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Dr. Robert Sawyer
Board Chair
California Air Resources Board
1101 I Street
Sacramento CA 95814

Re: ATCM Perchloroethylene Dry Cleaning Proposed Amendment

The mission of the Pollution Prevention Center at Occidental College's Urban and Environmental Policy Institute is to reduce or eliminate the use of toxic substances, improve human and environmental health, and conserve resources. Our Center has worked over the past ten years to establish the viability of non-toxic and non-smog forming alternatives to perchloroethlene (PCE) dry cleaning in California.

We believe that it is also the goal of the California Air Resources Board (ARB) to eliminate toxic air contaminants such as PCE whenever feasible. It is clear from ARB's Initial Statement of Reasons (ISOR) that the Board should phase out PCE dry cleaning and prohibit new VOC-containing systems. In addition, we believe ARB should expand this option by prohibiting the use of any chemical solvent that has not been shown to be safe.

Taking these actions would maximize pollution prevention outcomes, safeguard the public's health, and promote Environmental Justice. It would also strengthen the garment care industry, maintain California's leadership on clean technologies, and avoid regulatory pitfalls.

Sound Pollution Prevention/Precautionary Principle Policy

We believe that the best pollution prevention/precautionary principle policy is to phase out the use of toxic chemicals and phase in the use of non-toxic substitute technologies.

PCE represents a toxic chemical whose use should be eliminated wherever possible. The ISOR rightly points out that if ARB phases out PCE dry cleaning, most cleaners would shift to hydrocarbon (HC) dry cleaning, creating an increase in VOC emissions. To solve this problem, the ISOR suggests the option of a phase out of PCE and new VOC dry cleaning, which would "provide the maximum protection from emissions of Perc while preventing an increase in VOC emissions from hydrocarbon solvents." (ISOR, p. II-10).

From a pollution prevention perspective, the option of a phase out of PCE and new HC machines is far superior to allowing dry cleaners to continue to use PCE technology.

The only downside of this option discussed in the ISOR is the potential increase in the use of silicone-based solvent Green Earth, which is slightly more expensive than PCE dry cleaning and has potential toxicity issues of its own. We believe that ARB should use its regulatory authority to prohibit the use of any chemical, including the Green Earth solvent, until toxicity issues have been more fully evaluated and regulatory issues resolved. Given the toxicity issues with Green Earth, the ISOR suggests that faced with a phase out of PCE and new HC, cleaners would migrate to professional wet cleaning, a non-toxic non-smog forming technology which is less expensive than Green Earth, HC, or PCE.

Since professional wet cleaning is a less expensive option than PCE, and since every cleaner in California has the option of switching to professional wet cleaning, a policy that prohibits PCE, Green Earth, and new HC would result in a substantial shift to professional wet cleaning resulting in a positive economic impact to the industry.

Viability of Non-Toxic, Non-Smog Forming Technologies as Substitutes for PCE Dry Cleaning

Beginning in 1996, the Pollution Prevention Center, with support from ARB, the USEPA and SCAQMD, developed a "Professional Wet Cleaning Demonstration Program" which included the evaluation and demonstration of this non-toxic, non-smog forming technology in California. The program included an evaluation of the economic, environmental, and performance viability of professional wet cleaning to PCE cleaners and stimulated their switch to pollution prevention technology. Our most recent evaluation indicated that PCE dry cleaners who switched to professional wet cleaning were able to successfully wet clean the full range of garments they had previously dry cleaned, their operating costs were lower, and their energy use was substantially lower. Based on the findings about energy use, several investor-owned and municipally-owned energy utilities are now supporting a shift to professional wet cleaning.

Over the past ten years our Center has expanded this demonstration program to cover the greater Los Angeles region, San Francisco Bay Area, and San Diego. Our demonstration program also expanded to include an evaluation and demonstration of carbon dioxide (CO_2) as a second viable non-toxic and non-smog forming technology.

The number of professional wet cleaners has grown rapidly in California. There are now over 40 dedicated and 40 mixed professional wet cleaners in California; more than the rest of the United States combined. CO_2 dry cleaning has also grown steadily in California. California cleaners are now leading the rest of the world in the use of environmental garment care technologies.

In 2003, California passed legislation, AB998, designed to encourage and assist cleaners to replace PCE dry cleaning machines with environmental garment care technologies that are non-toxic and non-smog forming. ARB, which administers this program, has classified water-based cleaning and CO_2 cleaning as technologies qualified for AB998. In addition, ARB has prohibited specific solvents due to toxicity issues (e.g. Green Earth) and other solvents due to smog-forming issues (e.g. hydrocarbon and Rynex). AB998 has helped expand the number of professional wet cleaning and CO_2 dry cleaning facilities in California. Implementation of the required AB998 demonstration program will help further expand the number of cleaners converting from PCE dry cleaning to non-toxic and non-smog forming technologies. AB998, furthermore, serves as a clear model for how to formulate an amendment to the ATCM – prohibit the use of toxic or smog-forming solvents and allow cleaners to only use non-toxic and non-smog forming technology.

