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**Socio-Economic Impact Study  
Proposed Amendments to Dry Cleaning Industry Regulations:  
Regulation 2, Rule 1; Regulation 8, Rule 17;  
Regulation 8, Rule 27; and Regulation 11, Rule 16**

Submitted to:  
Bay Area Air Quality Management District

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# Executive Summary

The Bay Area Air Quality Management District (BAAQMD) has regulated pollution emissions and VOC emissions to reduce ozone formation from solvents associated with dry cleaning operations through Regulation 2, Rule 1, Regulation 8, Rule 17, Regulation 8, Rule 27, and Regulation 11, Rule 16. These rules set limits on the types and amounts of solvents used in dry cleaning operations, and restricts the use of perchloroethylene machines. BAAQMD proposes the following rule changes.

- **Regulation 2, Rule 1, Section 120.** Rule 2-1 establishes the general regulations for the review of new sources of air pollution and for the modification and operation of existing sources. Section 120 outlines the exemptions for Dry Cleaning Equipment, initially set at 700 gallons of solvent per year. The District proposes to lower the exemption level from 700 gallons of solvent per year per facility to 200 gallons per year. Facilities that exceed the exemption limit must obtain a Permit from the District to operate.
- **Regulation 8, Rule 17 Petroleum Dry Cleaning Operations.** Rule 8-17, controls VOC emissions to reduce ozone formation through machine and solvent filtration regulations. The District proposes to amend Rule 8-17, primarily to update the equipment standards, control requirements, and solvent definitions. The proposed amendment to Rule 8-17 requires all new machines to be closed loop machines. Under the Rule, existing transfer machines would be allowed to continue operation, but could only be replaced by a closed loop machine. The amendment also establishes record keeping, reporting, and registration requirements for dry cleaning facilities. The name of the rule would be changed to Non-halogenated Solvent Dry Cleaning Operations

In addition, since the rule currently only applies to petroleum based solvents while some alternative available technologies contain a number of non-halogenated POC and NPOC solvents, the District proposes renaming the title of Rule 8-17 from “Petroleum Solvent Dry Cleaning Operations” to “Non-Halogenated Dry Cleaning Operations.”

- **Regulation 8, Rule 27 Synthetic Solvent Dry Cleaning Operations.** Rule 8-27 controls ozone formation through synthetic solvent dry cleaning operation regulations. Since its inception, the BAAQMD has established new rules to address federal and state regulatory standards, including Rule 11-16, Perchloroethylene and Synthetic Solvent Dry Cleaning Operations, as a replacement for Rule 8-27. As a result, Rule 8-27 is obsolete and the District proposes to remove it.

- **Regulation 11, Rule 16 Perchloroethylene and Synthetic Solvent Dry Cleaning Operations.** The BAAQMD replaced Rule 8-27 with Rule 11-16 to regulate perchloroethylene and synthetic solvent dry cleaning operations based on new regulatory standards at both the federal and state level. The BAAQMD proposes amending Rule 11-16, primarily to adopt requirements of the Airborne Toxics Control Measure (ATCM), a state law, for Emissions of Perchloroethylene from Dry Cleaning Operations. The ATCM prohibits the installation of new perchloroethylene dry cleaning machines and establishes a phase out plan for existing perchloroethylene machines. By amending Rule 11-16, the District will be in compliance with the state ATCM and new requirements established by the National Emissions Standards for Hazardous Air Pollutants (NESHAP).

In addition, the District's proposes three standards that are more stringent than the state ATCM. First, Rule 11-16 would prohibit the purchase of halogenated solvent spotting formulations on July 1, 2009, followed by the prohibition of their use on July 1, 2010. Second, as the state ATCM currently applies only to perchloroethylene, the District proposes to extend the ATCM requirements to other synthetic solvents regulated by Rule 11-16. Finally, the amendment to Rule 11-16 establishes reporting requirements that are not present in the state ATCM.

## **Socio-Economic Impacts**

In order to estimate the economic impacts of amending Rule 2-1, Rule 8-17, Rule 8-27, and Rule 11-16 on the affected industries, this report compares the affected industry's compliance costs with its profit ratios. The analysis uses data from the BAAQMD, US Census County Business Patterns, the IRS, and Dun and Bradstreet, a private data vendor.

