

Second Petition of the Ko-Am Cleaners Association of California to the California Air Resources Board for Amendments to Section 93109, Title 17 California Code of Regulations

Introduction

This second petition of the Ko-Am Cleaners Association is submitted pursuant to §11340.6 and §11340.7 of the California Government Code,¹ and requests specific amendments to Section 93109 of Title 17 California Code of Regulations as it was adopted by the California Air Resources Board (CARB) on January 25, 2007.²

In light of the requirements set forth in §11340.6 and §11340.7, this second petition:

1. Summarizes the background associated with the Ko-Am Cleaners Association's first petition and its denial by CARB;
2. Describes the specific types of changes requested to §93109 and provides suggested regulatory language that could affect those changes;
3. Provides the reasons why the changes are being requested; and
4. References the authority of CARB to make the requested changes to §93109.

Background

On February 7, 2008 the Ko-Am Cleaners Association of California first petitioned CARB to amend Section 93109 of Title 17 California Code of Regulations. The requested amendments included elimination of the ban on the use of perchloroethylene-based dry cleaning machines and an extension of deadlines for the removal of certain types of perchloroethylene-based dry cleaning machines from service. A copy of that first petition is included as Attachment B.

On March 7, 2008, CARB's Executive Officer (EO) James N. Goldstene responded by denying the first petition. This response is included as Attachment C. In denying the

¹ These sections of the California Government Code are reproduced in Attachment A.

² See State of California Air Resources Board Resolution 07-05 and attachments.

first petition, the EO noted³ that with respect to the Board's decision to ban perchloroethylene-based dry cleaning machines that:

Based on the viability of dry cleaning alternatives, the Board felt it prudent and necessary to eliminate the potential health risk due to Perc emissions from dry cleaning and related equipment.

Although the first petition provided a detailed explanation of why alternatives to perchloroethylene-based dry cleaning machines were not viable for many dry cleaning operations, particularly smaller operations with lower revenue streams, the EO claimed otherwise stating⁴ that:

The viability of alternative dry cleaning technologies is evident by their market share. As stated...about 30 percent of the dry cleaning is being done by alternative dry cleaning processes already. The most popular alternative uses the high flash point hydrocarbon solvents with about 20 percent of the dry cleaning in California being processed using these solvents.

And that:⁵

Of all the alternatives available, the most environmentally friendly are water based cleaning systems and carbon dioxide cleaning systems.

However, the EO did not refute the concerns raised in the first petition regarding water based cleaning, which include that it is not an acceptable alternative for the dry cleaning process specified on many garment labels. Nor did the EO refute his staff's own conclusion that carbon dioxide systems are "prohibitively expensive" for many facilities.

Requested Amendments to Section 93109

The Ko-Am Cleaners Association of California requests that CARB take action to eliminate the current requirements for the phase-out perchloroethylene-based dry cleaning machines. One option that the Ko-Am Cleaners Association supports is for CARB to take action, emergency action, if possible, to adopt changes to Section 93109 of Title 17, California Code of regulations that reverse the action taken by the Board on January 25, 2007. Specifically, it is requested that the regulatory text adopted by the Board in 2007 be deleted and that regulatory language that was deleted in 2007 be restored. The text to be restored is contained in Attachment D.

³ See the final paragraph on page 3 of the EO's letter of March 7, 2008.

⁴ See the first paragraph on page 6 of the EO's letter of March 7, 2008.

⁵ See the second paragraph on page 6 of the EO's letter of March 7, 2008.

Other specific changes that could be made include the addition of five to 10 years of additional lead time to all of the compliance dates in the existing version of Section 93109 and, as discussed below, a reanalysis of the impacts of the ban on perchloroethylene-based dry cleaning machines

Reasons for the Requested Amendments

There are a number of reasons why the requested amendments to Section 93109 should be made. A number of these are set out in the first petition, Attachment B to this second petition. In addition, there are two more fundamental reasons why the requested changes to Section 93109 must be made.

The first of these is that the Board's January 25, 2007 decision that included the ban on perchloroethylene-based dry cleaning machines was based on an economic analysis that did not reflect the current state of California's economy. Rather, the Board's 2007 decision was based on what are now known as erroneous assumptions that vastly overstated the dry cleaning industry's ability to finance the purchase of alternative dry cleaning machines and the ability of the industry to recover those costs by passing them on to customers. As indicated in Attachment E, CARB's failure to make the requested changes to Section 93109 will have dramatic adverse consequences for the dry-cleaning industry and in small cleaners in particular.

The second is that the Board's January 25, 2007 decision that included the ban on perchloroethylene-based dry cleaning machines was based on an analysis of alternative technologies that failed to properly account for all of the costs associated with alternatives. As noted above, water based systems are not feasible for use in dry cleaning and by CARB staff's own admission carbon dioxide based systems are not economically viable. As also noted above, CARB staff points to high flash point hydrocarbon solvents as the most economically viable alternative to perchloroethylene-based dry cleaning machines.

However, as detailed in Attachment F, the California State Fire Marshall is requiring the installation of fire suppression systems at all dry cleaning facilities using the high flash point hydrocarbon solvent based machines. The consequences of the fire suppression system requirements include, at a minimum, far higher costs for the installation and operation of hydrocarbon systems than CARB staff reported to the Board in January, 2007. In addition, the fire suppression system requirements will likely preclude many dry-cleaners operating in leased or rented space from using hydrocarbon based systems because building owners will either refuse to pay for or refuse to allow the installation of the systems. In fact, dry cleaners who have already switched to hydrocarbon based systems may be in jeopardy of being prohibited from operating their businesses and recovering any of the costs they have incurred to comply with the CARB dry cleaning regulations. Overall, Attachment F and the California State Fire Code highlight the fact that CARB staff's conclusion that hydrocarbon based systems are a viable alternative to

perchloroethylene-based dry cleaning machines is erroneous and that fact renders the Board's finding based on that conclusion incorrect.

In summary, elimination of the ban on perchloroethylene-based dry cleaning machines is necessary both for the reasons outlined in the first petition plus the fact that analysis of the economic consequences of the ban upon which the Board based its January 2007 decision are simply wrong. Absent an updated economic analysis that accounts for both current economic conditions as well as California's fire suppression system requirements, it is simply not possible for the Board to make an informed decision regarding this matter. Therefore, the ban on perchloroethylene-based dry cleaning machines should be lifted immediately as requested to provide general economic relief and relief from the California fire suppression system requirements to the dry cleaning industry. Obviously, any new CARB rulemaking in this area following the requested action would have to address all material issues and facts including those raised in this petition.

Authority of the California Air Resources Board to Make the Requested Amendments

CARB has documented its authority to adopt changes to Section 93109 on numerous occasions. At the time of the most recent amendments to Section 93109, CARB cited the following as providing the necessary authority: Sections 39600, 39601, 39650, 39655, 39656, 39658, 39659, 39665 and 39666, California Health and Safety Code as well as Sections 7412 and 7416, Title 42, United States Code. We do not believe that there is any issue related to whether or not CARB has the authority to adopt changes to Section 93109.

Attachment A

Text of California Government Code Sections 11340.6 and 11340.7⁶

11340.6. *Except where the right to petition for adoption of a regulation is restricted by statute to a designated group or where the form of procedure for such a petition is otherwise prescribed by statute, any interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation as provided in Article 5 (commencing with Section 11346). This petition shall state the following clearly and concisely:*

(a) The substance or nature of the regulation, amendment, or repeal requested.

(b) The reason for the request.

(c) Reference to the authority of the state agency to take the action requested.

11340.7. *(a) Upon receipt of a petition requesting the adoption, amendment, or repeal of a regulation pursuant to Article 5 (commencing with Section 11346), a state agency shall notify the petitioner in writing of the receipt and shall within 30 days deny the petition indicating why the agency has reached its decision on the merits of the petition in writing or schedule the matter for public hearing in accordance with the notice and hearing requirements of that article.*

(b) A state agency may grant or deny the petition in part, and may grant any other relief or take any other action as it may determine to be warranted by the petition and shall notify the petitioner in writing of this action.

(c) Any interested person may request a reconsideration of any part or all of a decision of any agency on any petition submitted. The request shall be submitted in accordance with Section 11340.6 and include the reason or reasons why an agency should reconsider its previous decision no later than 60 days after the date of the decision involved. The agency's reconsideration of any matter relating to a petition shall be subject to subdivision (a).

(d) Any decision of a state agency denying in whole or in part or granting in whole or in part a petition requesting the adoption, amendment, or repeal of a regulation pursuant to Article 5 (commencing with Section 11346) shall be in writing and shall be transmitted to the Office of Administrative Law for publication in

⁶ Text obtained from: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=11001-12000&file=11340-11342.4>

the California Regulatory Notice Register at the earliest practicable date. The decision shall identify the agency, the party submitting the petition, the provisions of the California Code of Regulations requested to be affected, reference to authority to take the action requested, the reasons supporting the agency determination, an agency contact person, and the right of interested persons to obtain a copy of the petition from the agency.

Attachment B

**Petition of the Ko-Am Cleaners Association of California
to the California Air Resources Board for Amendments to
Section 93109, Title 17 California Code of Regulations**

Petition of the Ko-Am Cleaners Association of California to the California Air Resources Board for Amendments to Section 93109, Title 17 California Code of Regulations

Introduction

This petition, submitted pursuant to §11340.6 and §11340.7 of the California Government Code,¹ requests specific amendments to Section 93109 of Title 17 California Code of Regulations as it was adopted by the California Air Resources Board (CARB) on January 25, 2007.²

In light of the requirements set forth in §11340.6 and §11340.7, this petition:

1. Summarizes the background associated with CARB's proceedings leading to the January 25, 2007 adoption of the current regulation at §93109;
2. Describes the specific changes requested to §93109 and provides suggested regulatory language³;
3. Provides the reasons why the specific changes are being requested; and
4. References the authority of CARB to make the requested changes to §93109.

Background

Regulatory History – During the 1930s, perchloroethylene began to replace Stoddard solvent and other hydrocarbon-based dry cleaning solvents. It has subsequently become by far the most widely used dry cleaning solvent. In 1991, CARB identified perchloroethylene as a toxic air contaminant (TAC). In 1993, CARB adopted⁴ an “Airborne Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning Operations.” The regulation was codified as section 93109 of Title 17 of the California Code of Regulations.

Despite finding that, by 2003, the 1993 regulations had reduced perchloroethylene emissions by 70% from 1993 levels, CARB staff proposed modifications to section

¹ These sections of the California Government Code are reproduced in Attachment A.

² See State of California Air Resources Board Resolution 07-05 and attachments.

³ The suggested regulatory language is provided in Attachment B.

⁴ See <http://www.arb.ca.gov/toxics/atcm/perctrn.pdf>

93109⁵ intended to further reduce emissions from perchloroethylene from dry cleaning operations in California. These proposed regulations were rejected by the Board at a Public Hearing held on May 25, 2006. At the hearing, the Board and CARB officially cancelled the previous rulemaking⁶ and began work on a rulemaking that would ban the use of perchloroethylene.

Had they been adopted, the proposed regulations considered at the May 25, 2006 hearing would have banned by July 1, 2010, the use of perchloroethylene-based dry cleaning in the limited number of so-called “co-residential” facilities operating in the state and would have ultimately required the replacement of all older perchloroethylene dry cleaning machines with more advanced, lower-emitting, machines and the installation of improved ventilation systems. According to CARB staff (see reference 5), implementation of the regulations rejected by the Board in 2006 as well as CARB measures targeting perchloroethylene emissions from other sources would have reduced the risk due to ambient exposure to perchloroethylene to less than one in a million.

In 2007, CARB staff again proposed modifications to section 93109⁷ that were adopted on January 25, 2007. These modifications, which have now been approved by the California Office of Administrative Law, include a ban on the installation of new perchloroethylene dry cleaning machines in California, beginning January 1, 2008; and require the retirement of any perchloroethylene dry cleaning machine operating in California once the machine reaches 15 years old, beginning July 1, 2010. CARB staff claimed again that the implementation of the adopted regulations, as well as CARB measures targeting perchloroethylene emissions from other sources, will ultimately reduce the risk due to ambient exposure to perchloroethylene to less than one in a million. According to CARB staff (see reference 7) alternatives to perchloroethylene-based dry cleaning machines include machines using the following solvents:

- Water-based “professional wet-cleaning”;
- Carbon dioxide;
- Hydrocarbon solvents including Stoddard solvent;
- Decamethylcyclopentasiloxane; and
- Aliphatic glycol ethers.

CARB Data Regarding the Relative Risks Associated with Perchloroethylene and Other TACs – CARB staff has, since 1989, monitored ambient levels of perchloroethylene and reports that data as well as the estimated risk associated with exposure to these levels of perchloroethylene annually.⁸ The mean ambient concentration data and estimated risks

⁵ “Staff Report: Initial Statement of Reasons for The Proposed Amendments to the Control Measure for Perchloroethylene Dry Cleaning Operations,” California Air Resources Board, April 7, 2006.

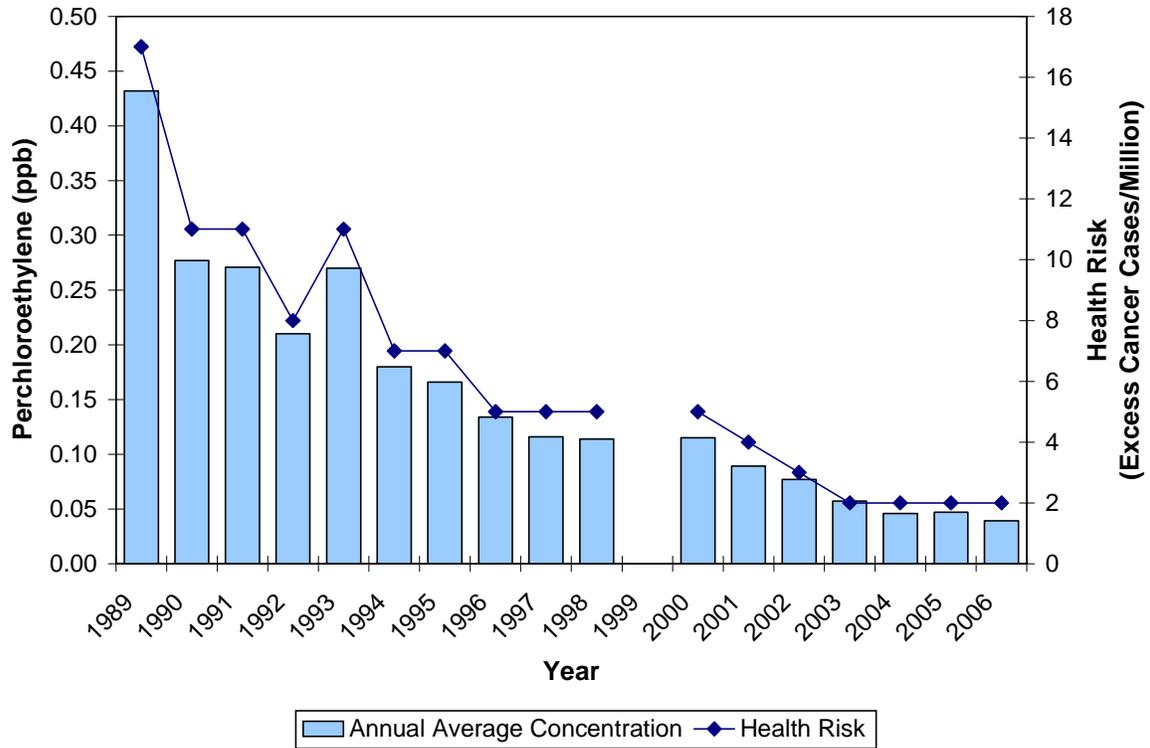
⁶ See <http://www.arb.ca.gov/regact/perc06/cancellationperc.pdf>

⁷ “Staff Report: Initial Statement of Reasons for The Proposed Amendments to the Control Measure for Perchloroethylene Dry Cleaning Operations and Adoption of Requirements for Manufacturers and Distributors of Perchloroethylene,” California Air Resources Board, December 8, 2006.

⁸ See <http://www.arb.ca.gov/adam/toxics/statepages/percstate.html>.

published by CARB staff for the period from 1989 to 2006 are shown in Figure 1. As shown in Figure 1, based on CARB data, the mean concentration of perchloroethylene in California air has dropped by about 90% from 1989 to 2006 as has the CARB staff's estimate of the health risk. It should be noted that the 2007 CARB rulemaking discussed above has not yet been implemented and therefore has had no effect on observed levels of perchloroethylene in ambient air.

Figure 1



In addition to data regarding the ambient concentrations of perchloroethylene and the associated health risks, CARB staff publishes an annual summary of emissions in California and California air quality data that includes data regarding the health risk posed by 10 TAC compounds, including perchloroethylene. According to CARB staff,⁹ data for these TACs are presented because they “pose the most substantial health risk.” The health risk values based on ambient concentrations observed in 1990 and 2005 at CARB monitoring sites as reported by CARB staff (see reference 9) are summarized below in Table 1.

⁹ “The California Almanac of Emissions and Air Quality – 2007 Edition,” California Air Resources Board, 2007. See also <http://www.arb.ca.gov/aqd/almanac/almanac07/almanac07.htm>.

Table 1			
Summary of CARB 1990 and 2005 Health Risk Estimates for Exposure to TACs in Ambient Air in California (from Reference 8)			
Compound	1990 Health Risk ^a	2005 Health Risk ^a	2005 Ranking
Diesel Particulate Matter	~900	~500	1
Benzene	~240	~50	2
1,3 Butadiene	~150	~40	3
Carbon Tetrachloride	~35	~25 ^b	4
Formaldehyde	~16	~20	5
Hexavalent Chromium	~40 ^c	~15	6
para-Dichlorobenzene	~9 ^d	~10	7
Acetaldehyde	~8	~6	8
Perchloroethylene	~11	~2	9
Methylene Chloride	~4	~1	10
Total 2005 Health Risk	~1,413	~669	
% of Total Health Risk Due to Perchloroethylene	0.8%	0.3%	

^a Excess cancer cases per million people.