Enforcement Problems Avoided by Phase Out of PCE Dry Cleaning

One of the greatest benefits of a pollution prevention approach to regulation, such as the phase out proposal presented above, is that it eliminates the need for ongoing enforcement of pollution control rules.

Significant compliance and enforcement problems have been rampant in the regulation of PCE dry cleaning. ARB's own audits of PCE dry cleaners show a very low level of compliance – ranging from 10-21%.[1] Other regulatory agencies in the United States have shown similar problems.[2] For example, a recent audit of PCE dry cleaners in south-central Pennsylvania showed that none of the cleaners in this region were in compliance.

These problems with compliance and enforcement are not surprising. For PCE dry cleaners, existing regulations are complicated and expensive. As for enforcement agencies, they are often lack adequate resources and frequently do not have the personnel to inspect cleaners on a regular basis. The proposed ARB staff amendments, which allow the continued use of PCE dry cleaning, will only add complexity and cost making an already unenforceable regulation worse.

Neither the ISOR nor the ARB Staff Technical Report discusses the problem with compliance and enforcement. In addition, it does not appear that ARB conducted any recent enforcement audits to establish the current compliance rate. Therefore, there is no evidence to suggest that a new more stringent rule that would allow the continued use of PCE dry cleaning could be adequately complied with or enforced.

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[1] California Air Resources Board, An Evaluation of the Bay Area Air Quality Management District's Air Pollution Control Program, app. B-2-4 (1998) (21% compliance); AQMD, Fact Sheet: Findings from Dry Cleaner Inspections in South Coast AQMD (1997) (10% compliance), California Air Resources Board, An Evaluation of the Sacramento Metropolitan Air Quality Management District's Air Pollution Control Program (1997) (14% compliance).

[2] Drycleaners News, Jan, 1999, Vol 48, No.7 (2% compliance in New York); Drycleaners News, Jan, 1998, Vol 47, No.11 (6% compliance in Massachusetts); National Clothesline, March, 2006, Vol 46, No.6. (0% compliance in Central Pennsylvania).

It is important to note that one of the reasons SCAQMD chose to phase out PCE dry cleaning was that cleaners were not able to comply with regulations and the District was not able to enforce them.

Ongoing Risks Avoided with a Phase Out

Phasing out PCE dry cleaning would eliminate public health risks associated with the continued use of this toxic chemical.

The ISOR estimates that, even after cleaners install local ventilation systems, maximum individual cancer risks would be 29 per million for a person living adjacent to a cleaner and 24 per million for a person working adjacent to a cleaner. Given that there are non-toxic, non-smog forming cost-effective alternatives, these risks, as calculated, are unacceptable.

These calculated risks are likely to underestimate the actual risk because the calculated risk assumes that cleaners are in full compliance with regulations. The low level of compliance by PCE dry cleaners suggests that the actual maximum individual risks would be substantially higher. For example, during the ATCM working group meetings, there was discussion that many dry cleaners do not regularly clean their carbon adsorbers, rendering them ineffective, and leading to higher PCE emissions.

Because the calculated risks are based on numerous assumptions, the point estimate should be treated more qualitatively than quantitatively. In the case of PCE, where there is no safe threshold of exposure, any exposure should be viewed as unacceptable if there are non-toxic, cost-effective alternatives.

Environmental Justice Problems Avoided with a Phase Out

Phasing out PCE dry cleaning is the only way to assure that the Environmental Justice goals of fair treatment of all California communities is attained.

California law requires ARB to consider Environmental Justice implications when creating new regulations. California statute defines environmental justice as: "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.[3]

In regards to Environmental Justice, the ISOR states, "Given that some communities experience higher exposure to toxic pollutants, it is a priority of ARB to ensure that full protection is afforded to all Californians." (p. XIII-10).

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[3] Government Code Section 65040.12 and Public Resources Code Section 72000.

Yet, ARB staff's proposal to allow the continued use of PCE dry cleaning would create differences in acceptable risk, setting a lower acceptable risk level for people living near a new PCE dry cleaner and higher acceptable risk level for people working near a cleaner or people living next to an existing cleaner.

To allow one community to be more "protected" than another community is clearly at odds with what the ISOR states as ARB's Environmental Justice goals. Moreover, new facilities are more likely to be located in newer, wealthier communities while existing facilities are more likely to be located in older, poorer neighborhoods. Creating lower levels of risk for wealthier people is clearly the kind of policy Environmental Justice provisions were designed to avoid.

The only way to create "full protection" is to phase out PCE dry cleaning. ARB should use this rulemaking as a model for how best to implement California Environmental Justice requirements in the context of toxics regulation.

We look forward to working together with ARB over the next several years to implement meaningful pollution prevention policies for the betterment of California communities, workers, and neighborhoods.

Sincerely,

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