### ***Economic Profile of Affected Industries***

The BAAQMD identifies the affected industries as Dry Cleaning and Laundry Services (NAICS 812320). According to the U.S. Census Bureau, there were 852 dry cleaning and laundry services businesses in the Bay Area in 2005. These businesses employed approximately 4,300 people in 2005, with over half of the businesses employing fewer than five people.

### ***Economic Impacts to Affected Industries***

According to IRS data on net income and total receipts in 2005, businesses in the personal and laundry services industry have an average rate of return of 6.1 percent, resulting in average firm net profits of \$6,400. According to BAAQMD data, the compliance costs for each rule amendment are as follows:

- **Regulation 2, Rule 1, Section 120.** Cost of compliance is \$217 per machine. The average firm with one machine can expect total costs of \$217 or 3.4 percent of profits. The average firm with two machines can expect total costs of \$434 or 6.8 percent of profits.
- **Regulation 8, Rule 17 Non-halogenated Solvent Dry Cleaning Operations.** Cost of compliance is an initial registration fee of \$180 per machine, with annual renewal costs of \$125 per machine. The average firm with one machine can expect total costs of \$180 or 2.8 percent of profits. The average firm with two machines can expect total costs of \$360 or 5.6 percent of profits.
- **Regulation 8, Rule 27 Synthetic Solvent Dry Cleaning Operations.** Removal of an outdated rule will not result in any compliance costs. Firms can expect zero impact.
- **Regulation 11, Rule 16 Perchloroethylene and Synthetic Solvent Dry Cleaning Operations.** According to the BAAQMD, the additional reporting costs should be minimal, while switching to non-halogenated solvents should result in a cost savings to firms. Firms can expect zero adverse impacts.

The impacts of each rule to the average firm fall well below the ARB's 10 percent threshold. However, the amendments could result in aggregate impacts of 12.4 percent to smaller firms operating two machines. Since the smaller firms are likely to have one machine, their aggregate impact should be closer to 6.2 percent, which is less than the 10 percent threshold.

### ***Regional Employment, Indirect, and Induced Impacts***

Since on average, the proposed amendments would not result in significant economic impacts to firms within the affected industries, the proposed amendment would not impact affected industry or regional employment. In addition, adoption of the proposed amendments would not result in any additional regional spinoff, or multiplier, impacts.

## **Impacts to Small Businesses**

Using the California Government Code 14835's definition of a small business, virtually all of the affected firms are small businesses. Since all firms would incur the same costs, the amendments do not disproportionately impact small businesses.

## Description of Proposed Rules

Since 1980, the Bay Area Air Quality Management District (BAAQMD) has regulated pollution emissions and VOC emissions to reduce ozone formation from solvents associated with dry cleaning operations through Regulation 2, Rule 120, Regulation 8, Rule 17, Regulation 8, Rule 27, and Regulation 11, Rule 16. These rules set limits on the types and amounts of solvents used in dry cleaning operations, and restricts the use of perchloroethylene machines. This section introduces each of the existing rules and proposed BAAQMD changes.

### **Regulation 2, Rule 1, Section 120 General Requirements**

Rule 2-1 establishes the general regulations for the review of new sources of air pollution and for the modification and operation of existing sources. Section 120 was adopted in October 1983 and outlines the exemptions for Dry Cleaning Equipment. The initial exemption level of 700 gallons of solvent per year for dry cleaning facilities has not been lowered since the Section was first adopted. Alternative solvent technology has progressed since 1983 and machines now use less solvent and have lower emissions.

The District proposes to lower the exemption level from 700 gallons of solvent per year per facility to 200 gallons per year. Facilities that exceed the exemption limit must obtain a Permit from the District to operate.

### **Regulation 8, Rule 17 Petroleum Solvent Dry Cleaning Operations**

The District adopted Rule 8-17, Petroleum Solvent Dry Cleaning Operations, as an ozone control measure in May 1980. At the time, all equipment types were first generation transfer units with separate washer and dryer machines. The Rule has been amended three times since its adoption. In March 1982, the District updated emission control requirements and in March 1985, BAAQMD eliminated exemptions and established solvent filtration requirements. Most recently, in September 1990, the District inserted leak check requirements, updated hazardous waste transport standards, and implemented minor improvements in control technology standards.

