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Select Committee on PFAS Contamination in Waterways and Drinking Water Supplies throughout New South Wales
Legislative Council
NSW Parliament

Re: Responses to Supplementary Questions

1 Introduction

Environmental Risk Sciences Pty Ltd (enRiskS) is pleased to provide the following responses to the supplementary questions from the Committee. The request for responses is provided in **Appendix A**.

2 Question 1 PFAS Health Risk Assessment

2.1 Do current NSW health guidelines accurately reflect the latest scientific understanding of PFAS risks?

There are no current health guidelines related to PFAS specific to NSW only. NSW regulations require the use of Australian health guidelines for soil, drinking water, recreational water and air. NSW Health requires that drinking water in NSW complies with the NHMRC drinking water guidelines.

If the question is referring to these national health guidelines, then the answer is YES, the current national guidelines used in NSW accurately reflect the latest scientific understanding of PFAS risks.

In fact, it is the NHMRC proposed drinking water guidelines for PFOS, PFOA, PFHxS and PFBS (released in late 2024) that do not actually reflect the latest scientific understanding. They reflect a somewhat distorted understanding of a small proportion of the scientific literature in relation to the effects of these chemicals.

As discussed in the hearing, Australia has detailed guidance on how to develop appropriate guidelines for any chemical including those in the PFAS group. When that guidance is followed carefully, the guidelines that are developed will reflect the latest scientific understanding in relation to the chemical of interest. That guidance is in line with international guidance about how to undertake such work.

2.2 Should PFAS be classified as a hazardous substance under NSW law?

The Work Health and Safety Regulation[1] administered by SafeWork NSW provides a definition of a hazardous chemical for use in NSW. This definition is the same as the one provided by SafeWork Australia.

[1] https://legislation.nsw.gov.au/view/html/inforce/current/sl-2017-0404

The environment protection regulations in NSW do not include additional requirements in relation to "hazardous substances". In other states there are additional requirements in the environment protection requirements in relation to hazardous substances but that is not the case in NSW.

The hazardous chemical definition has been in place in the Work Health and Safety regulations for decades. Any chemicals, including those in the PFAS grouping, that meet the definition have already been classified as hazardous chemicals for many years.

Under the Work Health and Safety Regulation (2017), the definition of a **hazardous chemical** is as follows:

> ***"hazardous chemical** means a substance, mixture or article that satisfies the criteria for any 1 or more hazard classes in the GHS, including a classification referred to in Schedule 6, unless the only hazard class or classes for which the substance, mixture or article satisfies the criteria are any 1 or more of the following—*
>
> - *acute toxicity—oral—category 5,*
> - *acute toxicity—dermal—category 5,*
> - *acute toxicity—inhalation—category 5,*
> - *skin corrosion/irritation—category 3,*
> - *aspiration hazard—category 2,*
> - *flammable gas—category 2,*
> - *acute hazard to the aquatic environment—category 1, 2 or 3,*
> - *chronic hazard to the aquatic environment—category 1, 2, 3 or 4,*
> - *hazardous to the ozone layer."*

At least some of the PFAS chemicals meet the criteria for several classifications under the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and so they are already classified as hazardous chemicals in Australia and in NSW and have been for some time.

The details of the relevant classifications for PFOS (as an example of the existing classifications for chemicals in the PFAS group that have been in place for many years) can be found at the SafeWork Australia database[2].

The classifications relevant for PFOS include:

- Carcinogenicity – category 2
- Reproductive toxicity – category 1B
- Specific target organ toxicity (repeated exposure) – category 1
- Acute toxicity – category 4
- Reproductive toxicity – effects on or via lactation
- Hazardous to the aquatic environment (chronic) – category 2
- H351 (Suspected of causing cancer)
- H360D (May damage the unborn child)
- H372 (Causes damage to organs through prolonged or repeated exposure)
- H332 (Harmful if inhaled)
- H302 (Harmful if swallowed)
- H362 (May cause harm to breast-fed children)

[2] https://hcis.safeworkaustralia.gov.au/HazardousChemical/Details?chemicalID=3431

- H411 (Toxic to aquatic life with long-lasting effects).