^b Based on 2003 as that is the last year for which CARB staff provides an estimate.

^c Based on 1992 as that is the first year for which CARB staff provides an estimate.

^d Based on 1991 as that is the first year for which CARB staff provides an estimate.

As shown in Table 1, in 2005 perchloroethylene accounts for just 0.3% of the total health risk estimated by CARB staff for the 10 TAC compounds. It ranks 9th on CARB's list of the top 10 TACs and, based on CARB staff's estimates, poses a risk that is 250 times less than that posed by exposure to Diesel exhaust PM. As one would have expected, based on Figure 1, CARB staff's estimates of the health risk posed by perchloroethylene dropped dramatically from 1990 to 2005. (Again, it is important to note that these changes in perchloroethylene concentration and risk are in no way influenced by the regulations adopted by CARB in January 2007.) In contrast, the health risk estimated for Diesel particulate matter has dropped by less than 50% over that same time, and the health risk estimated by CARB staff for formaldehyde has actually increased.

Requested Amendments to Section 93109

The Ko-Am Cleaners Association of California requests that CARB adopt changes to Section 93109 that are in essence the same changes proposed by CARB staff to the Board for adoption at the May 25, 2006 Board hearing. In general, the amendments to Section 93109 requested by this petition are as follows:

1. Eliminate the prohibition of the installation of perchloroethylene-based dry cleaning machines;
2. Eliminate the general requirement to remove perchloroethylene-based dry cleaning machines from service when the machines reach 15 years of age; and
3. Extend the date at which primary, converted, and “add-on” secondary control perchloroethylene-based dry cleaning machines must be removed.

The requested text of the amended section is provided in Attachment B. It differs from the May 25, 2006 staff proposal mainly in terms of the lead time provided for compliance given the time that will have elapsed between May 2006 and the time at which CARB could adopt the requested changes. In addition, additional lead time has been provided regarding the phase-out of primary, converted, and “add-on” secondary control machines.

Reasons for the Requested Amendments

In this section, the reasons for the requested amendments to section 93109 are presented.

The Ban Enacted on the Use of Perchloroethylene-Based Dry Cleaning Machines is Not Necessary to Adequately Protect Public Health – The fact that a ban on the use of perchloroethylene-based dry cleaning machines is not required to adequately protect public health is proved by the April 7, 2006 CARB staff report; the staff’s original proposed revisions to section 93109, which did not include a ban on perchloroethylene; and the testimony presented at the May 25, 2006 hearing on the staff proposal. It is clear that the Board’s decision to ban perchloroethylene was not based on any specific finding related to public health; rather, the Board simply made a policy decision that it preferred a ban.

Further, the ban on perchloroethylene is inconsistent with CARB’s policies with respect to the control of other TACs. As shown above, based on CARB data, exposure to perchloroethylene accounts for less than 1% of the risk posed by ambient exposure to TACs in California, while Diesel PM and benzene account for more than 80% of that risk. In the case of both Diesel PM and benzene, CARB’s control efforts, like the staff’s original proposed revisions to section 93109, have focused on controlling emissions rather than banning the use of Diesel-powered vehicles, banning the use of gasoline-powered vehicles, or requiring that the benzene content of gasoline be lowered to zero. Another example is CARB’s promotion of the expanded use of ethanol as a gasoline additive and as an alternative fuel (E85), despite the well-known fact that the use of ethanol leads to substantial increases in vehicular emissions of the TAC acetaldehyde.

There are No Viable Alternatives to the Use of Perchloroethylene-Based Dry Cleaning Machines at ALL Dry Cleaning Facilities

As discussed above, the California dry cleaning industry has a long history of using perchloroethylene-based machines and has both developed considerable experience with those machines as well as made considerable investments in them. Unless section 93109 is modified, that experience and those investments will be lost as the result of the ban on the use of perchloroethylene.

Instead, as noted above, the April and December 2006 ISOR documents provided a number of alternatives to perchloroethylene-based dry cleaning machines that dry cleaners should consider in replacing their existing equipment. This issue was further addressed in March 2007, when CARB issued a “Fact Sheet” regarding the amended dry cleaning ATCM requirements that listed what it referred to as “available alternative dry cleaning technologies.” The following technologies are listed in the fact sheet:¹⁰

1. Water-based cleaning;
2. Carbon dioxide;
3. Hydrocarbon solvent;
4. GreenEarth®;
5. Propylene glycol ether;
6. Stoddard solvent; and
7. Puredry®.

Unfortunately, despite the staff’s recommendation and the Board’s actions at the January 25, 2007 hearing, none of these technologies is a suitable replacement for all of the perchloroethylene-based dry cleaning machines in operation in California. In order to understand why this is, it is important to consider the nature of the dry cleaning industry in California. Based on data collected and published by CARB staff,¹¹ 90% of all dry cleaning operations have only one machine (see Table IV-4 of reference 11), the total floor space at approximately 80% of dry cleaning operations is 2,000 square feet or less (see Figure IV-4 of reference 11), many perchloroethylene-based dry cleaning machines last far longer than the 15-year lifetime incorporated in the current regulations (see Figure IV-1 of reference 11), and roughly 60% have two or fewer employees. While a full 40% have total annual receipts of less than \$100,000 (see Table IV-1 of reference 11). In addition, according to CARB staff’s most recent data for 2006 from reference 7, perchloroethylene-based machines account for 70% percent of the market.

Based on the above data collected by CARB staff, it is clear that most dry cleaning operations are small facilities with limited revenues that operate a single perchloroethylene-based dry cleaning machine and would, in the absence of a ban, continue to operate that machine for far longer than 15 years. Given this, the operator

¹⁰ See <http://www.arb.ca.gov/toxics/dryclean/factsheetmarch2007.pdf>

¹¹ “California Dry Cleaning Industry Technical Assessment Report,” California Air Resources Board, Stationary Source Division, Emissions Assessment Branch, February 2006.

must bear the economic impacts associated with removal of the existing perchloroethylene machine and must be able to affordably replace that machine with another single machine that performs the same function. Further, given that operators could choose to simply go out of business instead of choosing to replace the perchloroethylene machine, they must be able to rely on the fact that they will be able use the replacement machine for its entire lifetime in order to justify that decision.

Now that the nature of most dry cleaning operations has been established, each of the alternative technologies can be examined in that light.

Water-Based Cleaning – The main problem with water-based cleaning is that it is not an effective replacement for dry cleaning using perchloroethylene-based machines. The processes of dry cleaning and professional dry cleaning with respect to garments are defined in Section 423 of Title 16 of the Federal Code of Regulations which relate to clothing care labels. These processes are distinct from water-based cleaning (or washing) and intentional submission of dry-clean-only materials to water-based cleaning is clearly at odds with the intent of the federal garment care labeling requirements. It is for this reason that water-based cleaning is often used, as noted by CARB staff,⁷ as an adjunct to dry cleaning in “mixed shops” that have more than one cleaning machine. In addition, as also noted by CARB staff, water-based cleaning requires specialized equipment in addition to the machine, and small operations will likely lack sufficient floor space to accommodate the equipment.

Carbon Dioxide – As CARB staff indicated in reference 7, the capital cost associated with installation of a carbon dioxide system is over \$140,000 per machine, which CARB staff found to be “prohibitively expensive” for many facilities given that the capital cost exceeds the total receipts of at least 40% of California dry cleaning operations.

Hydrocarbon and Stoddard Solvent and Puredry® – Hydrocarbon and Stoddard and Puredry® solvents, as noted by CARB staff, represent the most generally viable alternative to perchloroethylene-based dry cleaning machines. However, Section V of reference 7 raises some concerns regarding the toxicity of these solvents and notes that their use results in the release of volatile organic compounds (VOC), which are precursors to ozone formation into the atmosphere. As is well known, many areas of California do not comply with existing federal and state ambient air quality standards for ozone, and compliance will become an even greater issue if the federal ozone standards that are currently under review are made more stringent. As noted in the transcript of the May 25, 2006 hearing, concerns regarding increased VOC emissions due to the use of these solvents in dry cleaning was one of the primary reasons why staff did not recommend a ban on perchloroethylene at that time. Further, at the January 25th hearing the Board did not provide any assurances that it would not target VOC emissions from dry cleaning for future controls or refrain from banning the use of hydrocarbon and Stoddard and Puredry® solvent-based machines in the future, although the Board did direct the staff to “ensure that they consider the full useful life of equipment in any future rule making for this source category.” Based on the above, these solvents are simply not

a viable alternative for small single-machine operations that will not be able to survive the economic impacts of additional controls or bans on the technology.

GreenEarth® – This solvent is decamethylcyclopentasiloxane and, as noted in reference 7, its toxicity is under investigation by both the U.S. EPA and the State of California. Given this, it appears, particularly in light of the ban on perchloroethylene-based dry cleaning machines, that there is a high likelihood of a similar ban on this technology. Therefore, it is not suitable as a general replacement for perchloroethylene in dry cleaning operations.

Propylene Glycol Ether – As noted by CARB staff, the toxicity of this solvent is also under investigation by the State of California. Again, given this, it appears, particularly in light of the ban on perchloroethylene-based dry cleaning machines, that there is a high likelihood of a similar ban on this technology. It is therefore not suitable as a general replacement for perchloroethylene in dry cleaning operations.

Authority of the California Air Resources Board to Make the Requested Amendments

CARB has documented its authority to adopt changes to Section 93109 in references 6 and 7 above as well in other areas. We do not believe that there is any issue related to CARB's authority to adopt regulations that the Board essentially considered for adoption in May 2006.

Attachment A

Text of California Government Code Sections 11340.6 and 11340.7¹²

11340.6. *Except where the right to petition for adoption of a regulation is restricted by statute to a designated group or where the form of procedure for such a petition is otherwise prescribed by statute, any interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation as provided in Article 5 (commencing with Section 11346). This petition shall state the following clearly and concisely:*

(a) The substance or nature of the regulation, amendment, or repeal requested.

(b) The reason for the request.

(c) Reference to the authority of the state agency to take the action requested.

11340.7. *(a) Upon receipt of a petition requesting the adoption, amendment, or repeal of a regulation pursuant to Article 5 (commencing with Section 11346), a state agency shall notify the petitioner in writing of the receipt and shall within 30 days deny the petition indicating why the agency has reached its decision on the merits of the petition in writing or schedule the matter for public hearing in accordance with the notice and hearing requirements of that article.*

(b) A state agency may grant or deny the petition in part, and may grant any other relief or take any other action as it may determine to be warranted by the petition and shall notify the petitioner in writing of this action.

(c) Any interested person may request a reconsideration of any part or all of a decision of any agency on any petition submitted. The request shall be submitted in accordance with Section 11340.6 and include the reason or reasons why an agency should reconsider its previous decision no later than 60 days after the date of the decision involved. The agency's reconsideration of any matter relating to a petition shall be subject to subdivision (a).

(d) Any decision of a state agency denying in whole or in part or granting in whole or in part a petition requesting the adoption, amendment, or repeal of a regulation pursuant to Article 5 (commencing with Section 11346) shall be in writing and shall be transmitted to the Office of Administrative Law for publication in

¹² Text obtained from: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=11001-12000&file=11340-11342.4>

the California Regulatory Notice Register at the earliest practicable date. The decision shall identify the agency, the party submitting the petition, the provisions of the California Code of Regulations requested to be affected, reference to authority to take the action requested, the reasons supporting the agency determination, an agency contact person, and the right of interested persons to obtain a copy of the petition from the agency.

Attachment B

Requested Regulatory Changes

Modify current Section 93109, Title 17, California Code of Regulations, to read as follows:

Section 93109. Airborne Toxic Control Measure for Emissions of Toxic Air Contaminants from Dry Cleaning Operations.

(a) Purpose.

The purpose of this control measure is to reduce emissions of toxic air contaminants (TACs), including perchloroethylene (Perc), from dry cleaning operations. Reducing these emissions will further protect the public health, especially for Californians who live or work near dry cleaning facilities.

(b) Applicability.

This section applies to any person who owns, operates, manufactures, or distributes dry cleaning equipment in California that uses any solvent that contains Perc or an identified TAC.

(c) Definitions. The definitions in Health and Safety Code division 26, part 1, chapter 1, commencing with section 39010, shall apply, with the following additions:

- (1) "Add-on secondary control machine" means a closed-loop machine with a secondary control system that is designed or offered as a separate retrofit system for use on multiple machine makes and models.
- (2) "Adsorptive cartridge filter" means a replaceable cartridge filter that contains diatomaceous earth, activated carbon, or activated clay as the filter medium.
- (3) "Carbon adsorber" means an air cleaning device that consists of an inlet for exhaust gases from a dry cleaning machine; activated carbon in the form of a fixed bed, cartridge, or canister, as an adsorbent; an outlet for exhaust gases; and a system to regenerate or reclaim saturated adsorbent.
- (4) "Cartridge filter" means a replaceable cartridge filter that contains one of the following as the filter medium, including but not limited to, paper, activated carbon, clay, paper and clay, or paper and activated carbon. Cartridge filters include, but are not limited to, standard filters, split filters, "jumbo" filters, and all carbon polishing filters.

- (5) "Closed-loop machine" means dry cleaning equipment in which washing, extraction, and drying are all performed in the same single unit (also known as dry-to-dry) and which recirculates Perc-laden vapor through a primary control system with or without a secondary control system with no exhaust to the atmosphere during the drying cycle. A closed-loop machine may allow for venting to the ambient air through a fugitive control system after the drying cycle is complete and only while the machine door is open.
- (6) "Co-residential" means sharing a common wall, floor, or ceiling with a residence or located within the same building.
- (7) "Converted machine" means an existing vented machine that has been modified to be a closed-loop machine by eliminating the aeration step, installing a primary control system, and providing for recirculation of the Perc-laden vapor with no exhaust to the atmosphere or workroom during the drying cycle. A converted machine may allow for venting to the ambient air through a fugitive control system after the drying cycle is complete and only while the machine door is open.
- (8) "Cool-down" means the portion of the drying cycle that begins when the heating mechanism deactivates and the refrigerated condenser continues to reduce the temperature of the air recirculating through the drum to reduce the concentration of Perc in the drum.
- (9) "Desorption" means regeneration of an activated carbon bed, or any other type of vapor adsorber by removal of the adsorbed solvent using hot air, steam, or other means.
- (10) "Dip tank operations" means the immersion of materials in a solution that contains Perc, for purposes other than dry cleaning, in a tank or container that is separate from the dry cleaning equipment.
- (11) "District" means an air pollution control or air quality management district as defined in Health and Safety Code section 39025.
- (12) "Drum" means the rotating cylinder or wheel of the dry cleaning machine that holds the materials being cleaned.
- (13) "Dry cleaning" means the process used to remove soil, greases, paints, and other unwanted substances from materials with Perc or other solvents.
- (14) "Dry cleaning equipment" means any machine, device, or apparatus that uses a solvent to dry clean materials or to remove residual solvent from previously cleaned materials. Dry cleaning equipment may include, but is not limited to, a converted machine, a closed-loop machine, a reclaiming cabinet, a drying cabinet; a primary control machine, primary control machine with a secondary control system; or an integral secondary control machine.

- (15) "Dry cleaning system" means all of the following equipment, devices, or apparatus associated with any dry cleaning process: dry cleaning equipment; filter or purification systems; waste holding, treatment, or disposal systems; solvent supply systems; dip tanks; pumps; gaskets; piping, ducting, fittings, valves, or flanges that convey Perc or other TAC vapors; and control systems.
- (16) "Drying cabinet" means a housing in which materials previously cleaned with Perc or another solvent containing a TAC are placed to dry and which is used only to dry materials that would otherwise be damaged by the heat and tumbling action of the drying cycle.
- (17) "Drying cycle" means the process used to actively remove the Perc remaining in the materials after washing and extraction. For closed-loop machines, the heated portion of the cycle is followed by cool-down and may be extended beyond cool-down by the activation of a control system. The drying cycle begins when heating coils are activated and ends when the machine ceases rotation of the drum for a converted or primary control machine, or at the end of the adsorption cycle for a secondary control machine.
- (18) "Enhanced ventilation system" means a ventilation system that is specifically designed to capture fugitive emissions from a dry cleaning machine. Types of enhanced ventilation systems include local ventilation systems, partial vapor barrier rooms, and full vapor barrier rooms.
- (19) "Environmental training program" means an initial course or a refresher course of the environmental training program for dry cleaning operations that has been authorized by the Air Resources Board according to the requirements of title 17, California Code of Regulations, section 93110.
- (20) "Executive Officer of the Air Resources Board" means the executive officer of the California Air Resources Board or his or her delegate.
- (21) "Existing facility" means any facility that operated Perc dry cleaning equipment prior to July 1, 2009.
- (22) "Facility" means any entity or entities which own or operate dry cleaning equipment, are owned or operated by the same person or persons, and are located on the same parcel or contiguous parcels.
- (23) "Fugitive control system" means a device or apparatus that collects fugitive Perc vapors from the machine door, button and lint traps, still, or other intentional openings of the dry cleaning equipment and routes those vapors to a device that reduces the mass of Perc prior to exhaust of the vapor to the atmosphere.

