

**DRAFT**

March 23, 2006

EPA Docket Center (6102T)  
Attention Docket ID No. OAR-2005-0155  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Sir/Madam:

On behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), thank you for this opportunity to comment on the Proposed National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities, which was published in the *Federal Register* on December 21, 2005 (70 *Federal Register* 75884). We are pleased that EPA has recognized the need for additional control measures to reduce emissions of perchloroethylene (perc) from dry cleaning facilities, but we believe the proposed rule should be strengthened to ensure adequate protection to public health and the environment.

STAPPA and ALAPCO are very concerned about the significant health risks associated with exposure to perc, which is a “probable carcinogen” and is responsible for adverse non-cancer effects. Acute exposures result in neurological symptoms, while chronic exposures are associated with health effects such as neurological, liver and kidney damage. There are also concerns about reproductive health issues due to exposure to perc. Accordingly, it is critical that EPA take measures to reduce emissions of perc beyond those contained in the Maximum Achievable Control Technology (MACT) and Generally Available Control Technology (GACT) standards established in 1993.

STAPPA and ALAPCO offer the following recommendations for the different types of dry cleaners mentioned in the proposal:

Large Industrial and Commercial Dry Cleaners – These are large establishments, or “major” sources. EPA estimates that there are 15 of these in the country. For new and existing units, equipment standards would include closed-loop systems (no venting to outside air) with refrigerated condensers and carbon adsorbers and enhanced leak detection and repair. EPA’s proposed control option is expected to reduce cancer risks from the current levels of 300 to 2,400 in one million to 30 to 270 in one million. EPA estimates that 55,000 people would be exposed to cancer risks greater than one in one million. Unfortunately, we do not believe this level of remaining risk is acceptable; EPA should include additional measures that will further reduce risks, especially to those living and working near the facility. These should include at least perc sensors and lock-out devices on new sources, in addition to those measures EPA is proposing.

“Freestanding” Small Dry Cleaners – These are smaller, or “area” sources, found as either stand-alone buildings or in strip malls or other locations. EPA estimates there are approximately 27,000 freestanding small dry cleaners in the United States. New units would meet equipment standards including closed-loop systems with refrigerated condensers and carbon adsorbers and enhanced leak detection and repair (a slightly different version than for major sources).

Our first concern with this portion of the proposal is the universe of sources that EPA has included in the “freestanding” group. We do not agree that dry cleaning facilities that share a building with other establishments should be considered freestanding. We recommend that EPA limit this category to those that qualify under the plain English meaning of the word “freestanding.” That is, sources in this group should only be those that are stand-alone facilities that do not share a wall, ceiling or floor with another establishment. Those facilities that share a building with another establishment should be included in the following category (currently termed “co-residential”).

EPA estimates that cancer risks will be reduced from 30 to 220 in one million to 20 to 175 in one million. Again, this level of remaining risk is not protective enough. We recommend that for freestanding area sources, EPA call for fourth generation equipment, which includes closed-loop systems with refrigerated condensers and carbon adsorbers, along with weekly leak inspections, annual third-party inspections and certification by an approved training program.

Although we do not believe EPA has recommended stringent-enough measures for this group of dry cleaners, we strongly support EPA’s proposal to require the elimination of remaining transfer machines within 90 days.

Small Dry Cleaners in Apartment Buildings (“Co-Residential”) – These are area sources located on the ground floors of residential buildings, usually found in urban settings, but also found on main streets of smaller towns. Since people live in the same building as these dry cleaners and are exposed to the emissions on a continual basis, the risks to those individuals are often far above acceptable levels. EPA estimates there are 1,300 small dry cleaners in residential buildings. EPA is proposing two options for these sources:

- “Residual Risk” option – Existing units would meet the same requirements as existing freestanding facilities. New units using perc would be prohibited.
- “Technology” option – Existing and new sources would use machines with refrigerated condensers and carbon adsorbers, enclose units in a vapor barrier to prevent exposures of perc emissions, and conduct weekly leak inspections, annual third-party inspections and training certification. The requirements are based on the New York State Department of Environmental Conservation’s (NYSDEC) dry cleaning requirements. NYSDEC’s requirements, implemented in 1997, are the most stringent in the country. However, the requirements in New York are mandated for all dry cleaners in any “mixed-use” settings (i.e., co-located in a building with other uses, including residences, businesses, offices, day-care centers, etc.), while EPA’s proposal would limit the NYSDEC-style standards only to those dry cleaners in residential buildings. NYSDEC does not distinguish

between dry cleaners co-located in residential buildings and those located in any “mixed-use” building.