In addition, the following pictograms apply for PFOS:

GHS08 (Health Hazard)

GHS07 (Exclamation Mark)

GHS09 (Environment)

GHS08 applies because serious health hazards may apply for PFOS such as suspected carcinogenicity or reproductive toxicity.

GHS07 applies because PFOS has low level toxicity to people including aspects like skin irritation or sensitisation, eye irritation and acute toxicity category 4.

GHS09 applies because PFOS is classified as having chronic hazard to the aquatic environment, category 2.

These classifications/workplace requirements for hazardous chemicals refer to materials as purchased for use in manufacturing, formulating etc – i.e. raw materials/pure product/technical products. **They do not refer to the concentrations present in the environment.**

When PFAS are part of a mixture making up a product (e.g. when PFOS or PFAS in general are put into cosmetics, food packaging, thermal paper, dental floss, paint or firefighting foam) or when it is part of an article (e.g. when it is present in furniture or carpeting for stain protection), these classifications may no longer be relevant because there will only be a small amount present.

This means products like dental floss or cosmetics etc, should they contain PFAS, do not meet the definition of a hazardous chemical.

2.3 What additional health monitoring efforts should be introduced for PFAS-affected communities?

Additional health monitoring efforts are not recommended for PFAS-affected areas.

As discussed in our submission, PFAS are just chemicals that are no different from all the other synthetic (and naturally occurring) chemicals that get handled in NSW every day. They are a group of chemicals that should be managed appropriately just as is the case for everything else – pesticides, food additives, drugs, fertilisers, cleaning agents, cosmetics etc. This includes managing the situation where a contaminated site exists and where there may be higher levels of exposure than is common across NSW.

There is no need to treat PFAS differently to other chemicals. As per national and state legislation, chemicals should be managed appropriately – when they are used, transported, stored, manufactured, formulated into products, treated at end of use or during disposal. Because this has not always occurred for many chemicals, there is also a need to investigate potential contamination at sites under the contaminated land regulations. Existing guidance already exists to explain how to undertake such assessments in all these situations.

There is no need to introduce additional health monitoring requirements for one group of chemicals (i.e. PFAS) alone. If the impacts to health of the residents of NSW due to exposure to chemicals in general is of concern to the committee, then health monitoring should be introduced for all the different types of chemicals that people may be exposed to. This is, of course, impossible for a country like Australia or a state like NSW due to the huge cost.

If health monitoring was to be developed for a wide range of environmental chemicals, a program such as the environmental chemicals part of the US NHANES project could be considered[3]. NHANES stands for National Health and Nutrition Examination Survey. The US tests for a wide range of things related to the health of the US population. As a small part of this work, they test for a range of chemicals in blood and/or urine from a statistical sample of people. The program considers all the chemicals that people are commonly exposed to and decides which chemicals to measure for each round of monitoring which occurs every few years. PFAS have been assessed since around 2003 – when analytical equipment relevant for such analysis became available.

Prior to considering such a program it is important to note that conducting health monitoring for PFAS-affected communities may actually create more health issues – through the introduction (or exacerbation) of stress and anxiety in relation to whether there is a problem or not. The study by ANU of communities living around a number of defence sites showed limited evidence for health effects but did identify an increase in psychological distress[4]. Each of the 3 communities assessed reported higher levels of such distress compared to the reference communities.

2.4 Does enRiskS support NSW implementing compulsory PFAS blood testing in high-exposure areas?

No. enRiskS does not support NSW implementing compulsory PFAS blood testing in high-exposure areas.

The ethics of compulsory blood testing is highly problematic. A study involving compulsory blood testing would not get approved by an ethics committee, and such approval would be essential before such a study could be undertaken. This would, therefore, prevent such a study.

Blood testing (voluntary or compulsory) is an invasive test which should only be undertaken for a clear clinical purpose or because a person has volunteered to be part of a study. That volunteering needs to be done only after the person has been **fully informed** of the potential risks and benefits of participating in such a study.

This includes being made fully aware that the study organisers can provide NO information about an individual person's health now or into the future in relation to PFAS concentrations in their blood.

