it's beneficial to their workers, and they're going to take responsibility for the health and safety of their workers, when they're saying it's beneficial to their health and safety. But I have got so much evidence to suggest that it's actually incredibly detrimental to their health and safety, and that specific industry has an eight times more fatality rate than other industries. I've got statistics on that.
- And if you want to talk about the harmful effects of the chemicals that are far more potent to the workers in the industry, including silica, which creates silicosis, and all kinds of terrible cancers, but the industry can still say that it is beneficial to the wellbeing of the community of their workers. I don't understand. I don't understand it. But anyway, I left it out because I'm not allowed to talk about it.
- Justice Pepper: Any other questions or ... yes, Dr. Beck?
- Dr. Beck: I was just going to follow up. You have quoted a large number of statistics, and I just wanted to clarify that in detailing those statistics, you'll also provide the references that support those statistics.
- Esther Nunn: Yeah.
- Dr. Beck: So that we can just have a look at the source material, the quotes that you are quoting.
- Esther Nunn: Absolutely.
- Dr. Beck: The actual numbers, but we need the background source references.
- Esther Nunn: Absolutely, I've got three pages of references.
- Dr. Beck: Good.
- Justice Pepper: Fantastic.
- Esther Nunn: And every single ...
- Justice Pepper: This is music to our ears.
- Esther Nunn: Every single statement or statistics that I've quoted, I've referenced.
- Dr. Beck: Excellent, thank you very much.



- Justice Pepper: Thank you. That is ... I can't tell you how incredibly helpful that is. Thank you. Not everybody does it, so we're very grateful when it does occur. Yes, Dr. Jones?
- Dr. Jones: I guess just following up on that, and one of our concerns certainly has been this issue of vehicular movement because this industry potentially brings with it potentially thousands of increased truck movements, and other things. You mentioned that heavy vehicles are six times more likely to be involved in fatal accidents, is that without a ... Like nomad road users and other smaller vehicle users, or is that in intra-truck? Type accidents.
- Esther Nunn: Does it matter? Does it actually matter?
- Dr. Jones: It can matter in a sense because we heard just previously that heavy vehicles that are using the existing roads are now being basically told not to drive at night. They're being told they've got to drive during the day. So what that does is actually increases the conjunction and probably greater likelihood of these accidents occurring. So once again, I think that's a matter, which we do need to take on board.
- Justice Pepper: I think the point being it can have a further detrimental effect.
- Esther Nunn: Yeah. But when I hear that the panel is saying that they can't make any conclusive evidence of how an increase of trucks of the magnitude that is involved in the fracking industry on top of the statistics that we're experiencing in the Northern Territory, which are four times the national average, I don't understand how you can't see that is going to have a massive increased detrimental effect.
- Justice Pepper: Noted. Thank you. Yes, Dr. Andersen?
- Dr. Andersen: Yeah. So I'm not familiar with the exact wording in the report, but I don't think anyone would suggest that having a massive increase in traffic does not pose a risk for increased accidents. That's ...
- Dr. Jones: And that's [inaudible]
- Dr. Andersen: That's, of course, an issue. But I'm not sure if it's as simple as that because so would increases in tourism, and you know, we want to promote tourism as well ...
- Esther Nunn: Yeah.
- Dr. Andersen: ... and we would know that would also increase the risk.
- Esther Nunn: Of course.
- Dr. Andersen: That's the context of further information and analyses are needed.