- (24) "Full-time employee" means any person who is employed at the dry cleaning facility and averages at least 30 hours per week in any 90-day period.
- (25) "Full vapor barrier room" means a room that completely surrounds a closed loop machine and is constructed of material resistant to diffusion of solvent vapors. Fugitive emissions are vented through a stack above the building. According to specifications, the exhaust fan may be installed inside the full vapor barrier room or near the ceiling at the back of the machine or outside the facility on a wall or on the roof. The fan should be of a high pressure (1-3 inches of water) design with a minimum capacity of 1,000 cubic feet per minute; and it should be in continuous operation (24 hours a day, 365 days a year) in a co-residential facility and whenever the dry cleaning machine is operating or being maintained in a non-residential facility. A control interlock must be installed to interrupt power to the dry cleaning machine if the ventilation fan is not operating. The stack should extend at least 5 feet (a 10-foot stack is recommended) above the roofline or any adjacent roof and at least 30 feet from any air intake or window. Emissions must be exhausted vertically (no rain caps). In addition, there should be one air exchange every 5 minutes. The diameter of the stack should generally be 8 to 14 inches with an air flow rate of 1,000 to 2,500 cubic feet per minute.
- (26) "Gallons of perchloroethylene purchased" means the volume of Perc, in gallons, introduced into the dry cleaning equipment, and not recovered at the facility for reuse on-site in the dry cleaning equipment, over a specified time period.
- (27) "Halogenated-hydrocarbon detector" means a portable device capable of detecting vapor concentrations of Perc of 25 ppmv or less and indicating an increasing concentration by emitting an audible signal or visual indicator that varies as the concentration changes.
- (28) "Integral secondary control machine" means a closed-loop machine that is designed and offered with an integral secondary control system.
- (29) "Integral secondary control system" means a carbon adsorber, or an equivalent device that is designed and offered as an integral part of a production package with a single make and model of dry cleaning machine and primary control system.
- (30) "Liquid leak" means a leak of liquid containing Perc of more than 1 drop every 3 minutes.
- (31) "Local ventilation system" means a ventilation system with a high capacity fan, exhaust stack, and physical apparatus/structures (such as fume hoods, shrouds, flexible walls – vertical plastic strips), near the closed-loop machine, that are designed and constructed of materials resistant to diffusion of solvent vapors. A minimum of 1,000 cubic feet per minute

airflow with a capture velocity greater than 100 feet per minute is required for the ventilation fan. The fan should be in operation whenever the dry cleaning machine and related equipment are operated. A control interlock must be installed to interrupt power to the dry cleaning machine if the ventilation fan is not operating. In addition, for stand-alone buildings, there should be one air exchange rate every 5 minutes. Walls or plastic strip curtains should extend at least 3 feet in front and back of the machine. The exhaust point should be at least 5 feet above the building or adjacent building and 30 feet from any window or air intake.

- (32) "Materials" means wearing apparel, draperies, linens, fabrics, textiles, rugs, leather, and other goods that are dry cleaned.
- (33) "Muck cooker" means a device for heating Perc-laden waste material to volatilize and recover Perc.
- (34) "New facility" means a facility that did not operate any dry cleaning equipment using Perc or any solvent that contains a TAC prior to July 1, 2009. Facility relocations shall be considered new facilities for the purposes of this control measure.
- (35) "Partial vapor barrier room" means a room that encloses the back of a closed-loop machine using materials resistant to diffusion of solvent vapors, with the front panel and loading door exposed for convenient loading and unloading. A high capacity fan within the room draws fugitive vapor through a stack for release outside. The ventilation duct or fan intake should be placed near the ceiling directly above the back of the machine or at the rear of the partial vapor barrier room. The fan should be in operation whenever the dry cleaning machine and related equipment are operated. A control interlock must be installed to interrupt power to the dry cleaning machine if the ventilation fan is not operating. In addition, there should be one air exchange rate every 5 minutes. The stack should extend at least 5 feet above the building roofline or any adjacent roof and at least 30 feet from any air intake or window. Emissions must be exhausted vertically (no rain caps). The diameter of the stack should generally be 8 to 14 inches with an air flow rate of 1,000 to 2,500 cubic feet per minute.
- (36) "Perchloroethylene (Perc)" means the substance with the chemical formula 'C₂Cl₄', also known by the name 'tetrachloroethylene', which has been identified by the Air Resources Board and listed as a TAC in title 17, California Code of Regulations, section 93000.
- (37) "Pounds of materials cleaned per load" means the total dry weight, in pounds, of the materials in each load dry cleaned at the facility, as determined by weighing each load on a scale prior to dry cleaning and recording the value.

- (38) "Primary control machine" means a closed loop machine used for dry cleaning that is equipped with a primary control system.
- (39) "Primary control system" means a refrigerated condenser, or an equivalent closed-loop vapor recovery system approved by the district.
- (40) "Reclaimer" means a machine, device, or apparatus used only to remove residual Perc from materials that have been previously cleaned in a separate piece of dry cleaning equipment.
- (41) "Reasonably available", as it applies to an initial course for the environmental training program, means that the course is offered within 200 miles of the district boundaries and that all such courses have a capacity, in the aggregate, that is adequate to accommodate at least one person from each facility in the district required to certify a trained operator at that time.
- (42) "Refrigerated condenser" means a closed-loop vapor recovery system into which Perc vapors are introduced and recovered by cooling below the dew point of the Perc.
- (43) "Residence" means any dwelling or housing which is owned, rented, or occupied by the same person for a period of 180 days or more, excluding short-term housing such as a motel or hotel room rented and occupied by the same person for a period of less than 180 days.
- (44) "Secondary control system" means a device or apparatus (typically a carbon adsorber) that reduces the concentration of Perc in the recirculating air at the end of the drying cycle beyond the level achievable with a refrigerated condenser alone.
- (45) "Self-service dry cleaning machine" means a Perc dry cleaning machine that is loaded, activated, or unloaded by the customer.
- (46) "Sensitive receptor" means any residence; any educational resource for minors including, but not limited to, schools or preschools for kindergarten through twelfth grade (K-12) or early childhood education; and any facility licensed under Health and Safety Code division 2, commencing with section 1200, for health care or community care including, but not limited to, hospitals, clinics, skilled nursing, long-term care, adult day care, foster and small family homes, child care centers, and family day care homes.
- (47) "Separator" means any device used to recover Perc from a water-Perc mixture.
- (48) "Solvent" means a liquid substance other than water used in dry cleaning equipment.

- (49) "Substantial use of an authority to construct" means one or more of the following: (A) the equipment that constitutes the source has been purchased or acquired; (B) construction activities, other than grading or installation of utilities or foundations, have begun and are continuing; or (C) a contract to complete construction of the source within one year has been entered into.
- (50) "TAC" or "toxic air contaminant" means an air contaminant that has been identified by the California Air Resources Board under sections 93000 and 93001 of title 13, California Code of Regulations, or under title 42, United States Code, section 7412(b) and its implementing federal regulations.
- (51) "Trained operator" means the owner, the operator, or an employee of the facility, who holds a record of completion for the initial course of an environmental training program and maintains her/his status by successfully completing the refresher courses as required.
- (52) "Transfer machine" means a combination of Perc dry cleaning equipment in which washing and extraction are performed in one unit and drying is performed in a separate unit.
- (53) "Vapor adsorber" means a bed of activated carbon or other adsorbent into which Perc vapors are introduced and trapped for subsequent desorption.
- (54) "Vapor leak" means an emission of Perc vapor from unintended openings in the dry cleaning system, as indicated by a rapid audible signal or visual signal from a halogenated-hydrocarbon detector or a concentration of Perc exceeding 50 ppmv as Perc as indicated by a portable analyzer.
- (55) "Vented machine" means dry cleaning equipment in which washing, extraction, and drying are all performed in the same single unit and in which fresh air is introduced into the drum in the last step of the drying cycle and exhausted to the atmosphere, either directly or through a control device.
- (56) "Wastewater treatment unit" means a device that treats Perc-contaminated wastewater through the addition of thermal or chemical energy, or through physical action, such as carbon or another type of adsorbent filtration system.
- (57) "Water-repelling operations" means the treatment of materials with a Perc-containing solution for the purpose of making the material water resistant or water-repelling.
- (58) "Workday" means any consecutive 24-hour period commencing at the same time each calendar day as defined in the California Code of Regulations, Labor Code section 500(a).

- (59) "Zoned for residential use" means that a local land-use ordinance or other government requirement allows residences as a permitted use.
- (d) Prohibitions. The owner/operator of a facility shall not operate any of the following types of equipment related to Perc dry cleaning:
- (1) A transfer machine, including any reclaimer or other device in which materials that have been previously dry cleaned with Perc are placed to dry;
 - (2) A vented machine;
 - (3) A self-service dry cleaning machine;
 - (4) A primary control or converted machine installed after July 1, 2009;
 - (5) A drying cabinet;
 - (6) Dip tank operations; and
 - (7) A secondary control system that has not been certified pursuant to subsection (l).
- (e) Requirements for Co-residential Facilities.
- (1) No co-residential facility shall install any dry cleaning equipment which uses solvents that contain Perc.
 - (2) Existing co-residential facilities shall remove any currently installed Perc dry cleaning machine by July 1, 2010.
- (f) Requirements for New Facilities.
- (1) No person shall operate a new facility which uses Perc unless the following conditions are met:
 - (A) The facility is located at least 300 feet from a sensitive receptor;
 - (B) The facility is located outside of and at least 300 feet from the boundary of an area that is zoned for residential use;
 - (C) An enhanced ventilation system has been installed; and
 - (D) Facilities using Perc shall install, operate, and maintain an integral secondary control machine.
 - (2) No person shall operate a new facility which uses a TAC other than Perc unless the following conditions are met:

- (A) The facility shall install, operate, and maintain best available control technology as required by applicable district rules or regulations; or
 - (B) In the absence of applicable district rules or regulations, the owner or operator of a new facility shall submit to and have approved by the district a control method or methods that achieve reductions in the risk associated with the TAC that equal or exceed the reductions for Perc under this section.
- (3) A new facility shall be deemed to meet the requirement specified in subsection (f)(1)(A) and (B) if one of the following criteria is met, even if the new facility does not meet the requirement at the time of initial startup (e.g., because of a zoning change that occurs after the authority to construct is issued):
- (A) If it meets the requirement at the time it is issued an authority to construct by the permitting agency, and substantial use of the authority to construct takes place within one year after it is issued; or
 - (B) If it meets the requirement at the time it is issued an authority to construct by the permitting agency, and substantial use of the authority to construct takes place before any zoning change occurs that affects the operation's ability to meet the standard at the time of initial startup.
- (g) Requirements for Existing Facilities.
- (1) All existing facilities that operate any dry cleaning equipment using Perc shall use an integral secondary control machine. For existing facilities that operated Perc dry cleaning equipment prior to July 1, 2007, and that do not have an integral secondary control machine, the compliance schedule is as follows:
- (A) If the facility is 100 feet or more from a sensitive receptor, the facility shall install an integral secondary control machine (or non-Perc alternative) by July 1, 2014, or when the primary, converted, or "add-on" secondary control machine is 20 years of age, whichever comes later.
 - (B) If a facility is within 100 feet of a sensitive receptor, the facility shall install an integral secondary control machine (or non-Perc alternative) by July 1, 2014, or when the primary, converted, or "add-on" secondary control machine is 20 years of age, whichever is later.
 - (C) All existing facilities that have not already done so under (A) or (B) above, shall install an integral secondary control machine (or non-Perc alternative) by July 1, 2020.

- (D) An existing primary control machine that is designed to accept a secondary control system will qualify as an integral secondary control machine if the following conditions are met:
1. The existing primary control machine is less than five years old on July 1, 2007;
 2. The secondary control system has been designed for the make and model of the existing primary control machine;
 3. The secondary control system has been demonstrated, pursuant to the requirements of subsection (I), to achieve a Perc concentration in the drum of 300 ppmv or less in each test; and
 4. The secondary control system is installed by the machine manufacturer or distributor by July 1, 2010.

(2) All existing facilities shall install an enhanced ventilation system. Compliance shall be according to the following:

- (A) By July 1, 2011, if a sensitive receptor is within 100 feet of the facility as of July 1, 2009; or
- (B) By July 1, 2012, if a sensitive receptor is 100 feet or greater from the facility as of July 1, 2009.

(h) Specifications for Integral Secondary Control Systems. An integral secondary control system shall:

- (1) Be designed to function with a primary control system or be designed to function as a combined primary control system and secondary control system that meets all of the applicable requirements of this section;
- (2) Not exhaust to the atmosphere or workroom;
- (3) Not require the addition of any form of water to the secondary control system that results in physical contact between the water and Perc;
- (4) Have a holding capacity equal to or greater than 200 percent of the maximum quantity of Perc vapor expected in the drum prior to activation of the system; and
- (5) Use a technology that has been demonstrated, pursuant to the requirements of subsection (I), to achieve a Perc concentration in the drum of 300 ppmv or less in each test.

- (i) Required Good Operating Practices. No person shall operate Perc dry cleaning equipment unless all of the following requirements are met:
- (1) Environmental training requirements. Each facility shall have one or more trained operators.
 - (A) A trained operator shall be the owner, the operator, or another employee of the facility, who successfully completes the initial course of an environmental training program to become a trained operator. Evidence of successful completion of the initial course shall be the original record of completion issued pursuant to title 17, California Code of Regulations, Section 93110.
 - (B) One person cannot serve as the trained operator for two or more facilities simultaneously.
 - (C) The trained operator shall be an owner or employee of the facility and be on site while the dry cleaning machine is in operation.
 - (D) Each trained operator shall successfully complete the refresher course of an environmental training program at least once every three years. Evidence of successful completion of each refresher course shall be the date of the course and the instructor's signature on the original record of completion.
 - (E) If the facility has only one trained operator and the trained operator leaves the employ of the facility, the facility shall:
 1. Notify the district in writing within 15 days of the departure of the trained operator; and
 2. Obtain certification for a replacement trained operator within 3 months.
 - i. If the district determines that the initial course of an environmental training program is not reasonably available, the district may extend the certification period for a replacement trained operator until 1 month after the course is reasonably available.
 - (2) Operation and maintenance requirements. The trained operator shall operate and maintain all components of the dry cleaning system in accordance with the requirements of this section and the conditions specified in the facility's operating permit. For operations not specifically addressed, the components shall be operated and maintained in accordance with the manufacturer's recommendations.
 - (A) The district shall provide an operation and maintenance checklist to the facility. Each operation and maintenance function and the date

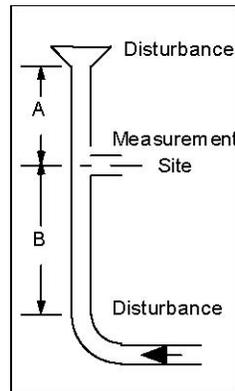
performed shall be recorded on the checklist. The operation and maintenance checklist shall include, at a minimum, the following requirements:

1. Refrigerated condensers shall be operated to ensure that exhaust gases are recirculated until the air-vapor stream temperature on the outlet side of the refrigerated condenser, downstream of any bypass, is less than or equal to 45°F (7.2°C).
 - i. Refrigerated condensers shall have a graduated or digital thermometer with a minimum range from 0°F (-18°C) to 150°F (66°C), which measures the temperature of the outlet vapor stream, downstream of any bypass of the condenser, and is easily visible to the operator.
2. Primary control systems, other than refrigerated condensers, shall be operated to ensure that exhaust gases are recirculated until the Perc concentration in the drum is less than or equal to 8,600 ppmv at the end of the drying cycle, before the machine door is opened.
3. Vapor adsorbers used as a primary control system or a secondary control system shall be operated to ensure that exhaust gases are recirculated at the temperature specified by the district, based on the manufacturer's recommendations for optimum adsorption. These vapor adsorbers shall be desorbed according to the conditions specified by the district in the facility's operating permit, including a requirement that no Perc vapors shall be routed to the atmosphere during routine operation or desorption.
4. Cartridge filters and adsorptive cartridge filters shall be handled using one of the following methods:
 - i. Drained in the filter housing, before disposal, for no less than 24 hours for cartridge filters and 48 hours for adsorptive cartridge filters. If the filters are then transferred to a separate device to further reduce the volume of Perc, this treatment shall be done in a system that routes any vapor to a primary control system, with no exhaust to the atmosphere or workroom; or
 - ii. Dried, stripped, sparged, or otherwise treated, within the sealed filter housing, to reduce the volume of Perc contained in the filter.

5. A still, and any muck cooker, shall not exceed 75 percent of its capacity, or an alternative level recommended by the manufacturer. A still, and any muck cooker, shall cool to 100°F (38°C) or less before emptying or cleaning.
 6. Button and lint traps shall be cleaned and inspected for damage each workday and the lint placed in a tightly sealed container.
 7. The facility owner/operator shall keep on site a spare set of gaskets for the loading door, still, lint trap, button trap, and water separator.
 8. The facility owner/operator shall keep on site a spare lint filter.
 9. All parts of the dry cleaning system where Perc may be exposed to the atmosphere or workroom shall be kept closed at all times except when access is required for proper operation and maintenance.
 10. Wastewater treatment units shall be operated to ensure that no liquid Perc or visible emulsion is allowed to vaporize.
 11. Carbon adsorbers in integral secondary control machines must be designed for non-contact steam or hot air stripping operation, and must be stripped or desorbed in accordance with manufacturer's instructions or at least weekly, whichever is more frequent.
- (3) Leak check and repair requirements. The trained operator shall inspect the dry cleaning system for vapor leaks. The district shall provide a leak inspection checklist to the facility. The trained operator, shall record the status of each component on the checklist.
- (A) Weekly Leak Checks. The dry cleaning system shall be inspected at least once per week for both liquid leaks and vapor leaks, using one of the following techniques:
 1. A halogenated-hydrocarbon detector; or
 2. A portable gas analyzer or an alternative method approved by the district.
 - (B) Annual Leak Checks. The dry cleaning system shall be inspected at least once per year for liquid and vapor leaks using a portable detector which gives quantitative results with less than ten percent uncertainty at 50 ppmv of Perc.

- (C) Any liquid leak or vapor leak that has been detected by the operator shall be noted on the checklist and repaired according to the requirements of this subsection. If the leak is not repaired at the time of detection, the leaking component shall be physically marked or tagged in a manner that is readily observable by a district inspector.
 - (D) Any liquid leak or vapor leak detected by the district, which has not been so noted on the checklist and marked on the leaking component of the dry cleaning system, shall constitute a violation of this section. For enforcement purposes, the district shall identify the presence of a vapor leak by determining the concentration of Perc with a portable analyzer according to ARB Test Method 21 (title 17, California Code of Regulations, section 94124).
 - (E) Any liquid leak or vapor leak shall be repaired immediately upon detection. For the purposes of this section a business day shall mean Monday through Friday, except holidays, as provided in Government Code of Regulation section 6700 and following.
 - 1. If repair parts are not available at the facility, the parts shall be ordered within the next business day of detecting such a leak. Such repair parts shall be installed within two business days after receipt. A facility with a leak that has not been repaired by the end of the 7th business day after detection shall not operate the dry cleaning machine, until the leak is repaired, without a leak-repair extension from the district.
 - 2. A district may grant a leak-repair extension to a facility, for a single period of 30 days or less, if the district makes the following findings:
 - i. The delay in repairing the leak could not have been avoided by action on the part of the facility;
 - ii. The facility used reasonable preventive measures and acted promptly to initiate the repair;
 - iii. The leak would not significantly increase exposure to TACs near the facility; and
 - iv. The facility is in compliance with all other requirements of this section and has a history of compliance.
- (4) Annual Drum Concentration Checks. Effective July 1, 2010, each facility shall perform annual drum concentration testing as specified below.

