



**U.S. Department of Energy
Hanford Site**

May 2, 2024

24-ECD-0077

Marla Koberstein
Rule Coordinator
Washington State Department of Ecology
Water Quality Program
P.O. Box 47696
Olympia, Washington 98504

Dear Ms. Koberstein:

**WASHINGTON STATE DEPARTMENT OF ECOLOGY'S PROPOSED RULEMAKING
FOR THE AQUATIC LIFE TOXICS CRITERIA**

The U.S. Department of Energy at the Hanford Site (DOE) electronically submitted the attached general and specific comments pertaining to Washington State's Proposed Rulemaking 173-201A WAC, Water Quality Standards for Surface Waters of the State of Washington. In short, DOE is concerned about potential impacts to the ongoing cleanup work at the Hanford Site. DOE is requesting a discussion with the State of Washington Department of Ecology about the proposed rulemaking to clarify and discuss any potential effects. If you have any questions, please contact me at (509)376-4820, or Paul Pak, Environmental Compliance Division Director, at (509)376-4798.

Sincerely,

Corey A. Low

Digitally signed by Corey
A. Low
Date: 2024.05.02
11:00:15 -0700'

Corey A. Low, Acting Assistant Manager
for Safety and Environment

ECD:AET

Attachment and cc: See page 2

*Richland Operations Office
P.O. Box 550
Richland, Washington 99352*

*Office of River Protection
P.O. Box 450
Richland, Washington 99352*

Ms. Marla Koberstein
24-ECD-0077

-2-

May 2, 2024

Attachment:

DOE Comments Regarding the Washington
State Department of Ecology's Proposed
Rulemaking for the Aquatic Life
Toxics Criteria

cc w/attach:

L. C. Buelow, EPA-Region 10
D. R. Einan, EPA-Region 10
L. Guzzo, EPA-Region 10, Seattle
Environmental Portal, G3-35

cc w/o attach:

B. A. Conlon, CPCCo
R. E. Fox, CPCCo
E. A. Garcia, CPCCo
A. L. Johnson, HMIS
D. L. Morgans, CPCCo
W. S. Thompson, HMIS
J. M. Wall, CPCCo

Attachment
24-ECD-0077

U.S. Department of Energy Comments Regarding the
Washington State Department of Ecology's Proposed Rulemaking
Chapter 173-201A WAC - Aquatic Life Toxics Criteria

(6 pages including cover sheet)

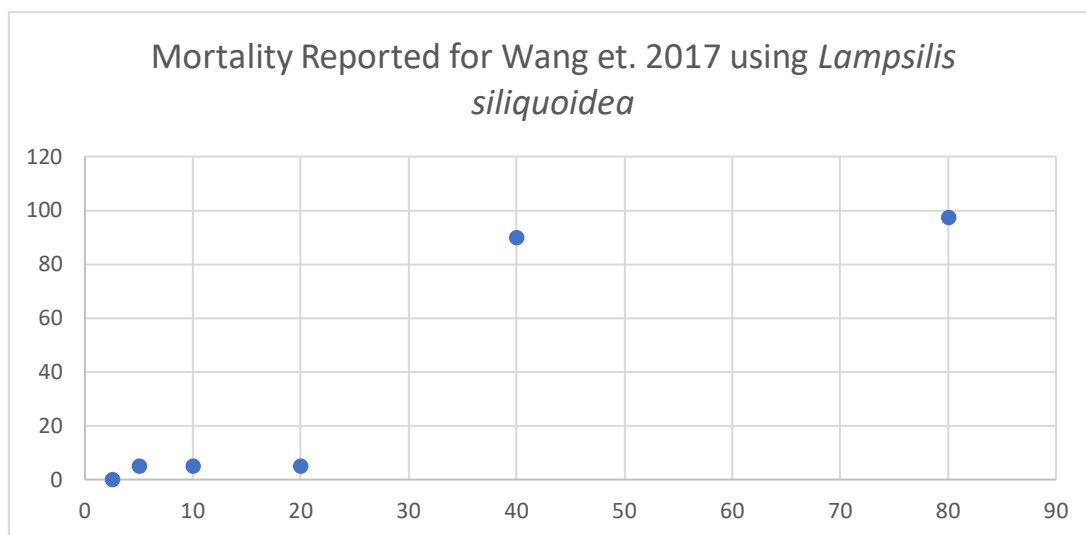
Attachment

**THE U.S. DEPARTMENT OF ENERGY'S COMMENTS REGARDING
ECOLOGY'S PROPOSED RULEMAKING - CHAPTER 173-201A WAC -
AQUATIC LIFE TOXICS CRITERIA**