[3] https://www.cdc.gov/biomonitoring/resources/national-exposure-report.html
[4] https://nceph.anu.edu.au/research/research-projects/pfas-health-study/reports

This is because there is no clear information on a causal relationship between the PFAS levels in a person's blood and health effects so there is no way a doctor could help a person understand their risk of any disease that might arise from exposure to PFAS based on the concentrations in their blood. This lack of clarity in a causal relationship between blood concentrations and effects arises because the studies on the effects on health from PFAS only show measurable changes similar to those for many other things that can impact on health including things like lack of exercise and inappropriate diet.

In addition, when undertaking studies in people (epidemiological studies), it's important to remember that the people involved are exposed to a wide range of chemicals. Many chemicals can cause the types of effects seen in studies on PFAS, and people are always exposed to a mixture of chemicals. Therefore, it is almost impossible to determine which chemical might have caused a particular effect in an individual, or if we just think about PFAS, which individual PFAS might have caused the effect.

Because the effects reported in the studies of PFAS health effects are mainly the ones that are commonly seen in the whole population due to lifestyle aspects (diet/exercise) and other chemicals and potentially other aspects (workplace exposures, impacts of heat, thirst, weight etc), it is not possible to identify the relationship between the levels in a person's blood and health effects.

This means that measuring PFAS in blood will not assist a person to understand their risk of health impacts in any way.

Many chemicals are present in the blood of people so if this idea is important to the committee, it should be important for all chemicals that may be of concern – again this is clearly impossible due to the costs and ethics issues involved.

It is acknowledged that the National Academies in the US have published information about the relationship between PFAS in someone's blood and health effects[5], however, what has been recommended is problematic and these recommendations have not been adopted by any other country. They also remain as just recommendations in the US.

The National Academies guidance is shown in the figure below.

[5] https://nap.nationalacademies.org/catalog/26156/guidance-on-pfas-exposure-testing-and-clinical-follow-up