- (A) Sampling ports shall be installed in the piping, upstream and downstream of the carbon bed. The sampling ports should be in a straight section of piping, and at least six pipe or duct diameters downstream (shown as distance B in figure below) and two pipe or duct diameters upstream (shown as distance A in figure below) from any flow disturbance such as a bend, expansion, contraction or process in that pipe, if possible.



- (B) The sampling ports shall be at least $\frac{1}{4}$ " (one-quarter inch) in diameter. Each port shall be equipped with a Swagelok® male connector, or equivalent, $\frac{1}{8}$ " (one-eighth inch) national pipe thread (NPT), $\frac{1}{8}$ " (one-eighth inch) tube fitting and $\frac{1}{8}$ " (one-eighth inch) tubing plug.
- (C) At least once per year measure the Perc concentration at the end of a drying cycle from the sampling ports using a portable Perc detector that gives quantitative results with less than ten percent uncertainty at 50 ppmv of Perc.
- (D) The concentration of Perc in the drum, as represented by the reading from the sample port upstream of the carbon bed, shall be:
1. Less than 500 ppmv at the end of the drying cycle for a new integral secondary control machine during the initial start-up period (under the Authority to Construct); and
 2. Less than 1000 ppmv at the end of the drying cycle during normal operation after the initial start-up period.
- (E) The concentration of Perc at the sampling port downstream of the carbon bed shall be less than 100 ppmv while the secondary control system is operating.

(j) Recordkeeping Requirements.

- (1) The following records shall be retained by all facilities for at least 5 years:
 - (A) Method of wastewater disposal. If a wastewater treatment unit is being used, then the make and model of the treatment unit shall be recorded;
 - (B) Purchase and delivery receipts for the dry cleaning solvent indicating the volume in gallons;
 - (C) For add-on or integral secondary control machine operations: the start time and finish time of each regeneration; and the temperature of chilled air;
 - (D) Effective July 1, 2010, for add-on or integral secondary control machine: Perc concentrations measured annually at the sampling ports located upstream and downstream of the secondary control system at the end of the drying cycle;
 - (E) The operation and maintenance checklists required by subsection (i)(2)(A) and the completed leak inspection checklists required by subsection (i)(3);
 - (F) For liquid leaks or vapor leaks that were not repaired at the time of detection, a record of the leaking component(s) of the dry cleaning system awaiting repair and the action(s) taken to complete the repair. The record shall include copies of purchase orders or other written records showing when the repair parts were ordered and/or service was requested; and
 - (G) The type of enhanced ventilation system in the facility (e.g. local ventilation system, partial vapor barrier room, or full vapor barrier room).
- (2) The manufacturer's operating manual for all components of the dry cleaning system shall be retained for the life of the equipment.
- (3) The original record of completion of the environmental training program for each trained operator shall be retained during the employment of that person. A copy of the record of completion shall be retained for an additional period of two years beyond the separation of that person from employment at the facility.
- (4) All records, or copies thereof, shall be maintained in English and shall be accessible at the facility at all times.

(k) Reporting Requirements.

- (1) The owner or operator of each facility shall prepare an annual report which covers the period of January 1st through December 31st of each year. The annual report shall include the following information:
 - (A) The estimated distance of the facility to the nearest sensitive receptor and nearest business;
 - (B) A copy of the record of completion of the environmental training program for each trained operator;
 - (C) The total of the pounds of materials cleaned;
 - (D) The gallons of solvent purchased for all solvent additions in the reporting period;
 - (E) The make, model, serial number, and date of manufacture of the dry cleaning machine;
 - (F) The type of enhanced ventilation system in the facility (e.g. local ventilation system, partial vapor barrier room, or full vapor barrier room); and
 - (G) The method of wastewater disposal. If a wastewater treatment unit is used, the make and model of the treatment unit shall be reported.
- (2) The owner or operator of each facility shall submit this annual report to the district by February 2nd of each year.
- (3) A district may exempt a source from item (1) of this subsection if the district maintains current equivalent information on the facility.
- (4) The districts shall report to ARB the annual Perc purchases of permitted facilities by April 2nd of each year or an alternative date agreed upon by the district and ARB.

(l) Testing and Certification of Secondary Control Systems.

- (1) Test Program and Scope.
 - (A) For a given design, a single test program shall be conducted, in accordance with the following procedures, to meet the specifications in subsection (h).
 - (B) The person conducting the test program shall prepare a test plan that describes, in detail, the dry cleaning machine and control systems being tested, the test protocol, and the test method.

- (C) A minimum of three tests shall be conducted for each test program on each control system design.
- (D) All tests for a single test program shall be conducted on a single dry cleaning machine.
- (E) When testing a particular dry cleaning machine model that is available in various drum capacities and carbon weights in the secondary control system, the testing shall, at a minimum, be conducted on the configuration with the largest ratio of drum capacity to weight of the carbon. The dry cleaning machine drum/carbon ratio shall be calculated as follows:

$$\text{drum / carbon ratio} = \frac{\text{machine drum capacity (pounds)}}{\text{Weight of carbon in absorber (pounds)}}$$

- (F) Test results may not be applied to a different make/model or replacement dry cleaning machine that has been reconfigured.
- (2) Test Conditions. Testing shall be conducted under normal operating conditions, unless otherwise specified.
- (A) Each test shall be conducted during the cleaning of one load of materials, after running 80 percent of the manufacturer's recommended number of loads before carbon regeneration.
 1. The machine shall be filled to no less than 85 percent of its drum capacity with materials for each test. At least 70 percent of the load to be cleaned must consist of woolen or absorbent padded material.
 2. The weight of materials shall be recorded for each test.
 - (B) An integral secondary control machine shall be tested on a closed-loop machine with the primary control system operating normally.
- (3) Test Methods.
- (A) The temperature of the air in the dry cleaning machine drum shall be measured and recorded continuously during the entire drying cycle, including the operation of the secondary control system.
 - (B) Sampling shall be conducted as follows:
 1. Sampling shall begin at the end of the drying cycle and be completed within 5 minutes.

2. Sampling shall be completed prior to the opening of the dry cleaning machine door and activation of any fugitive control system.
- (C) The Perc concentration in the dry cleaning machine drum shall be determined by one of the following methods:
1. A sampling port and valve shall be appropriately placed to draw a sample from the interior of the drum or the lint filter housing. The sampling port shall be connected to a gas chromatograph by $\frac{1}{4}$ " (one-quarter inch), outside diameter, Teflon tubing. Any sampling pump shall have Teflon diaphragms. The gas chromatograph shall measure the concentrations of Perc in accordance with ARB Method 422 (title 17, California Code of Regulations, section 94132) or NIOSH Method 1003 (NIOSH Manual of Analytical Methods, U.S. Department of Health and Human Services, August 15, 1987).
 2. A sampling port and valve shall be appropriately placed to draw a sample from the interior of the drum or the lint filter housing. The sampling port shall be connected by $\frac{1}{4}$ " (one-quarter inch) outside diameter Teflon tubing to a Tedlar bag. Any sampling pump shall have Teflon diaphragms. The concentration of Perc in the air sampled shall be measured in accordance with ARB Method 422 (title 17, California Code of Regulations, section 94132) or NIOSH Method 1003 (NIOSH Manual of Analytical Methods, U.S. Department of Health and Human Services, August 15, 1987) within 24 hours of sampling. If an independent laboratory is contracted to perform the analysis of the samples, the chain of custody procedures contained in ARB Method 422 or NIOSH Method 1003 shall be followed.
- (D) An alternative test method deemed acceptable by the Executive Officer of the Air Resources Board.
- (4) Certification Procedures.
- (A) The manufacturer shall submit to the Air Resources Board the following information:
1. A detailed description of the dry cleaning system including control devices;
 2. A copy of the operations manual, written in plain English;

3. Production photographs of the front and rear of the dry cleaning machine for which certification is being requested;
4. The test plan required by subsection (l)(1)(B), including a detailed summary of the test results; and
5. Any other information deemed necessary by the Air Resources Board to consider the request for certification.

(m) Wastewater Treatment.

- (1) Effective July 1, 2010, wastewater shall be hauled away by a registered hazardous waste transporter or treated in a wastewater treatment unit.
- (2) The wastewater treatment unit shall meet the following requirements:
 - (A) A self-contained unit designed to minimize solvent discharge to the environment, including but not limited to the air, water, and sewer system.
 - (B) The wastewater shall be placed in a wastewater treatment unit that has adequate processing capacity for the facility as determined by the district; and
 - (C) The wastewater treatment unit shall be equipped with a separator. The separator shall have all of the following:
 1. A solvent/water separation settling chamber; and
 2. Carbon or another type of adsorbent filtration system that the wastewater cycles through.

(n) Water-repelling Operations.

- (1) No person shall perform water-repelling operations unless all materials to be treated with Perc water-repelling solutions are treated in a closed-loop machine.

(o) Severability.

Each part of this section is deemed severable, and in the event that part of this section is held to be invalid, the remainder of this section shall continue in full force and effect.

NOTE: Authority cited: sections 39600, 39601, 39650, 39655, 39656, 39658, 39659, 39665, and 39666, Health and Safety Code; sections 7412 and 7416, title 42, United States Code.

Reference: sections 39650, 39655, 39656, 39658, 39659, and 39666, Health and Safety Code; sections 7412 and 7414, title 42, United States Code; Sections 63.320, 63.321, 63.323, and 63.324, title 40, Code of Federal Regulation

Attachment C

Denial of First Petition



Linda S. Adams
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Arnold Schwarzenegger
Governor

March 7, 2008

Mr. Lawrence Lim, Chairman
Ko-Am Cleaners Association of California
5420 Ygnacio Valley Road, Suite 60
Concord, California 94521

Dear Mr. Lim:

On February 7, 2008, the California Air Resources Board (ARB or Board) received your letter together with the petition entitled "Petition of the Ko-Am Cleaners Association of California to the California Air Resources Board for Amendments to Section 93109, Title 17 California Code of Regulations" (hereinafter the Petition). You have cited the following as authority for the requested action: Health and Safety Code (HSC) sections 39600 and 39601(a).

The California Administrative Procedure Act (APA) provides that any interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation as provided in Government Code section 11340.6. The petition must clearly and concisely state the substance or nature of the regulation, amendment or repeal requested, the reason for the request, and reference to the authority of the state agency to take the action requested. (Government Code section 11340.6(a)-(c)). The APA further provides that a state agency shall notify the petitioner in writing of the receipt and shall within 30 days either deny the petition indicating why the agency has reached its decision on the merits of the petition in writing or schedule the matter for public hearing in accordance with the notice and hearing requirements of the APA. (Government Code section 11340.7.) By this letter, we are advising you that ARB has denied the Petition.¹ The basis for my denial is set forth in this letter and the references listed on the attachment to this letter.

¹ The Board may delegate any duty it deems appropriate to its Executive Officer (Health and Safety Code section 39515(a)). Moreover, the Board is conclusively presumed to have delegated any of its powers to the Executive Officer unless it has expressly reserved that power to itself (Health and Safety Code (HSC) section 39516.) The Board has not reserved the power to act on rulemaking petitions and it is, therefore, appropriate for me to act on the Petition pursuant to my delegated authority.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. Lawrence Lim, Chairman

March 7, 2008

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The Regulation Addressed by the Petition

The Petition requests that ARB amend section 93109 of title 17, California Code of Regulations (CCR), which is generally known as the Airborne Toxic Control Measure for Emissions of Perchloroethylene (Perc) from Dry Cleaning and Water-Repelling Operations (Dry Cleaning ATCM). We will briefly summarize some of the key provisions of the regulation. The Dry Cleaning ATCM prohibits the sale or lease of new Perc dry cleaning machines beginning on January 1, 2008, eliminates the use of existing Perc machines at co-residential facilities (facilities that share a wall with, or are located in the same building, as a residence) by July 1, 2010, requires that machines that are 15 years or older be removed from service by July 1, 2010, and requires that all other Perc machines be removed from service once they become 15 years old or by January 1, 2023, whichever is sooner. In addition, the Dry Cleaning ATCM expands good operating practices and recordkeeping and reporting requirements for Perc dry cleaners, and requires Perc manufacturers and distributors to report and keep records of their Perc sales to California dry cleaners.

The Petition requests ARB to amend the Dry Cleaning ATCM to incorporate most of the requirements of the proposal that was considered by the Board at its May 25, 2006 public hearing. The key elements of your request include: 1) elimination of the prohibition on installation of Perc-based dry cleaning machines; 2) elimination of the general requirement to remove Perc-based dry cleaning machines from service when the machines reach 15 years of age; and 3) extension of the date at which primary, converted, and "add-on" secondary control Perc-based dry cleaning machines must be removed. The proposals differ from ARB staff's May 25, 2006 proposal mainly in terms of the lead time provided for compliance and timeframe during which ARB would adopt the requested changes. The amendments also provide additional time to phase-out primary, converted, and "add-on" secondary control machines.

In the Petition, you stated three reasons why the Board should consider amending the Dry Cleaning ATCM. The reasons and ARB's responses to them are addressed in the following discussion.

The Board's Rationale for Banning Perc Dry Cleaning

The first reason cited in the Petition is the claim that the Board's decision at the May 25, 2006 meeting to ban Perc dry cleaning is based on policy rather than protecting public health. The Petition states that:

The Ban Enacted on the Use of Perchloroethylene-Based Dry Cleaning Machines is Not Necessary to Adequately Protect Public Health – The fact that a ban on the use of perchloroethylene-based dry cleaning machines is not required

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to adequately protect public health is proved by the April 7, 2006 CARB staff report; the staff's original proposed revisions to section 93109, which did not include a ban on perchloroethylene; and the testimony presented at the May 25, 2006 hearing on the staff proposal. It is clear that the Board's decision to ban perchloroethylene was not based on any specific finding related to public health; rather, the Board simply made a policy decision that it preferred a ban.

The California Toxic Air Contaminant Identification and Control Program established under California law by Assembly Bill 1807 (Chapter 1047, Statutes of 1983) and set forth in HSC sections 39650 – 39675, requires the ARB to identify and control air toxics in California. As a result, in 1991, the Board identified Perc as a toxic air contaminant (TAC). In that process, the Board found that no threshold exposure level could be identified below which adverse health effects would not be expected. Once identification has occurred, HSC section 39665(a) requires ARB to prepare a report on the need to control Perc and adopt appropriate measures. On October 14, 1993, the Board adopted the Dry Cleaning ATCM codified in title 17 of the CCR, section 93109.

In 2003, staff began an evaluation of the effectiveness of the Dry Cleaning ATCM. The evaluation found that, as a result of the Dry Cleaning ATCM, Perc emissions from dry cleaning operations had been reduced by about 70 percent. However, the evaluation also showed that residual health risks associated with Perc emissions from dry cleaning operations remained present, the best available control technology (BACT) for Perc dry cleaning operations had improved, more effective ventilation systems existed, and alternative technologies were available and viable. As a result of this evaluation, staff proposed amendments to the Dry Cleaning ATCM based on BACT for the Board's consideration. Staff's initially proposed amendments were presented in the Staff Report: Initial Statement of Reasons, released on April 7, 2006 (hereafter ISOR1; Reference A) and considered at the Board's May 25, 2006 public hearing.

Section 39666(c) of the HSC states that the Board is 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 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. In accordance with the HSC and after considering staff's initial proposal, written comments, and public testimony, the Board voted unanimously not to proceed with the rulemaking and directed staff to return to the Board with a proposal to phase out Perc from dry cleaning operations in furtherance of the Board's mission to protect public health. Based on the viability of dry cleaning alternatives, the Board felt it prudent and necessary to eliminate the potential health risk due to Perc emissions from dry cleaning machines and related equipment.

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Furthermore, as reflected in the transcripts of the May 25, 2006 public hearing (hereafter Transcript1, Reference B) and in the Board's January 25, 2007 resolution (hereafter Resolution 07-5, Reference F) approving the currently adopted Dry Cleaning ATCM, the main concern that the Board had with the original proposal was that it was not adequately health protective. The Board expressed particular concern about the continued Perc exposure to workers, customers and communities near Perc dry cleaning facilities. In addition, the Board viewed its deliberate decision in phasing out Perc as necessary to provide a long term, health protective, solution to an identified TAC which does not have a Board-specified threshold exposure level.

ARB's Policy on Control of Toxic Air Contaminants

The second reason cited in the Petition is the claim that the ban on Perc is inconsistent with CARB's policies with respect to the control of other TACs. The Petition contrasted the ambient exposure of Perc to the other TACs and how the control of Perc is different from the control of diesel particulate matter (PM), benzene, and the use of ethanol, which leads to the production of acetaldehyde. In addition, the Petition also noted that the ambient mean concentration of Perc has dropped by about 90 percent from 1989 to 2006 and, in 2005, Perc accounts for about 0.3 percent of the total health risk estimated by CARB staff for the top ten TACs.

The Board is mandated to evaluate and determine the need to control substances which have been identified as toxic air contaminants according to HSC sections 39650 through 39675. The HSC directs the Board to control TACs on a case by case basis depending on the circumstance surrounding a TAC's usage. For TACs such as Perc, Diesel PM, benzene, and acetaldehyde, section 39666(c) of the HSC states that the Board is 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 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. When assessing health risk, the Board not only considers the health risk posed by ambient exposure in general but also the potential for higher health risk due to exposure to near source concentrations of the TAC.