1.	<p>The Hanford Site offices are subject to an extensive cleanup framework and schedules under the Tri-Party Agreement and Consent Order. The proposed rulemaking could affect existing and future cleanup decisions and actions if the proposed standards are incorporated into soil and groundwater standards.</p> <p>Ecology should provide clarification about whether the rule may impact cleanup considering WAC 173-340, if so, Ecology should provide a cost analysis. The rule appears to have potential for such impact, because surface water quality values are considered in establishing cleanup levels</p>
2.	<p>The premise and purpose of this rulemaking lacks real definition. Based on the general language, this rulemaking is to set standards and limitations for surface water discharges and will not be utilized for cleanup standards of soil or groundwater. Further, these standards will not be utilized for infiltration systems utilized for remediation systems. Please confirm this or identify the public notice in this rulemaking of that intent. We have carefully examined all the documents supporting this rulemaking and cannot find any discussion about remediation systems and activities.</p>
3.	<p>It is inappropriate to do a rulemaking that has conditions and standards that are based on the actions of another entity not within the control of the rulemaking body. Proposing standards for PFOS and PFOA that will only be included if the Environmental Protection Agency finalizes their standards is improper. It is understood that the State will not be going forward with PFOS and PFOA standards at this time and will pursue those standards later. As such, we are not commenting further on these two standards.</p>
4.	<p>The State's criteria lack a foundation in sound scientific rationale, thereby failing to fulfill its obligations under the EPA's Implementing Regulations pursuant to CWA Section 303(c), 33 U.S.C. § 1313(c), and 40 CFR 131.4. These regulations establish that states have the primary responsibility for reviewing, establishing, and revising water quality standards (WQS), which include the designated uses of a waterbody, or waterbody segment, and the water quality criteria necessary to protect those designated uses. Such criteria must be based on a sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use.</p> <p>The term "new science" is misleading and implies the introduction of novel scientific technologies. However, "new science" merely refers to recent studies, many of which lack peer review and fail to correlate with or represent the conditions prevailing in the waters of Washington State. The acceptance of these new studies as fact, when many have been challenged, appears completely premature and inappropriate.</p>

5.	<p>Ecology’s updated aquatic life criteria are based on previous ESA consultations from the NMFS’ and USFWS’ Biological Opinions (BiOps) from other Pacific Northwest states (i.e., Idaho and Oregon) to determine whether additional considerations are needed to protect ESA-listed species in Washington. The Swinomish Tribe Biological Evaluation by EPA was also used to inform Ecology’s decisions. It should be noted that according to EPA ruling on the August 4th, 2023 submittal of the Swinomish Indian Tribal Community’s Surface Water Quality Standards related to Aquatic Life stated: EPA’s action applies to water under the jurisdiction of the Swinomish Tribe. The action does not apply to water outside of the jurisdiction of the Swinomish Tribe which are under Washington State jurisdiction.</p> <p>For all the metals where the Idaho and Oregon USFWS BiOps report likely to adversely affect (LAA) did not result in a jeopardy call, but the Swinomish Biological Evaluation concluded that endangered species and their populations may be at risk. For example, Cr(VI) and other metals where this scenario occurs, it must be emphasized that the EPA ruling states the Swinomish tribe surface water quality standards do not apply to waters outside the jurisdiction of the Swinomish Tribe. Ecology must not apply the new science in updating the aquatic life criteria under these circumstances. The current values provide adequate protection for endangered species and since there were no jeopardy calls for Idaho and Oregon, the state of Washington aquatic life criteria should match EPA recommendations. As stated in the states’ BiOps, a likely to adversely affect determination with no jeopardy means that effects to endangered species are measurable, observable, and likely to occur, but will not affect the continued existence of the species at the population level or landscape scale (i.e., critical habitat).</p>
6.	<p>The EPA does not have clear guidelines for the inclusion of scientific articles into criteria derivation but does have some general guidance that can be used from their 1985 guidelines. Ecology used the 1985 EPA guidance in addition to standard method test acceptability requirements. The criteria used for the inclusion of scientific articles is outlined in the technical support document for the <i>Proposed Updates to Aquatic Life Toxics Criteria</i>. It states that those studies that do not meet the outlined criteria be disqualified and removed from consideration. One of the listed criteria includes the following:</p> <p><i>Test species must be a non-invasive North American species (invasive species with established populations were not considered in this rule because they do not represent native fauna of Washington, there is a significant amount of time and resources used to eradicate these species, and they are generally less sensitive than native species thereby precluding their use as a surrogate).</i></p> <p>Based on this criterion, the following species must be excluded from the analysis since they are not North American species – <i>Pseudosida ramose</i>, <i>Hypisboas pulchellus</i>, and <i>Notodiaptomus conifer</i>. These species are specific to South America.</p>

