



September 16, 2026

California Air Resources Board
Transportation and Toxics Division
airtoxics@arb.ca.gov

Subject: Comments from the Industrial Environmental Association (IEA) regarding the “Roadmap to Reduce Air Toxics.”

On behalf of the Board of Directors and members of the Industrial Environmental Association (IEA), thank you for the opportunity to submit these comments regarding the draft Roadmap to Reduce Air Toxics.

IEA, established in 1983, is a non-profit organization serving approximately 40 manufacturing companies in Southern California. IEA advocates on behalf of industry to influence legislation and facilitate environmental compliance for member companies through education and training. To provide manufacturing companies with a voice in the development of environmental regulations arising in California, IEA’s expanded role includes representing industry at the local and state levels, maintaining collaborative relationships with regulatory agencies, facilitating compliance for member companies, and leading initiative-taking educational and training activities. Today, IEA is an influential representative of the manufacturing industry, and its members are recognized as leaders in regulatory compliance and experts in environmental health and safety.

New Chemicals, the Nature of Risk, and Demonstrating the Need for Further Regulation

The Roadmap contains statements about health risk that we believe are inaccurate and fail to demonstrate a need for further regulation. In essence, the Roadmap claims that there are new chemicals that result in new or increased harm at levels that warrant further control. We question that description for reasons described herein:

The claim that there are “more air toxic chemicals being discovered each year” (Page 9) and the portrayal that these chemicals are “emergent” throughout the document may unintentionally imply that new toxic air contaminants or emission pathways are being discovered from existing activities. In many instances, the chemical, its uses, and its emissions have always been present and known to exist. Rather, it is more precise to state that the toxicological data for certain chemicals are improving, but a distinction still exists between new hazard identification and demonstrated environmental risk.

California’s historical air toxics data demonstrate that a relatively small number of pollutants are the primary drivers of estimated health risk. Absent evidence of substantial uncharacterized exposure or anomalously high toxic potency, it is more likely that “new” TACs will collectively represent the lower-order “tail-risks” of existing statewide population health risk. We are also concerned that in the unlikely event of the converse, where CARB and OEHHA disclose new health hazards that exceed the known universe of TACs, there is the potential for public backlash and loss of trust from concerned parties for failing to disclose said risks previously.

We also strongly caution against the certainty expressed by CARB in the statement that “compounds identified as TACs typically have no level of emissions below which harmful impacts are not expected to occur” (Page 9). Dose-response thresholds are fundamental to toxicological assessments, especially in the case of noncancer health effects. Metrics such as the no/lowest observable adverse effect level (NOAEL/LOAEL) demonstrate that exposure concentrations for some TACs exist where no observable health impacts are expected. As for carcinogenic effects, where some TACs are evaluated using non-threshold models in the place of thresholds that have yet to be established, it is still not evidence that harmful effects are expected to occur at every level of exposure.

Therefore, we recommend that that CARB, in collaboration with OEHHA, reference dose response thresholds for chemicals, such as the NOAEL, LOAEL, and other defensible dose

criteria from reputable institutions such as the American Thoracic Society to determine empirically rigorous health risks.

We also note that the health risk factors and risk assessment methodologies established by OEHHA are hypothetical and rely on conservative assumptions when uncertainty exists in the underlying data for a given chemical. For instance, risk factors are often extrapolated from animal test subjects to humans and apply factors of safety to account for physiological and metabolic differences that exist between species. The safety factor is compounded further in the assessment of health risk by assuming full bioavailability of the chemical, which is often not how it is encountered in the real world. For example, respiratory assessments generally assume that 100% of the inhaled chemical enters the body when, in reality, some amount is exhaled back into the air without undergoing gas exchange (i.e. dosing) inside the body. Similarly in the cases where metals are assessed, total metals concentrations are referenced even though some metals may be present in naturally occurring, biologically unavailable forms. For example, trace metals from natural sources may be bound to larger particles, making them less bioavailable and more likely to be excreted rather than absorbed by exposed organisms.

In the case of air emissions risk modelling, emissions calculation methods and dispersion models apply simpler characteristics (out of necessity and health protection) that account for more deposition of an airborne contaminant than what occurs in real life. In short, the “precautionary principle” is applied at multiple stages of the health risk assessment process. Individually, each conservative assumption may account for the inherent uncertainty of a given data reference. However, the cumulative effect of layering these assumptions can compound non-linearly such that the results do not represent likely health outcomes. In most cases, these assessments are at best useful for comparison of relative risk between sources rather than demonstrating the level of actual risk.

We would also submit that an additional theoretical risk does not predict exposure, nor does it demonstrate an actual public health outcome. We therefore strongly recommend that CARB incorporates empirical public health data, including emergency room visits, hospitalizations, cancer cases recorded, and other metrics tracked by public health agencies. CARB could use this data to identify populations within the state experiencing disproportionately high adverse health outcomes and to determine whether further assessment is needed to evaluate the extent to which ambient concentrations of “emerging” toxic chemicals may be contributing to those outcomes.

We acknowledge that public health outcomes are affected by multiple factors, such as socioeconomic status and access to public health resources. However, we note that in the instances where modelling tools such as CalEnviroScreen identify communities with disproportionately high excess environmental health risk that do not correlate with the empirical public health relative to other communities, the most likely conclusion is that the effect of “emerging” chemicals is de minimis.

It is also imperative that a regulatory framework and the underlying programs produce predictable outcomes over reasonable and stable periods of time. The approach that has been taken with the adoption of the HRA Guidelines by OEHHA in 2015 and proposed in the Roadmap (e.g., for acrolein) whereby the risk level for a particular source relative to the threshold of significance is subject to sudden, unpredictable change is the antithesis of predictability. These rapid changes erode the public’s trust in government decision-making, create unnecessary economic risk to businesses seeking to invest in California, and should be avoided whenever possible as a matter of good governance.