The District proposes to amend Rule 8-17, primarily to update the equipment standards, control requirements, and solvent definitions. Currently, the rule only applies to petroleum based solvents. While most new solvent formulations are petroleum, some alternative technologies currently available contain a number of non-halogenated POC and NPOC solvents that need to be formally recognized and incorporated into the solvent definition currently defined by the rule. As such, the

District proposes renaming the title of Rule 8-17 from “Petroleum Solvent Dry Cleaning Operations” to “Non-Halogenated Dry Cleaning Operations.”

The proposed amendment to Rule 8-17 requires all new machines to be closed loop machines. Under the Rule, existing transfer machines would be allowed to continue operation, but could only be replaced by a closed loop machine. The amendment also establishes record keeping, reporting, and registration requirements for dry cleaning facilities.

## **Regulation 8, Rule 27 Synthetic Solvent Dry Cleaning Operations**

The District originally adopted Rule 8-27 for synthetic solvent dry cleaning operations in 1980 as an ozone control measure. Since that time, the BAAQMD has established new rules to address federal and state regulatory standards. In 1994, the District’s Board adopted Rule 11-16, Perchloroethylene and Synthetic Solvent Dry Cleaning Operations, as a replacement for Rule 8-27. As a result, Rule 8-27 is obsolete and the District proposes to remove it.

## **Regulation 11, Rule 16 Perchloroethylene and Synthetic Solvent Dry Cleaning Operations**

In December 1994, the BAAQMD replaced Rule 8-27 with Rule 11-16 to regulate perchloroethylene and synthetic solvent dry cleaning operations. Rule 11-16 was based on new regulatory standards at both the federal and state level.

The BAAQMD proposes amending Rule 11-16, primarily to adopt requirements of the Airborne Toxics Control Measure (ATCM) for Emissions of Perchloroethylene from Dry Cleaning Operations, a state law which became effective on December 27, 2007. The ATCM prohibits the installation of new perchloroethylene dry cleaning machines and establishes a phase out plan for existing perchloroethylene machines. By amending Rule 11-16, the District will be in compliance with the state ATCM and new requirements established by the National Emissions Standards for Hazardous Air Pollutants (NESHAP).

The District’s proposed amendment to Rule 11-16 includes three standards that are more stringent than the state ATCM and other existing federal provisions. First, Rule 11-16 would prohibit the purchase of halogenated solvent spotting formulations on July 1, 2009, followed by the prohibition of their use on July 1, 2010. Spotting solutions are commonly used by all dry cleaning facilities to remove localized spots or stains. While many newer spotting formulations currently exist that are soy or water based, halogenated solvents such as perchloroethylene, trichloroethylene (TCE) or methylene chloride are often used during more difficult spot removal circumstances.

Currently, the state ATCM applies only to perchloroethylene. The District proposes to extend the ATCM requirements to other synthetic solvents regulated by Rule 11-16.

Finally, the amendment to Rule 11-16 establishes reporting requirements that are not present in the state ATCM. The amendment would require all facilities using perchloroethylene equipment that must phase this equipment out under the ATCM to declare their intent either to install alternative solvent equipment or to retire existing equipment by December 31, 2009. This reporting requirement will facilitate an orderly transition in advance of the perchloroethylene solvent equipment prohibition date.

This study will only analyze the impacts related to these three additional standards that go above and beyond what is required by the state ATCM.

## **Regional Trends**

This section provides background information on the demographic and economic trends for the San Francisco Bay Area, which represents the BAAQMD's District. The San Francisco Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. Regional trends are compared to statewide demographic and economic patterns since 2000, in order to show the region's unique characteristics relative to the State.

### **Regional Demographic Trends**

Table 1 shows the population and household trends for the nine county Bay Area and California between 2000 and 2008. During this time, the Bay Area's population increased by 7.6 percent, compared to 12.3 percent in California. Likewise, the number of Bay Area households grew by 7.2 percent, compared to a ten percent statewide increase.

