



August 19, 2004

Dorothy Shimer
Research Division
Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

Subject: Draft Report to the California Legislature: Indoor Air Pollution in California

Dear Ms. Shimer:

Clorox, with world headquarters in Oakland, California, for ninety years manufactures and markets some of the best known brands, including *Clorox* bleach, *Formula 409* and *Pine-Sol* home cleaning products, *Combat* insecticides, *Fresh Step* cat litter, *Kingsford* barbecue products, *Hidden Valley Ranch* salad dressing, *Brita* water filters, *STP* and *Armor All* auto care products, and *Glad* plastic bags and wraps. We remain strongly committed to understanding the human health and safety and environmental impacts of our products and manufacturing processes, as well as the public health benefits that our products provide.

Our products include government-registered household bleach, mildew removers, and toilet bowl cleaners, to name a few. These products help protect children and adults against serious public health threats, including *E. coli*, *Salmonella*, *Staphylococcus*, *Streptococcus*, and other microorganisms. They are also essential to effectively controlling and eliminating cockroaches and their feces. Cockroach allergens, bacteria, viruses and other contaminants and pests that make children and adults sick, are a significant cause of indoor air problems, spreading infectious diseases and aggravating allergic responses.

These products are properly labeled for safe use and are strictly regulated under federal and state laws. Also, with the enactment of the federal Food Quality Protection Act, the U.S. Environmental Protection Agency does include an assessment of safety to protect children's health in their review and approval of these products.

The Clorox Company supports and urges your serious consideration of the comments submitted by our trade associations—the Consumer Specialty Products Association and The Soap and Detergent Association. We also respectfully submit the following:

Consumer Products

- The report fails to consider the stringent product safety regulations that govern consumer products and what manufacturers like Clorox have done and continue to do to assure product safety above and beyond current regulatory requirements. Also, the report fails to take into account the impact of CARB's own consumer product regulations. Our products continue to be reformulated to meet California's past and future strict volatile organic compound (VOC) limits where it is technically and commercially feasible and where product efficacy is not compromised.
- The report does not mention the public health benefits of disinfectant cleaning products. For example, sodium hypochlorite bleach is important for household, institutional and industrial cleaning and disinfecting. It is effective against a broad array of bacteria, spores, viruses and fungi. It cleans, sanitizes and disinfects hard surfaces, as well as ensures the destruction of contaminant microorganisms from bed sheets, towels, dishcloths, cloth diapers, clothes, etc.; and it performs under hot, cold and hard water conditions. As mentioned on page 56 of the report, chloroform can be released to indoor air during a ten-minute wash cycle when using sodium hypochlorite bleach.

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However, the report fails to mention that the concentration and amount of byproduct compounds emitted from sodium hypochlorite bleach during its use is far below accepted acute and chronic exposure limits, including trigger levels set under California's Proposition 65 law. Thus, using bleach-based products in a manner directed on the labels presents a negligible risk to human health.

- It is imperative that decisions about restricting the use of consumer household cleaning products take into account the potential hazards as well as the significant public health benefits they provide. Household disinfection is especially needed to protect the elderly, infants, pregnant women, and immunocompromised people. The need is greatest if the household includes children in day care or chronically ill people. Children in day care often bring diseases home that are transferred to other family members.

Terpenes

- As stated in CSPA's comments, it is inaccurate to characterize terpenes as "irritant chemicals" and misleading to refer to these chemicals as "indoor air pollutants." Under conditions of consumer use, terpenes are seldom shown to cause irritation. We agree with CSPA's statement "Outdoor vegetation represents the primary source of terpenes in ambient air with emission levels much lower than those that occur from their use in household cleaning products."

Biological Contaminants

- Clorox is extremely disappointed that the report does not give sufficient attention to mold, mildew and other biological contaminants and the public health benefits that consumer products provide. For example, a recent study by the University of Arizona¹ has found that mold is pervasive in homes nationwide, thriving in household sites that are not routinely cleaned and disinfected. According to Bill McLin, executive director, Asthma and Allergy Foundation of America (AAFA), "If mold spores are deposited in the lining of the nose, they can cause hay fever-like symptoms, including sneezing, itching and congestion. If these spores reach the lungs, they have the potential to trigger asthma." The AAFA recommends the following steps that people can take to help reduce mold growth throughout the home:
 - Keep Humidity below 40%
 - Use an air conditioner or dehumidifier during humid months
 - Make sure your home has adequate ventilation
 - Dry any water leak within 24 hours
 - Get rid of mold materials immediately, once they're found
 - **Clean hard surfaces regularly with products certified to kill mold. Allergy or asthma sufferers should ask nonsensitive people to apply cleaning products**

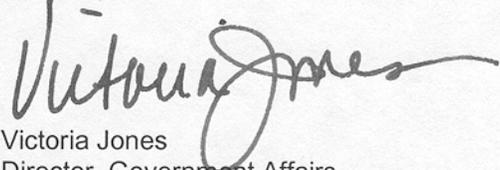
Mold must be killed **and** removed from the surface. Soap and water or detergents remove only mold stains, but can leave mold spores behind. When mold grows in our homes, dilute bleach solutions are effective in killing the viable mycelia and removing them from surfaces.²

¹ Reynolds, KA; Boone, S; Bright, K; Gerba, CP. "Survey of Indoor Mold in the Home Environment and Efficacy of a Hypochlorite Disinfectant."

² Portnoy; Kwak; VanOsdol; Dowling; Barnes, "Health Effects of Indoor Fungi."

The Clorox Company appreciates the opportunity to comment on this Report to the Legislature and urges your serious consideration of our concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Victoria Jones", with a long horizontal flourish extending to the right.

Victoria Jones
Director, Government Affairs

c: Richard Bode, Chief, Health and Exposure Assessment Branch, Research Division
Peggy Jenkins, Indoor Exposure Assessment Section, Research Division
Laurie E. Nelson, Randlett/Nelson Associates