

August 23, 2004
Dorothy Shimer
Research Division
Air Resources Board
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Subject: Draft Report to the California Legislature: Indoor Air Pollution in California

Dear Ms. Shimer:

I appreciate the opportunity to provide comments regarding the California Air Resources Board (ARB) **Draft for Public Review of the Report to the California Legislature: Indoor Air Pollution in California**. These comments are made on behalf of the Access Business Group, a member of the Alticor Corporation, parent of Amway/ Quixtar.

Access Business Group provides most of the products marketed by tens of thousands of Quixtar independent business owners in the State of California. These products include formulated household, cosmetic and toiletry products many of which are already regulated for VOC content by the ARB Stationary Source Division developed Ambient Air Quality regulations. The company also provides a room air treatment system that is performance rated by the Association of Household Appliance Manufacturers (AHAM) standard test for air cleaner performance (AC-1). These product categories are noted in the report.

General Comments

Access Business Group concurs with comments by the Consumer Specialty Products Association (CSPA) that the Report is deficient by failing to thoroughly evaluate the contribution of biological and radiological contaminants to indoor air quality. The underlying statute is clear in its stated expectation - the definition of "indoor air pollutants" for this Report is meant to include more than merely chemical pollutants and sources for assessing of "public health hazards." The Bill expressly states that the Report must provide:

A listing that references work performed by other state or federal entities regarding biological and radiological substances, including a summary of activities conducted by the State Department of Health Services pursuant to Chapter 18 (commencing with Section 26100) of Division 20.

To that end there should be a weighted assessment that accounts for all contributions to indoor air contamination that corresponds to the public health impact of the contaminants. There is still an emphasis on indoor chemical emissions that present little or no recognized health risks (e.g. some regulated VOC in consumer products) while largely ignoring risks that are acknowledged to be more significant. Chemical contaminants are the focus of the report while bacterial aerosols and other biological contaminants and small particles are given less attention. For example Table ES-2 comments on VOCs broadly with estimated health costs as a consequence of cancer risk while ignoring the risks of airborne pathogens, allergens and 0-10 micron particulates.

The Report also seems to ignore the extensive regulatory process conducted by ARB Stationary Source Division in considering the impact of formulated consumer products on ambient air quality. That process was charged with assessing impacts on human health from emissions as well as ozone formation potential. Manufacturers of the consumer products have made major contributions to assure product safety by meeting and exceeding the regulatory compliance requirements of California and the US.

Another critical flaw throughout the Draft Report is the failure to adequately consider the public health and indoor air quality benefits of air cleaners and formulated consumer products.

DRAFT REPORT COMMENTS

Executive Summary

The section “Children Are Especially Vulnerable to Poor Indoor Air Quality” (page 2) asserts that children “may be especially vulnerable” to poor indoor air quality. The health impacts of the specific contaminants cited in this report should be more directly connected with child health before making generalizations about impacts. Many chemical exposures have not been found to be especially impactful on children. We concur that children deserve appropriate protections and additional study needs to be done. It is for this reason that we have supported the EPA pilot project on children’s health assessment. It may be appropriate to suggest coordination of this California assessment that the EPA program.

Table ES-1 (page 3), “Sources and Potential Health Effects of Major Indoor Air Pollutants,” implies a priority order that was disavowed in the public meeting. It also connects broad categories of pollutants, sources and health effects. The connections are sufficiently imprecise that a prominent disclaimer or elimination of the chart is appropriate. Otherwise, the information may be cited with a purpose to confuse and mislead rather than improve the quality of indoor air for California residents. There is also the implication that sources are “major” contributors of the pollutants cited. In fact, cleaning agents and air fresheners used in household and institutional settings would not be the sources of the cited organic chemicals. For example, ARB has been eliminating perchloroethylene use except under specific industrial applications where no acceptable alternative has been identified.

Regarding “endocrine disrupters,” the Federal government is still trying to establish test methodologies to identify such materials and evaluate health effects. Identifying indoor air as a significant source for meaningful pollutants in this category is speculative and should be eliminated.

Speculative citation of irritant effects (page 5) is an example of the need for further care in the assumptions made by this report. Terpenes such as pinene and limonene can be present in cleaning and freshening products either as fragrances or as active solvents. However, they are not identified as general irritant chemistries as these use levels. Also, household decorations such as Christmas trees and wreaths, floral arrangements and fruit are likely to be higher contributors of these chemicals to indoor air than the consumer products cited. In fact, outdoor vegetation represents the primary source of terpenes in ambient air with emissions that far exceed contributions of household cleaning products.

The causes of Sick Building Syndrome (SBS) are correctly noted as “not yet firmly identified.” How then can you assume that the source is chemical?

Table ES-2 (page 10), “Estimated Annual Costs of Indoor Air Pollution in California”, clearly identifies with environmental tobacco smoke (ETS) as the cause of approximately $\frac{3}{4}$ of the estimated annual costs. Some costs such as those associated with radon exposure and airborne pathogens are ignored. According to the U.S. Centers for Disease Control (CDC), each year Americans are sick more than 4 billion days from infectious diseases and as a result spend more than \$950 billion on direct medical costs. In addition, over 160,000 people in the United States die yearly with an infectious disease as the underlying cause. This would suggest reworking the table and eliminating the contribution from sick building syndrome until a better causal link can be established between indoor air quality and the impact.

In the section "Existing Regulations, Guidelines and Practices" (page 11) fails to acknowledge many instances of air quality problems result from consumer neglect or willful disobedience of standards or maintenance to standard specification. Carbon monoxide poisoning is frequently a consequence of such consumer related failure. Regulations of consumer products are numerous and comprehensive intended to assure the safety and efficacy of those products under a wide variety of consumer uses.

The conclusion that air cleaning devices have limited effectiveness is correct in the same way that one might say public education (a "key step" for reducing exposures according to ARB) has limited effectiveness. An appropriately rated air cleaner, delivers specified performance in a measured area. The difficulty is in instances where consumers ignore performance criteria or accept information that is not validated.

Table ES-3 (page 17), "Prioritization of Pollutant Sources for Mitigation," is clearly incorrect as noted above. Environmental Tobacco Smoke is in a league alone when health impacts are considered. Pathogens are ignored and the health impacts of other categories are not well quantified.

Although the comments presented above are incomplete, they serve to demonstrate that much further work is needed before any action plan on indoor air can be initiated.

SUMMARY AND CONCLUSIONS

Access Business supports the intent of the Report and understands the limitations that AARB has had in producing an encyclopedic summary of indoor air contaminants and corresponding remediation recommendations. We believe that a thorough scientific peer review will identify many areas that require improvement. Therefore, we recommend that ARB prepare to identify an ongoing scientific research advisory panel to provide continuing review. This has been a useful feature of the scientific panel convened for the ambient air regulations. The model of a consumer product working group and an industry research review panel could well be emulated also.

Access Business Group hopes that the comments we have made have been constructive and we look forward to continuing to work cooperatively with ARB staff in its efforts to finalize this Report and present a path toward improved indoor air quality. We look forward to reviewing the revised Report and commenting again when that new draft is received.

Respectfully submitted,

Robert W. Hamilton

cc: Richard Bode, Chief, Health and Exposure Assessment Branch, Research Division
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