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Via First Class Mail and Telecopy

May 24, 2006

Clerk of the Board
Air Resources Board
1001 I Street, 23rd Floor
Sacramento, CA 95814

Re: Amendments to ATCM for Perchloroethylene Dry Cleaning Operations

Dear Board Members:

I am writing to comment upon the proposed Air Toxics Control Measure (ATCM) for perchloroethylene dry cleaning. As a law professor at the UCLA School of Law, I have researched and written in the area of environmental regulation generally, and in the area of pollution prevention in the dry cleaning sector specifically over the last seven years.[1] My comments are directed at the legal standards that govern the selection of ATCMs and the application of those standards in this case. Based on my analysis, I urge the Board to adopt the measures identified as Option 3 in the Staff Report for the proposed ATCM: phase out of PCE dry cleaning systems coupled with a prohibition on new VOC-containing systems. Given the commercial availability and viability of alternative non-toxic systems, and California law's mandated preference for pollution prevention measures, Option 3 is the only reasonable choice.

I. Legal Standards for Selection of an ATCM

The Board's authority to regulate toxic air contaminants is set out in the Tanner Act, Cal. Health & Safety Code § 39650 et seq. For a toxic such as PCE for which there is no threshold exposure level, the ATCM must "be designed, in consideration of the factors specified in subdivision (b) of Section 39665, to *reduce emissions to the lowest level achievable through application of best available control technology or a more effective control method*, unless the state board or a district board determines, based on an assessment of risk, that an alternative level of emission reduction is adequate or necessary to prevent an endangerment of public health." Cal. Health & Safety Code § 39666(c) (italics added). The factors set out in Section 39665(b) include, among other things, the following:

> • The availability and technological feasibility of airborne toxic control measures to reduce or eliminate emissions, the anticipated effect of airborne toxic control measures on levels of exposure, and the degree to which proposed airborne toxic control measures are compatible with, or applicable to, recent technological

[1] The opinions expressed in this letter are mine alone, and are not intended to represent the views or opinions of the UCLA School of Law or its faculty.

improvements or other actions which emitting sources have implemented or taken in the recent past to reduce emissions.

- The approximate cost of each airborne toxic control measure, the magnitude of risks posed by the substances as reflected by the amount of emissions from the source or category of sources, and the reduction in risk which can be attributed to each airborne toxic control measure.

- The availability, suitability, and relative efficacy of substitute compounds of a less hazardous nature.

- The potential adverse health, safety, or environmental impacts that may occur as a result of implementation of an airborne toxic control measure.

Cal. Health & Safety Code § 39665(b) (4)-(7).

The courts have established two principles that must guide your application of these standards in any particular case. First, the Tanner Act gives preference to pollution prevention alternatives that achieve zero or near-zero emissions. In what appears to be the sole case in California addressing this section, an appellate court concluded that Section 39666(c) directs the Board to design an ATCM to reduce the emissions of toxics to zero if, considering the factors in Section 39665(b), "it is achievable given the technology and costs of enforcement and the availability of substitute compounds of a less hazardous nature." Coalition for Reasonable Regulation of Naturally Occurring Substances v. California Air Resources Bd., 122 Cal. App. 4th 1249, 1261 (Cal. App. 3d Dist. 2004.) Second, your decision must be one that is reasonably necessary to effectuate the purpose of the statute. Coalition for Reasonable Regulation, 122 Cal. App 4th at 1263; Gov. Code, § 11342.2.

The ARB staff's recommendation—retention of PCE systems with enhanced emission control—violates both of those principles. It ignores information in the record, including ARB staff's own Technology Assessment Report, demonstrating that professional wet cleaning, one of the leading pollution prevention alternatives, is a commercially viable, available cleaning technology. Wet cleaning cleans the same range of garments with the same quality as PCE. It is less expensive than PCE dry cleaning, and will completely eliminate toxic and smog-forming emissions.

With these standards in mind, the remainder of my comments will apply the four most salient factors drawn from Section 39665(b) to the dry cleaning ATCM: commercial viability, impact on emissions/risk, economic cost, and adverse impacts of the proposed ATCM.

II. Analysis of Salient Statutory Factors

A. Commercial Viability

Professional wet cleaning has been evaluated in a number of rigorous studies. Virtually every analysis of modern professional wet cleaning has concluded that it cleans the same range of

garments with the same quality as PCE systems, including studies of wet cleaning systems in actual operating shops.[2] ARB staff's own Technology Assessment Report (TAR) concludes that wet cleaning is a viable, commercially available technology. TAR at VIII-2, VIII-4. Table III-1 in the staff report summarizes the relative performance as follows:

Solvent	Cleaning Performance
Perc	Aggressive, oil-based stains, most water-based stains, silks, wools, rayons. Not good for delicates
Wet cleaning	Aggressive, good for both oil-based and water-based stains. Can handle delicate garments. Requires tensioning equipment and training for successful operation.

B. Impact on Emissions/Risk

It is undisputed that wet cleaning will completely eliminate PCE emissions and the associated risks. The staff's proposed option will continue to expose Californians to PCE emissions, with potential cancer risks of between 25 in a million to 10 in a million, depending upon proximity to the dry cleaning facility.

Moreover, staff's risk numbers underestimate actual risk because they assume that facilities will comply fully with the complicated operation, inspection/monitoring, maintenance and recordkeeping requirements of the proposed ATCM. Experience tells us that noncompliance in this industry is pervasive and serious. Indeed, the evidence regarding the dry cleaning industry's compliance with existing obligations is deeply troubling. Compliance audits conducted in years ranging from 1996 to 2005 in California, New York, Massachusetts, and Pennsylvania reveal rates of noncompliance of between 79% and 100%.[3] The inability of dry cleaners to comply with complicated equipment standards for PCE systems weighs heavily against the continued reliance on such standards as the revised ATCM.