The Board began its evaluation of Perc in 1993. At that time, the total statewide Perc emissions from dry cleaning were about 742,000 gallons per year and the maximum individual risk near most dry cleaners ranged from about 50 to 500 chances in a million. Even though the total statewide Perc emissions from dry cleaning in 2003 has decreased to about 222,000 gallons per year and the ambient mean concentration of Perc has dropped significantly since the Dry Cleaning ATCM was initially adopted in 1994, the potential cancer risk at close distances to a Perc facility remained of concern to the Board. For example, a resident living in the same building as a Perc facility may be exposed to higher levels of Perc and may result in cancer risks of 50 to 100 in a million (Transcript1). Furthermore, as shown in the Staff Report: Initial Statement of

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Reasons released on December 8, 2006 (hereafter ISOR2, Reference C) the estimated potential cancer risk of the latest Perc technology, a secondary control machine, at 20 meters is 40 chances per million or higher because about 10 percent of them are calculated to emit Perc vapors equivalent to 61 gallons or more per year.

In addition to risk considerations, the Board considers the types of control technology that are available and whether there are alternatives that can be used in place of the deployed control technologies to further control the TAC. In the case of Perc, the staff's evaluation concluded that control technologies are available in the form of improved ventilation systems to reduce but not eliminate near source exposures to Perc. Staff's evaluation for the Dry Cleaning ATCM rulemaking showed that about 30 percent of the dry cleaning facilities are already using an alternative dry cleaning technology; therefore, alternatives to Perc dry cleaning were readily available and viable (page ES-4, ISOR2).

After considering staff's evaluation results, written comments, public testimony, and staff's revised proposal on January 25, 2007, the Board, in accordance with HSC section 39666, approved the currently adopted regulation that phases out the use of Perc in dry cleaning operations. The process in adopting the amended Dry Cleaning ATCM parallels the processes used by the Board in considering controls for other TACs. Mirroring its action to ban Perc in dry cleaning, the Board has also banned the use of Perc, methylene chloride, and trichloroethylene in automotive brake cleaners, hexavalent chromium in cooling towers, and asbestos in surfacing applications.

However, in other cases, such as the control of diesel PM and other TACs, the Board may or may not phase out the use of the TAC based on its determination of how best to comply with the HSC in each instance. Considering the Board's actions with regard to diesel PM, in 1998, the Board determined diesel exhaust to be a TAC. In 2000, the Board proceeded with a plan to reduce diesel exposures to the lowest level achievable using the best available control method or a better method to accomplish the goal. Since then, diesel controls included lowering of emission standards, cleaner diesel fuels, allowing for alternative fuels such as biodiesel, and allowing for alternatives to diesel-fueled engines and vehicles.

Viable Alternatives to Perc Dry Cleaning

The third reason cited in the Petition is the claim that there are no viable alternatives to Perc dry cleaning for all dry cleaning facilities. The Petition further states that the potential economic impact, labeling issues related to wet-cleaning, cost issue related to carbon dioxide, potential for further regulation related to hydrocarbon solvents, and toxicity issue related to GreenEarth and propylene glycol ether as barriers for switching to alternative dry cleaning processes.

The claimed lack of viable alternative fails for the reasons discussed herein. Alternatives to Perc dry cleaning are discussed in Executive Summary and Chapter III

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of ISOR2. The viability of alternative dry cleaning technologies is evident by their market share. As stated in the ISOR2 and reflected in the transcript of the Board's January 25, 2007 public hearing (hereafter Transcript2, Reference D), about 30 percent of the dry cleaning in California is being done by alternative dry cleaning processes already. The most popular alternative uses the high flash-point hydrocarbon solvents, with about 20 percent of dry cleaning in California being processed using these solvents. The dry cleaning industry has used hydrocarbon solvents for a long time; in fact, long before Perc was introduced to the industry. The current generation of hydrocarbon solvents (i.e., the high flash point hydrocarbon solvents), introduced in the early 1990's, is safer compared to the older generation of hydrocarbon solvents such as Stoddard because of the new generation's higher flash point, which lowers its associated fire hazard, and its chemical composition, which lowers any potential adverse health impact.

Of all the alternatives available, the most environmentally friendly are water based cleaning systems and carbon dioxide cleaning systems. These alternatives are currently used by some in "mixed shops" and by others in "dedicated shops" where all of the dry cleaning for these facilities is being successfully processed by one of these technologies. Because these systems are non-toxic and non-smog forming, they qualify for grants under the programs authorized by Assembly Bill (AB) 998 (chapter 821, statutes 2003, HSC section 41999). The \$10,000 grants available under the AB 998 program can potentially help the marginal operators who are unable to finance the cost of a new dry cleaning system. Most of the alternatives considered are discussed in detail in Chapter III of ISOR2 and a summary of the cleaning performance of the evaluated dry cleaning solvents is shown in Table III-1 (page III-5) of ISOR2. This table is duplicated here as Table II-1.

Alternatives to this regulatory action were considered in the ISOR2, in accordance with Government Code section 11346.2. For the reasons set forth in the ISOR2, in the staff's presentation at the January 25, 2007 public hearing, and in the Final Statement of Reasons (hereafter FSOR, Reference E), the Board has determined that no reasonable alternative considered by the agency, or that has otherwise been identified and brought to the attention of the Board, would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board (FSOR, page 4, D).

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Table II-1. Summary of Cleaning Performance of Dry Cleaning Solvents

Solvent	Cleaning Performance
Perc	Aggressive, oil-based stains, most water-based stains, silks, wools, rayons. Not good for delicates.
Stoddard	Less aggressive than Perc for oil-based stains. Can handle delicate garments.
PureDry	Less aggressive than Perc for oil-based stains. Can handle delicate garments.
Shell 140	Less aggressive than Perc for oil-based stains. Can handle delicate garments.
EcoSolv	Less aggressive than Perc for oil-based stains. Can handle delicate garments.
DF-2000	Less aggressive than Perc for oil-based stains. Can handle delicate garments.
Green Jet (DWX-44 detergent)	Less aggressive than Perc. More effective in cleaning sugar, salt, perspiration stains. Good for delicates. Not good for heavily soiled garments.
Rynex 3	Aggressive, cleans water-soluble and oil-based stains.
GreenEarth	Less aggressive than Perc for oil-based stains. Good for water-based stains, delicates.
CO ₂	Good for all stains and most fabrics. Very effective in removing oils, greases, sweats.
Wet cleaning	Aggressive, good for both oil and water-based stains. Can handle delicate garments. Requires tensioning equipment and training for successful operation.

Conclusion

Based on the foregoing analysis, we find that the Petition has not demonstrated that the Dry Cleaning ATCM to be inconsistent with the overall statutory charge to protect public health through the control of TACs, nor has the Petition demonstrated further amendments to the Dry Cleaning ATCM to be reasonably necessary to effectuate the purposes of the HSC.

The record upon which this denial is based includes the Petition and all of the material incorporated by reference in the Petition – Exhibits A through F. The record also includes this letter and all attachments hereto.

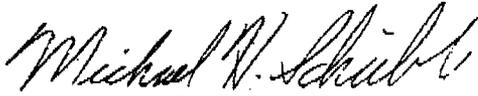
Mr. Lawrence Lim, Chairman

March 7, 2008

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In accordance with Government Code section 11340.7(d), a copy of this letter is being transmitted to the Office of Administrative Law for publication in the California Regulatory Notice Register. The agency contact person on this matter is Robert Krieger, Manager, Emissions Evaluation Section at (916) 323-1202. Interested parties may obtain a copy of the Petition from Lori Andreoni, ARB Office of Legal Affairs, 1001 I Street, P.O. Box 2815, Sacramento, CA 95812, (916) 322-5594.

Sincerely,



fw James N. Goldstene
Executive Officer

Attachment

cc: Robert Krieger, Manager
Emissions Evaluation Section
Stationary Source Division

Lori Andreoni, Manager
Board Administration
and Regulations Coordination Unit
Office of Legal Affairs

LIST OF REFERENCES*

Response to Ko-Am Cleaners Association of California's Petition for Amendments of Section 93109 of Title 17, California Code of Regulations, March 2008

- Reference A: Staff Report: Initial Statement of Reasons for the Propose Amendments to the Control Measure for Perchloroethylene Dry Cleaning Operations, April 7, 2006
<http://www.arb.ca.gov/regact/perc06/isor.pdf>
- Reference B: Transcript of May 25, 2006 Public Hearing to Consider Proposed Amendments to the Control Measure for Perchloroethylene Dry Cleaning Operations
<http://www.arb.ca.gov/board/mt/2006/mt052506.txt>
- Reference C: Staff Report: Initial Statement of Reasons for the Propose Amendments to the Control Measure for Perchloroethylene Dry Cleaning Operations, December 8, 2006
<http://www.arb.ca.gov/regact/2007/perc07/isor.pdf>
- Reference D: Transcript of January 25, 2007 Public Hearing to Consider Adoption of the Amendments to the Control Measure for Perchloroethylene Dry Cleaning Operations and Adoption of Requirements for Manufacturers and Distributors of Perchloroethylene
<http://www.arb.ca.gov/board/mt/2007/mt012507.txt>
- Reference E: Final Statement of Reasons; Public Hearing to Consider Adoption of the Amendments to the Control Measure for Perchloroethylene Dry Cleaning Operations and Adoption of Requirements for Manufacturers and Distributors of Perchloroethylene
<http://www.arb.ca.gov/regact/2007/perc07/fsor.pdf>
- Reference F: State of California Air Resources Board Resolution 07-5, January 25, 2007
<http://www.arb.ca.gov/regact/2007/perc07/res075.pdf>

* All references are available on the websites; therefore, hardcopies of the references are not included.

Attachment D

Text to be Restored

Title 17, California Code of Regulations

PART 2 ~ Delete Existing Text

Section 93109. Perchloroethylene Airborne Toxic Control Measure--Dry Cleaning Operations.

- (a) Definitions. For the purposes of this section, the following definitions shall apply:
- (1) "Adsorptive cartridge filter" means a replaceable cartridge filter that contains diatomaceous earth or activated clay as the filter medium.
 - (2) "Cartridge filter" means a replaceable cartridge filter that contains one of the following as the filter medium: paper, activated carbon, or paper and activated carbon. A cartridge filter contains no diatomaceous earth or activated clay. Cartridge filters include, but are not limited to: standard filters, split filters, "jumbo" filters, and all carbon polishing filters.
 - (3) "Closed-loop machine" means dry cleaning equipment in which washing, extraction, and drying are all performed in the same single unit (also known as dry-to-dry) and which recirculates perchloroethylene-laden vapor through a primary control system with no exhaust to the atmosphere during the drying cycle. A closed-loop machine may allow for venting to the ambient air through a fugitive control system after the drying cycle is complete and only while the machine door is open.
 - (4) "Co-located with a residence" means sharing a common wall, floor, or ceiling with a residence. For the purposes of this definition, "residence" means any dwelling or housing which is owned, rented, or occupied by the same person for a period of 180 days or more, excluding short-term housing such as a motel or hotel room rented and occupied by the same person for a period of less than 180 days.
 - (5) "Converted machine" means an existing vented machine that has been modified to be a closed-loop machine by eliminating the aeration step, installing a primary control system, and providing for recirculation of the perchloroethylene-laden vapor with no exhaust to the atmosphere or workroom during the drying cycle. A converted machine may allow for venting to the ambient air through a fugitive control system after the drying cycle is complete and only while the machine door is open.
 - (6) "Cool-down" means the portion of the drying cycle that begins when the heating mechanism deactivates and the refrigerated condenser continues to reduce the temperature of the air recirculating through the drum to reduce the concentration of perchloroethylene in the drum.

- (7) "Date of compliance" means the time from the effective date of this control measure in the district until a facility must be in compliance with the specific requirements of this control measure.
- (8) "Desorption" means regeneration of an activated carbon bed, or any other type of vapor adsorber by removal of the adsorbed solvent using hot air, steam, or other means.
- (9) "Dip tank operations" means the immersion of materials in a solution that contains perchloroethylene, for purposes other than dry cleaning, in a tank or container that is separate from the dry cleaning equipment.
- (10) "District" means the local air pollution control district or air quality management district.
- (11) "Drum" means the rotating cylinder or wheel of the dry cleaning machine that holds the materials being cleaned.
- (12) "Dry cleaning equipment" means any machine, device, or apparatus used to dry clean materials with perchloroethylene or to remove residual perchloroethylene from previously cleaned materials. Dry cleaning equipment may include, but is not limited to, a transfer machine, a vented machine, a converted machine, a closed-loop machine, a reclaimer, or a drying cabinet.
- (13) "Dry cleaning system" means all of the following equipment, devices, or apparatus associated with the perchloroethylene dry cleaning process: dry cleaning equipment; filter or purification systems; waste holding, treatment, or disposal systems; perchloroethylene supply systems; dip tanks; pumps; gaskets; piping, ducting, fittings, valves, or flanges that convey perchloroethylene-contaminated air; and control systems.
- (14) "Drying cabinet" means a housing in which materials previously cleaned with perchloroethylene are placed to dry and which is used only to dry materials that would otherwise be damaged by the heat and tumbling action of the drying cycle.
- (15) "Drying cycle" means the process used to actively remove the perchloroethylene remaining in the materials after washing and extraction. For closed-loop machines, the heated portion of the cycle is followed by cool-down and may be extended beyond cool-down by the activation of a control system. The drying cycle begins when heating coils are activated and ends when the machine ceases rotation of the drum.
- (16) "Environmental training program" means an initial course or a refresher course of the environmental training program for perchloroethylene dry cleaning operations that has been authorized by the Air Resources Board according to the requirements of 17 CCR, Section 93110.

- (17) "Equivalent closed-loop vapor recovery system" means a device or combination of devices that achieves, in practice, a perchloroethylene recovery performance equal to or exceeding that of refrigerated condensers.
- (18) "Existing facility" means any facility that operated dry cleaning equipment prior to the effective date of this control measure in the district. Facility relocations, within the same district, shall be considered existing facilities for the purposes of this control measure.
- (19) "Facility" means any entity or entities which: own or operate perchloroethylene dry cleaning equipment, are owned or operated by the same person or persons, and are located on the same parcel or contiguous parcels.
- (20) "Facility mileage" means the efficiency of perchloroethylene use at a facility, expressed as the pounds of materials cleaned per gallon of perchloroethylene used, and calculated for all dry cleaning machines at the facility over a specified time period.
- (21) "Fugitive control system" means a device or apparatus that collects fugitive perchloroethylene vapors from the machine door, button and lint traps, still, or other intentional openings of the dry cleaning system and routes those vapors to a device that reduces the mass of perchloroethylene prior to exhaust of the vapor to the atmosphere.
- (22) "Full-time employee" means any person who is employed at the dry cleaning facility and averages at least 30 hours per week in any 90-day period.
- (23) "Gallons of perchloroethylene used" means the volume of perchloroethylene, in gallons, introduced into the dry cleaning equipment, and not recovered at the facility for reuse on-site in the dry cleaning equipment, over a specified time period.
- (24) "Halogenated-hydrocarbon detector" means a portable device capable of detecting vapor concentrations of perchloroethylene of 25 ppmv or less and indicating an increasing concentration by emitting an audible signal or visual indicator that varies as the concentration changes.
- (25) "Liquid leak" means a leak of liquid containing perchloroethylene of more than 1 drop every 3 minutes.
- (26) "Materials" means wearing apparel, draperies, linens, fabrics, textiles, rugs, leather, and other goods that are dry cleaned.
- (27) "Muck cooker" means a device for heating perchloroethylene-laden waste material to volatilize and recover perchloroethylene.

- (28) "New facility" means a facility that did not operate any dry cleaning equipment prior to the effective date of this control measure in the district. Facility relocations, within the same district, shall not be considered new facilities for the purposes of this control measure.
- (29) "Perceptible vapor leak" means an emission of perchloroethylene vapor from unintended openings in the dry cleaning system, as indicated by the odor of perchloroethylene or the detection of gas flow by passing the fingers over the surface of the system. This definition applies for an interim period of 18 months only, beginning on the effective date of this control measure in the district.
- (30) "Perchloroethylene (Perc)" means the substance with the chemical formula 'C₂Cl₄', also known by the name 'tetrachloroethylene', which has been identified by the Air Resources Board and listed as a toxic air contaminant in 17 CCR, Section 93000.
- (31) "Perchloroethylene dry cleaning" or "dry cleaning" means the process used to remove soil, greases, paints, and other unwanted substances from materials with perchloroethylene.
- (32) "Pounds of materials cleaned per load" means the total dry weight, in pounds, of the materials in each load dry cleaned at the facility, as determined by weighing each load on a scale prior to dry cleaning and recording the value.
- (33) "Primary control system" means a refrigerated condenser, or an equivalent closed-loop vapor recovery system approved by the district.
- (34) "Reclaimer" means a machine, device, or apparatus used only to remove residual perchloroethylene from materials that have been previously cleaned in a separate piece of dry cleaning equipment.
- (35) "Reasonably available", as it applies to an initial course for the environmental training program, means that the course is offered within 200 miles of the district boundaries and that all such courses have a capacity, in the aggregate, that is adequate to accommodate at least one person from each facility in the district required to certify a trained operator at that time.
- (36) "Refrigerated condenser" means a closed-loop vapor recovery system into which perchloroethylene vapors are introduced and trapped by cooling below the dew point of the perchloroethylene.
- (37) "Secondary control system" means a device or apparatus that reduces the concentration of perchloroethylene in the recirculating air at the end of the drying cycle beyond the level achievable with a refrigerated condenser alone. An "integral" secondary control system is designed and offered as an integral part of a production package with a single make and model of dry cleaning machine and

primary control system. An "add-on" secondary control system is designed or offered as a separate retrofit system for use on multiple machine makes and models.

