



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

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# Presentation Outline

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- **Dry cleaning technology**
- **Regulatory overview**
- **Summary of staff proposal**
- **Remaining rule development schedule**
- **Q & A**

# Dry Cleaning Technology

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## ➤ Dry Cleaning

- The use of solvents, other than water, to clean fabrics

## ➤ Dry Cleaning Machines

- 1<sup>st</sup> Generation
  - Transfer machines (vented)
- 2<sup>nd</sup> Generation
  - Dry-to-dry machines (vented)
- 3<sup>rd</sup> Generation
  - Closed-loop machines (non-vented)
- 4<sup>th</sup> Generation
  - Secondary control machines

# Regulated Dry Cleaning Solvents

<b>Solvent</b>	<b>Applicable District Rule</b>	<b>Primary Issue</b>
<b>Perc</b>	<b>11-16</b>	<b>Toxicity</b>
<b>Trichloroethylene (TCE)</b>	<b>11-16</b>	<b>Toxicity</b>
<b>N-propyl bromide (e.g., DrySolv™)</b>	<b>11-16</b>	<b>Toxicity</b>
<b>Stoddard Solvent</b>	<b>8-17</b>	<b>Ozone precursor</b>
<b>High flash point hydrocarbons (e.g., Exxon DF2000™)</b>	<b>8-17</b>	<b>Ozone precursor</b>
<b>Glycol ethers (e.g., Rynex™)</b>	<b>8-17</b>	<b>Ozone precursor</b>
<b>Volatile methyl siloxanes (e.g., Green Earth®)</b>	<b>8-17</b>	<b>Potential toxicity</b>
<b>Carbon dioxide Water (wet cleaning)</b>	<b>Not regulated</b>	<b>Industry acceptance</b>

# Dry Cleaning Machines

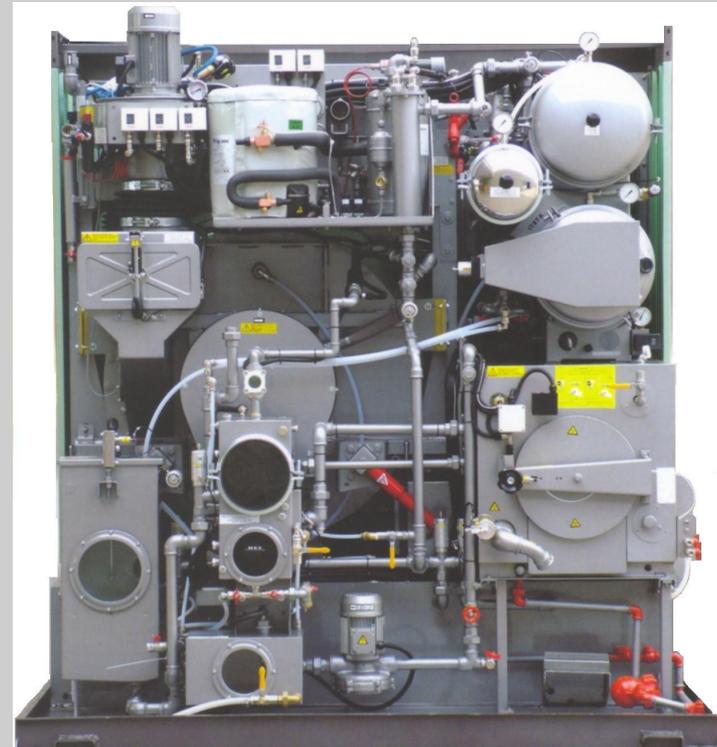


Perc secondary control machine with integrated carbon adsorber



Hybrid closed-loop machine for petroleum & water cleaning

## Dry Cleaning Machines (cont.)



Closed-loop machine for high flash-point hydrocarbon or siloxane

# Regulatory Overview

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## ➤ District

- **Regulation 11, Rule 16:** Perchloroethylene & Synthetic Solvent Dry Cleaning Operations [updated 2009]
- **Regulation 8, Rule 17:** Nonhalogenated Solvent Dry Cleaning Operations [updated 2009]

## ➤ State

- **Airborne Toxic Control Measure (ATCM)**  
[updated December 2007]

## ➤ Federal

- **National Emission Standards for Hazardous Air Pollutants (NESHAP)** [updated July 2008]

# Summary of Regulation 11-16 Current Requirements

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## ➤ **Effective January 1, 2008**

- Prohibit new installations of Perc equipment
- Prohibit dip tanks & drying cabinets
- Enhanced recordkeeping & reporting requirements
- Enhanced maintenance & operational requirements
- New requirements for Perc manufacturers & distributors to keep records and report sales of Perc to dry cleaners

## ➤ **Effective July 1, 2010**

- Prohibit Perc machines in co-residential facilities, converted machines, & machines > 15 years (appx ~ 273 in 2010)

## ➤ **Effective January 1, 2023**

- Prohibit all Perc dry cleaning

# Summary of Regulation 11-16 Current Requirements (continued)

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## Existing Facilities

- Facility must report make, model, serial number, and age of machine.