- Esther Nunn: But I'm not presenting any submission about the detrimental health impacts of an increase in tourism on our roads.
- Dr. Andersen: No, of course not.
- Esther Nunn: We're talking about the fracking industry. And if there's statistics that there's up to 1,000 truck trips for one fracking well operation and the numbers that I see is 12,000 proposed wells for the Amadeus Basin, how many increased truck traffic is that going to be for Mark [inaudible] and his people down there at Yulara, and all the tourists that are on the road? There's no doubt that's going to have a massive impact on the road fatalities in the Northern Territory.
- Dr. Andersen: Yes
- Justice Pepper: Any further...
- Dr. Beck: Yeah. It's just in terms of the estimates of truck traffic, it does depend upon how much water is required, and the method of deliveries. So it can be via trucks, but it can be via pipelines.
- Esther Nunn: Yeah.
- Dr. Beck: So some of this information, we are uncertain about at the moment, and we are trying to quantify a number of aspects, so there is uncertainty. Some of this uncertainty can be clarified in the passage of time before the Interim Final Report will be prepared. Other information may remain uncertain. So we're in a process of trying to gain greater clarity from where we are at the moment, and that's just one example, where we will try to obtain further information.
- Esther Nunn: I understand that, and I really appreciate what you're saying. But the timeframe that we're supposed to be doing this, and provide the evidence, and assess it all, and make informed decisions that are going to affect our future forever, we've got six months until the end of the year. You really think that you're going to be able to assess all of this information and make really best practice, informed decisions on the health and safety of everybody in the Northern Territory?
- Dr. Beck: Just to clarify, we are not going to be making any decisions. That's the role of government. We will be making recommendations, this panel will be. Some of the recommendations may be, but further information needs to be collected before we could recommend a decision being taken.
- Esther Nunn: And that's why we're pushing so hard for the precautionary principle because six months is not long enough to make an informed decision on something as massive as introducing the fracking industry into the Northern Territory.



- Dr. Beck: I appreciate that. I just need to reiterate what I've said before that this panel is not making any decisions. We'll be making recommendations.
- Esther Nunn: I hope you make good ones.
- Justice Pepper: I can't but reiterate what Dr. Beck has said, it's the job of government to make the decisions.
- Esther Nunn: Yeah.
- Justice Pepper: Not the job of this inquiry.
- Esther Nunn: But they have employed you to gather the information and make those informed decisions.
- Justice Pepper: No, no. I do have to correct you there. We are not making decisions. We are making recommendations.
- Esther Nunn: Recommendations, sorry.
- Justice Pepper: It's an important distinction. And if we don't have enough data, then it may well be that our recommendation is that you, government, need to go away, and get that data before you make any decisions. And we will have certainly no hesitation in pointing out where the data deficiencies are, where the gaps are, and saying, no, you need to go away and get that data, plug those information gaps, those knowledge gaps before you go any further. We will have no hesitation in doing that.
- Esther Nunn: And are you in the position to be able to say that you recommend a ban on fracking?
- Justice Pepper: Uh, no, I'm not. That is not within our terms of reference. That is the job of government.
- Esther Nunn: I hope that you can get enough evidence to recommend something in that direction so the government understands how serious it is from all this work that we're all putting into this.
- Justice Pepper: As I say, I'm not going to repeat myself. As I said, I've hopefully explained what the role of this panel is, and what the role of government is, and where the two intersect.
- Gem Walsh: Can I respond to what Dr. Beck said?
- Justice Pepper: Please, absolutely, absolutely.
- Gem Walsh: On just regarding not having enough information to be able to speak to the issue of exactly how many truck movements would be happening, and where, and what direction, and the impacts it would have, do you think it



would then be prudent to recommend that the moratorium on fracking remain until that information is available, and quantifiable?

Dr. Beck: I think just, once again, I'm just reiterating what Justice Pepper said, we're not going to be recommending no lifting ... Sorry, maintaining the moratorium or recommending a ban. We would perhaps in that situation, if we don't have enough information by the time we get to the Interim Report, that could be a situation where we may, I emphasise may, say that's where we need to get further information, and we'd make that as a recommendation to government in our report.

Justice Pepper: But the moratorium is a matter for government, and only government alone. Any further comments or questions?

Thank you very much for your very detailed presentation. I'll look forward to.. So you're going to drop off the written document to the taskforce sitting behind you, and whatever additional information, statistics, evidence you can provide to us. We would be most grateful.

Esther Nunn: And when would you like that by?

Justice Pepper: As soon as possible is the answer. You know our timeline.

Esther Nunn: Thank you very much.

Justice Pepper: Thank you very much again to both of you.

Gem Walsh: Thanks.

Esther Nunn: Cheers.

Justice Pepper: Appreciate it.