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[2] Sinsheimer, P., Grout, C., Namkoong, A., & Gottlieb, R. Fashioning a Greener Shade of Clean: Commercialization of Professional Wet Cleaning in the Garment Care Industry. *Pollution Prevention Education and Research Center: Occidental College*. December 2004.); Star, P., Ewing, S. Real World Wetcleaning, Center for Neighborhood Technology, November 2000; California Air Resource Board. California Dry Cleaning Industry Technical Assessment Report, February 2006); U.S. EPA, 1999. Case Study: Liquid Carbon Dioxide (CO2) Surfactant System for Garment Care, Design for the Environment. www.epa.gov/opptintr/dfe/pubs/garment/lcds/micell.htm. May 1999; Jacobs Engineering, Viable Alternatives to Perchloroethylene in Dry Cleaning, December 30, 2004.

[3] Timothy F. Malloy and Peter Sinsheimer, *Innovation, Regulation and the Selection Environment*, 57 Rutgers L. Rev. 183, 211-212, Table 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); California Air Resources Board, An Evaluation of the Sacramento Metropolitan Air Quality Management District's Air Pollution Control Program, app. B-2-4 (1998); AQMD, Fact Sheet: Findings from Dry Cleaner Inspections in South Coast AQMD (1997); Drycleaners News, Jan, 1999, Vol 48, No.7; Drycleaners News, Jan, 1998, Vol 47, No.11; National Clothesline, March, 2006, Vol 46, No.6.

C. Economic Cost

It is undisputed that wet cleaning systems have significantly lower capital costs and annualized operating costs than PCE systems. According to ARB's own TAR cost estimates, purchase and installation of a "typical" PCE machine costs between $3,400 to $8,200 *more* than the purchase and installation of a comparable wet cleaning system (including tensioning and pressing equipment). Table VII-2, TAR. Table VII-5 of the TAR concludes that the annualized operating cost of a wet cleaning system is approximately $6,400 *less* than that of a comparable PCE system.

D. Adverse Impacts

It is also undisputed that, unlike PCE systems, hydrocarbon systems, and Green Earth, wet cleaning has no anticipated adverse health, safety, or environmental impacts. None. The option recommended by staff has a broad range of negative impacts, including significant impacts on air, surface water, groundwater, waste management and worker exposure. See TAR at VIII-1 to VIII-9.

III. Staff's Rejection of Option 3 is Unreasonable

Analysis under the statutory factors demonstrates that Option 3—a phase out of PCE and hydrocarbon solvents—best meets the mandate to reduce emissions to the lowest level achievable through application of best available control technology or a more effective control method. Option 3 also clearly meets the requirement of pollution prevention established by the court in Coalition for Reasonable Regulation. Yet, ARB staff has summarily rejected Option 3, providing little explanation. The reasoning set out in the staff lacks any meaningful legal or factual support, is inconsistent with the staff's own findings, and is thus unreasonable.

Staff contends that "wet cleaning is not popular in the industry because many dry cleaners believe that it is not suitable for cleaning a wide range of garments and that it is a fundamentally different process." Staff Report at II-10. The staff report cites no support in the record for this conclusion regarding what "many" dry cleaners believe. Nonetheless, even if the staff's conclusion regarding dry cleaners' beliefs is correct, it does not change the fact that those dry cleaners are mistaken. As noted above, the systematic studies of the wet cleaning technology and of actual cleaners who have adopted wet cleaning all demonstrate that wet cleaning in fact does clean the full range of garments as well as, and in some cases better than, PCE dry cleaning.

Staff also contends that successful wet cleaning requires operator training. This is true. However, the fact that training is necessary does not support rejection of the option. Training is available from wet clean machine manufacturers as well as through other cleaners who have converted to this process.

Staff argues that cleaners are concerned about liability resulting from the "dry clean only" label. The Federal Trade Commission, which is responsible for care labeling of garments, has proposed developing a "professional wet cleaning" care label for garments currently labeled "dry clean" or "dry clean only." The FTC suspended proceeding with "professional wet cleaning" care label due to a lack of standardized test method. In 2005, the International Standardization Organization (ISO) finalized its professional wet cleaning test procedures and symbol system.

Countries that recognize ISO now can carry "professional wet clean" care labels in garments sold in those countries. In the United States, the FTC can either accept the ISO standards or develop their own. CARB should encourage the FTC to proceed with this.

Lastly, staff suggests that Option 3 would have greater economic impact than other options. This apparently based on the assumption that cleaners would choose to use Green Earth or CO_2 systems to substitute for PCE or hydrocarbon systems. While cleaners could so choose, it is equally likely that that they could choose the *cheaper* option of wet cleaning. As noted above, cleaners purchasing a wet cleaning system rather than a PCE or hydrocarbon system would actually save money. ARB staff's own survey results support the notion that wet cleaning is an equally likely choice as Green Earth: 13% of those surveyed stated that for their next purchase, they will buy a wet cleaning system, compared to 15% who would choose Green Earth.

In conclusion, the phase out of PCE systems coupled with a prohibition on new VOC-containing systems (such as hydrocarbon systems) is reasonably necessary to achieve the goals of the law. The law requires the adoption of the option capable of achieving the greatest emission reduction, with a preference for pollution prevention. Professional wet cleaning has been shown in scientific studies and in practice to clean the same range of garments successfully at a lower cost than PCE systems. Professional wet cleaning achieves this result with virtually no negative environmental, health, safety or economic impacts. For these reasons, the Board should reject the staff proposal, and adopt Option 3.

Thank you for the opportunity to provide comments on this proposal.

Sincerely,

Timothy F. Malloy