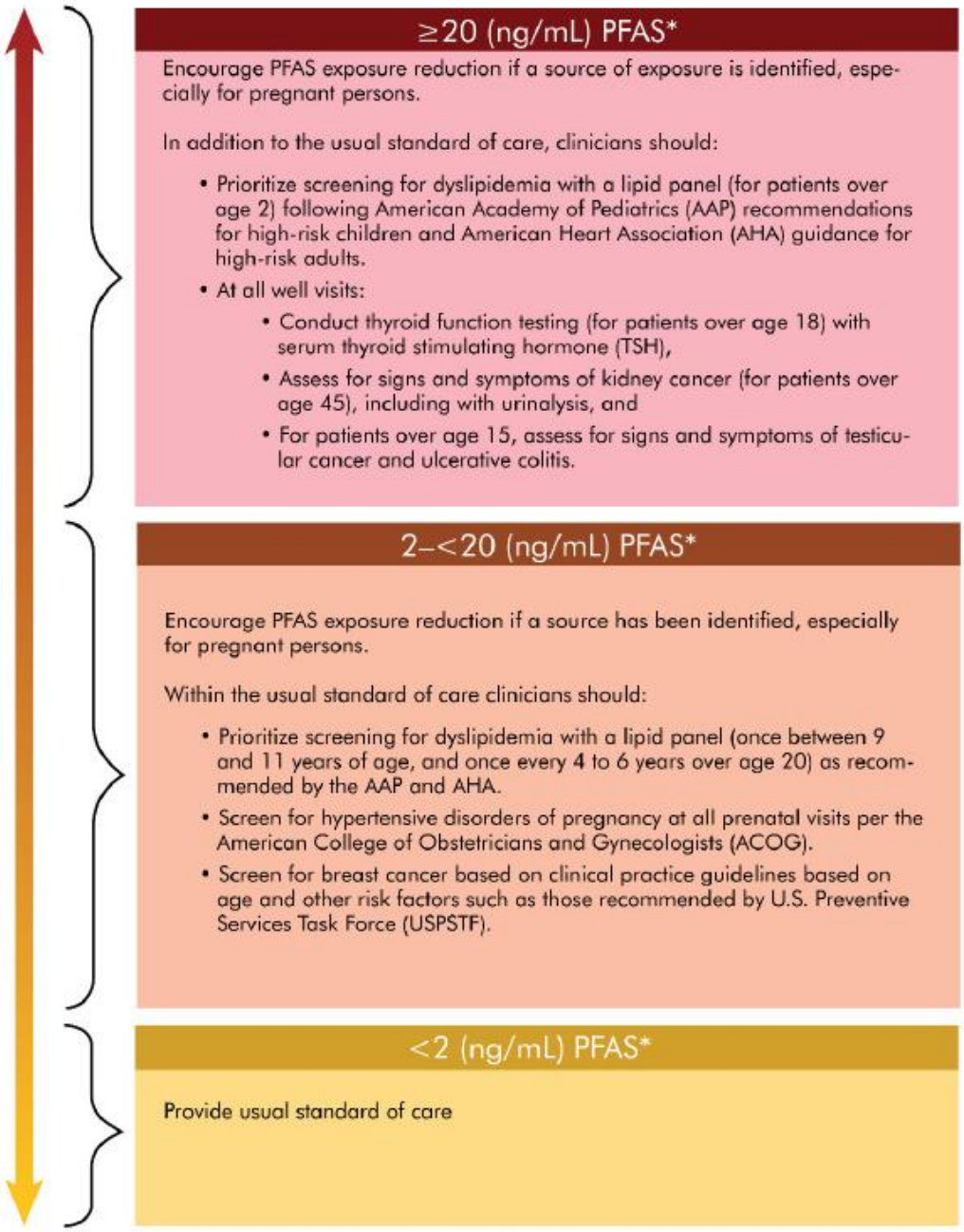

FIGURE S-6 Clinical guidance for follow-up with patients after PFAS testing.
NOTE: MeFOSAA = methylperfluorooctane sulfonamidoacetic acid; PFDA = perfluorodecanoic acid; PFHxS = perfluorohexane sulfonic acid, PFNA = perfluorononanoic acid; PFOA = perfluorooctanoic acid; PFOS = perfluorooctanesulfonic acid; PFUnDA = perfluoroundecanoic acid.

The problem with this guidance is that the entire US population has concentrations in blood that are in the high or medium risk categories, but this has not resulted in significant health effects that can be clearly identified as resulting from exposure to PFAS in the wider US population.

The concentrations of various PFAS in blood have been measured by the US Centers for Disease Control as part of the environmental chemicals part of the NHANES project[6]. Findings have been considered for the period 2000 to 2010 and separately for 2011 to 2018.

The concentrations (for the PFAS referred to by the National Academies recommendations) for 2000 to 2010 were 18 ng/mL for the average and 55 ng/mL for those with high end exposure. For 2011 to 2018, 9 ng/mL was the average concentration and 27 ng/mL was the concentration for those with high end exposure.

These results indicate:

- Average concentrations for the sum of relevant PFAS in the whole US population were essentially at the cutoff value for the highest risk category (i.e. >20 ng/mL) prior to 2010.
- Average concentrations for the sum of relevant PFAS in the whole US population since 2010 were in the medium risk category (i.e. >2 ng/mL and <20 ng/mL).
- Concentrations for those with high end exposure were in the highest risk category for the whole time period over which results have been collected (i.e. >20 ng/mL).

Along with existing population concentrations being in the higher categories without obvious health effects, it is likely that the cutoff values recommended by the National Academies are based on epidemiological studies in areas of the US where significant contamination has occurred (i.e. areas around manufacturing sites).

These cutoff values have probably been determined by taking data from such studies about the blood concentration associated with effects on health in these studies (where people have much higher concentrations in their blood) and then adjusting those values using a range of uncertainty factors to cover for aspects about which information was limited. This is the normal approach to determining such values.

This means the cutoff values used for conservatively managing PFAS concentrations in blood in the general population (i.e. values recommended by National Academies) will be much lower than the actual concentrations measured in blood in the epidemiological studies at which effects were seen. It is also relevant to note that the epidemiological studies relate to associations between blood levels and health effects – not causal relationships.

