



Update for ATSDR Health Assessors

Including APPLETREE Partners
(Internal Use Only)

DCHI Guidance &
Clearance News

January 2020

The purpose of this newsletter is to keep you informed about the guidance and resources that are available for use in your health evaluations.

Did you catch the latest guidance & webinars? (Summer 2019)

- Exposure Point Concentration Guidance for Discrete Samples
- Toxic Equivalents (TEQ) Guidance for Dioxin & Dioxin Like Compounds (August 2019)

Missed it? Not to Worry! You can find these guidance documents and supporting information in the [Resources Section of PHAST](#). To access the webinar recordings directly:

<https://centersfordiseasecontrol.sharefile.com/d-s48b2305aa514cf2a>



Writing Tips for PFAS!

Consistent use of terms can be tricky when writing a public health document evaluating PFAS exposures. Keep in mind....

The Toxicological Profile for PFAS should be referred to as DRAFT.
The Minimal Risk Levels (MRLs) for PFAS should be referred to as PROVISIONAL.
The Environmental Media Evaluation Guides (EMEGs) for PFAS are not indicated as draft or provisional.

Managing the “Grey Zone” can be complicated.



When evaluating the non-cancer public health implications of an exposure dose or concentration above an MRL, one useful tool is the Margin of Exposure (or MOE). The MOE is the effect level dose or concentration (for air) derived from a study divided by the exposure dose or concentration (for air) from your site. The MOE should be part of your overall weight-of-evidence evaluation in the public health implications section. Below are some guidelines to consider when using the MOE:

- Base the MOE on an effect level [i.e., LOAEL, BMDL, HED_{LOAEL} , or HED_{BMDL}] from the study used to derive the MRL. Health assessors can include NOAELs in the discussion, but more weight should be given to effect levels. In many instances, NOAELs can be considered weak based upon a number of factors, such as a small number of animals tested.
- Health assessors should also check to see if there are other LOAELs for the same target organ used to derive the MRL. For some chemicals, lower LOAELs exist that were not chosen to derive the MRL because the selected LOAEL was deemed more robust.
- Health assessors may also want to calculate MOEs for other target organs or systems when those endpoints are as sensitive or nearly as sensitive as the endpoint used to derive the MRL.
- In general, the smaller the MOE the more likely a chemical is to pose an unreasonable risk. For example, if the MOE indicates that a particular toxicity effect level is 1,000 times higher than the estimated exposure dose or concentration, there is little concern that the exposure dose or concentration is at levels where toxicity is possible. However, if the MOE is 2, the exposure dose or concentration is likely approaching effect levels and it's reasonable to conclude there is a risk of harmful effects.
- The use of MOEs is complicated by the fact that the uncertainty factor that was used to derive the MRL for most individual chemicals ranges from 3 to 1,000. Thus, an MOE of 9 might be just above the MRL if the uncertainty factor is 10 or it might be approaching effect levels if the uncertainty factor is 1000. It's important that once the MOE is calculated, health assessors should compare the exposure doses directly to doses that cause effects to see where the dose is in relation to the effect levels and the MRL.
- In their evaluation, health assessors should also consider the uncertainty factor used to derive the MRL. The exposure dose does not have to be at the effect level for health assessors to conclude that a risk of harmful effects exists. A risk of harmful effects could exist if the exposure dose approaches effect levels.
- In the final analysis, an assessor should use the MOE(s), make direct comparison of exposure doses to effects levels, and use their professional judgment to decide whether the exposure dose is:
 - Well below an effect level so that harmful effects are not likely,
 - Approaching an effect level so harmful effects are possible, or
 - At or above an effect level so harmful effects are likely.
- The term “MOE” itself does **not** need to be mentioned in the assessment--it can be part of your overall “desktop” analysis of the weight-of-evidence of possible harmful effects. If health assessors choose to present the MOE term and values in their assessments, the term “MOE” should be defined in the description of ATSDR's overall health assessment evaluation process.

Contact an ADS for more information

Interim Guidance on Evaluating Carcinogenicity of Hexavalent Chromium

While we await the findings of USEPA's reassessment, ATSDR DCHI has adopted the oral cancer slope factor for hexavalent chromium from Cal EPA on an interim basis. Additionally, CREGs have been developed for soil and water based on the interim cancer slope factor. The interim guidance, [posted in the Resources Section of PHAST](#), provides the basis for the CREGs and site-specific considerations related to: source, fate and transport, bioavailability and sample evaluation.

Do you know where to find all the latest **FINAL** DCHI guidance documents?

All of the latest guidance documents are posted in the [Resources Section in PHAST](#). The table below shows new guidance coming soon!

What New DCHI Guidance is Evolving?

Guidance Topics	Status	Point(s) of Contact
Exposure Point Guidance for Non-Discrete Sampling	Spring 2020	Greg Ulirsch; James Durant
Exposure Point Concentration (EPC) Guidance for PAHs	Under Development	Greg Ulirsch; James Durant
Exposure Unit (EU) Guidance	Winter 2020	Greg Ulirsch; James Durant
Air Exposure Dose Guidance	Spring 2020	Michelle Colledge
Fish and Shellfish Guidance	Fall 2020	David Mellard

Need a Subject Matter Expert?

Don't hesitate! Get technical assistance from an SME at the scoping, development and/or clearance stage of your document.

Air: Michelle Colledge

Asbestos: Jill Dyken

Dioxins: Hana Pohl

Lead: Carole Hossom

Particulate Matter: Greg Ulirsch, Michelle Colledge

Pesticides: Kai Elgethun

PFAS: Rachel Rogers

Radiation: Paul Charp

Shower Model: David Mellard

TCE: David Mellard, Jill Dyken

Vapor Intrusion: Tonia Burk

General steps for submitting an article to the Journal of Environmental Health:

1. Discuss your idea with an ADS and Supervisor
2. Put in EHPM!
2. Coordinate with Padma Vempaty, who is ATSDR's point person with the Journal of Environmental Health (JEH).
3. Reach out to Kristin Ruby-Cisneros at JEH. She can give you formatting tips.
4. Draft article.
5. Share with an ADS and Supervisor outside of e-clearance for their informal review.
6. Put in e-clearance—for journals, e-clearance will default to Division ADS and Division Director. Courtesy copy goes to NCEH/ATSDR OS.
7. Once cleared, work with Kristin to get formatting correct. Keep your management involved in the process so no one is surprised!

PHAST Update: Supplemental Toxicological Information Completed for Eight Chemicals

The PHAST team is continuing to update the supplemental toxicological information in the CVs and Health Guidelines Module. There are now eight chemicals (see below) with updated information describing the studies associated with the MRL development and with other sensitive organs and systems. This section also contains toxicity values (e.g., BMDL, HED) that health assessors should use when evaluating the Margin of Exposure (MOE) and making decisions about possible health effects.

List of completed chemicals

iArsenic	March 2019
Benzene	Oct 2019
TCE	May 2019
MMA	July 2019
DMA	July 2019
Cr(III)	Sept 2019
Cr(VI)	Sept 2019