

January 27, 2023

To: Mark Gordon
Department of Ecology, Toxics Cleanup Program
P.O. Box 47600
Olympia, WA 98504-7600
Delivered electronically via email

Subject: Comments on Ecology's Draft Guidance for Investigating and Remediating PFAS Contamination in Washington State

Dear Mr. Gordon,

Thank you for the opportunity to review and provide comments on the Department of Ecology's Draft Guidance for Investigating and Remediating PFAS Contamination in Washington State. As a leader in economic growth and environmental stewardship for the region, we understand the importance of regulating toxic chemicals impacting our state. We applaud Ecology for moving forward with development of guidance and see this as an additional step forward for regulation of per- and polyfluoroalkyl substances.

During finalization of this guidance as well as during future rulemaking that occurs for the regulation of PFAS, please consider the following comments:

1. **General Comment:** We understand the rationale to provide a guidance document with flexibility, to allow for site and situational variability, however additional specificity on where, how and when this guidance is intended to be applied would be beneficial to the regulated community. For example, Section 1.1 titled Purpose and Applicability does not include any description or detail about how one might apply this guidance to properties or areas that are not yet engaged in a site cleanup process, or what types of sites, or types of historical activity at a site would indicate a potential for the presence of PFAS. We recommend inclusion of additional text describing the types of historical activities or industries that would be indications to Ecology (or to property owners) that PFAS presence should be considered or investigated. Currently, there is insufficient discussion of how one may determine if they should be considering or investigating the potential for PFAS in soil and groundwater at a site not currently listed under MTCA.
2. **General Comment:** Use of Preliminary Cleanup Levels. Section 3 states that a '*preliminary cleanup level gauges whether a hazardous substance is present at a concentration that warrants cleanup actions.*' Please expand discussion of Preliminary Cleanup Levels to better explain how these values are used, when they should be applied, and what the outcome of a Preliminary Cleanup Level evaluation process is. The Port has experienced significant project schedule delays, investigation scope expansion and significant costs associated with Preliminary Cleanup

Level screening conducted on existing sites. This process has not yet resulted in an outcome that has modified or changed the outcome of a project. The Contaminant of Concern (COC) Screening process is still conducted following initial Preliminary Cleanup Level screening, and the PCUL screening routinely screens in irrelevant chemicals that are eliminated later. We strongly recommend reconsidering the development and inclusion of Preliminary Cleanup Levels for PFAS without clear explanation of when and how they are to be used, how they vary from COC screening levels and cleanup levels, and how they are applied to Sites. We understand the need to determine what level of contamination at a site warrants cleanup and suggest this is done using the ARAR process and actual cleanup levels (also calculated and included in this guidance document), rather than a different set of values and an additional evaluation step. Alternately, identification of these values as “screening levels” rather than “preliminary cleanup levels” may also assist in avoidance of confusion caused by inclusion of these values without clear guidance on their applicability and use.

3. **General Comment:** In multiple places in the document, discussion of existing Sites with PFAS contamination are described. It is unclear the relevance of this information to the guidance document. We encourage you to reconsider the usefulness and necessity of including this site-specific information for existing Sites in a guidance document without explanation of why it is being included, or the relevance of this to other sites.
4. **General Comment:** The laboratory analytical methods, and cleanup level calculation methods included in this guidance are in general, consistent with current practice in other states, and we are in support of the discussion provided for analytical methods and cleanup level development. A few specific technical comments on analytical methods and cleanup level calculation are provided below.
5. **Specific Comment: Page 1, Footnote 2.** This footnote refers to the Washington state law restricting AFFF use, and notes AFFF can no longer be manufactured, sold, or used for fire training, although it can still be used for emergencies and actual fire situations *until an alternative is found*. Alternatives to PFAS-containing foams are already available, and in use in many areas. Suggest rewording to avoid indicating alternatives are not currently available. Chapter 70A.400 allows for ongoing AFFF use where mandated by federal law, not where alternatives have not been found.
6. **Specific Comment: Section 3.2.2.** This section describes the MTCA requirement for compliance with ARARs, and Section 3.2.3 states that the Department of Health’s State Action Levels (SALs) “are expected to serve as the groundwater cleanup levels for most sites that have potable groundwater”. We would question the applicability of the Department of Health SALs as an ARAR at Sites that are not within a drinking water aquifer. The definition of potable groundwater is broad reaching, and includes many areas of the State where groundwater is not currently and will never be used as a drinking water source. Please provide your specific WAC 173-340-710(4) rationale to apply these SALs as an ARAR, and consider options for sites with groundwater that may be determined potable that will not have a current or future use as drinking water.