If the National Academies guidance was being implemented in the health care system in the US, it would mean that it should be common practice for all GPs to at least:

- identify sources of PFAS for all of their patients especially those pregnant
- undertake a lipid panel for all patients starting at ages 9-11 and then every 4-6 years thereafter
- screen for hypertensive disorders in all pregnant patients
- screen for breast cancer based on age and other risk factors for all patients.

The other recommendations in the higher risk category should also be considered.

[6] https://www.cdc.gov/exposurereport/data_tables.html

To our knowledge, this is not occurring.

It is also important to note that it is not normal practice for Australia to directly adopt US guidelines/recommendations (see enRiskS response to NHMRC provided to committee at the hearing).

3 Question 2 Environmental Risk Assessment

3.1 Are Australian PFAS risk models outdated compared to international standards?

No, the Australian models to look at potential effects of PFAS in ecosystems are not outdated.

In fact, Australia has had draft water quality guidelines for PFOS and PFOA since 2016 while the US has only had equivalent guidelines since September 2024 (i.e. last year)[7]).

Work is underway to finalise the water quality guidelines for PFAS for use in Australia by consultants for the Commonwealth DCCEEW. Such work has taken a considerable amount of time due to a lack of resources being allocated by governments for this project. This limited allocation of resources relates to updating guidelines for PFAS but also to updating guidelines for all the other chemicals which are in the process.

Australia also has had soil quality guidelines based on protection of ecosystems since 2018. The US still does not have equivalent guidelines.

One aspect of assessing potential effects of PFAS in ecosystems that could be improved is that related to bioaccumulation. The model used in Australia is not outdated but is acknowledged as being limited. This is something acknowledged by most organisations developing such guidelines.

Bioaccumulation is when a chemical in the environment is taken up by an organism (e.g. fish in surface waters containing a contaminant) and then cannot be excreted by this organism. Most chemicals get taken up by organisms but they can then be excreted by normal bodily processes (e.g. those processes that remove parts of food that are not useful). Bioaccumulative chemicals are those where normal bodily processes do not work to remove them from the organism.

The reason the approach adopted to consider such chemicals is limited is because there a wide range of environmental conditions that change how much of a chemical an organism gets exposed too and can take up as well as how food chains develop – i.e. how higher organisms can be exposed to a chemical based on it being present in their food. For many chemicals, PFAS in particular, there are no good models to take all those aspects into account to make a good prediction of how much will end up in the organism of interest. This is an aspect acknowledged as limited on an international basis not just for Australia.

The technical committee supporting the development of water quality and soil quality guidelines in Australia do keep in touch with Australian and international experts and adapt/refine the guidance they provide when appropriate. When better models for assessing bioaccumulation become available, it is expected that they will be adopted into Australian guidance in a timely manner (assuming appropriate resourcing).

[7] https://www.epa.gov/wqc/aquatic-life-criteria-perfluorooctanoic-acid-pfoa and https://www.epa.gov/wqc/aquatic-life-criteria-perfluorooctane-sulfonate-pfos

3.2 What is the greatest environmental risk posed by PFAS contamination in NSW?

Work by the NSW EPA and landowners has identified a number of sites in NSW that have been heavily contaminated with PFAS. These include defence bases and airports. Sites with the highest concentrations of these chemicals are the ones where environmental risks may be the highest. Depending on the land uses and ecosystems present around these most contaminated sites, these risks may not be unacceptably high.

3.3 How should NSW improve its approach to assessing long-term PFAS impacts on ecosystems?

There is no need to improve the approach taken. Comprehensive existing guidance is available. Improving guidance that is already adequate and available diverts resources from other potential environmental risks, where guidance may not be adequate and/or available.

3.4 Should NSW mandate ongoing monitoring of PFAS levels in soil and groundwater?

No, there is no need for NSW to mandate ongoing monitoring of PFAS levels in soil and groundwater.

As has been discussed, these chemicals are not different from all other chemicals in commercial use so they should not be treated differently. We do not mandate monitoring of the level of other chemicals in soil and groundwater in NSW.

