

Air Toxics Science Advisory Committee Meeting #2: Toxicity Reference Value Selection Process

Cleaner Air Oregon Program

Jan. 20, 2023
Virtual Meeting

Agenda

- Welcome and introductions
- Finalize Charter
- Discussion of Authoritative Sources
- Presentation and discussion on TRV process for chronic and acute
- Presentation and discussion on Workflow
- Any other questions/comments?
- Closing and next steps

Charter

- Operating Principles have been added into the Charter
- One change to language-
 - Last bullet point of "Ground Rules"- change from "limiting discussion to health science" to "limiting discussion to health risk assessment"

TRV Review and Today's Meeting

List of Existing TRVs for Priority Toxic Air Contaminants

List of Potential New TRVs for Priority Toxic Air Contaminants

Agency staff will check TRV information from all authoritative sources:

- US ATSDR
- US EPA
- California EPA

& gather information on other TRVs that could be adopted from other organizations or developed

Agency staff select TRVs using process discussed with ATSAC

In a series of meetings with ATSAC, agency staff will

- Share results of the TRV selection process
- Ask technical questions that arose and discuss tangential work
- Ask for ATSAC feedback if there is a proposal to deviate from the TRV selection process

Authoritative Sources

Authoritative sources are listed in Oregon Administrative Rule, OAR 340-247-0030

- U.S. Agency for Toxic Substances and Disease Registry (ATSDR)
- U.S. Environmental Protection Agency (EPA)
- California Environmental Protection Agency (CalEPA)
- Oregon DEQ in consultation with the Air Toxics Science Advisory Committee (ATSAC)



DEQ in Consultation with ATSDAC

- Would only look for TRVs beyond US EPA, ATSDR, and CalEPA if the following criteria are met
 - None of our other authoritative sources have a value **AND**
 - We think the chemical has a high likelihood of harming public health in Oregon **AND**
 - There is adequate scientific information available **AND**
 - There is agency staff bandwidth
- Have the option to review or adopt TRVs developed by other states and countries
- It would be very resource intensive for DEQ and OHA to explore developing a new TRV

Discussion Question

What should DEQ and OHA consider when reviewing values from other organizations or agencies not listed as an authoritative source?

Toxicity Reference Values (TRVs)

TRV Name	Definition
Chronic Cancer	Air concentration corresponding to a one in one million excess cancer risk, calculated by dividing one in one million (0.000001) by the inhalation unit risk when that air is breathed over a lifetime.
Chronic Noncancer	Air concentration below which noncancer health effects are not expected over a year or more of constantly breathing that air.
Acute Noncancer	Air concentration below which noncancer health effects are not expected over 24 hours or less from breathing that air.

Selecting Chronic TRVs

Agency Name	Name of Chronic TRV	Type of TRV Available
US Agency for Toxic Substances and Disease Registry (ATSDR)	<ul style="list-style-type: none"> Chronic Minimal Risk Level (MRL) 	<ul style="list-style-type: none"> Noncancer
US Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> Inhalation Unit Risk (IUR) Reference Concentration (RfC) 	<ul style="list-style-type: none"> Cancer Noncancer
California Environmental Protection Agency (CalEPA)	<ul style="list-style-type: none"> IUR Chronic Reference Exposure Level (REL) 	<ul style="list-style-type: none"> Cancer Noncancer
Oregon DEQ in consultation with ATSAC*	<ul style="list-style-type: none"> Chronic TRV 	<ul style="list-style-type: none"> Noncancer Cancer

*Oregon DEQ in consultation with ATSAC was added to the list of authoritative sources by the Environmental Quality Commission in 2021. Currently, there are no TRVs from this authoritative source.

Discussion Question

What questions or feedback do you have on the general process of selecting the most recently published chronic TRV?

Selecting Acute TRVs

Order of Preference	Agency Name	Name of Acute TRV	Assumed Exposure Time
1	ATSDR	Acute Minimal Risk Level (MRL)	Less than 2 weeks (includes 24 hours)
2	CalEPA	Acute Reference Exposure Level (REL)	1 hour
3	ATSDR	Intermediate MRL	2 weeks to 1 year

Discussion Questions

- Do you have questions or feedback on the authoritative source order preference for selecting acute TRVs?
- Can you recommend other sources of acute TRVs the agencies should consider while prioritizing review of toxic air contaminants where the current acute TRV is equal to the chronic non-cancer TRV or based on chronic studies?

Break

TRV Review and Today's Meeting

List of Existing TRVs for Priority Toxic Air Contaminants

List of Potential New TRVs for Priority Toxic Air Contaminants

Agency staff will check TRV information from all authoritative sources:

- US ATSDR
- US EPA
- California EPA

& gather information on other TRVs that could be adopted from other organizations or developed

Agency staff select TRVs using process discussed with ATSAC

In a series of meetings with ATSAC, agency staff will

- Share results of the TRV selection process
- Ask technical questions that arose and discuss tangential work
- Ask for ATSAC feedback if there is a proposal to deviate from the TRV selection process

TRV Update Tool

Review of Authoritative Sources

Select a TAC to review

Acetaldehyde

General Information

Seq. ID	1
CAS No.	75-07-0
Noncancer Class	HI3
187 HAP Status	Yes

*Screenshots
from TRV Tool*

IRIS

[Go To IRIS Assessment](#)

Click to Update IRIS Values

Variable	2018 Value	Current Working Value	New Value
EPA Reference Conc (RfC) ($\mu\text{g}/\text{m}^3$)	9	9	
EPA IRIS Date (Non-Cancer)	10/1/1991	10/1/1991	
Inhalation Unit Risk (IUR) ($\mu\text{g}/\text{m}^3$)-1	0.0000022	0.0000022	
EPA IRIS Date (Cancer)	6/1/1988	6/1/1988	
EPA Oral Reference Dose (RfD) (mg/kg-d)			
EPA IRIS Date (Non-Cancer)			
Oral Slope Factor mg/kg/day)-1			
EPA IRIS Date (Cancer)			
Assigned Staff			
Comments			

Discussion Questions

- Do you have questions or comments on the proposed process for reviewing and providing feedback on DEQ's and OHA's work?
- What other feedback or input do you have for DEQ and OHA?

Final Questions?