

Andrew M. Kenefick

May 7, 2024

Marla Koberstein
Department of Ecology
Water Quality Program
PO Box 47696
Olympia, WA 98504-7696

Submitted via Ecology web portal.

**RE: Proposed Revisions to Chapter 173-201A WAC
(Aquatic Life Toxics Criteria) – 6PPD-quinone**

Dear Ms. Koberstein:

In addition to the comments submitted on behalf of the Washington Council of Trout Unlimited, I am submitting the following comment on my behalf only.

At least one other comment submitted on the proposed 6PPD-quinone WQC asserted that the 24-hour LC₅₀ value is more relevant than the 96-hour LC₅₀ value because the acute exposure window is only one hour. This comment appears to confuse the sampling or exposure window with the testing criteria for determining an acute WQC. The 1-hour acute exposure window is “the time period over which exposure is to be averaged.” Water Quality Standards Handbook § 3.1.2 (1994). It explains, “For acute criteria, EPA recommends an averaging period of 1 hour. That is, to protect against acute effects, the 1-hour average exposure should not exceed the [criterion maximum concentration].” *See also* EPA, Water Quality Standards Handbook, § 3.5.1 (2023). The 1-hour averaging period is not the period over which acute effects will occur. Rather, it is the period over which the measured instream concentrations are averaged to verify compliance with applicable standards.

The duration of toxicity testing for determining WQC is different. They are testing criteria for evaluating the effects of exposure to pollutants on aquatic organisms. In its 1994 Water Quality Standards Handbook (on the very same page as the above quote), EPA explains that it “derives acute criteria from 48- to 96-hour tests of lethality or immobilization.” *Id.* EPA emphasizes that acute aquatic criteria should be based on 48- to 96-hour toxicity tests (not 24-hour tests): “If enough acceptable data for 48- to 96-hour toxicity tests on aquatic plants and animals are available, they are used to derive the acute criterion.” *Id.*; *see also* EPA, Water Quality Standards Handbook, § 3.5 (2023) (“Acute criteria are derived using short-term (48- to 96-hour) toxicity tests on aquatic plants and animals.”).

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The use of 96-hour LC₅₀ data for setting an acute WQC with a 1-hour averaging period is consistent with EPA guidance. Ecology is well-justified in its recognition that the 24-hour LC₅₀ data does not adequately protect sensitive species like coho salmon.

Sincerely,

A handwritten signature in blue ink that reads "Andrew M. Kenefick". The signature is written in a cursive style with a large, stylized 'K'.

Andrew M. Kenefick

[LL from AMK re WQC for 6PPD-q \(5/7/2024\)](#)