It would, however, actually be useful to have monitoring of ambient levels of a wide range of chemicals in soil, groundwater and surface water in NSW – not just for PFAS.

If data on ambient levels of a wide range of chemicals including PFAS were available for NSW, it would allow consideration of whether a contaminated site is causing a significant change in the exposure of ecosystems. It is not appropriate to do this just for PFAS, but it would be helpful if such monitoring was undertaken for a wide range of chemicals similar to work in other states.

EPA Victoria has undertaken a wide range of ambient monitoring for chemicals. They have looked at PFAS, but they have also looked at a wide range of other chemicals including pesticides, metals, pharmaceuticals and other industrial chemicals. This provides useful data. Some of the documents describing this work can be accessed at:

- https://www.epa.vic.gov.au/about-epa/publications/1870
- https://www.epa.vic.gov.au/about-epa/publications/2054-emerging-contaminants-in-recycled-water
- https://www.epa.vic.gov.au/about-epa/publications/1924
- https://www.epa.vic.gov.au/about-epa/publications/1879
- https://www.epa.vic.gov.au/about-epa/publications/2049-report-on-pfas-in-the-environment
- https://www.epa.vic.gov.au/about-epa/publications/1736.

Queensland DETSI has also undertaken ambient monitoring of PFAS. The document describing this work is available at:

- https://www.qld.gov.au/environment/management/environmental/pfas/monitoring-program-report.

enRiskS would support the implementation of an ambient program in NSW similar to that undertaken in Victoria if it covers a full range of relevant chemicals important in environmental assessment but not for PFAS only.

4 Question 3 Regulatory Gaps and Government Response

4.1 What key regulatory reforms would enRiskS recommend to improve PFAS risk management?

There are ways that national and state regulation about how chemicals are managed in Australia could be improved but this is for all chemicals not just for PFAS. The Productivity Commission report in 2008[8] provides a good description of issues related to improving chemicals regulation. Some of the issues raised have been addressed – in particular, the introduction of ICHeMS.

There is one specific issue that would assist in managing the risks of PFAS in NSW. It is the issue of PFAS contamination on Commonwealth land that may move onto state land. Sorting out the confusion between state and commonwealth land is required but, as it is constitutional, it is unlikely to be able to be clarified.

4.2 How does enRiskS assess the NSW Government's current PFAS response, and where does it fall short?

This question implies that the NSW Government approach in relation to PFAS is falling short. This is not the case.

In line with national and state guidance and regulation, NSW Government agencies are doing the best they can do within the resources available to them to ensure good management of PFAS – just as they do for all chemicals in commercial use.

4.3 Should NSW introduce legally binding PFAS limits in drinking water, similar to new US regulations?

Australia already has legally binding PFAS limits in drinking water. That is exactly what the NHMRC Australian Drinking Water Guidelines (ADWG)[9] are.

In NSW, NSW Health is the relevant oversight agency. In addition, the Independent Pricing and Regulatory Tribunal (IPART) manages the operating licences for Sydney Water and Hunter Water regarding supply of drinking water in cooperation with NSW Health. These IPART licences include requirements to comply with the NHMRC Drinking Water Guidelines. For other water authorities/councils, NSW Health deals with those organisations directly – again such water supplies are required to comply with the NHMRC Drinking Water Guidelines. The NHMRC Drinking Water Guidelines include guidelines for PFOS + PFHxS and PFOA and these have been in place since 2016.

It should be noted that the USEPA guidelines for drinking water are not actually legally binding at this time. The Biden Administration published them in 2024, but they do not come into force until 2027. Since the Trump Administration has taken over, it is understood that this requirement for implementation in 2027 may have been removed, however, this is not shown on the relevant USEPA webpage at this time[10].

[8] https://www.pc.gov.au/inquiries/completed/chemicals-plastics
[9] https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines
[10] https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

The USEPA guidelines for drinking water are also based on a US policy approach for carcinogenic chemicals[11]. The MCLG is the maximum contaminant limit goal and this value is based on health effects only. It is not the legally enforceable guideline – the adopted guideline takes into account the goal as well as laboratory limitations and treatment technologies.

