



Association of Idaho Cities
3100 South Vista, Suite 201, Boise, Idaho 83705
Telephone (208) 344-8594
Fax (208) 344-8677
www.idahocities.org

February 28th, 2023

Beth Spelsberg (via email: elizabeth.spelsberg@deq.idaho.gov)
Department of Environmental Quality
1410 N. Hilton, Boise, ID 83706

RE: Docket No. 58-0102-2201

Dear Ms. Spelsberg,

The Association of Idaho Cities (AIC) serves to advance the interests of the cities of Idaho through legislative advocacy, technical assistance, training, and research. Idaho cities represent over 70% of all Idaho residents and their utilities play important roles as primary care takers of our waterways and implementers of Idaho's arsenic human health criteria. These stakeholders have significant interests in the development of water quality standards, rules, and guidance related to the protection of human and aquatic life.

AIC seeks criteria, rules, and policies that ensure effective protection of Idaho's human health, aquatic life, and natural resources. AIC has commented previously, during the negotiated rulemaking process, and we appreciate the work done by DEQ throughout the process to ensure that safe, effective, and reasonable rules were produced. DEQ has done a tremendous job of working with stakeholders throughout the process, and we are grateful for their effort and care throughout the process. In particular, we appreciate the importance of this guidance document as a critical piece to help cities understand, follow, and maintain these new criteria. Further, we appreciate the use of the DEQ 2005 mercury guidance regarding the general organization and some content of the arsenic guidance.

AIC appreciates the opportunity to continue to be involved in the guidance development stage. We thank DEQ for the opportunity to submit comments. Specific comments, attached below, were developed through a collaborative effort with HDR Engineering and the City of Boise.

AIC appreciates the efforts by DEQ to ensure safe and effective human health criteria for arsenic. Should you have any questions concerning these comments, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'MAT', with a horizontal line extending to the right from the end of the signature.

Mary Alice Taylor, Policy Analyst

Attachment 1- Comments from HDR Engineering:

Chapter 5 – Site-Specific Options

Formal site-specific criteria in Idaho and elsewhere in the U.S. typically require that these criteria be adopted by rule subject to EPA approval. Does DEQ envision that alternatives for site-specific application would be available? Would this be along the lines of performance based criteria and/or applied on a permit-by-permit basis without the need for rule-making, similar to ammonia and biotic ligand model criteria?

Chapters 9, 10, and 11 – General Comment

DEQ noted in the guidance meeting on February 14, 2023 that the latter sections of the draft guidance were not yet complete at that time. We recognize that there will be additional opportunity to comment on those sections as DEQ further develops them, but thought it would be useful to make some initial suggestions at this time. In particular, we recommend that DEQ incorporate more of the specific approaches in the mercury guidance for TMDL and IPDES implementation into this arsenic guidance.

Chapter 10 - TMDLs

This chapter says that water column criteria, either the state-wide values or those developed with site-specific BAFs, must be used as TMDL targets and WLAs. We suggest that DEQ consider using the fish tissue criterion, consistent with Chapter 5 of DEQ's 2005 guidance for implementing the mercury fish tissue criterion. The mercury guidance on pages 86-87 recommends using a percent reduction approach in situations when a TMDL is needed. For example, if the fish tissue criterion is exceeded in a water body by 25%, the TMDL allocations would be based on achieving a 30% reduction from point and nonpoint sources, which includes a 5% margin of safety. Percent reduction TMDLs are not unusual in the U.S. or Idaho. The recent metals TMDL by DEQ for the Spokane River in Idaho used that approach. Chapter 6 of the mercury guidance describes how IPDES permit limits would be derived for TMDL WLAs.

Chapter 11 - IPDES

Chapter 6 of the mercury guidance provides useful approaches for IPDES permitting. See in particular Tables 6-1 and Figure 6-1. This emphasizes the importance of Best Management Practices (BMPs) for control of a pollutant that is not usually introduced by the municipal point source or from industries discharging to the sewer system. This is applicable to arsenic also.

Chapter 4 of DEQ's 2019 IPDES ELG Supplemental focuses on challenging toxics, including arsenic. The Supplemental notes that Section 2.2.2.7.3 of the DEQ's 2017 ELDG addresses approaches to parameters such as arsenic (variances, waivers, and intake credits). Variances, waivers and intake credits are allowed for implementation of HHC (see DEQ Water Quality Standards and IPDES Rules and Guidance). This arsenic guidance should make it clear that these

alternative regulatory approaches could apply, and provide more details on how and in what circumstances those approaches can be used.