7. Wang et al. 2017 was used in the determination of the Cr(VI) ACR values. The study is based on a 28-day exposure of *Lampsilis siliquoidea*. The concentrations used to develop the dose-response curve did not have an adequate organism response that is required to establish a NOEC and LOEC. Based on the reported results of Wang et al. 2017, the concentration range is too large and should have been set between 20 and 50 ug/L (see below figure). An organism response occurring between only two concentrations indicates that incorrect test concentrations were used and a NOEC and LOEC (used to determine the MATC) cannot be established. Based on the study design and the lack of dose response, the results from this study must not be considered in calculating the ACR for Cr(VI).



8. For the Cr(VI) chronic analysis, studies based on non-North American species must be removed in addition to the Wang et al. 2017 study (based on the lack of dose response). When these studies are removed based on established criteria, the previously excluded study using *Pimephales promelas* (EPA 1996) must also be removed from the Cr(VI) ACR calculations. This study was previously excluded due to the ACR being 10x greater than the other studies considered in the analysis. Additionally, the results reported in EPA 1996 for daphnia species must take precedence over those reported by Hickey 1989. The criterion listed in the technical document states the hierarchy based on study design are as follows: flow through > static renewal > static (if multiple studies existed for same species, studies were rejected if the more representative test design was used). In addition, studies measuring chemical concentrations must be given precedence over those that do not. Hickey 1989 used a static renewal design (not flow through) and did not measure test concentrations. Based on these criteria, the studies used in the previous determination of Cr(VI) must be given precedence over the Hickey et al. 1989 studies for daphnia and ceriodaphnia. Overall, the new studies used to update the chronic criteria for Cr(VI) must be excluded based on the use of non-North American species, the lack of dose response, study design, lack of analytical testing, and the ACR being 10x higher than other studies. When these studies are removed, the previous ACR value of 2.917, consistent with current EPA aquatic life criteria, will be used in establishing Cr(VI) chronic criterion.

9.	<p>A preliminary cost-benefit analysis is absent from the Preliminary Regulatory Analyses given one was provided for the freshwater acute criteria. A greater than 2x reduction in the freshwater chronic criteria for many of the analytes more than justifies an analysis of costs. Additionally, the cost benefit analysis must account for the impacts to WAC 173-340-730, because the surface water quality standards include consideration of water quality standards within WAC 173-201A. Because Ecology has failed to provide the economic impact analysis for freshwater chronic criteria as required by the State Administrative Procedures Act, this rulemaking is invalid on its face. The cost impacts must be discussed and provided for public comment.</p>
10.	<p>The State has not established sufficient parameters or constituents to protect the designated use. The adoption of a 99% protection standard to protect 99% of species 99% of the time, has not been proven to be necessary or required for the protection of any endangered species in the State of Washington. Prior to the Washington State Department of Ecology implementing such a stringent measure, it would have been imperative for Ecology to furnish documentation demonstrating the factual basis, need, and prevailing conditions necessitating and mandating this action.</p> <p>However, based on our review, we find no identified use of the 99 percentile criteria. It appears that the acute to chronic ratio methodology was used similar to the current rule. Ecology's documentation in this rule making is substantially incorrect and misleading to the public.</p>
11.	<p>It is unjustifiably severe to apply criteria for the protection of endangered species to waters within the State that neither harbor nor have historically sustained such endangered species. Rather, the appropriate approach entails protecting the actual species present in each respective body of water. The imposition of financial burdens on operators of publicly owned treatment works (POTWs), which are predominantly municipal responsibilities, for the protection of species that do not inhabit the waters they discharge into, lacks any rational basis. Standards should be applied to safeguard the species inhabiting the specific water bodies into which discharge occurs.</p> <p>State regulations explicitly stipulate that standards may be formulated based on a body-specific basis. WAC 173-201A-240 Toxic substances states the department may revise the criteria in Table 240 for aquatic life on a statewide or water body-specific basis as needed to protect aquatic life occurring in waters of the state and to increase the technical accuracy of the criteria being applied.</p>