Information from the USEPA about this approach states that:

> *For **chemical contaminants that are carcinogens,** USEPA sets the MCLG at zero if both of these are the case:*
>
> - *there is evidence that a chemical may cause cancer*
> - *there is no dose below which the chemical is considered safe.*
>
> *If a chemical is carcinogenic and a safe dose can be determined, EPA sets the MCLG at a level above zero that is safe.*

This description means that this approach (i.e. setting the MCLG at zero) is normally applied to genotoxic carcinogens (i.e. chemicals that directly attack DNA resulting in cancer and where no threshold can be determined). The legally enforceable guideline then is the relevant limit of reporting that can be achieved by laboratories.

In Australia, the NHMRC guidance indicates that the basis for guidelines for genotoxic carcinogens is not zero but a risk of 1 in 1 million risk based on relevant information from studies on laboratory animals etc. The World Health Organisation (WHO) also adopts a similar approach when they set drinking water guidelines but they use 1 in 100,000 risk for their calculations. This means the Australian approach is actually more stringent/conservative than that recommended by WHO.

Regardless of which approach is considered, it is important to note that PFOS and PFOA are NOT considered to be genotoxic carcinogens by IARC. There is much discussion about how IARC developed their classifications for these 2 chemicals, but it is agreed that they are not genotoxic.

This makes the whole approach adopted by the USEPA somewhat confusing.

4.4 Does enRiskS believe Australia's approach to PFAS regulation is too industry-friendly?

No. The national and state guidance for developing guidelines for soil, water and air and for undertaking assessments of specific sites/contaminants are often criticised by industry as being too conservative and onerous. Currently, this guidance is science centric and appropriately conservative.

5 Question 4 Public Communications and Transparency

5.1 What misconceptions about PFAS risks does enRiskS commonly encounter?

There is a large misunderstanding in the community about chemicals in general. Many people believe that whenever they find out that they are being exposed to a chemical that they were not aware of, that it must mean they are being poisoned, and someone should be required to fix the situation. However, in most cases, the chemicals they may be worrying about are ones everyone is exposed to all day every day and they may even be ones that are essential nutrients which are required for maintaining normal, healthy operation of all our body's systems.

[11] https://www.epa.gov/sdwa/how-epa-regulates-drinking-water-contaminants#develop

It is important to acknowledge that the fundamental building blocks for the entire planet are chemicals.

Whether it is the water we drink, the air we breathe, the food we eat, the ground we walk on, the houses we live in, the things we have inside our houses or workplaces or what we ourselves are made of, everything is made of chemicals.

Some chemical substances like water, oxygen and nutrients are essential to keeping us alive or to let plants or other animals live. Other chemical substances are naturally occurring, but they can kill us – like spider and snake venoms or well-known poisons like arsenic or mercury. The same applies to the chemical substances we manufacture – some substances are quite benign, and some are quite toxic.

A range of chemical substances are used to manufacture things we use every day like food, clothes, computers, kitchen appliances, cars, houses, roads, trains, planes, hair dyes, beauty products, toothpaste, shampoo, flea rinse for our pets and many other things.

The presence or detection of a chemical in the environment does not equal an unacceptable risk to people or the environment. Risk assessment is used to determine if the amount of a chemical present in the environment could pose a risk to people or the environment.

Community concern has been focused on PFAS in recent years because of the approach taken in the media. Stories in newspapers that do not provide all relevant information, and which present the information they do include in an alarmist fashion, are now common. Stories in movies, TV series and documentaries have similar problems – often only providing half the story. This is reinforced by academics that have a focus on getting research dollars rather than being properly science focused.

In addition, government agencies are not encouraged to openly disagree with those people and organisations who paint a problematic picture of PFAS and other chemicals in the media. It would be useful if government agencies were encouraged to respond more openly and appropriately to these issues (i.e. call out these issues when they come across them" – i.e. when the story in the media does not include all relevant information). This would help the community to better understand the issues.