- (38) "Self-service dry cleaning machine" means a perchloroethylene dry cleaning machine that is loaded, activated, or unloaded by the customer.
- (39) "Separator" means any device used to recover perchloroethylene from a water-perchloroethylene mixture.
- (40) "Still" means a device used to volatilize and recover perchloroethylene from contaminated solvent removed from the cleaned materials.
- (41) "Trained operator" means the owner, the operator, or an employee of the facility, who holds a record of completion for the initial course of an environmental training program and maintains her/his status by successfully completing the refresher courses as required.
- (42) "Transfer machine" means a combination of perchloroethylene dry cleaning equipment in which washing and extraction are performed in one unit and drying is performed in a separate unit.
- (43) "Vapor adsorber" means a bed of activated carbon or other adsorbent into which perchloroethylene vapors are introduced and trapped for subsequent desorption.
- (44) "Vapor leak" means an emission of perchloroethylene vapor from unintended openings in the dry cleaning system, as indicated by a rapid audible signal or visual signal from a halogenated-hydrocarbon detector or a concentration of perchloroethylene exceeding 50 ppmv as methane as indicated by a portable analyzer. This definition applies beginning 18 months after the effective date of this control measure in the district.
- (45) "Vented machine" means dry cleaning equipment in which washing, extraction, and drying are all performed in the same single unit and in which fresh air is introduced into the drum in the last step of the drying cycle and exhausted to the atmosphere, either directly or through a control device.
- (46) "Waste water evaporator" means a device that vaporizes perchloroethylene-contaminated waste water through the addition of thermal or chemical energy, or through physical action.
- (47) "Water-repelling operations" means the treatment of materials with a water-repellent solution that contains perchloroethylene.
- (b) Applicability. Any person who owns or operates perchloroethylene dry cleaning equipment shall comply with Section 93109.

- (c) Initial Notification. The owner/operator shall provide the district with all of the following information, in writing:
- (1) By the applicable date shown in column 2 of Table 1.
 - (A) The name(s) of the owner and operator of the facility.
 - (B) The facility name and location.
 - (C) Whether or not the facility is co-located with a residence.
 - (D) The number, types, and capacities of all dry cleaning equipment.
 - (E) Any control systems for each dry cleaning machine.
 - (F) For existing facilities only, the gallons of perchloroethylene purchased by the facility during the previous calendar year.
 - (2) A district may exempt a source from item (1) of this subsection if the district maintains current equivalent information on the facility.
- (d) Recordkeeping. The owner/operator shall maintain records for the specified time period, beginning on the applicable date shown in column 3 of Table 1. These records, or copies thereof, shall be accessible at the facility at all times.
- (1) All of the following records shall be retained for at least 2 years or until the next district inspection of the facility, whichever period is longer.
 - (A) For each dry cleaning machine, a log showing the date and the pounds of materials cleaned per load.
 - (B) Purchase and delivery receipts for perchloroethylene.
 1. For only those facilities with solvent tanks that are not directly filled by the perchloroethylene supplier upon delivery, the date(s) and gallons of perchloroethylene added to the solvent tank of each dry cleaning machine.
 - (C) The completed leak inspection checklists required by subsection (f)(2) and the operation and maintenance checklists required by subsection (f)(1)(A).
 - (D) For liquid leaks, perceptible vapor leaks, or vapor leaks that were not repaired at the time of detection, a record of the leaking component(s) of the dry cleaning system awaiting repair and the action(s) taken to complete the repair.

The record shall include copies of purchase orders or other written records showing when the repair parts were ordered and/or service was requested.

- (2) For dry cleaning equipment installed after the effective date of this control measure in the district, the manufacturer's operating manual for all components of the dry cleaning system shall be retained for the life of the equipment.
- (3) The original record of completion for each trained operator shall be retained during the employment of that person. A copy of the record of completion shall be retained for an additional period of two years beyond the separation of that person from employment at the facility.
- (e) Annual Reporting. The owner/operator shall maintain an annual report. At the district's discretion, the facility owner or operator shall furnish this annual report to the district by the date specified by the district. The annual report shall include all of the following:
 - (1) A copy of the record of completion for each trained operator.
 - (2) The total of the pounds of materials cleaned per load and the gallons of perchloroethylene used for all solvent additions in the reporting period.
 - (3) The average facility mileage, determined from all solvent additions in the reporting period, as follows:

The Total of the Pounds of Materials Cleaned Per Load
The Total of the Gallons of Perchloroethylene Used

- (f) Good Operating Practices. The owner/operator shall not operate dry cleaning equipment after the applicable dates shown in column 5 and column 6 of Table 1, unless all of the following requirements are met:
 - (1) Operation and maintenance requirements. The trained operator, or his/her designee, shall operate and maintain all components of the dry cleaning system in accordance with the requirements of this section and the conditions specified in the facility's operating permit beginning on the applicable date specified in column 5 of Table 1. For operations not specifically addressed, the components shall be operated and maintained in accordance with the manufacturer's recommendations.
 - (A) The district shall provide an operation and maintenance checklist to the facility. Each operation and maintenance function and the date performed shall be recorded on the checklist. The operation and maintenance checklist provided by the district shall include, at a minimum, the following requirements:

1. Refrigerated condensers shall be operated to ensure that exhaust gases are recirculated until the air-vapor stream temperature on the outlet side of the refrigerated condenser, downstream of any bypass, is less than or equal to 45° F (7.2° C).
2. Primary control systems, other than refrigerated condensers, shall be operated to ensure that exhaust gases are recirculated until the perchloroethylene concentration in the drum is less than or equal to 8,600 ppmv at the end of the drying cycle, before the machine door is opened and any fugitive control system activates.
3. Vapor adsorbers used as a primary control system or secondary control system shall be operated to ensure that exhaust gases are recirculated at the temperature specified by the district, based on the manufacturer's recommendations for optimum adsorption. These vapor adsorbers shall be desorbed according to the conditions specified by the district in the facility's operating permit, including a requirement that no perchloroethylene vapors shall be routed to the atmosphere during routine operation or desorption.
4. During the interim period between compliance with this subsection and compliance with the requirements of subsection (g), an existing facility with a transfer machine or a vented machine shall operate any existing carbon adsorber, which functions during the drying cycle, to meet the following requirements:
 - i. Desorption shall be performed periodically, at the frequency specified by the district. The frequency, at a minimum, shall be each time all dry cleaning equipment exhausted to the device has cleaned a total of three pounds of materials for each pound of activated carbon. Desorption shall be performed with the minimum steam pressure and air flow capacity specified by the district.
 - ii. Once desorption is complete, the carbon bed shall be fully dried according to the manufacturer's instructions.
 - iii. No vented perchloroethylene vapors shall bypass the carbon adsorber to the atmosphere.
5. Cartridge filters and adsorptive cartridge filters shall be handled using one of the following methods.

- i. Drained in the filter housing, before disposal, for no less than: 24 hours for cartridge filters and 48 hours for adsorptive cartridge filters. If the filters are then transferred to a separate device to further reduce the volume of perchloroethylene, this treatment shall be done in a system that routes any vapor to a primary control system, with no exhaust to the atmosphere or workroom.
 - ii. Dried, stripped, sparged, or otherwise treated, within the sealed filter housing, to reduce the volume of perchloroethylene contained in the filter.
 6. A still, and any muck cooker, shall not exceed 75 percent of its capacity, or an alternative level recommended by the manufacturer. A still, and any muck cooker, shall cool to 100° F (38° C) or less before emptying or cleaning.
 7. Button and lint traps shall be cleaned each working day and the lint placed in a tightly sealed container.
 8. All parts of the dry cleaning system where perchloroethylene may be exposed to the atmosphere or workroom shall be kept closed at all times except when access is required for proper operation and maintenance.
 9. Waste water evaporators shall be operated to ensure that no liquid perchloroethylene or visible emulsion is allowed to vaporize.
- (2) Leak check and repair requirements. The trained operator, or her/his designee, shall inspect the dry cleaning system for liquid leaks and perceptible vapor leaks beginning on the applicable date shown in column 5 of Table 1. The trained operator, or her/his designee, shall inspect the dry cleaning system for vapor leaks instead of perceptible vapor leaks beginning 18 months after the effective date of this control measure in the district. The district shall provide a leak inspection checklist to the facility. The trained operator, or her/his designee, shall record the status of each component on the checklist.
- (A) The dry cleaning system shall be inspected at least once per week for liquid leaks and:
1. For perceptible vapor leaks, beginning on the applicable date shown in column 5 of Table 1 until 18 months after the effective date of this control measure in the district.
 2. For vapor leaks, beginning 18 months after the effective date of this control measure in the district, using one of the following techniques:

- i. A halogenated-hydrocarbon detector.
 - ii. A portable gas analyzer or an alternative method approved by the district.
- (B) Any liquid leak, perceptible vapor leak, or vapor leak that has been detected by the operator shall be noted on the checklist and repaired according to the requirements of this subsection. If the leak is not repaired at the time of detection, the leaking component shall be physically marked or tagged in a manner that is readily observable by a district inspector.
- (C) Any liquid leak, perceptible vapor leak, or vapor leak detected by the district, which has not been so noted on the checklist and marked on the leaking component of the dry cleaning system, shall constitute a violation of this section. For enforcement purposes, the district shall:
 - 1. Identify the presence of a perceptible vapor leak based on the odor of perchloroethylene or the detection of gas flow by passing the fingers over the surface of the system.
 - 2. Identify the presence of a vapor leak by determining the concentration of perchloroethylene with a portable analyzer:
 - i. According to ARB Test Method 21 (17 CCR, Section 94124, March 28, 1986).
 - ii. Measured 1 cm. away from the dry cleaning system.
- (D) Any liquid leak or vapor leak shall be repaired within 24 hours of detection.
 - 1. If repair parts are not available at the facility, the parts shall be ordered within two working days of detecting such a leak. Such repair parts shall be installed within five working days after receipt. A facility with a leak that has not been repaired by the end of the 15th working day after detection shall not operate the dry cleaning equipment, until the leak is repaired, without a leak-repair extension from the district.
 - 2. A district may grant a leak-repair extension to a facility, for a single period of 30 days or less, if the district makes these findings:
 - i. The delay in repairing the leak could not have been avoided by action on the part of the facility.
 - ii. The facility used reasonable preventive measures and acted promptly to initiate the repair.

- iii. The leak would not significantly increase Perc exposure near the facility.
 - iv. The facility is in compliance with all other requirements of this section and has a history of compliance.
- (3) Environmental training requirements. The facility shall have one or more trained operators beginning on the applicable date shown in column 6 of Table 1.
- (A) A trained operator shall be the owner, the operator, or another employee of the facility, who successfully completes the initial course of an environmental training program to become a trained operator. Evidence of successful completion of the initial course shall be the original record of completion issued pursuant to 17 CCR, Section 93110. The trained operator shall be a full-time employee of the facility. Except for the provisions of subsection (f)(3)(C)2., one person cannot serve as the trained operator for two or more facilities simultaneously.
 - (B) Each trained operator shall successfully complete the refresher course of an environmental training program at least once every three years. Evidence of successful completion of each refresher course shall be the date of the course and the instructor's signature on the original record of completion.
 - (C) If the facility has only one trained operator and the trained operator leaves the employ of the facility, the facility shall:
 - 1. Notify the district in writing within 30 days of the departure of the trained operator.
 - 2. Obtain certification for a replacement trained operator within 3 months, except that a trained operator who owns or manages multiple facilities may serve as the interim trained operator at two of those facilities simultaneously for a maximum period of 4 months, by which time each facility must have its own trained operator.
 - 3. If the district determines that the initial course of an environmental training program is not reasonably available, the district may extend the certification period for a replacement trained operator until 1 month after the course is reasonably available.
- (g) Equipment. The owner/operator shall not operate dry cleaning equipment after the applicable date shown in column 7 of Table 1, unless the following requirements are met:

- (1) Prohibited Equipment. The owner/operator shall not operate any of the following types of dry cleaning equipment after the applicable date shown in column 7 of Table 1.
- (A) A transfer machine, including any reclaimer or other device in which materials that have been previously dry cleaned with perchloroethylene are placed to dry, except a drying cabinet that meets the requirements of item (4)(A) of this subsection.
 - (B) A vented machine.
 - (C) A self-service dry cleaning machine.
- (2) Required Equipment. The owner/operator of each new or existing facility shall meet the applicable requirements of Table 1 as follows:
- (A) For an existing facility:
 - 1. Within 12 months of the effective date of this control measure in the district, choose either Option 1 or Option 2 of Table 1 and notify the district of her/his choice.
 - 2. Comply with the requirements of Option 2, notwithstanding her/his choice of Option 1, if the facility does not meet the applicable requirements for Option 1 within 18 months of the effective date of this control measure in the district.
 - 3. Install, operate, and maintain the required equipment for the option chosen, as shown in column 1 of Table 1 for existing facilities.
 - (B) A new facility shall install, operate, and maintain the required equipment shown in column 1 of Table 1 for new facilities. The applicable requirements shall be determined based on the date the facility commences operation of the dry cleaning equipment.
- (3) Specifications for Required Equipment. Required equipment shall meet the following specifications:
- (A) A primary control system shall:
 - 1. Operate during both the heated and cool-down phases of the drying cycle to reduce the mass of perchloroethylene in the recirculating air stream.
 - 2. Not exhaust to the atmosphere or workroom.

3. Not require the addition of any form of water to the primary control system that results in physical contact between the water and perchloroethylene.
 4. For refrigerated condensers only:
 - i. Be capable of achieving an outlet vapor temperature, downstream of any bypass, of less than or equal to 45° F (7.2° C) during cool-down; and
 - ii. Have a graduated thermometer with a minimum range from 0° F (-18° C) to 150° F (66° C), which measures the temperature of the outlet vapor stream, downstream of any bypass of the condenser, and is easily visible to the operator.
 5. For equivalent closed-loop vapor recovery systems:
 - i. Use a technology that has been demonstrated, pursuant to the requirements of subsection (h), to achieve a perchloroethylene concentration of 8,600 ppmv or less in each test.
 - ii. Have a device that measures the perchloroethylene concentration, or a demonstrated surrogate parameter, in the drum at the end of each drying cycle, before the machine door is opened and any fugitive control system activates, and indicates if the concentration is above or below 8,600 ppmv. This device shall be installed such that the reading is easily visible to the operator.
- (B) A converted machine shall meet all of the following requirements, as demonstrated on-site to the district, either upon conversion or prior to compliance with the requirements of subsection (g)(2)(A):
1. All process vents that exhaust to the atmosphere or workroom during washing, extraction, or drying shall be sealed.
 2. The converted machine shall use an appropriately-sized primary control system to recover perchloroethylene vapor during the heated and cool-down phases of the drying cycle.
 - i. A refrigerated condenser shall be considered appropriately sized, for a machine converted on or after the date that this section is filed with the Secretary of State, if all of the following conditions are met:
 - a. The water-cooled condensing coils are replaced with refrigerant-cooled condensing coils.

- b. The compressor of the refrigerated condenser shall have a capacity, in horsepower (hp) that is no less than the minimum capacity, determined as follows:

$$\begin{array}{l} \text{Minimum} \\ \text{Capacity (hp)} \end{array} = \frac{\text{Capacity of the Machine (lbs)}}{12}$$

- ii. A refrigerated condenser shall be considered appropriately sized, for a machine converted prior to the date that this section is filed with the Secretary of State, if the conditions a., or b. below are met:
 - a. The refrigerated condenser shall meet the specifications for new conversions in subsection (g)(3)(B)2.i.
 - b. The refrigerated condenser shall achieve, and maintain for 3 minutes, an outlet vapor temperature, measured downstream of the condenser and any bypass of the condenser, of less than or equal to 45° F (7.2° C) within 10 minutes of the initiation of cool-down.
 - iii. An equivalent closed-loop vapor recovery system shall be appropriately sized for the conversion of a vented machine if the system does not extend the total drying time by more than five minutes to meet the specifications of subsection (g)(3)(A)5.
3. The converted machine shall operate with no liquid leaks and no vapor leaks. Any seal, gasket, or connection determined to have a liquid leak or vapor leak shall be replaced.

(C) A secondary control system shall:

- 1. Be designed to function with a primary control system or be designed to function as a combined primary control system and secondary control system that meets all of the applicable requirements of this section.
- 2. Not exhaust to the atmosphere or workroom.
- 3. Not require the addition of any form of water to the secondary control system that results in physical contact between the water and perchloroethylene.
- 4. Use a technology that has been demonstrated, pursuant to the requirements of subsection (h), to achieve a perchloroethylene concentration in the drum of 300 ppmv or less in each test.

5. Have a holding capacity equal to or greater than 200 percent of the maximum quantity of perchloroethylene vapor expected in the drum prior to activation of the system.
 6. For add-on secondary control systems only, the system shall be sized and capable of reducing the perchloroethylene concentration in the drum from 8,600 ppmv or greater to 300 ppmv or less in the maximum volume of recirculating air in the dry cleaning machine and all contiguous piping.
- (4) Specifications for Other Equipment.
- (A) A drying cabinet shall:
1. Be fully enclosed.
 2. Be exhausted via one of the following methods:
 - i. To a control system that has been demonstrated, pursuant to the requirements of subsection (h), to achieve a perchloroethylene concentration of 100 ppmv or less in each test, measured at the outlet without dilution.
 - ii. To a control system that reduces the concentration of perchloroethylene in a closed system with no exhaust to the atmosphere or workroom.
- (h) Equipment Testing. For a given design, a single test program shall be conducted, in accordance with the following procedures, to meet the specifications in subsections (g)(3) and (g)(4). The person or organization conducting the test program shall prepare a written test plan that describes, in detail, the dry cleaning machine and control systems being tested, the test protocol, and the test method.
- (1) Test Program and Scope. A minimum of three tests shall be conducted for each test program on each control system design. All tests for a single test program shall be conducted on a single dry cleaning machine.
- (A) Test results for a primary control system design, or an add-on secondary control system design, may be applied to a different make/model of dry cleaning machine if the equipment designer or facility demonstrates, to the satisfaction of the district, that:
1. The test results would be representative of the performance of the control system design on the different make/model of dry cleaning machine.
 2. The control system design is properly sized for the maximum volume of recirculating air in the dry cleaning machine during the drying cycle.