Evaluating Cumulative Risks and Opportunities for Model Validation Feedback

We note that the Draft Road Map is sparse on details regarding how CARB intends to validate the proposed methodologies against empirical health data, save for one statement in Section VII, Page 35, *Develop Policies and Methods to Evaluate and Address Cumulative Risks from Ambient Exposure*, which references community-scale assessments of health effects.

IEA strongly encourages the use of measured public health data as meaningful feedback for CARB’s methodology improvements. As noted previously, we recommend that CARB references public health outcomes as the primary metric for evaluating health risk models’ ability to identify burdened populations and determining environmental equity. Models and their further refinements are useful to better characterize potential health risks for a given area. However, we remind CARB that the overall goal is to reduce the number of respiratory-related illnesses and emergency events across the State- especially with CARB’s stated interest in promoting equality of outcomes for communities. We assert that equity in this case should refer to equality of public health outcomes, not equality of modeled health risks.

At IEA’s 42nd Annual Environmental Conference earlier this year, one of our speakers provided a comprehensive review of San Diego County’s health data for both ER visits and hospitalization rates from 2011 to 2024 and the data suggested a counterintuitive pattern. Comprehensively, areas like El Cajon, Lakeside, Southeastern San Diego, Lemon Grove, and the South Bay had worse overall public respiratory health burdens than some regions

within the AB617 communities. The observation was particularly impactful for areas such as Southeastern San Diego and Lemon Grove, which are predominantly suburban neighborhoods with no notable stationary emission sources. This is critical, as we note that the County's data already accounts for all air toxics, including those without published health risk values, and emissions from facilities that have not reported as part of the emissions inventory program. It is highly unlikely that San Diego County is unique in this regard here in the State.

If CARB's emphasis remains on modeled health risk without due diligence and deference to public health data, then communities such as Southeastern San Diego and Lemon Grove risk experiencing the same inequities that the Draft Road Map proposes to address.

As an example of our suggested principle in action, we share lessons learned with San Diego APCD Rule Development group, where close collaboration with District staff and responsible analysis of publicly available datasets made it clear that an Indirect Source Rule (ISR) for warehouses was not a suitable course of action for San Diego County nor for the AB617 communities. Multiple independent analyses of the available data indicated that implementation of such ISR would yield an insignificant reduction in mobile source emissions in areas that were located outside of AB617 areas – effectively redirecting resources from disadvantaged communities and failing to meaningfully reduce emissions.

Improving Risk Communication for the General Public

We raise concerns regarding CARB's communication of risks for chemicals such as acrolein, as described in Section II, Page 16, *Non-diesel Air Toxics are Emerging Rapidly and Eclipsing Previously Understood Risks*.

The Roadmap document states: "...Based on that research and CARB's statewide air monitoring data, the average estimated excess cancer risk from acrolein is approximately 1,300 in a million statewide. This means that if one million people were exposed to the statewide average monitored levels of acrolein continuously over a lifetime (70 years), it is estimated that approximately 1,300 of them may develop cancer due to this exposure, in addition to the background rates of developing cancer from all other causes..."

IEA strongly agrees with CARB's assessment that collectively, risk communication to the public requires significant improvement. Several IEA members participate on the Community Steering Committee for the Portside AB 617 community. We have watched for six years as scientists and experts have attempted unsuccessfully to explain to the general public, in laymen's terms, the complexities of measuring risk. In the instance identified above for the case of acrolein, we note that 1,300 in one million is an individual's

calculated excess cancer risk of exposure to acrolein over a lifetime, 0.13% over 70 years, assuming they remain exposed to this concentration continuously.

While technically true that the expected rate would be approximately 1,300 cancer cases per 1 million people over that same timeframe, for this outcome to be feasible, many population-level assumptions would also need to be true. This expected value would only be possible, assuming 1 million people lived to be at least 70 years old and were simultaneously and continuously dosed at the statewide average concentration – the logistics of which do not stand up to scrutiny. Furthermore, we have seen consistently that the general public interpret this to mean that 1,300 people *will* contract cancer as opposed to that the estimated excess health risk is 0.13% over a lifetime. To compound the issue, these risks are usually communicated without additional context of everyday risks from other activities, such as cooking with natural gas, that are considered mundane and routine. Rather than improving understanding and informing the public, communications such as the example of acrolein in the Draft Road Map foment fear, anger, and calls to action that undermine public trust.

We further recommend that CARB establishes a system to solicit feedback from recipients of risk communications to ensure that the message is clear and comprehensible by the public and to use that feedback as a means of continuous improvement. Without such a system, a robust risk assessment methodology will fail to resonate with an informed and knowledgeable public.

General Comments

IEA is hopeful that the public engagement process can be productive and enable California to continue the success noted in the Roadmap in reducing emissions and enhancing public health. Recent discussions in San Diego among IEA, OEHHA and CARB regarding concerns about acrolein's cancer potency have left our members encouraged that CARB and OEHHA representatives are listening and thoughtfully considering the challenges faced by industry. It was clear to us that our comments were understood and that there would be frequent communication as this process moves forward. We are encouraged because we believe that close and frequent interaction between regulators and the regulated community can lead to reducing risk and protecting public health in the most efficient manner possible and without unnecessary costs and challenges for any of the parties. We look forward to continuing these discussions and we appreciate this new working relationship which inspires collaboration and improved outcomes for all Californians.

Sincerely,

A handwritten signature in black ink that reads "Jack Monger". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jack Monger

CEO

Industrial Environmental Association of San Diego