

## **NO BINDING FEDERAL DRINKING WATER REGULATIONS FOR 1,4-DIOXANE**

Mar 06, 2020

People want certainty from federal agencies. We all yearn for direction, especially from the United States Environmental Protection Agency ("EPA"). Here is the information, albeit limited, we can use for 1,4-Dioxane.

### **WHAT IS 1,4-DIOXANE?**

1,4-Dioxane is a synthetic industrial chemical that is a colorless, clear, and flammable liquid with a faint odor.<sup>[1]</sup>

1,4-Dioxane was used as a solvent for extracting animal and vegetable oils as well as in the formulation of inks, coatings, and adhesives. It also was also used as a solvent in processing crude petroleum, petroleum refining, and petrochemicals.<sup>[2]</sup>

1,4-Dioxane was (and sometimes currently still is) found in numerous goods, including deodorants, perfumes, mouthwashes, paints, cosmetics, detergents, certain plastics, and other products.<sup>[3]</sup>

### **WHAT ARE THE DRINKING WATER REQUIREMENTS?**

Notably, there is no maximum contaminant level ("MCL") for 1,4-Dioxane. To date, EPA has only issued a health advisory suggestion that others should follow. EPA indicates in a non-binding document entitled "2018 Edition of the Drinking Water Standards and Health Advisories Tables" that the drinking water concentration representing a  $1 \times 10^{-4}$  cancer risk level for 1,4-Dioxane is 0.35  $\mu\text{g}/\text{L}$ .<sup>[4]</sup>

Other health advisories for 1,4-Dioxane are found at the following EPA fact sheet.<sup>[5]</sup> 1,4-Dioxane is also listed on the Chemical Contaminant list, meaning EPA identifies 1,4-Dioxane as a potential concern in public water systems, but it is not subject to any national drinking water regulations.<sup>[6]</sup> EPA also provides a non-mandatory residential screening level for resident tap water.

It should be noted that while there is no binding federal drinking water for 1,4-Dioxane, it is a common groundwater contaminant. As a result, we have worked on many sites where regulators have required potentially responsible parties to identify and address 1,4-Dioxane in the groundwater despite its lack of a federally binding drinking water standard.

## CONCLUSION

While there is no binding drinking water regulation for 1,4-Dioxane, it is a common contaminant in groundwater and it typically addressed at CERCLA Sites.

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[1] [https://www.epa.gov/sites/production/files/2014-03/documents/ffro\\_factsheet\\_contaminant\\_14-dioxane\\_january2014\\_final.pdf](https://www.epa.gov/sites/production/files/2014-03/documents/ffro_factsheet_contaminant_14-dioxane_january2014_final.pdf)

[2] <https://clu-in.org/contaminantfocus/default.focus/sec/1,4-Dioxane/cat/Overview/>

[3] *See, e.g.*, <https://www.madesafe.org/science/hazard-list/14-dioxane/>

[4] <https://www.epa.gov/sites/production/files/2018-03/documents/dwtable2018.pdf> See page 4 of 12.

[5] [https://www.epa.gov/sites/production/files/2014-03/documents/ffro\\_factsheet\\_contaminant\\_14-dioxane\\_january2014\\_final.pdf](https://www.epa.gov/sites/production/files/2014-03/documents/ffro_factsheet_contaminant_14-dioxane_january2014_final.pdf) See pages 3 and 4 of 9.

[6] <https://www.epa.gov/ccl/chemical-contaminants-ccl-4>

## RELATED PRACTICE AREAS

- PFAS Team

## MEET THE TEAM



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