**Table 1: Population and Household Trends, 2000-2008**

<b>Bay Area (a)</b>	<b>2000</b>	<b>2008 (est.)</b>	<b>Total Change 2000-2008</b>	<b>Percent Change 2000-2008</b>
<b>Population</b>	6,784,348	7,301,080	516,732	7.6%
<b>Households</b>	2,466,020	2,643,390	177,370	7.2%
<b>Average Household Size</b>	2.69	2.71		
<b>California</b>				
<b>Population</b>	33,873,086	38,049,462	4,176,376	12.3%
<b>Households</b>	11,502,871	12,653,045	1,150,174	10.0%
<b>Average Household Size</b>	2.87	2.94		

Notes:

(a) Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

Sources: California, Department of Finance, 2008; Claritas, 2008; BAE 2008.

The slower growth in the Bay Area is related to its relatively built out environment, compared to the state overall. While central valley locations, such as the Sacramento region, experienced large increases in the number of housing units, the Bay Area, which was relatively built out before the housing boom, only experienced moderate increases in housing units.

## Regional Economic Trends

In the five-year period, between the third quarters of 2002 and 2007, the Bay Area's economic base grew by only one percent, increasing from 3.29 million jobs to 3.32 million jobs. This represents slightly slower job growth than the State, which grew by five percent.

Manufacturing, Retail Trade, and Professional, Scientific, and Technical Services, the largest private (non-government) sectors in the Bay Area's economy, each constituted ten percent of the region's total jobs in 2007. Over the five-year period the Manufacturing sector lost 14 percent of its jobs, while the Retail Trade sector was relatively stagnant, experiencing no growth. However, during this period, the Professional, Scientific, and Technical Services sector grew by 13 percent. Statewide, the Manufacturing sector declined by 11 percent while Retail Trade and Professional, Scientific, and Technical Services grew by six and 18 percent, respectively. Overall, the Bay Area's economic base reflects the state's base, sharing a similar distribution of employment across sectors. Table 2 shows the jobs by sector in 2003 and 2007.

The affected industry, Dry Cleaning and Laundry Services, falls into the Other Services, except Public Administration sector. In 2007, the Other Services except Public Administration sector

represented four percent of the region's job base, and five percent of the state's job base. However, the region's sector experienced slower growth between 2002 and 2007, increasing by nine percent, compared to 16 percent statewide.

**Table 2: Jobs by Sector, 2002 – 2007 (a)**

Industry Sector	Bay Area					California				
	Q3 2003 (b)		Q3 2007 (c)		% Change 2003-2007	Q3 2003 (b)		Q3 2007 (c)		% Change 2003-2007
	Jobs	% Total	Jobs	% Total		Jobs	% Total	Jobs	% Total	
Agriculture, Forestry, Fishing and Hunting	19,710	1%	22,751	1%	15%	435,282	3%	441,795	3%	1%
Mining	1688	0%	2,132	0%	26%	20,308	0%	25,337	0%	25%
Construction	182,168	6%	198,440	6%	9%	806,164	5%	910,188	6%	13%
Manufacturing	358,498	11%	348,278	10%	-3%	1,532,370	10%	1,466,834	9%	-4%
Utilities	4,805	0%	5,843	0%	22%	55,648	0%	58,097	0%	4%
Wholesale Trade	124,222	4%	125,247	4%	1%	647,417	4%	719,879	5%	11%
Retail Trade	331,679	10%	338,591	10%	2%	1,574,968	11%	1,674,276	11%	6%
Transportation and Warehousing	51,741	2%	54,487	2%	5%	407,146	3%	431,593	3%	6%
Information	116,002	4%	114,415	3%	-1%	463,621	3%	475,166	3%	2%
Finance and Insurance	149,705	5%	147,137	4%	-2%	615,069	4%	614,055	4%	0%
Real Estate and Rental and Leasing	61,896	2%	59,665	2%	-4%	275,684	2%	283,925	2%	3%
Professional, Scientific, and Technical Services	274,606	9%	330,575	10%	20%	906,003	6%	1,059,422	7%	17%
Management of Companies and Enterprises	67,300	2%	58,996	2%	-12%	254,353	2%	206,120	1%	-19%
Administrative and Waste Services	180,712	6%	194,079	6%	7%	958,972	6%	1,000,102	6%	4%
Educational Services	60,980	2%	70,488	2%	16%	217,082	1%	243,996	2%	12%
Health Care and Social Assistance	282,842	9%	297,223	9%	5%	1,269,971	9%	1,374,102	9%	8%
Arts, Entertainment, and Recreation	52,850	2%	55,790	2%	6%	247,286	2%	260,712	2%	5%
Accommodation and Food Services	255,817	8%	283,526	9%	11%	1,174,673	8%	1,321,331	8%	12%
Other Services, except Public Administration	139,584	4%	147,552	4%	6%	652,212	4%	718,747	5%	10%
Unclassified	231	0%	89	0%	-61%	46,183	0%	52,002	0%	13%
Government (d)	411,273	13%	419,892	13%	2%	2,218,003	15%	2,306,723	15%	4%
<b>Subtotal</b>	<b>3,128,309</b>	<b>98%</b>	<b>3,275,196</b>	<b>99%</b>	<b>5%</b>	<b>14,778,415</b>	<b>100%</b>	<b>15,644,402</b>	<b>100%</b>	<b>6%</b>
Additional Suppressed/Confidential Employment (e)	53,878	2%	42,448	1%	-21%	n/a	0%	n/a	0%	
<b>Total, All Employment</b>	<b>3,182,187</b>	<b>100%</b>	<b>3,317,644</b>	<b>100%</b>	<b>4%</b>	<b>14,778,415</b>	<b>100%</b>	<b>15,644,402</b>	<b>100%</b>	<b>6%</b>

