



Oregon Department of Environmental Quality

Updates to the TRV Update and Selection Process after the ATSAC Meeting on January 20, 2023

This document covers changes made to DEQ's TRV update and selection process following the ATSAC meeting on January 20, 2023. Since that meeting, DEQ and OHA staff have carefully considered the ATSAC's feedback and researched the references that ATSAC members provided. In addition, DEQ and OHA have made changes to the TRV review process, and those changes are detailed in this document.

Before reviewing this document, ATSAC members should read two other related documents:

- Background Document Provided Prior to Meeting #2: [Proposed TRV Update and Selection Process for ATSAC Review](#)
- [Meeting #2 Meeting Minutes](#)

Agency staff will formally begin recording information in the TRV tool for the TRV review process in the next few weeks. Staff anticipate that the full, initial agency review will take several months and will complete that review before planning the next series of ATSAC meetings. If ATSAC members have any follow-up comments or suggestions to the TRV process, please contact Apollonia Goeckner (apollonia.goeckner@deq.oregon.gov, 503-869-0026).

Change #1: DEQ will gather additional TRV information to inform TRV selection

DEQ will collect additional detailed information on all TRVs from authoritative sources in the TRV tool and this applies to chronic exposure TRVs, for both cancer and noncancer health effects, and acute exposure TRVs. Prior to the ATSAC meeting, the staff were already planning on recording a variety of information on each TRV into the tool, such as uncertainty factors, TRV publication date, reproductive and developmental hazards, and target organs for noncancer health effects. However, agency staff have since added additional fields into the TRV tool in response to ATSAC comments. Staff will now also enter information on for noncancer TRVs:

- The point of departure (POD) method [e.g., no observed adverse effect level (NOAEL), lowest observed adverse effect level (LOAEL), or benchmark concentration (BMC)]
- The author and year of the study used to determine the point of departure
- The factor used to calculate the human equivalent concentration (HEC), if applicable
- The time adjustments used, if applicable

For cancer TRVs, staff will also enter information on the author and year of the study used to calculate the slope factor in addition to TRV publication date.

While these additions will require more staff time during the TRV review process, DEQ agrees with ATSAC members that this information is important to track to make sure the best available TRV is selected and will aid in future ATSAC discussions.

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Change #2: DEQ will share additional information with the ATSAC

When there are two or more TRVs to choose from for a toxic air contaminant, DEQ will now provide a table of choices to the ATSAC members to review, which will list key differences and similarities between the TRV choices. This table will be presented alongside DEQ's proposed TRV selection. Previously, DEQ had only planned on sharing the proposed TRV selection with ATSAC members.

Change #3: DEQ will use publication date only as a screening step for chronic exposure TRV selection and use additional information to make proposed TRV selection

DEQ and OHA staff and ATSAC members discussed the process for selecting chronic exposure TRVs for both cancer and noncancer health effects when more than one TRV is available. After that discussion, agency staff are now planning to use TRV published date for screening purposes instead of final section criteria.

The revised plan is that agency staff will first select the most recently published chronic exposure TRV from among the authoritative sources. Staff will then take a close look to see why the most recent TRV may differ from other TRV options. Staff will carefully consider and select a proposed chronic exposure TRV to discuss with ATSAC members using the following list of preferred TRV attributes:

- The TRV includes a new critical study
- The TRV includes modern POD methods (e.g., as indicated by a BMC POD method instead of a LOAEL or NOAEL)
- The TRV includes uncertainty factors (UFs) and/or modifying factors (MFs) informed by new scientific studies when applicable
- The TRV includes factors used to calculate HECs and time adjustments from study conditions to continuous chronic exposure when applicable

DEQ and OHA staff will present the selection choices and the agency proposed TRV to the ATSAC at future meetings.

As suggested by ATSAC members, DEQ and OHA staff may also look at TRVs developed by other state agencies, such as the Texas Commission on Environmental Quality (TCEQ), in certain cases. DEQ agrees with the ATSAC members that stated the importance of only looking at TRVs from organizations that provide transparent TRV derivation documents, offer a public comment process, have similar policies on application of uncertainty and modifying factors, and do not derive their values from occupational exposure limits or non-toxicological endpoints such as odor perception. The original ATSAC fact sheet on the TRV update process describes the conditions when DEQ and OHA would explore adopting a TRV from an organization not listed on the authoritative source list ([pg. 3](#)). For example, agency staff may look for TRVs from alternative sources when no other authoritative sources listed in Oregon Administrative Rule (OAR) have a TRV available.

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Change #4: DEQ will use the authoritative source order of preference list as a screening step for acute exposure TRV selection and use additional information to make final proposed TRV selection

Agency staff plan to use the original DEQ proposal for selecting acute exposure TRVs as a screening tool. Briefly, agency staff will select acute exposure TRVs from the authoritative source list with exposure times that best match DEQ's assumed exposure time of 24 hours (refer to Table 2 of [the original ATSAC fact sheet on the TRV update process](#)). When more than one TRV option is available, staff will carefully consider and select a proposed acute exposure TRV to discuss with ATSAC members using the following list of preferred TRV attributes:

- The TRV is based on studies with exposures that more closely match DEQ's 24-hour acute averaging time
- The TRV includes time adjustments that are appropriate for a 24-hour exposure
- The TRV includes a new critical study
- The TRV includes modern POD methods (e.g., as indicated by a BMC POD method instead of a LOAEL or NOAEL)
- The TRV includes UFs and/or MFs informed by new scientific studies when applicable
- The TRV includes factors used to calculate HECs when applicable

DEQ and OHA will present the selection choices and the agency proposed TRV to the ATSAC at future meetings.

Agency staff will also now check additional sources of acute exposure TRVs that ATSAC members suggested, such as TCEQ, in certain cases. The original ATSAC fact sheet on the TRV update process describes the conditions when DEQ and OHA would explore adopting a TRV from an organization not listed on the authoritative source list ([pg. 3](#)). In agreement with several ATSAC members and the process for selecting chronic exposure TRVs, DEQ plans to only look at acute exposure TRVs from organizations that provide transparent TRV derivation documents, offer a public comment process, and do not derive their values from occupational exposure limits or non-toxicological endpoints such as odor perception.

Contact

Cleaner Air Oregon, Oregon Department of Environmental Quality

Primary Contact: Apollonia (Apple) Goeckner, Program Coordinator

Alternate Contact: Matt Davis, Program Manager

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