



Dry Cleaning ATCM Amendments

Workshop

September 19, 2006

California Environmental Protection Agency

Air Resources Board



Agenda

- Background
- Key Elements of the Draft Regulation
- Summary of Draft Regulation
- Impacts of Draft Regulation
- Amendment Schedule
- AB 998 Status
- Questions/Discussion



Background

- ARB identifies Perc as a toxic (1991)
- ARB adopts control measures:
 - ⇒ Dry Cleaning (1993)
 - ⇒ Aerosol Adhesives (2000)
 - ⇒ Automotive Products (2000)
 - ⇒ Consumer Products (2004)
- Districts adopt degreasing rules (1990s)

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Background

- Evaluation process began in 2003
- Board hearing in May 2006
 - ⇒ Did not proceed with the proposed rulemaking
 - ⇒ New rulemaking to phase out Perc from dry cleaning operations

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Background

Number of Perc Machines in Operation (2006):

Facility Description	Number of Machines
Facilities with Converted and Primary Control Machines	1,240
Facilities with Integral and add on Secondary Control Machines	880
Co residential Facilities with Perc machines	50
Total Facilities in South Coast	1,540
Total Statewide Perc Dry Cleaning Facilities	3,650



Background

Number of Perc Alternatives in Operation (2006):

Perc Dry Cleaning Alternatives	Number of Machines
Hydrocarbon	1,100
Green Earth®	190
Water Based Cleaning Systems ¹	170
Carbon Dioxide	12
Others (Rynex3, PureDry, Stoddard)	70

1. Includes mixed shops



Key Elements of Draft Regulation

- Prohibit sales of Perc machines on January 1, 2008
- Prohibit new Perc facilities on January 1, 2008
- Phase out Perc co-residential facilities and converted Perc machines by July 1, 2010
- Start phase out other Perc machines on July 1, 2010
- Remove all Perc machines from service by January 1, 2023

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Key Elements of Draft Regulation

- Recordkeeping and reporting for Perc distributors
- Recordkeeping and reporting for Perc manufacturers

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Summary of Draft Regulation

- **Applicability**
 - ⇒ Sellers, distributors, installers, owners, and operators of Perc machines
 - ⇒ Sellers of Perc to dry cleaners



Summary of Draft Regulation

- **New Facilities**
 - ⇒ Prohibits sale or lease of Perc machines
 - ⇒ Prohibits installation or operation of Perc dry cleaning machine



Summary of Draft Regulation

- **Relocated Facilities**
 - ⇒ If approved by the district, existing facilities may relocate within the same district

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Summary of Draft Regulation

- **Existing Facilities**
 - ⇒ Prohibits sale or lease of Perc machines on January 1, 2008
 - ⇒ Prohibits drying cabinets and dip tanks on January 1, 2008
 - ⇒ Converted machines, Perc machines in co residential facilities, and machines whose age cannot be determined removed from service by July 1, 2010

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Summary of Draft Regulation

- Existing Facilities

- ⇒ Starting on July 1, 2010, all other existing Perc machines removed from service when they are 15 years old
- ⇒ By January 1, 2023, all Perc dry cleaning machines remove from service

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Summary of Draft Regulation

- Existing Facilities

- ⇒ Keep on site a spare set of gaskets
- ⇒ Keep on site a spare lint filter
- ⇒ Annual leak inspection

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Summary of Draft Regulation

- Requirements for Perc Manufacturers
 - ⇒ Maintain monthly records of Perc sold
 - ⇒ Provide contact information for distributors
 - ⇒ Report any changes to the list of distributors

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Summary of Draft Regulation

- Requirements for Perc Distributors
 - ⇒ Maintain monthly records of Perc purchased
 - ⇒ Maintain monthly records of Perc sold
 - ⇒ Maintain contact information for each Perc dry cleaner

