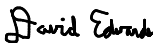




Gavin Newsom, Governor  
Yana Garcia, Secretary for Environmental Protection  
David Edwards, Ph.D., Acting Director

## MEMORANDUM

**TO:** Yana Garcia  
Secretary for Environmental Protection  
California Environmental Protection Agency

**FROM:** David Edwards, Ph.D.   
Acting Director David Edwards (Jan 3, 2025 08:45 PST)  
Office of Environmental Health Hazard Assessment

**DATE:** January 3, 2025

**SUBJECT:** ADOPTION OF CANCER INHALATION UNIT RISK FACTOR (IUR) FOR ISOPRENE

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The Office of Environmental Health Hazard Assessment (OEHHA) has adopted a Cancer Inhalation Unit Risk Factor (IUR) for Isoprene for use in the Air Toxics Hot Spots program, effective January 3, 2025.

Isoprene is used to make synthetic isoprene rubber, which is used mainly in the manufacture of vehicle tires and footwear, and to produce butyl rubber for manufactured goods such as hoses and liners in tubeless tires. In addition, the manufacture of styrene-isoprene-styrene polymers is used to make thermoplastic rubber and pressure-sensitive or thermosetting adhesives. CARB requested that OEHHA derive an IUR for isoprene due to its presence in biogas emissions and in the air of residential areas near oil and gas operations.

A draft document describing the scientific basis for the Isoprene IUR was released on February 16, 2024 to solicit public comments. During the ensuing 45-day public comment period, two public workshops were held (Sacramento and Diamond Bar). No public comments were received. The State's Scientific Review Panel on Toxic Air Contaminants (SRP) peer-reviewed the draft document in August 2024. The draft was then revised in response to SRP comments and reviewed by the SRP chair before finalization.

The IUR and cancer slope factor (CSF) values for Isoprene are as follows:

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Inhalation Unit Risk Factor (IUR):  $5.4 \times 10^{-6}$  per microgram per cubic meter  
( $\mu\text{g}/\text{m}^3$ )<sup>-1</sup>;  
 $1.5 \times 10^{-5}$  per part per billion (ppb)<sup>-1</sup>

Cancer Slope Factor (CSF):  $1.9 \times 10^{-2}$  per milligram per kilogram of body  
weight per day (mg/kg-d)<sup>-1</sup>

The Isoprene IUR values will be provided to the California Air Resources Board for incorporation into the Hotspots Analysis and Reporting Program (HARP) software suite. HARP software is used to generate Air Toxics Hot Spots facility health risk assessments.

The final document that describes the scientific basis for the IUR is attached and will be made available on the OEHHA web site on January 3<sup>rd</sup>.

#### Attachments

cc: Scott Lichtig  
Deputy Secretary for Environmental Policy  
California Environmental Protection Agency

Richard Boyd, Assistant Division Chief  
Transportation and Toxics Division  
California Air Resources Board

Matthew O'Donnell, Chief  
Risk Reduction Branch  
California Air Resources Board

Meng Sun, Chief  
Air and Site Assessment and Climate Indicators Branch  
Office of Environmental Health Hazard Assessment