7. **Specific Comment: Section 3.2.3, Table 3.** HFPO-DA is not considered volatile by EPA definition and should not be addressed as such.
8. **Specific Comment: Section 3.2.4.** Tables of cleanup levels are provided in Chapter 3 for all media except surface water. For clarity, please consider organizing the document so that criteria for all media are provided in the same section.
9. **Specific Comment: Section 3.2.5.** Soil cleanup levels do not consider the impact of regional background. PFAS are known to occur globally in air deposition and rainfall (see *Per- and Polyfluoroalkyl Substances Technical and Regulatory Guidance (Section 6)*). The Interstate Technology & Regulatory Council PFAS Team. June 2022; and *Outside the Safe Operating Space of a New Planetary Boundary for Per- and Polyfluoroalkyl Substances (PFAS)*. Ian T. Cousins, Jana H. Johansson, Matthew E. Salter, Bo Sha, and Martin Scheringer. Environmental Science & Technology 2022 56 (16), 11172-11179. DOI: 10.1021/acs.est.2c02765 for a few recent references). The impact of this regional background should be considered in the development of soil cleanup standards, as described in the ITRC guidance noted above, and referenced by Ecology's draft guidance: "The implications of such ambient levels of PFAS should be considered in evaluating exposures and risk levels, establishing site action levels and cleanup goals, and identifying PFAS sources". Similar exercises for other states have considered state background levels in determining protective soil leaching. The November 2022 Sampling, Analysis, and Assessment of PFAS Under New York State Department of Environmental Conservation's Part 375 Remedial Programs publication is a primary example of this.
10. **Specific Comment: Table 5.** We recommend inclusion of current laboratory Practical Quantitation Limits as a column in this table, given the very low concentrations calculated for soil cleanup levels presented in this table. We also request inclusion of discussion of how Ecology intends to handle situations where the calculated cleanup levels for PFAS are less than laboratories are currently able to detect, should that condition occur.
11. **Specific Comment: Section 3.4.** This section, titled *Ecology's historical PFAS Investigatory Levels (now superseded)* describes an entire site-specific criteria development process for a specific Site that is not current, or relevant to this guidance. To eliminate confusion, we strongly suggest deleting this section from the document. If this section remains in the document, we recommend including an introductory paragraph that explains the relevance of this information and why it is included, and how it should be used by the reader.
12. **Specific Comment: Section 4.5.2.** The first paragraph of this section states '*For drinking water samples, if the source of PFAS contamination is unknown.... Use both Method 533 and 537.1...*' – however it is our understanding this document is providing guidance for the investigation and remediation of soil and groundwater, not drinking water. Please confirm and clarify the text of this section. The recommendation to '*use both methods*' should be more clearly explained as to when, and how this may be conducted (analyses of select samples by a different method, duplicate analyses of representative samples, etc.).
13. **Specific Comment. Section 4.2.** EPA Methods 533 and EPA 537.1 can be used to analyze potable water for the 6 PFAS compounds included in this guidance. Ecology recommends using EPA 533

because it relies on isotope dilution quantification techniques. Does Ecology require testing for all target PFAS compounds provided by the referenced methods (29 compounds) or just the 6 PFAS compounds currently included in the guidance? Please clarify if Ecology is expecting analyses to be conducted for all possible PFAS, or just the PFAS with current criteria.

14. **Specific Comment: Chapter 6.0.** Treatment Technologies – please consider expansion of this chapter to discuss emerging technologies for PFAS treatment and destruction and provide additional discussion of the common and known challenges, impacts and costs of the technologies discussed.
15. **Specific Comment: Section 6.0.** The current draft does not specifically list or discuss acceptable disposal methods. Disposal of PFAS-contaminated waste will be a significant factor in the evaluation of remedial technologies and alternatives. Please update this guidance to include discussion of approved and commercially available disposal options, and if Ecology has guidance or preference for methods of waste disposal.

We thank you again for your progress on development of a regulation for PFAS. Please feel free to reach out to my technical staff (Megan King, king.m@portseattle.org) with any clarifying questions or opportunities for future collaboration.

Regards,



[Sandra Kilroy \(Jan 27, 2023 16:31 PST\)](#)

Sandra Kilroy

Senior Director, Environment & Sustainability

PFAS Draft Guidance_PortofSeattle Comment Letter_DRAFT

Final Audit Report

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