Submission feedback for

Classifying waste and waste soils containing PFAS

Prepared by

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Friends of Latrobe Water (FLoW) formed for the purpose of protecting and advocating for Latrobe Valley water sources, connected waterways and Gippsland Lakes from brown coal activities including historic mining activities, legacy and coal ash contamination. With that, we take every opportunity to inform, educate and support Latrobe Valley and broader Gippsland community to take action ensuring legacy contamination from the coal industry and other heavy industry are remediated under improved statutory obligations to provide clean air, land and water.

Overview

The following snip from the Commonwealth Department tasked with management of PFAS[1] presents a non-defensible disclaimer why our standards do not align internationally in the absence of any credible research or evidence to prove otherwise that Australian ecosystems, biota and human health do not negatively suffer harm at the current higher protective measures.

Why do Australian guidelines differ from other international standards?

International standards can differ between countries for a variety of reasons, including different methodologies and different environmental conditions. The standards may also be intended for different purposes, such as levels to trigger action, compared to levels that are protective over the short term, compared to levels protective over the long term.

[1] https://www.dcceew.gov.au/environment/protection/chemicals-management/pfas#why-do-australian-guidelines-differ-from-other-international-standards

Inconsistencies and contradictions.

1. The consultation paper is very disappointing from a science-based regulator supposedly the pre-eminent authority to manage and protect environmental health. It is very clear by the statements in the executive summary Vic EPA and the Victorian Chief Environmental Scientist are not committed to updating PFAS knowledge consistent with new international scientific evidence, nor does it appear to be a priority.

2. The many statements and assertions are both conflicting and inconsistent. Where Vic EPA make qualifying statements there are no references to ensure accuracy and transparency. For some information it verges on disinformation as they represent a false position that is entirely non-defensible.

3. The ultimate contradiction is this statement, "*when it comes to waste and waste soils containing PFAS, the community expects it* [EPA] ***to use the best available relevant scientific research*** *and to align with* ***nationally agreed standards*** *when deciding how PFAS should be managed.*" The consultation paper is evidence Vic EPA are forsaking best available PFAS science to conform with the irresponsible position of the Commonwealth to undermine the seriousness of PFAS contamination.

4. The paper says *"EPA takes its responsibility to protect human health and the environment seriously"* but section 2.3. *"What are the risks associated with exposure to PFAS?"* continues the non-defensible disclaimer by the Commonwealth Department of Health's guidance about PFAS stating (falsely) "*PFAS have not been proven to cause any specific illnesses in humans.*" Further states (again falsely), "*that there is no consistent evidence that PFAS are harmful to human health at low levels of exposure (relevant to background or occupational exposure). The guidance recommends that, although there is uncertainty about the potential for exposure to PFAS to cause significant adverse human health effects, 'as a precaution human exposure to PFAS be minimised'.*

5. Both these outrageous assertions discount recent findings by WHO IARC classifying PFOA as a Group 1 Carcinogen and PFOS as Group 2B.[2]

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[2] https://www.food-safety.com/articles/9082-who-classifies-two-major-pfas-as-carcinogenic-to-humans-underlines-risk-of-dietary-exposure PFOA is carcinogenic to humans on the basis of sufficient evidence for cancer in experimental animals and strong mechanistic evidence (for epigenetic alterations and immunosuppression) in exposed humans…PFOS is possibly carcinogenic to humans on the basis of strong mechanistic evidence across test systems, including in exposed humans (for epigenetic alterations and immunosuppression, as well as several other key characteristics of carcinogens).

6. This new determination puts pressure on Government and Regulators (EPAs, Health) to review current health levels presently set for water/soils/biosolids which includes the proposed standard in the Draft PFAS NEMP 3.0

7. It also highlights Vic EPA's contradiction in section 2.1 of the consultation paper, "*These* [PFOS, PFOA & PFHxS] *are three of the most studied and best understood PFAS chemicals, which means there are many scientific studies of their effect on environmental and human health,* while also noting in section 2.3 PFAS guidance by Commonwealth Department of Health's *have uncertainty about the potential for exposure to PFAS to cause significant adverse human health effects*.

8. Same continues in section 4 that local and international scientific research into PFAS has stabilised citing ***appropriate upper threshold*** *numbers for the different categories of waste containing PFAS can be established… there is growing national consensus that the PFAS NEMP thresholds are appropriate for an Australian setting.*

9. FLoW calls out these contradictions and inconsistencies where Vic EPA continue random declarations that PFAS management on a national perspective is appropriate in the absence of any Australian studies to declare PFAS thresholds set by Australia are safe for human health.

Proposed classification concerns with the strategy

10. This proposed classification by Vic EPA only addresses 3 PFAS compounds, PFOS, PFOA & PFHxS and fails to include the many other PFASs in contaminated soils, both long and short chain PFAS. Short-chain PFAS degrade to their terminal precursors of PFOA and PFOS.