Notes:

(a) Includes all wage and salary employment covered by unemployment insurance.

(b) Represents employment for third quarter, 2003.

(c) Represents employment for third quarter, 2007.

(d) Government employment includes workers in all local, state and Federal sectors, not just public administration. For example, all public school staff are in the Government category.

(e) County employment for some industries were suppressed by EDD due to the small number of firms reporting in the industry for a given county.

Sources: California Employment Development Department, 2008; BAE, 2008.

# Socio-Economic Impacts

This section describes the affected industry, discusses the methodology, industry economic profile, and annualized compliance costs, and estimates the economic impacts associated with the proposed amendments to Rule 2-1, Rule 8-17, Rule 8-27, and Rule 11-16.

## Affected Industry

According to the U.S. Census Bureau, there were 852 dry cleaning and laundry services businesses in the Bay Area in 2005. These businesses employed approximately 4,300 people in 2005. As Table 3 shows, over half of dry cleaning and laundry services businesses employ fewer than five people.

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**Table 3: Profile of Dry Cleaning Industry, 2006 (a)**

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Employment	4,303
<b>Number of Establishments (by workforce size)</b>	
1-4	578
5-9	181
10-19	61
20-49	28
50-99	3
100-249	1
250+	0
Total	852

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Notes:

(a) The dry cleaning industry is defined as NAICS 812320, Drycleaning and Laundry Services (except Coin-Operated)

Sources: U.S. Census County Business Patterns, 2006; BAE, 2008

## Methodology

In order to estimate the economic impacts of the proposed amendments on the dry cleaning industry, this report compares the affected industry's annualized compliance costs with its profit ratios. The analysis uses data from the BAAQMD, US Census County Business Patterns, the IRS, and Dun and Bradstreet, a private data vendor.

## Economic Profile of Affected Industry

With over 800 businesses in the Bay Area, annual sales in the dry cleaning industry total approximately \$119.6 million. As Table 4 shows, dry cleaning businesses have average annual sales of \$105,100. However, this figure is lower for the majority of businesses with fewer than five employees; annual sales for businesses of this size averages \$62,200.

**Table 4: Bay Area Dry Cleaning Businesses Sales**

<u>Number of Employees</u>	<u>Number of Businesses</u>	<u>Average # of Employees (a)</u>	<u>Average Annual Sales (a)</u>	<u>Total Sales</u>
1-4	578	2	\$62,200	\$35,951,600
5-9	181	6	\$172,100	\$31,150,100
10-19	61	12	\$320,900	\$19,574,900
20-49	28	28	\$906,000	\$25,368,000
50-99	3	77	\$2,525,000	\$7,575,000
100-249	1	n/a	n/a	n/a
250+	0	n/a	n/a	n/a
Total	852	3	\$105,100	\$119,619,600

Notes:

(a) Based on data from a 40% sample of the dry cleaning businesses in the Bay Area.

The sample did not include any businesses with 100 employees or more.