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Summary of Draft Regulation

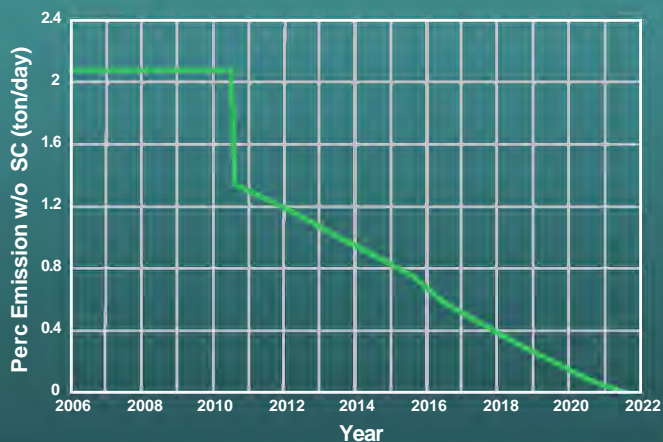
- Requirements for Perc Distributors
 - ⇒ Report annually the volume of Perc sold
 - ⇒ Provide contact information for distributors
 - ⇒ Report any change to contact information or list of distributors

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Impacts of Draft Regulation

Estimated Perc Emission Trend



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Impacts of Draft Regulation

- Emissions and risks

- ⇒ Reduce Perc emissions by about 2.1 tons/day
- ⇒ 100% risk reduction from Perc machines in dry cleaning facilities

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Impacts of Draft Regulation

Current Machine Costs

Machine Type	Installation Cost	Typical Machine or System Cost	Machine Cost Difference Perc Primary Control to Alternative	Machine Cost Difference Perc Secondary Control to Alternative
Perc Secondary Control (40 lb. capacity)	\$2,500 to \$5,000	\$44,000		
Perc Secondary Control (45 lb. capacity)	\$2,500 to \$5,000	\$50,000		
Hydrocarbon (50 lb. capacity)	\$5,000 to \$6,000	\$68,000	+\$24,000	+\$18,000
GreenEarth (50 lb. capacity)	\$5,000 to \$6,000	\$68,000	+\$24,000	+\$18,000
Professional Wet Cleaning System ⁶	\$2,500 to \$6,000	\$39,000 to \$63,000	\$5,000 to +\$19,000	\$11,000 to +\$13,000
CO ₂ (60 lb. capacity)	\$50,000	\$143,000	+\$99,000	+\$93,000

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Impacts of Draft Regulation

Current Recurring Costs

Technology	Annual Solvent Cost	Cost of Detergent /Spotting Agents	Gas and Elect. Costs	Permit Fees and Tng	Licen . Fee	Ave Mnt. Cost	Delta Labor Cost	Waste Disp. Cost	Total Annual Recurring Cost
Perc (Primary)	\$1,600	\$1,500	\$4,430	\$330	N/A	\$700	N/A	\$2,500	\$11,890
Perc (Secondary)	\$1,360	\$1,500	\$4,430	\$330	N/A	\$700	N/A	\$2,500	\$11,650
Hydrocarbon	\$940	\$1,500	\$4,430	\$300	N/A	\$620	\$1,300	\$2,640	\$11,960
GreenEarth	\$1,770	\$1,100	\$5,220	N/A	\$2,500	\$1,220	\$1,300	\$2,260	\$15,110
Professional Wet Cleaning	\$20	\$2,360	\$6,360	N/A	N/A	\$320	\$5,720	\$0	\$14,780
Carbon Dioxide	\$2,970	\$1,500	\$3,230	N/A	N/A	\$2,490	\$1,040	\$490	\$12,880

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Impacts of Draft Regulation

■ Cost

- ⇒ Statewide cost of the draft regulation is estimated to be about \$39 million
- ⇒ Cost effectiveness of the draft regulation is estimated to be about \$2.9 per pound of Perc reduced

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Amendment Schedule

- Staff report and the proposed amendments available on December 8 for a 45 day formal public review
- Board hearing to officially consider revised amendments to the Dry Cleaning ATCM on January 25, or 26, 2007

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AB 998 Status

- 2006 Grant Program
 - ⇒ 30 pre approved applicants
 - ⇒ 9 are still in the process
- 2006 Demonstration Program
 - ⇒ 2 proposals received
 - ⇒ proposals in the review process

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