The guidance also should make it clear to current and future permit writers, and other users, that mixing zones can be applied for HHC for arsenic. This is needed because DEQ's 2016 mixing zone guidance says that mixing zones cannot be applied to bioaccumulative pollutants that have a high risk of harm. The guidance says that there are 36 toxic pollutants in DEQ's water quality standards that are defined as bioaccumulative, but does not list them. It also defines bioaccumulative as a BAF > 1000 (L/kg). Arsenic is not highly bioaccumulative, with state-wide BAFs orders of magnitude lower than the high risk threshold of 1000, as stated a number of times in this guidance in previous sections.

Attachment 2- Comments from City of Boise

Editorial comments

Section 2.3 references Section 1.4.1 which is not included in the document.

Section 4.1 Table 1 is in Subsection 210.01.a, which contains criteria for protection of Aquatic Life. This should be changed to “Criteria in Table 2”, which is in Subsection 210.01.b and contains criteria for protection of human health.

Section 6.1 refers to section 7.1.3 which is not included in the document.

Comments

Section 3 – The document lists several factors that can influence arsenic bioaccumulation potential. Fish size and age are additional factors that we recommend be added to the list.

Section 3, Table 1 – Some fish change their trophic level based on life stage. If the table is based on adult fish, please clarify. Additionally, it would be beneficial to expand the list and include the gamefish identified in Section 6.1.1.

Section 4.1 – states that the criteria are not to be exceeded on an annual harmonic arithmetic mean concentration. Other sections refer to an annual arithmetic mean. For example, Section 9 says if the annual arithmetic average tissue value is less than the criterion, the AU will not be listed as impaired. We recommend that DEQ check for consistent language throughout the document. IDAPA Subsection 210.03.d.ii states “Frequency and duration for human health toxics criteria. Criteria in Table 2 in Subsection 210.01 are not to be exceeded based on an annual harmonic mean.” If annual harmonic arithmetic mean is the intended metric, it would be beneficial to provide an example calculation for both a small and a large dataset.

Section 4.2.1 (document page 13) – It would be beneficial to show equation 6 with the actual inputs to calculate 8 ug/kg.

Section 5 – Does DEQ intend to provide additional details on data collection requirements or considerations for a site-specific criteria? For example, how many trophic levels are to be sampled, etc.

Point sources in the Lower Boise River participate in a watershed-based fish tissue mercury cooperative monitoring program which helps distribute the costs across many entities. Fish tissue data collection and analyses are expensive and may be a financial burden to small municipalities. We encourage DEQ to support cooperative efforts where possible.

Section 6.1 – states that “fish tissue samples may be composited or averaged from fish collected over a single calendar year and can be combined from within the same assessment unit or immediately adjacent assessment units depending on location and length”. Different

sections (such as 4.1, 4.2.1, 4.2.3 and Section 7) note that DEQ prefers downstream assessment units or fish. It is unclear when it is appropriate to use adjacent vs downstream AUs.

Section 6.1.1 (document page 17) suggests that regionally stocked fish should be avoided. If interpreted literally, this text implies that species that are stocked should not be used in analyses. We suggest that this text be reworded to state that hatchery fish should be excluded from the sample. In addition, we recommend some additional text (or link to a reference) that provides guidance on how hatchery fish can be identified.

6.1.2 – It is unclear in this section if DEQ was referring to a water column sample instead of a fish tissue sample for the analytical MDL less than or equal to 0.05 ug/g and a MRL or PQL less than or equal to 0.2 ug/g. If they are both fish tissue analyses analytical levels, it would be clearer if the same units were used (suggest ug/kg to match the criteria). If this was intended to be a water column analysis analytical level, ug/L would be clearer.

Section 6.1.4 states, “According to the proposed rule, “water column samples must be representative of the annual average concentration of dissolved inorganic arsenic at the site” and discusses the number of water samples that should be evaluated for temporal considerations. In Section 4.1 (proposed rule) the annual average concentration requirement appears to apply to the translation of a fish tissue element to a water column value. Other sections of the document (Section 3 and Section 11) stress using paired water column and fish tissue samples. We recommend additional clarity on when to use paired samples vs. an annual average.

Section 6.1.4 additionally states, “There is not a set number of samples required according to the rule...”. However, Section 4.1 states that “the fish tissue element for total recoverable inorganic arsenic is based on a single measurement using sufficiently sensitive methods” when discussing the application of the fish tissue element of the arsenic criterion for human health.

Section 6.1.4 also notes that “sampling frequency should be taken into consideration for sites in which the water column may have seasonal changes, such as spring melt/runoff.” If the sample frequency comment is intended for fish sampling, the fish that inhabit that waterbody are an integrated sample of year-round conditions. In addition, some streams or rivers may not be able to safely sampled for fish in some seasons (such as spring melt/runoff) or may be unable to be sampled for other conditions (iced over in another season).