SIC Code 7216 - Dry Cleaning Plants, Except Rug Cleaning

Sources: Dun and Bradstreet, 2008; BAE, 2008

According to IRS data on net income and total receipts in 2005, businesses in the personal and laundry services industry have an average rate of return of 6.1 percent. Table 5 estimates profits for dry cleaning businesses based on this rate of return. While profits vary greatly based on business size, Bay Area dry cleaning businesses' profits average \$6,400 annually.

**Table 5: Bay Area Dry Cleaning Businesses Profits**

<b>Number of Employees</b>	<b>Number of Businesses</b>	<b>Average Annual Sales (a)</b>	<b>Average Return on Sales (b)</b>	<b>Average Profits</b>	<b>Total Profits</b>
1-4	578	\$62,200	6.1%	\$3,800	\$2,196,400
5-9	181	\$172,100	6.1%	\$10,500	\$1,900,500
10-19	61	\$320,900	6.1%	\$19,600	\$1,195,600
20-49	28	\$906,000	6.1%	\$55,300	\$1,548,400
50-99	3	\$2,525,000	6.1%	\$154,000	\$462,000
100-249	1	n/a	6.1%	n/a	n/a
250+	0	n/a	6.1%	n/a	n/a
Total	852	\$105,100	6.1%	\$6,400	\$7,302,900

**Notes:**

(a) Based on data from a 40% sample of the dry cleaning businesses in the Bay Area.

The sample did not include any businesses with 100 employees or more.

SIC Code 7216 - Dry Cleaning Plants, Except Rug Cleaning

(b) Based on net income and total receipts for personal and laundry service businesses in 2005 as reported by the IRS.

Sources: Dun and Bradstreet, 2008; IRS, 2005; BAE, 2008

## Description of compliance costs

### **Regulation 2, Rule 1, Section 120**

Approximately 95 percent of existing exempt dry cleaning facilities will continue to qualify for the Rule 2-1 Section 120 exemption. The remaining 5 percent, which are larger solvent users, will need permits to operate. With approximately 330 facilities currently qualifying for the exemption, an estimated 17 to 20 facilities will lose their permit exemption status under the proposed change.

The cost to the 17 to 20 facilities that will lose their exemption status is minimal. These businesses will need to apply for a permit to continue operations. Annual permits for loss of exemption cost \$217 per drum for machines with a capacity of no more than 100 pounds. An additional \$4.50 per pound is assessed for the machine capacity that exceeds 100 pounds.

### **Regulation 8, Rule 17**

BAAQMD anticipates minimal impacts as a result of amending Rule 8-17. As discussed previously, the amendment would require all new equipment to be closed loop while allowing for the continued operation of existing transfer machines. Closed loop equipment has been industry standard for over ten years. Lower operational costs associated with closed loop equipment led to the abandonment of older transfer equipment that dominated most of the 20<sup>th</sup> Century. Because of the widespread use of closed loop equipment in the industry already and the lower operational costs associated with these machines, the proposed amendment to Rule 8-17 is not anticipated to generate significant compliance costs for businesses.

The proposed amendment does add a registration requirement for owners and operators of dry cleaning machines that are exempt from the permit requirements of Regulation 2, Rule 1. Operators of non-halogenated dry cleaning machines must pay an initial registration fee of \$180 per machine and subsequent annual renewal fees of \$125 per machine.

**Regulation 8, Rule 27**

There is no compliance cost associated with the proposed removal of the obsolete Rule 8-27.

**Regulation 11, Rule 16**

As discussed earlier, this report only assesses the impacts associated with the proposed amendments to Rule 11-16 that go above and beyond what is required by the state ATCM perchloroethylene regulations. The three additional standards are prohibition of halogenated spotting solutions, extension of the state ATCM to all synthetic solvents, and reporting requirements for facilities with perchloroethylene equipment.

The proposed prohibition of halogenated solvents in spotting solutions is not anticipated to generate additional costs for dry cleaning businesses. As Table 6 shows, the cost of TCE based spotting chemicals is higher than the cost of all alternative spotting solutions. According to BAAQMD staff, even if distributors apply substantially higher markups for alternative spotting solutions, the halogenated solution would remain more costly.