11. What do site managers do when other PFAS compounds are found outside the 3 noted? The classification notes PFAS contamination will be assessed on a case-by-case basis in line with the best available science, but Vic EPA are not using updated science nor including the total sum of PFAS.

    - Section 1.2 notes, *Vic EPA is not anticipating changes to the proposed limits…* even though other countries are moving forward on validating methods to test for 40 PFAS in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue. US EPA now test for a total of 14 PFAS for risk-based values in their updated Regional Screening Level and Regional Removal Management Levels.[3]

    - Vic EPA declare their environmental parameters are rigorous when PFAS standards, measurements and levels remain in the upper thresholds

[3] https://www.epa.gov/system/files/documents/2023-12/epas-pfas-strategic-roadmap-dec-2023508v2.pdf

compared to the much lower international standards. Both cannot be correct to protect human health.

- Vic EPA are trying to normalise PFAS (section 5) as a contaminant where the US are proposing to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).[4]

- Vic EPA only note hazardous when waste soil containing PFAS above the limits in the PFAS general designation is classified as reportable priority waste (RPW) which is hazardous by nature. Again, this inconsistency highlights a lack of protection to reduce PFAS exposures.

Self-classifying

12. Self-classifying waste soils contaminated with PFAS as fill material to be spread across Victoria is concerning. Even low doses of PFAS as a constant drip feed are problematic[5] for bio accumulation especially what Australia deem to be acceptable as low PFAS levels for human health exposures.

13. It is not clear how Vic EPA has determined self-classifying waste and waste soils containing PFAS will minimise potential environmental impacts.

14. With the goal of the GED to close contamination pathways, how do Vic EPA provide oversight for self-investigations and classifications – is there an onus on the regulator to fact check what investigations need to happen?

PFAS and the General Environment Duty

15. The reliance on the GED and the permissioning framework is flawed as they can only be as effective as the regulator chooses to determine what risk of harm is and to who and what. Risks to human health and the environment are not sufficiently identified if there is limited monitoring data and testing providing no evidence to prove harm and no way to analyse the extent of risks so balancing risk is impossible and can only benefit the polluter. Once risk is established, site specific limits can be set. These should be managed in accordance with best practice but that does not mean international best practice and standards. There is also the opportunity for duty holders with another get-out clause, as far as reasonably practicable, which has a dollar value to it. Therefore, the values and risk of harm to human health and the environment are further weakened.

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[4] https://www.epa.gov/superfund/proposed-designation-perfluorooctanoic-acid-pfoa-and-perfluorooctanesulfonic-acid-pfos

[5] https://pubmed.ncbi.nlm.nih.gov/36115532/
But the levels for PFOS, PFOA, and GenX reflect science showing that "these chemicals are shockingly toxic at extremely low doses," https://www.consumerreports.org/water-quality/even-extremely-low-levels-of-pfas-in-drinking-water-unsafe-a1147585461/

16. There are multiple connected waterways around our urban and regional industrial/construction sites and waste facilities that provide the pathway for PFAS to enter and become highly mobile through the aquatic environment from poorly managed regulatory processes. With the disturbance of contaminated soils, the contaminants become mobile and the dust becomes airborne circulating in the air we breathe and depositing to the water we drink and on the food we eat.

17. Therefore, the adoption of these regulations will allow low levels of PFAS contaminated soil to be reused and spread as fill on uncontaminated lands increasing exposures, and as a result,

    - contaminate surface water and groundwater.
    - dusts from these now PFASs contaminated soils can be re-transported long distances in atmosphere and be deposited at pristine land sites (agriculture).
    - exposure to dust from these carcinogenic compounds present high risk to human health[6]

18. It is to this point the consultation paper will fail to prevent ongoing PFAS exposures to the aquatic environment, food webs and the public while Australia refuses to align with best practice international measures to reduce PFAS exposures.

19. FLoW request Vic EPA incorporate and adopt more stringent standards than presented in the consultation paper.

20. FLoW also endorses the Concerned Waterways Alliance feedback submission on this consultation paper as we are a representative group of this alliance.

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[6] Resource's, fate and distribution of dust associated Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) A review https://www.mdpi.com/2305-6304/11/4/335
…This article reviews and identifies the potential sources of dust-associated PFAS that can accumulate and spread across SDS-prone regions. Furthermore, PFAS exposure routes and their toxicity through bioaccumulation in rodents and mammals are discussed. The major challenge when dealing with emerging contaminants is their quantification and analysis from different environmental media, and these PFAS include known and unknown precursors that need to be quantified. Consequently, a review of various analytical methods capable of detecting different PFAS compounds embedded in various matrices is provided. This review will provide researchers with valuable information relevant to the presence, toxicity, and quantification of dust-associated PFAS to develop appropriate mitigation measures.