5.2 Should the NSW Government publish real-time PFAS contamination data for public access?

It is not currently possible for real time analysis of PFAS to be undertaken in any media (soil, water, air). Samples must be taken to a laboratory, and it takes days to weeks for the analysis to be completed.

If this question is actually about publishing PFAS results whenever they become available for contaminated sites or industrial facilities, then this may cause more problems than it solves.

If such results are to be published, then they **always** need to be accompanied by contextual information that includes a clear and excellent explanation that:

- chemicals are a normal component of the environment
- the dose makes the poison – i.e. potential risks from exposure to a chemical relate to how much of the chemical a person is exposed too, not just that the chemical is present
- chemical concentrations need to be different from the levels normally present in the environment to have potential risks

- other matters related to the particular situation relevant for the data.

If the data are just published with no contextual/explanatory information, then publishing such data will just cause stress in the relevant communities. Increased stress is much more likely to cause health impacts than exposure to PFAS (or most other environmentally relevant chemicals).

There will be a wide range of other chemicals present in the environment for many communities, and there is no analysis or reporting of all other chemicals to the community. Treating PFAS differently from all the other chemicals relevant to environmental exposures just perpetuates a problem.

5.3 What role should scientific advisory panels play in shaping NSW's PFAS policies?

A scientific advisory panel focused on managing chemicals in general might be useful to assist NSW Health and NSW EPA in their work. There is no need for one specific to PFAS only.

In addition, such a panel is only useful if people with the correct types of skills, experience and qualifications are appointed. In particular, if those who have been assisting the media with problematic/unhelpful stories related to PFAS are included in such panels, then this may result in a panel that is not particularly useful. This is because the committee may end up spending a lot of time discussing matters related to a lack of understanding of the science and/or the basics of chemicals regulation in Australia.

5.4 If NSW does not strengthen its PFAS regulations, what are the long-term risks for public health and the environment?

Again, this question assumes that the current regulations are not sufficient. This is not true. The current regulations and guidance about how to do assessments are robust and sufficient.

6 Closure

If you require any additional information, please do not hesitate to contact us on . We look forward to continuing to help with this important work.

Yours sincerely,

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Director

Therese Manning (Fellow ACTRA)

Ruth Jarman (Registrant ACTRA)

Dr Kate Langdon

Dr Belinda Goldsworthy (Registrant ACTRA)

Attachment A – Supplementary questions from Select Committee

Inquiry Into Pfas Contamination In Waterways And Drinking Water Supplies Throughout New South Wales

Hearing: 5 February 2025

SUPPLEMENTARY QUESTIONS

Dr Jackie Wright, Director/Principal, Environmental Risk Sciences Pty Ltd (enRiskS)

(1) PFAS Health Risk Assessment

(a) Do current NSW health guidelines accurately reflect the latest scientific understanding of PFAS risks?

(b) Should PFAS be classified as a hazardous substance under NSW law?

(c) What additional health monitoring efforts should be introduced for PFAS-affected communities?

(d) Does enRiskS support NSW implementing compulsory PFAS blood testing in high-exposure areas?

(2) Environmental Risk Assessment

(a) Are Australian PFAS risk models outdated compared to international standards?

(b) What is the greatest environmental risk posed by PFAS contamination in NSW?

(c) How should NSW improve its approach to assessing long-term PFAS impacts on ecosystems?

(d) Should NSW mandate ongoing monitoring of PFAS levels in soil and groundwater?

(3) Regulatory Gaps and Government Response

(a) What key regulatory reforms would enRiskS recommend to improve PFAS risk management?

(b) How does enRiskS assess the NSW Government's current PFAS response, and where does it fall short?

(c) Should NSW introduce legally binding PFAS limits in drinking water, similar to new US regulations?

(d) Does enRiskS believe Australia's approach to PFAS regulation is too industry-friendly?

(4) Public Communication and Transparency

(a) What misconceptions about PFAS risks does enRiskS commonly encounter?

(b) Should the NSW Government publish real-time PFAS contamination data for public access?

(c) What role should scientific advisory panels play in shaping NSW's PFAS policies?

(d) If NSW does not strengthen its PFAS regulations, what are the long-term risks for public health and the environment?