There are several deficiencies in EPA’s proposal:

#### *Residual Risk Proposal*

- Stricter standards apply to co-residential facilities, rather than any mixed-use location (i.e., one that shares its building with another establishment). EPA contemplates more stringent standards only for facilities co-located in *residential* buildings. However, higher risks are present in any mixed-use facility, not just residences, since individuals that work or otherwise frequent those buildings, including sensitive populations, could also experience prolonged exposures. Mixed-use facilities include offices, stores, other businesses, day-care centers, schools or other establishments where people spend many hours. If exposures are pro-rated to reflect eight hours of daily exposure (for individuals who work or attend day care or school in buildings co-located with dry cleaners), the resulting risks could still be above acceptable levels.
- The ban is only on new sources. EPA proposes banning new perc dry cleaners in residential buildings, but does not call for an expeditious phase-out of existing perc facilities. While it is good that older units could not be replaced with new perc units under the proposal, it will take many years for existing units to be phased out, subjecting the population to ongoing perc exposures. The proposal should call for the phase out of existing units in *mixed-use* environments (not just residences). Sources could either stop operations or switch to a safe and approved alternative solvent.

#### *Technology Proposal*

- There is no ban on perc units. The proposal does not call for the ban of new perc units and the phase-out of existing perc units in mixed-use locations. While the NYSDEC standards, on which EPA’s technology proposal was based, are the most stringent in the country, were an excellent response to the deficiencies of the original MACT and GACT standards (technology-based requirements), and resulted in significant reductions, there remain high risks to individuals who live in, work in or otherwise frequent mixed-use buildings where perc dry cleaners are located. In the eight years since the NYSDEC program was implemented, additional data have been collected about the risks related to perc exposures in mixed-use environments and additional action is warranted. The Residual Risk program under the Clean Air Act is intended to go *beyond* the technology-based requirements of MACT, so it should be more stringent than the technology-based program.

STAPPA and ALAPCO recommend that the provisions for dry cleaners in mixed-use buildings be a strengthening of EPA’s proposal. First, the requirements for this group should apply to any dry cleaning facility located in a building with other establishments (i.e., one that shares walls, ceilings or floors with others), not just those that share a building with residences. New perc units in such mixed-use settings should be prohibited and existing units should be

phased out within several years (e.g., three to five years). Among the options for units in those settings is to switch to a non-perc formulation or become drop-off locations.

During the period before the existing units are phased out, facilities should be required to follow good operating and maintenance procedures that reduce emissions. These include, at the very least, leak detection and repair practices that limit leakage as much as possible.

We also propose one clarification. Paragraph 63.322(o)(5) appears to accomplish the intended purpose of prohibiting the installation of new dry cleaning systems, as described in the preamble (II.B., pg 75887). However, we recommend a clarification in the language as follows, “. . . from any *new or existing* dry cleaning system that is installed after . . .” (emphasis added). This clarification is recommended to avoid the potential confusion regarding the “new source” terminology. Throughout the preamble, as in II.B., the adjective “new” and “existing” appear to be used in the traditional meanings. “Existing” describes those machine installed prior to the December 9, 1991 proposal date of the rule. “New” describes those machine installed on or after the initial proposal date. The potential for confusion lies in EPA having taken a somewhat different position by allowing existing dry cleaning systems to be sold and/or relocated (i.e., installed) while still maintain an “existing” status (see page IV-1 of the Plain English Guide for Dry Cleaners).

#### Residual Risks Related to Exposures to Dry Cleaners in Mixed-Use Buildings

As stated above, we strongly believe the final rule should be more stringent, especially for the mixed-use facilities, because of the high risks associated with dry cleaning facilities. Even after the implementation of the NYSDEC regulations on dry cleaners, there remain troubling risk levels in mixed-use buildings. For other areas of the country that have implemented only the 1993 MACT/GACT standards and do not have the more protective New York program in place already, the risk that remains at this point is undoubtedly higher than in New York.

The New York State Department of Health (NYSDOH) derived a health-based guideline for perc in residential air. The department recommends that the average air level in a residential community not exceed 100 micrograms of perc per cubic meter of air ( $100 \text{ ug/m}^3$ ), considering continuous lifetime exposure and sensitive people. Actions to reduce exposure are recommended if perc levels are above background levels, even if they are below  $100 \text{ ug/m}^3$ . However, actions of increasing urgency are recommended at levels above  $100 \text{ ug/m}^3$ , based upon the level. Immediate action to reduce exposure is warranted when air levels are at  $1,000 \text{ ug/m}^3$  (i.e., if measurements exceed  $1,000 \text{ ug/m}^3$ , the facility is shut down and undergoes a rigorous compliance inspection before it is allowed to operate).

How does the guideline level of  $100 \text{ ug/m}^3$  compare to cancer risk? The rule of thumb is that  $1 \text{ ug/m}^3$  is equal to a one-in-1-million cancer risk. Thus, the guideline level of  $100 \text{ ug/m}^3$  is approximately equal to a cancer risk of one in 10,000. This is a much higher risk than what is considered acceptable in other environmental programs. For example, the standard for perc in drinking water is five micrograms per liter. People are assumed to drink two liters of water each day, so an individual’s daily exposure through drinking water would be no more than 10 ug.