**Table 6: Price Estimates of Spotting Agents**

<b>Spotting Agent</b>	<b>Price per Gallon</b>
<b>Halogenated Solvents</b>	
TCE (Perc trichloroethylene)	\$46
<b>Alternatives</b>	
Pyrotex (Acetate HC)	\$38-\$42
Laidlaw (HCs)	\$40
Cold Plus	\$36
Soy Gold 2500	\$25
Mirachem NP 2520	\$20
DPM	\$25
90% Soy Gold 2500/10% Acetone	\$25
90% Soy Gold 2500/10% DPM	\$26
90% DPM/10% Acetone	\$24

Sources: BAAQMD, 2008; BAE, 2008

BAAQMD does not anticipate additional compliance costs associated with extending the state ATCM beyond perchloroethylene to all synthetic solvents. Because Freon and TCA (111-trichloroethane) solvent dry cleaning has largely been phased out, perchloroethylene is the primary synthetic solvent in use currently. As such, there is no additional compliance cost associated with

extending the state ATCM.

The proposed reporting requirements for facilities with perchloroethylene equipment will not result in significant compliance costs for businesses. The one-time declaration of intent to install alternative equipment or retire existing equipment is a minor administrative requirement that will not incur major costs.

## **Affected Industry Economic Impact Analysis**

In order to determine the economic impacts of the proposed amendments on dry cleaning businesses of various sizes, this analysis compares estimated compliance costs with business revenues to determine whether costs result in profit losses of 10 percent or more. The California Air Resources Board (ARB) uses the 10 percent threshold as a proxy for burden. Profit losses greater than 10 percent are considered to indicate a potential for significant adverse economic impacts.

### ***Regulation 2, Rule 1, Section 120***

The BAAQMD expects that between 17 and 20 businesses will lose their exemption under Rule 2-1 as a result of the proposed amendment. Table 7 shows the annual permit fee as a share of total profit for dry cleaning businesses. Because BAAQMD assesses permit fees on a per machine basis, costs are estimated for businesses with one machine and two machines. It should be noted that a large majority of dry cleaning businesses operate a single dry cleaning machine; only 8 percent of facilities have two machines and less than one percent have more than two machines. This analysis assumes machine capacities are below 100 pounds, therefore resulting in a permit fee of only \$217 per machine. The ARB estimates that the median capacity of machines ranges from 40 to 50 pounds.

**Table 7: Compliance Cost of Rule 2-1 as Share of Profits**

Number of Employees	Average Profits	Businesses w/ 1 Machine		Businesses w/ 2 Machines	
		Compliance Cost (a)	Share of Annual Profit	Compliance Cost (a)	Share of Annual Profit
1-4	\$3,800	\$217	5.7%	\$434	11.4%
5-9	\$10,500	\$217	2.1%	\$434	4.1%
10-19	\$19,600	\$217	1.1%	\$434	2.2%
20-49	\$55,300	\$217	0.4%	\$434	0.8%
50-99	\$154,000	\$217	0.1%	\$434	0.3%
100-249	n/a	\$217	n/a	\$434	n/a
250+	n/a	\$217	n/a	\$434	n/a
Total	\$6,400	\$217	3.4%	\$434	6.8%

Notes:

(a) Assumes machine capacity is less than 100 pounds.

Sources: Dun and Bradstreet, 2008; BAAQMD, 2008; BAE, 2008

As Table 7 shows, permit costs range from 0.1 percent to 5.7 percent of annual profits for businesses with one machine and between 0.3 percent and 11.4 percent for businesses with two machines. Based on this analysis, only businesses with two machines and fewer than five employees would experience compliance costs that exceed 10 percent of profits. However, given the fact that 92 percent of businesses operate just one machine, it is unlikely that the smallest dry cleaning businesses (with one to four employees) would operate two machines and be subject to the \$434 permit fee. It is much more likely that the larger businesses would have more than one machine, and thus, be subject to the \$434 permit fee.

This analysis indicates that the 17 to 20 businesses that are anticipated to lose their exemption status as a result of the proposed amendment can expect to pay permit fees that are below 10 percent of total annual profits. This level of impact is not considered significant and would not be expected to affect employment levels or result in business closure.

### **Regulation 8, Rule 17**

The proposed amendment to Rule 8-17 would result in an initial registration fee of \$180 and an annual renewal fee of \$125 per machine. Table 8 shows the fees as a percent of total profits for businesses with one and two machines.

