



Fact Sheet

Cleaner Air Oregon Hazard Index Rule Requirements

The Cleaner Air Oregon program assesses noncancer health risks to the public from exposure to Toxic Air Contaminant emissions from commercial and industrial facilities. Noncancer health risks are evaluated using a Hazard Index [Oregon Administrative Rules [340-245-0020\(25\)&\(26\)](#)] which incorporates toxicity and exposure information – for more information on how Hazard Indexes are calculated and used in the CAO program see the [Noncancer Health Risk Fact Sheet](#). This document describes the statutory requirements for assigning Hazard Indexes to specific Toxic Air Contaminants for use in the CAO program.

Background and Overview

Oregon Revised Statutes place limits on the Department of Environmental Quality's authority to require risk reductions for permitted facilities that were in existence prior to the creation of the CAO program in November 2018 – these are defined as “existing sources” under the CAO program. These limits are based on specified protective benchmarks for both cancer and noncancer risk from Toxic Air Contaminant (TAC) emissions at these facilities. [\[ORS 468A.337.2.b\]](#) For noncancer risk from existing sources, the benchmark was set at a Hazard Index (HI) of five rather than an HI of one set for new sources in the CAO program.

However, the statutes allow for DEQ to propose adjustments to the noncancer benchmark of an HI number of no less than three for TAC(s) emitted that are shown to have developmental or other severe health effects. This means that for certain TACs, DEQ could require risk reductions if a facility's noncancer risk exceeds an HI of three rather than five. In 2020, in order to propose adjustments to HI values, DEQ convened a Technical Advisory Committee to determine which TACs under the CAO program would meet the qualifications to have their benchmark for noncancer risk adjusted from HI of five to an HI of three. Based on these discussions, along with input from the Rules Advisory Committee, DEQ established the following criteria for “other severe health effects,” in addition to developmental health effects, which included the following:

- Reproductive health effects;
- Multiple organ health effects; and
- If the contaminant is listed for inhalation hazards per the U.S. Department of Transportation

Using these criteria, DEQ proposed that the noncancer benchmarks for 158 TACs be adjusted to an HI of three. In April 2020, the Environmental Quality Commission adopted these rules, which included: (1) the criteria for determining “other severe health effects;” (2) benchmark adjustments to the proposed 158 TACs; and (3) methods for calculating risk when a facility emits both HI five and HI three TACs, which is referred to as calculating a Risk Determination Ratio. [\[OAR 340-245-0200\(5\)\]](#)

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Toxic Air Contaminant Review and Update Rulemaking

During the current "Toxic Air Contaminant Review and Update Rulemaking," DEQ and the Oregon Health Authority reviewed authoritative sources and other scientific information to propose updates to the following: (1) Toxic Air Contaminant Priority List [[OAR 340-247-8010 Table 1](#)]; (2) Toxicity Reference Values, or TRVs [[OAR 340-247-8010 Table 2](#)]; and (3) Risk-Based Concentrations, or RBCs, used in the CAO program to regulate emissions of TACs [[OAR 340-245-8010 Table 2](#)].

To meet the statutory requirements for determining which TACs with new or revised noncancer TRVs should be assigned a noncancer benchmark for existing facilities an HI of three, DEQ and OHA reviewed all these TACs against the criteria that EQC previously adopted:

- Developmental health effects
- Reproductive health effects
- Multiple Organ health effects
- Inhalation hazards per the U.S. Department of Transportation

Additionally, DEQ hired a third-party contractor, Eastern Research Group Inc, to review the proposed TRVs and confirm that the noncancer TRVs assigned an HI of three met the required criteria.

For this rulemaking, DEQ proposed the following adjustments of benchmarks based on these criteria:

- 107 new TRVs – 87 are designated as HI three and 20 are HI five.
- 10 existing TRVs changed from an HI of five to an HI of three.
- 3 existing TRVs changed from an HI of three to an HI of five.

DEQ has provided a spreadsheet for review of the proposed adjustments for the specific chemicals that also indicates the criteria used to make the determination – please see the [HI3-HI5 Derivation Table](#).

Program name and contacts

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