However, if normal inhalation at the guideline level of 100 ug/m<sup>3</sup> is calculated, a person would breathe in 2,000 ug per day, or *200 times the amount of perc that would be acceptable in drinking water*.<sup>1</sup> A drinking-water source would be shut down if it had the levels of perc found in the air in typical mixed-use buildings that house dry cleaners – even those that currently meet the more stringent New York State standards.

In 2001-2003, the state of New York conducted studies of perc levels in the air in residential dry cleaner buildings *after* the implementation of the New York dry cleaning regulations.<sup>2</sup> Based on the findings, it appears likely that there is not a regulatory scenario allowing the use of perc in mixed-use buildings, no matter how robust, that will result in acceptable risks. Among the interesting findings in the New York study:

- While perc levels in most apartments in dry cleaner buildings sampled were below, or only slightly above, the guideline level of 100 ug/m<sup>3</sup> (1 x 10<sup>-4</sup> cancer risk), higher levels were found in dry cleaner buildings located in low-income, minority neighborhoods. In fact, out of the 65 apartments sampled, “the six highest perc levels detected, ranging between 695-5,000 ug/m<sup>3</sup>, are in six different dry cleaner buildings located in census block groups characterized as minority or as both minority and low income” (page 15). Additionally, “[m]ean perc levels in dry cleaner buildings in low-income or minority neighborhoods are about ten and four times higher than mean levels in higher-income and non-minority neighborhoods, respectively” (page 18). Clearly, these findings raise concerns about environmental justice.
- Half of the 24 buildings sampled had at least one apartment where perc levels exceeded the 100 ug/m<sup>3</sup> guideline. Four of the 24 sampled buildings had at least one apartment with perc levels over 1,000 ug/m<sup>3</sup>. Of the 65 apartments sampled, 26 percent (17) had perc levels above 100 ug/m<sup>3</sup>. That is, even with the New York standards in place, one quarter of the residences exceeded New York’s guideline level. Recall that New York’s guideline levels are roughly equivalent to EPA’s *minimum* goal of reducing cancer risks to one in 10,000.
- “Thus, despite the evident success of additional dry cleaner regulations adopted in 1997 in reducing residential exposures to perc, involuntary residential perc exposures continued in the study area, at least through 2003, when sampling for this study was completed” (page 18).

New York did testing prior to adopting its own rule (1994-1997). Those findings are important when considering the situation in other parts of the country. While they do not reflect

---

<sup>1</sup> People are assumed to inhale about 20 cubic meters (m<sup>3</sup>) of air per day. If an individual inhales 20 m<sup>3</sup> at the NYSDOH guideline of 100 ug/m<sup>3</sup>, his exposure would be 2,000 ug per day from inhalation. At the immediate action level of 1,000 ug/m<sup>3</sup>, exposure would equal 20,000 ug per day.

<sup>2</sup> “Tetrachloroethylene (PCE, Perc) Levels in Residential Dry Cleaner Buildings in Diverse Communities in New York City,” *Environmental Health Perspectives* (published by the National Institute of Environmental Health Sciences) June 21, 2005.

reductions from the MACT/GACT standards, the likelihood is that levels in other parts of the country are somewhere between New York's findings in 1994-1997 and 2003. Mean levels in 1994-1997 were 340-360 ug/m<sup>3</sup>. In 2003 they were 34 ug/m<sup>3</sup>. Maximum levels were 25,000 ug/m<sup>3</sup>. In 2003 they were 5,000 ug/m<sup>3</sup>. Samples from 1998 in Hudson County, New Jersey were 470 – 4,200 ug/m<sup>3</sup>, with a mean of 2,000 ug/m<sup>3</sup> (page 17).

#### Number of Sources

New York's and EPA's estimates of the number of sources do not appear to agree. New York estimates that there are 2,500 dry cleaning plants in the state and that 80 percent are in mixed-use buildings (i.e., 2,000 mixed-use). EPA has estimated that there are 1,300 dry cleaners co-located with residences *nationwide*. Even considering that New York is counting other mixed-use locations besides residences, it seems that EPA's number may be an underestimation (indicating that the nationwide risks are underestimated as well).

Clearly, dry cleaner emissions, particularly those in mixed-use buildings, pose a significant problem with considerable health risks. One of the most alarming facts is that many, if not most, of the population exposed to these risks (those living, working or frequenting these buildings for other reasons) have no idea of the magnitude of the risks to which they are exposed.

#### Substitution of Perc

EPA should consider calling for the elimination of perc in dry cleaning, and encouraging substitution with less toxic, safe alternatives. This would go along way toward reducing the risks to individuals exposed to dry cleaning operations and emissions.

Thank you for your consideration of our comments. Please do not hesitate to contact STAPPA/ALAPCO if you seek additional information.

Sincerely,

Robert Colby  
Chair  
ALAPCO Air Toxics Committee

Vinson Hellwig  
Chair  
STAPPA Air Toxics Committee