**Table 8: Compliance Costs of Rule 8-17 as Share of Profits**

Number of Employees	Average Profits	Businesses w/ 1 Machine		Businesses w/ 2 Machines	
		Compliance Cost	Share of Annual Profit	Compliance Cost	Share of Annual Profit
<b>Initial Registration Fee</b>					
1-4	\$3,800	\$180	4.7%	\$360	9.5%
5-9	\$10,500	\$180	1.7%	\$360	3.4%
10-19	\$19,600	\$180	0.9%	\$360	1.8%
20-49	\$55,300	\$180	0.3%	\$360	0.7%
50-99	\$154,000	\$180	0.1%	\$360	0.2%
100-249	n/a	\$180	n/a	\$360	n/a
250+	n/a	\$180	n/a	\$360	n/a
Total	\$6,400	\$180	2.8%	\$360	5.6%
<b>Renewal Fee</b>					
1-4	\$3,800	\$125	3.3%	\$250	6.6%
5-9	\$10,500	\$125	1.2%	\$250	2.4%
10-19	\$19,600	\$125	0.6%	\$250	1.3%
20-49	\$55,300	\$125	0.2%	\$250	0.5%
50-99	\$154,000	\$125	0.1%	\$250	0.2%
100-249	n/a	\$125	n/a	\$250	n/a
250+	n/a	\$125	n/a	\$250	n/a
Total	\$6,400	\$125	2.0%	\$250	3.9%

Sources: Dun and Bradstreet, 2008; BAAQMD, 2008; BAE, 2008

The initial and renewal registration fees for exempt businesses fall below 10 percent of the total annual profits for businesses of all sizes. On average, businesses with one machine can expect the initial registration fee to be approximately 2.8 percent of their annual profits and the renewal registration fee to be approximately 2.0 percent. Again, these fees do not constitute significant economic impacts to dry cleaning businesses and are not expected to affect employment levels or cause business closures in the industry.

### **Regulation 8, Rule 27**

There is no economic impact associated with the proposed removal of the obsolete Rule 8-27.

### **Regulation 11, Rule 16**

As previously discussed, the proposed amendments to Rule 11-16 are not expected to generate compliance costs. The prohibition of halogenated spotting solutions would result in cost savings for businesses due to the fact that alternative spotting solutions cost less than halogenated solutions. Furthermore, the reporting requirements and extension of the ATCM to all synthetic solvents are not expected to generate compliance costs. As a result, there are no significant economic impacts associated with the proposed amendments to Rule 11-16.

## **Affected Industry and Regional Employment Impacts**

The proposed amendments to Rule 2-1, Rule 8-17, Rule 8-27, and Rule 11-16 are not expected to result in significant economic impacts to businesses within the dry cleaning industry. As such, the proposed amendments will not impact the dry cleaning industry or regional employment.

## **Regional Indirect and Induced Impacts**

Indirect and induced impacts refer to regional multiplier effects of increasing or decreasing regional economic activity. If the proposed amendments to the rules were to significantly impact local businesses, any closures would result in direct regional economic losses. Firms would no longer buy goods from local suppliers, thereby resulting in reduced indirect impacts, or business-to-business expenditures. In addition, businesses would no longer employ regional residents, resulting in reduced induced impacts in the form of household spending.

Because the proposed amendments are not anticipated to result in significant direct impacts to the dry cleaning industry, its adoption would not generate any indirect or induced impacts.

## Impact on Small Businesses

According to California Government Code 14835, a small business is any business that meets the following requirements:

- Must be independently owned and operated;
- Cannot be dominant in its field of operation;
- Must have its principal office located in California;
- Must have its owners (or officers in the case of a corporation) domiciled in California; and
- Together with its affiliates, be either:
  - A business with 100 or fewer employees, and an average annual gross receipts of \$10 million or less over the previous three tax years, or
  - A manufacturer with 100 or fewer employees.

Using these definitions, virtually all dry cleaning businesses in the Bay Area are small businesses. However, because this analysis determined that the proposed amendments to the rules will generate only minor compliance costs associated with new registration fees and will have no significant impacts to businesses, small dry cleaning businesses are not anticipated to experience adverse impacts.