- (B) Test results for an integral secondary control system design may not be applied to a different make/model of dry cleaning machine.
- (2) Test Conditions. Testing shall be conducted under normal operating conditions, unless otherwise specified.
 - (A) For primary control systems and secondary control systems, each test shall be conducted during the cleaning of one load of materials.
 - 1. The machine shall be filled to no less than 75 percent of its capacity with materials for each test.
 - 2. The weight of materials shall be recorded for each test.
 - (B) A primary control system shall be tested on a closed-loop machine, or a converted machine, without a secondary control system.
 - (C) A secondary control system shall be tested on a closed-loop machine.
 - 1. An integral secondary control system shall be tested with the primary control system operating normally.
 - 2. An add-on secondary control system shall be tested independent of a primary control system and the initial perchloroethylene concentration in the drum shall be 8,600 ppmv or greater.
 - (D) For a control system on the exhaust of a drying cabinet, each test shall be conducted following the placement of materials cleaned with perchloroethylene in the drying cabinet. The materials shall be transferred to the drying cabinet and testing shall begin no later than 15 minutes after the end of the washing and extraction process.
 - 1. The drying cabinet shall be filled to no less than 50 percent of its capacity with materials for each test.
 - 2. The weight of materials shall be recorded for each test.
- (3) Test Method. Equipment shall be tested in accordance with the following methods.
 - (A) For primary control systems and secondary control systems:
 - 1. The temperature of the air in the drum shall be measured and recorded continuously during the entire drying cycle, including the operation of the secondary control system.

2. Sampling shall be conducted as follows:
 - i. For primary control systems and integral secondary control systems, sampling shall begin at the end of the drying cycle and be completed within 5 minutes.
 - ii. For add-on secondary control systems, sampling shall be done when the concentration of perchloroethylene is 8,600 ppmv or greater and again when the concentration reaches 300 ppmv or less.
 - iii. Sampling shall be completed prior to the opening of the machine door and activation of any fugitive control system.
 3. The perchloroethylene concentration in the drum shall be determined by one of the following methods:
 - i. A sampling port and valve shall be appropriately placed to draw a sample from the interior of the drum or the lint filter housing. The sampling port shall be connected to a gas chromatograph by one-quarter (1/4-) inch, outside diameter, Teflon tubing. Any sampling pump shall have Teflon diaphragms. The gas chromatograph shall measure the concentrations of perchloroethylene in accordance with ARB Method 422 (17 CCR, Section 94132, December 31, 1991) or NIOSH Method 1003 (NIOSH Manual of Analytical Methods, U.S. Department of Health and Human Services, August 15, 1987).
 - ii. A sampling port and valve shall be appropriately placed to draw a sample from the interior of the drum or the lint filter housing. The sampling port shall be connected by one-quarter (1/4-) inch outside diameter Teflon tubing to a Tedlar bag. Any sampling pump shall have Teflon diaphragms. The concentration of perchloroethylene in the air sampled shall be measured in accordance with ARB Method 422 (17 CCR, Section 94132, December 31, 1991) or NIOSH Method 1003 (NIOSH Manual of Analytical Methods, U.S. Department of Health and Human Services, August 15, 1987) within 24 hours of sampling. If an independent laboratory is contracted to perform the analysis of the samples, the chain of custody procedures contained in ARB Method 422 or NIOSH Method 1003 shall be followed.
- (B) For a control device on the exhaust of a drying cabinet, sampling and analysis shall be conducted using ARB Method 422 (17 CCR, Section 94132, December 31, 1991) or NIOSH Method 1003 (NIOSH Manual of Analytical Methods, U.S. Department of Health and Human Services, August 15, 1987).
- (C) An alternative test method deemed acceptable by the Air Pollution Control Officer or Executive Officer of the district and the Executive Officer of the Air Resources Board.

- (4) All test plans and test results shall be made available to the district and the Executive Officer of the California Air Resources Board upon request.
- (i) Water-repelling and Dip Tank Operations. No person shall perform water-repelling or dip tank operations, after the applicable date shown in column 8 of Table 1, unless all of the following requirements are met:
 - (1) All materials to be treated with perchloroethylene water-repelling solutions shall be treated in a closed-loop machine, a converted machine, or a dip tank.
 - (2) For dip tank operations:
 - (A) The dip tank shall be fitted with a cover that prevents the escape of perchloroethylene vapors from the tank and shall remain covered at all times, except when materials are placed in and removed from the dip tank or while the basket is moved into position for draining.
 - (B) After immersion, the materials shall be drained within the covered dip tank until dripping ceases.
 - (C) All materials removed from a dip tank shall be immediately placed into a closed-loop machine or a converted machine for drying and not removed from the machine until the materials are dry.
- (j) Compliance. A facility shall comply with all provisions of this section as follows:
 - (1) By the applicable dates of compliance specified in column 1 through column 8 of Table 1.
 - (2) For compliance with subsection (f)(3) "Environmental Training Requirements", an alternative date of compliance shall apply if the district determines that the initial course of an environmental training program for perchloroethylene dry cleaning operations is not reasonably available.
 - (A) For existing facilities in the district, if the initial course is not reasonably available within 12 months of the effective date of this control measure in the district, the alternative date of compliance for subsection (f)(3) only shall be 6 months from the date the district determines that the initial course is reasonably available.
 - (B) For each new facility in the district, if the initial course is not reasonably available within the period from 3 months prior to 2 months following commencement of operation, the alternative date of compliance for subsection (f)(3) only shall be 1 month from the date the district determines that the initial course is reasonably available.

NOTE: Authority cited: Sections 39600, 39601, 39650, 39655, 39656, 39658, 39659, 39665, and 39666, Health and Safety Code; Sections 7412 and 7416, Title 42, United States Code. Reference: Sections 39650, 39655, 39656, 39658, 39659, and 39666, Health and Safety Code; Sections 7412 and 7414, Title 42, United States Code; Sections 63.320, 63.321, 63.323, and 63.324, Title 40, Code of Federal Regulations.

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TABLE 1

**Equipment Requirements and Summary of Compliance Times
for Existing and New Facilities**

Facility Type	EQUIPMENT REQUIREMENTS		DATE OF COMPLIANCE (after the effective date of this control measure in the district)						
	Compliance Option(s)	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
		Required Dry Cleaning Equipment	Initial Notification	Recordkeeping	Annual Reporting	Leak Check and Repair, Operation & Maintenance Requirements	Environmental Training Requirements	Equipment Requirements	Water-Repelling and Dip Tank Requirements
EXISTING FACILITIES	Option 1	Converted Closed-Loop Machine with Primary Control System	60 days	60 days	Specified by district	60 days	18 months	18 months	18 months
	Or Option 2	Closed-loop Machine with Primary Control System	60 days	60 days	Specified by district	60 days	18 months	48 months	18 months
NEW FACILITIES Commencing Operations prior to 18 months After the Effective Date of This Control Measure in the District									
		Closed-loop Machine with a Primary Control System	On application for permit	Upon commencement of operation	Specified by district	Upon commencement of operation	3 months following commencement of operation	Upon commencement of operation	Upon commencement of operation
NEW FACILITIES Commencing Operations 18 months or Later After the Effective Date of This Control Measure in the District									
		Closed-loop Machine with a Primary Control System and a Secondary Control System	On application for permit	Upon commencement of operation	Specified by district	Upon commencement of operation	3 months following commencement of operation	Upon commencement of operation	Upon commencement of operation

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Attachment E



MICHELLE STEEL

MEMBER

STATE BOARD OF EQUALIZATION

November 14, 2008

Ms. Mary D. Nichols, Chair
California Air Resources Board
PO Box 2815
Sacramento, CA 95812

Dear Chair Nichols:

I urge the California Air Resources Board to reconsider its May 25, 2006 decision to ban the use of perchloroethylene-based dry cleaning. According to the adopted regulation, drycleaners would have to replace their existing machines beginning July 1, 2010. With the current downturn in the economy, this additional burden will cause significant hardship for many small dry-cleaning businesses.

Since May 25th, California's economy along with the rest of the country has experienced grave uncertainty and systemic failure. With California's unemployment rate at a record high, our state cannot afford the immediate implementation of any new regulation that could cause businesses to fail and jobs to disappear.

California must balance environmental protection with small business development. We can achieve the state's goal of environmental protection by simply extending the implementation timeline for this new regulation. California's dry-cleaning businesses have expressed willingness to compromise on a five year implementation timeline. This expanded timeline will give drycleaners time to stay in business with a firm commitment to end the use of perchloroethylene-based drycleaning.

The California Air Resources Board can help small businesses by reevaluating their decision. Our state's current economic conditions require the Board to reconsider its decision.

I look forward to working with the California Air Resources Board on balancing environmental protection with small business development. If I can ever be of assistance to you, please do not hesitate to contact me at (310) 377-8016.

Sincerely,

A handwritten signature in cursive script that reads "Michelle Steel".

MICHELLE STEEL
Board Member, Third District
California State Board of Equalization

cc: Board Members of the California Air Resources Board

Attachment F



CALIFORNIA CLEANERS ASSOCIATION

of Dry Cleaners & Launderers

OFFICERS

President
David Suber
Los Angeles

Vice President
Bobby Patel
Costa Mesa

Vice President
Aslam Lodhi
Napa

Treasurer
Jim Douglas
Sacramento

Immediate
Past President
Bob Blackburn
Porterville

DIRECTORS

Jim Douglas
Sacramento

Aslam Lodhi
Napa

Lynnette Watterson
San Mateo

Pamela Whittington
Santa Cruz

Reena Luis
Stockton

Jacob Blackburn
Porterville

David Suber
Los Angeles

Bobby Patel
Costa Mesa

Patrick Somers
Indio

Chris Gomez
El Cajon

ALLIED TRADES REPRESENTATIVES

Kelly Kelleher
Long Beach

Joven Lactaon
Los Angeles

Dan Pollock
Cypress

Jackie Smith
Huntington Beach

November 17, 2008

Governor Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

Dear Governor Schwarzenegger:

I am writing you on behalf of the drycleaning industry in the State of California. According to the Employment Development Department our industry employs an estimated 20,000 people, not counting the self-employed. Virtually all drycleaners are very small businesses, and most are minority-owned.

We are in fear that large numbers of drycleaners and the jobs they create will disappear due to the interaction of regulations enforced by the California Air Resources Board and the State Fire Marshall. We are asking for assistance from your administration in resolving this regulatory conundrum.

A brief history of the regulatory issues may assist in providing a clear understanding of our dilemma. For many decades most drycleaners have utilized a cleaning solvent known as perchloroethylene, or "perc". Perc is a non-flammable cleaning fluid, but it has been identified as a toxic air contaminant under California regulations. With local air boards increasing their regulation of perc over the past decade, California drycleaners began an aggressive program to reduce the use of this solvent and to move towards alternative solvents.

In 2007 the Air Resources Board adopted a statewide regulation requiring the removal of all perchloroethylene drycleaning machines from operation by 2017, or the date on which the machine reaches 15 years from the date of manufacture. The regulation thus results in the complete phase-out of perc machines by 2023. In adopting the regulations, CARB made regulatory findings that cost-effective alternatives to perchloroethylene exist for drycleaners.

Continued on next page

In order to move away from perc, and to comply with the CARB phase-out, the vast majority of drycleaners have chosen to invest in machinery which uses hydrocarbon or GreenEarth silicone solvents. With a flammability flashpoint of 140-200 F, these solvents are classified as Class IIIA solvents. Throughout California, most municipalities have been issuing permits for the installation of these machines, without the necessity for fire sprinklers, because of the high flashpoint of the solvents, the existence of built-in safety and fire-suppression systems in the machines, and the fact that low volumes of solvent would be stored on-site. In issuing the permits, municipalities have relied in part on guidance from the National Fire Protection Association ("NFPA32") that fire sprinklers are not required if less than 330 gallons of Class IIIA solvents are stored on-site.

Recently we learned that the Office of the State Fire Marshall takes a very different view of Class IIIA solvents and fire sprinklers. The State Fire Marshall believes that the California Fire Code requires sprinklers whenever a building contains a drycleaning establishment utilizing Class IIIA solvents, without any exemptions based upon the square footage of the establishment or the amount of solvent stored at the facility. While we certainly understand and respect the public safety mission of the Fire Marshall, and have met with state fire officials in an attempt to discuss alternatives, please understand that enforcement of this interpretation of the Fire Code will impose an impossible financial burden on small drycleaners struggling to comply with the requirement to phase out the use of perchloroethylene.

In short, California air quality regulators have required a perc phase-out based in part on a belief that cost-effective alternatives exist. When drycleaners attempt to implement a cost-effective alternative, they may be met with an interpretation of the Fire Code which requires the entire building to install fire sprinklers. Even in good times, this sort of regulatory "whip-saw" would present an enormous challenge for the tiny businesses which make up the bulk of California's drycleaners. In today's economy, the burden will absolutely result in the closure of substantial numbers of businesses, with attendant job losses.

We would respectfully suggest that this is absolutely the worst possible time to allow uncoordinated regulatory burdens to jeopardize an entire industry and threaten thousands of jobs. To avoid this result, we would request that the state consider options to delay implementation of the perchloroethylene phase-out, and to adopt an exemption from the fire sprinkler requirements for establishments installing safe, modern machines and storing limited quantities of solvent on-site.

Thank you for considering our request. We are available to answer any questions or provide additional information if desired.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Suber". The signature is fluid and cursive, with a large initial "D" and a long, sweeping underline.

David Suber
President

cc: Tonya L. Hoover
Assistant State Fire Marshal

Linda S. Adams
Secretary for Environmental Protection

James N. Goldstene
Executive Officer Air Resources Board

Fabricate™ 2008



**Learn About California Fire
Codes - 2007**

Sunday, August 24, 2008

9:00 am - 10:00 am

CHAPTER 3

USE AND OCCUPANCY CLASSIFICATION

SECTION 301 GENERAL

301.1 Scope. The provisions of this chapter shall control the classification of all buildings and structures as to use and occupancy.

SECTION 302 CLASSIFICATION

302.1 General. Structures or portions of structures shall be classified with respect to occupancy in one or more of the groups listed below. A room or space that is intended to be occupied at different times for different purposes shall comply with all of the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.

1. Assembly (see Section 303): Groups A-1, A-2, A-3, A-4 and A-5
2. Business (see Section 304): Group B
3. Educational (see Section 305): Group E
4. Factory and Industrial (see Section 306): Groups F-1 and F-2
5. High Hazard (see Section 307): Groups H-1, H-2, H-3, H-4 and H-5
6. Institutional (see Section 308): Groups I-1, I-2, I-3 and I-4
7. Mercantile (see Section 309): Group M
8. Residential (see Section 310): Groups R-1, R-2, R-3 and R-4
9. Storage (see Section 311): Groups S-1 and S-2
10. Utility and Miscellaneous (see Section 312): Group U

SECTION 303 ASSEMBLY GROUP A

303.1 Assembly Group A. Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption; or awaiting transportation.

Exceptions:

1. A building used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy.

2. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.
3. A room or space used for assembly purposes that is less than 750 square feet (70 m²) in area and is accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

Assembly occupancies shall include the following:

A-1 Assembly uses, usually with fixed seating, intended for the production and viewing of the performing arts or motion pictures including, but not limited to:

Motion picture theaters
Symphony and concert halls
Television and radio studios admitting an audience
Theaters

A-2 Assembly uses intended for food and/or drink consumption including, but not limited to:

Banquet halls
Night clubs
Restaurants
Taverns and bars

A-3 Assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to:

Amusement arcades
Art galleries
Bowling alleys
Places of religious worship
Community halls
Courtrooms
Dance halls (not including food or drink consumption)
Exhibition halls
Funeral parlors
Gymnasiums (without spectator seating)
Indoor swimming pools (without spectator seating)
Indoor tennis courts (without spectator seating)
Lecture halls
Libraries
Museums
Waiting areas in transportation terminals
Pool and billiard parlors

A-4 Assembly uses intended for viewing of indoor sporting events and activities with spectator seating including, but not limited to:

Arenas
Skating rinks
Swimming pools
Tennis courts

[F] WIRELESS PROTECTION SYSTEM. A system or a part of a system that can transmit and receive signals without the aid of wire.

[F] ZONE. A defined area within the protected premises. A zone can define an area from which a signal can be received, an area to which a signal can be sent or an area in which a form of control can be executed.

SECTION 903

→ AUTOMATIC SPRINKLER SYSTEMS

[F] 903.1 General. Automatic sprinkler systems shall comply with this section.

[F] 903.1.1 Alternative protection. Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted in lieu of automatic sprinkler protection where recognized by the applicable standard and approved by the fire code official.

[F] 903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

Exception: Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic fire alarm system and are separated from the remainder of the building by fire barriers consisting of not less than 1-hour fire-resistance-rated walls and 2-hour fire-resistance-rated floor/ceiling assemblies.

[F] 903.2.1 Group A. An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. For Group A-1, A-2, A-3 and A-4 occupancies, the automatic sprinkler system shall be provided throughout the floor area where the Group A-1, A-2, A-3 or A-4 occupancy is located, and in all floors between the Group A occupancy and the level of exit discharge. For Group A-5 occupancies, the automatic sprinkler system shall be provided in the spaces indicated in Section 903.2.1.5.

[F] 903.2.1.1 Group A-1. An automatic sprinkler system shall be provided for Group A-1 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than the level of exit discharge.
4. The fire area contains a multitheater complex.

[F] 903.2.1.2 Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:

1. The fire area exceeds 5,000 square feet (465 m²);
 2. The fire area has an occupant load of 100 or more;
- or

3. The fire area is located on a floor other than the level of exit discharge.

[F] 903.2.1.3 Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than the level of exit discharge.

Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

[F] 903.2.1.4 Group A-4. An automatic sprinkler system shall be provided for Group A-4 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than the level of exit discharge.

Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

[F] 903.2.1.5 Group A-5. An automatic sprinkler system shall be provided for Group A-5 occupancies in the following areas: concession stands, retail areas, press boxes and other accessory use areas in excess of 1,000 square feet (93 m²).

[F] 903.2.2 Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 20,000 square feet (1858 m²) in area.
2. Throughout every portion of educational buildings below the level of exit discharge.

Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.

→ [F] 903.2.3 Group F-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

- 1. Where a Group F-1 fire area exceeds 12,000 square feet (1115 m²);
2. Where a Group F-1 fire area is located more than three stories above grade plane; or
3. Where the combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m²).

a raised platform shall be provided with an under-vehicle guideway manually activated deluge sprinkler system. In open cut stations, such system shall be provided in guideways which are situated between a raised platform edge and a retaining wall.

903.2.17.2.1 Systems shall be provided along the entire length of track at each station platform.

903.2.17.2.2 Deluge nozzles with caps shall be located in the approximate center of track with spacing designed to completely wet the undersides of the vehicle at the applied density.

903.2.17.2.3 System density shall be a minimum of 0.19 gallon per minute (gpm) per square foot (0.72 L/m per m²) for the design area. When more than one zone is provided, two adjacent zones are required to be considered operating for calculating purposes.

903.2.17.2.4 Deluge systems shall be directly connected to a water supply capable of supplying the required flow rate for a minimum 30-minute duration.

903.2.17.2.5 Controls or manually operable valves shall be in a location acceptable to the fire code official. All deluge systems shall be monitored by the station fire alarm system.

903.2.17.2.6 Each valve shall be monitored by a separate circuit. The alarm panel shall be located in an area normally occupied by station personnel or signals shall be transmitted to the operations control center (OCC).

903.3 Installation requirements. Automatic sprinkler systems shall be designed and installed in accordance with Sections 903.3.1 through 903.3.7.

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Sections 903.3.1.1, 903.3.1.2 or 903.3.1.3.

903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Section 903.3.1.1.1.

903.3.1.1.1 Exempt locations. In other than Group I-2, I-2.1, or I-3 occupancies, automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the

contents, when approved by the fire code official.

3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. In rooms or areas that are of noncombustible construction with wholly noncombustible contents.

903.3.1.2 NFPA 13R sprinkler systems. Where allowed in buildings of Group R, up to and including four stories in height, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R.

903.3.1.2.1 Balconies and decks. Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units where the building is of Type V construction. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

903.3.1.3 NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems installed in one- and two-family dwellings shall be installed throughout in accordance with NFPA 13D.

903.3.2 Quick-response and residential sprinklers. Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers shall be installed in the following areas in accordance with Section 903.3.1 and their listings:

1. Throughout all spaces within a smoke compartment containing patient sleeping units in Group I-2 in accordance with the *California Building Code*.
2. Dwelling units and sleeping units in Group R and I-1 occupancies.
3. Light-hazard occupancies as defined in NFPA 13.

903.3.3 Obstructed locations. Automatic sprinklers shall be installed with due regard to obstructions that will delay activation or obstruct the water distribution pattern. Automatic sprinklers shall be installed in or under covered kiosks, displays, booths, concession stands, or equipment that exceeds 4 feet (1219 mm) in width. Not less than a 3-foot (914 mm) clearance shall be maintained between automatic sprinklers and the top of piles of combustible fibers.

Exception: Kitchen equipment under exhaust hoods protected with a fire-extinguishing system in accordance with Section 904.

903.3.4 Actuation. Automatic sprinkler systems shall be automatically actuated unless specifically provided for in this code.

903.3.5 Water supplies. Water supplies for automatic sprinkler systems shall comply with this section and the

CHAPTER 12

DRY CLEANING

SECTION 1201 GENERAL

1201.1 Scope. Dry cleaning plants and their operations shall comply with the requirements of this chapter.

1201.2 Permit required. Permits shall be required as set forth in Appendix Chapter 1, Section 105.6.

SECTION 1202 DEFINITIONS

1202.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

DRY CLEANING. The process of removing dirt, grease, paints and other stains from such items as wearing apparel, textiles, fabrics and rugs by use of nonaqueous liquids (solvents).

DRY CLEANING PLANT. A facility in which dry cleaning and associated operations are conducted, including the office, receiving area and storage rooms.

DRY CLEANING ROOM. An occupiable space within a building used for performing dry cleaning operations, the installation of solvent-handling equipment or the storage of dry cleaning solvents.

DRY CLEANING SYSTEM. Machinery or equipment in which textiles are immersed or agitated in solvent or in which dry cleaning solvent is extracted from textiles.

SOLVENT OR LIQUID CLASSIFICATIONS. A method for classifying solvents or liquids according to the following classes:

Class I solvents. Liquids having a flash point below 100°F (38°C).

Class II solvents. Liquids having a flash point at or above 100°F (38°C) and below 140°F (60°C).

Class IIIA solvents. Liquids having a flash point at or above 140°F (60°C) and below 200°F (93°C).

Class IIIB solvents. Liquids having a flash point at or above 200°F (93°C).

Class IV solvents. Liquids classified as nonflammable.

SECTION 1203 CLASSIFICATIONS

1203.1 Solvent classification. Dry cleaning solvents shall be classified according to their flash points as follows:

1. Class I solvents are liquids having a flash point below 100°F (38°C).
2. Class II solvents are liquids having a flash point at or above 100°F (38°C) and below 140°F (60°C).

3. Class IIIA solvents are liquids having a flash point at or above 140°F (60°C) and below 200°F (93°C).
4. Class IIIB solvents are liquids having a flash point at or above 200°F (93°C).
5. Class IV solvents are liquids classified as nonflammable.

1203.2 Classification of dry cleaning plants and systems. Dry cleaning plants and systems shall be classified based on the solvents used as follows:

1. Type I—systems using Class I solvents.
2. Type II—systems using Class II solvents.
3. Type III-A—systems using Class IIIA solvents.
4. Type III-B—systems using Class IIIB solvents.
5. Type IV—systems using Class IV solvents in which dry cleaning is not conducted by the public.
6. Type V—systems using Class IV solvents in which dry cleaning is conducted by the public.

Spotting and pretreating operations conducted in accordance with Section 1206 shall not change the type of the dry cleaning plant.

1203.2.1 Multiple solvents. Dry cleaning plants using more than one class of solvent for dry cleaning shall be classified based on the numerically lowest solvent class.

1203.3 Design. The occupancy classification, design and construction of dry cleaning plants shall comply with the applicable requirements of the *California Building Code*.

SECTION 1204 GENERAL REQUIREMENTS

1204.1 Prohibited use. Type I dry cleaning plants shall be prohibited. Limited quantities of Class I solvents stored and used in accordance with this section shall not be prohibited in dry cleaning plants.

1204.2 Building services. Building services and systems shall be designed, installed and maintained in accordance with this section and Chapter 6.

1204.2.1 Ventilation. Ventilation shall be provided in accordance with Section 502 of the *California Mechanical Code* and DOL 29 CFR Part 1910.1000, where applicable.

1204.2.2 Heating. In Type II dry cleaning plants, heating shall be by indirect means using steam, hot water or hot oil only.

1204.2.3 Electrical wiring and equipment. Electrical wiring and equipment in dry cleaning rooms or other locations subject to flammable vapors shall be installed in accordance with the *California Electrical Code*.

1204.2.4 Bonding and grounding. Storage tanks, treatment tanks, filters, pumps, piping, ducts, dry cleaning units,

stills, tumblers, drying cabinets and other such equipment, where not inherently electrically conductive, shall be bonded together and grounded. Isolated equipment shall be grounded.

SECTION 1205 OPERATING REQUIREMENTS

1205.1 General. The operation of dry cleaning systems shall comply with the requirements of Sections 1205.1.1 through 1205.3.

1205.1.1 Written instructions. Written instructions covering the proper installation and safe operation and use of equipment and solvent shall be given to the buyer.

1205.1.1.1 Type II, III-A, III-B and IV systems. In Type II, III-A, III-B and IV dry cleaning systems, machines shall be operated in accordance with the operating instructions furnished by the machinery manufacturer. Employees shall be instructed as to the hazards involved in their departments and in the work they perform.

1205.1.1.2 Type V systems. Operating instructions for customer use of Type V dry cleaning systems shall be conspicuously posted in a location near the dry cleaning unit. A telephone number shall be provided for emergency assistance.

1205.1.2 Equipment identification. The manufacturer shall provide nameplates on dry cleaning machines indicating the class of solvent for which each machine is designed.

1205.1.3 Open systems prohibited. Dry cleaning by immersion and agitation in open vessels shall be prohibited.

1205.1.4 Prohibited use of solvent. The use of solvents with a flash point below that for which a machine is designed or listed shall be prohibited.

1205.1.5 Equipment maintenance and housekeeping. Proper maintenance and operating practices shall be observed in order to prevent the leakage of solvent or the accumulation of lint. The handling of waste material generated by dry cleaning operations and the maintenance of facilities shall comply with the provisions of this section.

1205.1.5.1 Floors. Class I and II liquids shall not be used for cleaning floors.

1205.1.5.2 Filters. Filter residue and other residues containing solvent shall be handled and disposed of in covered metal containers.

1205.1.5.3 Lint. Lint and refuse shall be removed from traps daily, deposited in approved waste cans, removed from the premises, and disposed of safely. At all other times, traps shall be held securely in place.

1205.1.5.4 Customer areas. In Type V dry cleaning systems, customer areas shall be kept clean.

1205.2 Type II systems. Special operating requirements for Type II dry cleaning systems shall comply with the provisions of Sections 1205.2.1 through 1205.2.3.

1205.2.1 Inspection of materials. Materials to be dry cleaned shall be searched thoroughly and foreign materials, including matches and metallic substances, shall be removed.

1205.2.2 Material transfer. In removing materials from the washer, provisions shall be made for minimizing the dripping of solvent on the floor. Where materials are transferred from a washer to a drain tub, a nonferrous metal drip apron shall be placed so that the apron rests on the drain tub and the cylinder of the washer.

1205.2.3 Ventilation. A mechanical ventilation system which is designed to exhaust 1 cubic foot of air per minute for each square foot of floor area [$0.0058 \text{ m}^3/(\text{s} \cdot \text{m}^2)$] shall be installed in dry cleaning rooms and in drying rooms. The ventilation system shall operate automatically when the dry cleaning equipment is in operation and shall have manual controls at an approved location.

1205.3 Type IV and V systems. Type IV and V dry cleaning systems shall be provided with an automatically activated exhaust ventilation system to maintain a minimum of 100 feet per minute (0.51 m/s) air velocity through the loading door when the door is opened. Such systems for dry cleaning equipment shall comply with the *California Mechanical Code*.

Exception: Dry cleaning units are not required to be provided with exhaust ventilation where an exhaust hood is installed immediately outside of and above the loading door which operates at an airflow rate as follows:

$$Q = 100 \times A_{LD} \quad \text{(Equation 12-1)}$$

where:

Q = flow rate exhausted through the hood, cubic feet per minute (m^3/s).

A_{LD} = area of the loading door, square feet (m^2).

SECTION 1206 SPOTTING AND PRETREATING

1206.1 General. Spotting and pretreating operations and equipment shall comply with the provisions of Sections 1206.2 through 1206.5.

1206.2 Type I solvents. The maximum quantity of Type I solvents permitted at any work station shall be 1 gallon (4 L). Class I solvents shall be stored in approved safety cans or in sealed DOTn-approved metal shipping containers of not more than 1-gallon (4 L) capacity. Dispensing shall be from approved safety cans.

1206.3 Type II and III solvents. Scouring, brushing, and spotting and pretreating shall be conducted with Class II or III solvents. The maximum quantity of Type II or III solvents permitted at any work station shall be 1 gallon (4 L). In other than a Group H-2 occupancy, the aggregate quantities of solvents shall not exceed the maximum allowable quantity per control area for use-open system.

1206.3.1 Spotting tables. Scouring, brushing or spotting tables on which articles are soaked in solvent shall have a liquid-tight top with a curb on all sides not less than 1 inch

(25 mm) high. The top of the table shall be pitched to ensure thorough draining to a 1.5-inch (38 mm) drain connected to an approved container.

1206.3.2 Special handling. When approved, articles that cannot be washed in the usual washing machines are allowed to be cleaned in scrubbing tubs. Scrubbing tubs shall comply with the following:

1. Only Class II or III liquids shall be used.
2. The total amount of solvent used in such open containers shall not exceed 3 gallons (11 L).
3. Scrubbing tubs shall be secured to the floor.
4. Scrubbing tubs shall be provided with permanent 1.5-inch (38 mm) drains. Such drain shall be provided with a trap and shall be connected to an approved container.

1206.3.3 Ventilation. Scrubbing tubs, scouring, brushing or spotting operations shall be located such that solvent vapors are captured and exhausted by the ventilating system.

1206.3.4 Bonding and grounding. Metal scouring, brushing and spotting tables and scrubbing tubs shall be permanently and effectively bonded and grounded.

1206.4 Type IV systems. Flammable and combustible liquids used for spotting operations shall be stored in approved safety cans or in sealed DOTn-approved metal shipping containers of not more than 1 gallon (4 L) in capacity. Dispensing shall be from approved safety cans. Aggregate amounts shall not exceed 10 gallons (38 L).

1206.5 Type V systems. Spotting operations using flammable or combustible liquids are prohibited in Type V dry cleaning systems.

SECTION 1207 DRY CLEANING SYSTEMS

1207.1 General equipment requirements. Dry cleaning systems, including dry cleaning units, washing machines, stills, drying cabinets, tumblers, and their appurtenances, including pumps, piping, valves, filters and solvent coolers, shall be installed and maintained in accordance with NFPA 32. The construction of buildings in which such systems are located shall comply with the requirements of this section and the *California Building Code*. B:C portable fire extinguishers shall be provided near the doors inside dry cleaning rooms containing Type II, Type III-A and Type III-B dry cleaning systems.

1207.2 Type II systems. Type II dry cleaning and solvent tank storage rooms shall not be located below grade or above the lowest floor level of the building and shall comply with Sections 1207.2.1 through 1207.2.3.

Exception: Solvent storage tanks installed underground, in vaults or in special enclosures in accordance with Chapter 34.

1207.2.1 Fire-fighting access. Type II dry cleaning plants shall be located so that access is provided and maintained

from one side for fire-fighting and fire control purposes in accordance with Section 503.

1207.2.2 Number of means of egress. Type II dry cleaning rooms shall have not less than two means of egress doors located at opposite ends of the room, at least one of which shall lead directly to the outside.

1207.2.3 Spill control and secondary containment. Curbs, drains, or other provisions for spill control and secondary containment shall be provided in accordance with Section 2704.2 to collect solvent leakage and fire protection water and direct it to a safe location.

1207.3 Solvent storage tanks. Solvent storage tanks for Class II, IIIA and IIIB liquids shall conform to the requirements of Chapter 34 and be located underground or outside, above ground.

Exception: As provided in NFPA 32 for inside storage or treatment tanks.

SECTION 1208 FIRE PROTECTION

1208.1 General. Where required by this section, fire protection systems, devices and equipment shall be installed, inspected, tested and maintained in accordance with Chapter 9.

1208.2 Automatic sprinkler system. An automatic sprinkler system shall be installed in accordance with Section 903.3.1.1 throughout dry cleaning plants containing Type II, Type III-A or Type III-B dry cleaning systems.

1208.3 Automatic fire-extinguishing systems. Type II dry cleaning units, washer-extractors, and drying tumblers in Type II dry cleaning plants shall be provided with an approved automatic fire-extinguishing system installed and maintained in accordance with Chapter 9.

Exception: Where approved, a manual steam jet not less than 0.75 inch (19 mm) with a continuously available steam supply at a pressure not less than 15 pounds per square inch gauge (psig) (103 kPa) is allowed to be substituted for the automatic fire-extinguishing system.

1208.4 Portable fire extinguishers. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and Section 906. A minimum of two 2-A:10-B:C portable fire extinguishers shall be provided near the doors inside dry cleaning rooms containing Type II, Type III-A and Type III-B dry cleaning systems.



2007
CALIFORNIA
FIRE CODE

FIRE PROTECTION:

AUTOMATIC SPRINKLER SYSTEM..... GENERAL AUTOMATIC SPRINKLER SYSTEM SHALL COMPLY WITH THIS SECTION.(CBC 20067 SEC. 903.1)

GROUP F-1..... AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT ALL BUILDING CONTAINING A GROUP F-1 OCUPANCY WHERE ONE OF THE FOLLOWING CONDITION EXISTS. (IBC 2006 903.2.3)

1. WHERE A GROUP F-1 FIRE AREA EXCEEDS 12,000 SQ. FT.
2. WHERE A GROUP F1 FIRE AREA IS LOCATED MORE THAN THREE STORIES ABOVE GRADE PLANE OR
3. THE FIRE AREA IS LOCATED ON A FLOOR OTHER THAN THE LEVEL OF EXIT DISCHARGE.

PORTABLE FIRE EXTINGUISHERS..... PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE INTERNATIONAL FIRE **CODE. (CBC. 2007 SEC. 906.1)** CFC 2007 CHAPTER 1208.4 PORTABLE FIRE EXTINGUISHERS. PORTABLE FIRE EXTINGUISHERS SHALL BE SELECTED. INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS SECTION AND SECTION 906. A MINIMUM OF TWO 2-A:10-B:C PORTABLE FIRE EXTINGUIHER SHALL BE PROVIDED NEAR THE DOOR INSIDE DRYCLEANING AREA CONTAINING TYPE 111A DRY CLEANING SYSTEM.

NOTE:

(F) TABLE 307.1(1) MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A PHYSICAL HAZARD

COMBUSTIBLE LIQUID CLASS 111A. USED CLOSED SYSTEM 330 GAL. CBC. 2007 TABLE 307.1(1)

NO FLAMMABLE / COMBUSTIBLE, TOXIC OR HAZARDOUS MATERIALS WILL BE STORED OR USED BEYOND EXEMP AMOUNTS OF CHAPTER 3"H" OCCUPANCIES OF THE 2007 CBC

ABOVE SERVICE ENTRANCE DOOR. SIGNAGE..... "THIS DOOR MUST REMAIN UNLOCK DURING BUSINESS HOURS"