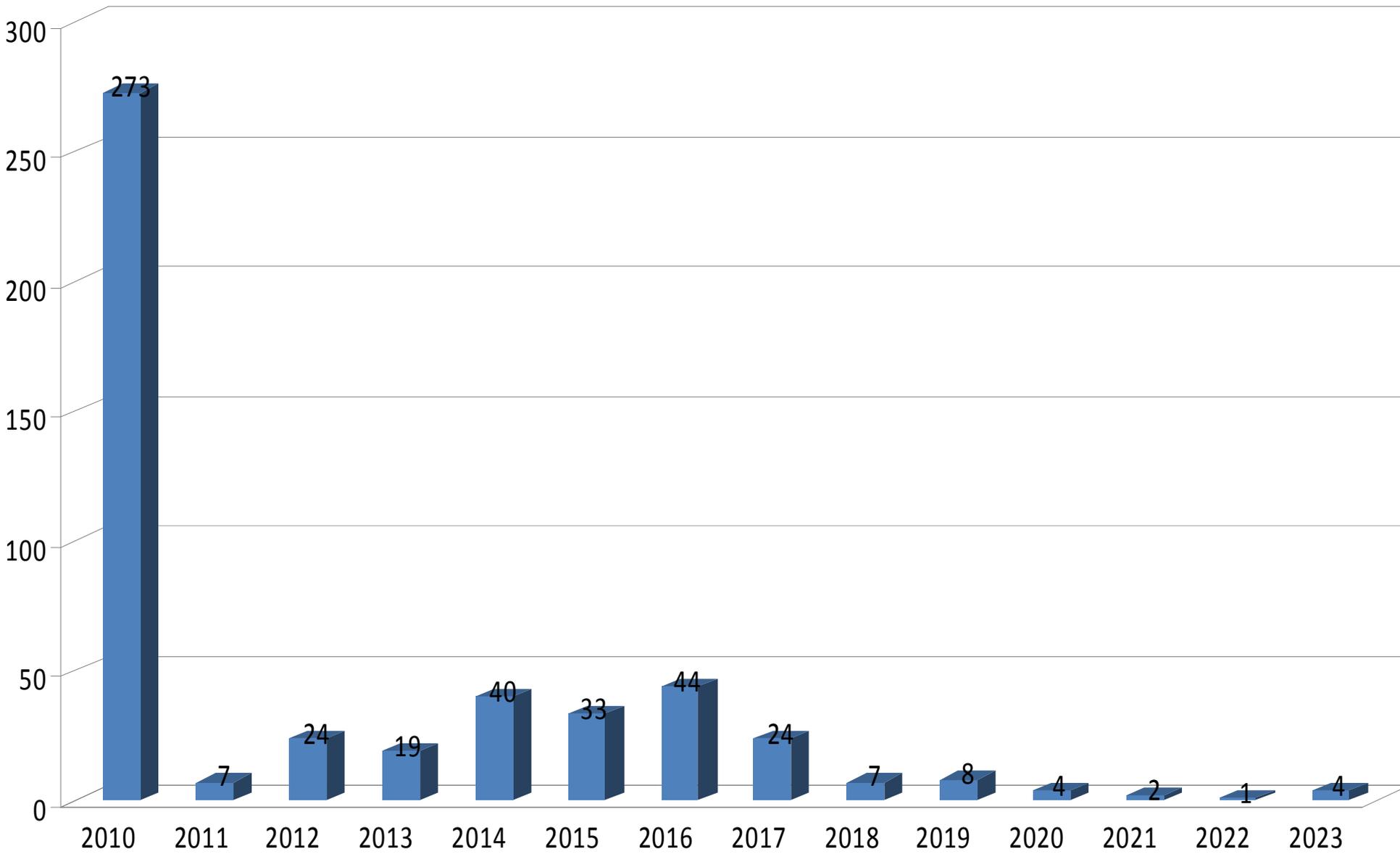
## First Compliance Deadline: December 31, 2009

**All facilities using Perc solvent must declare either:**

- **Their intention to convert to an alternative (non-Perc) dry cleaning method and the expected date of installation for the non-Perc equipment, or**
- **The date their Perc dry cleaning facility will stop operating.**

For conversion: submit to the Air District a completed application for an Authority to Construct for the appropriate permit or exemption for the non-Perc equipment the facility intends to install.

# Existing 15 Yr Machine Phase-out Timeline



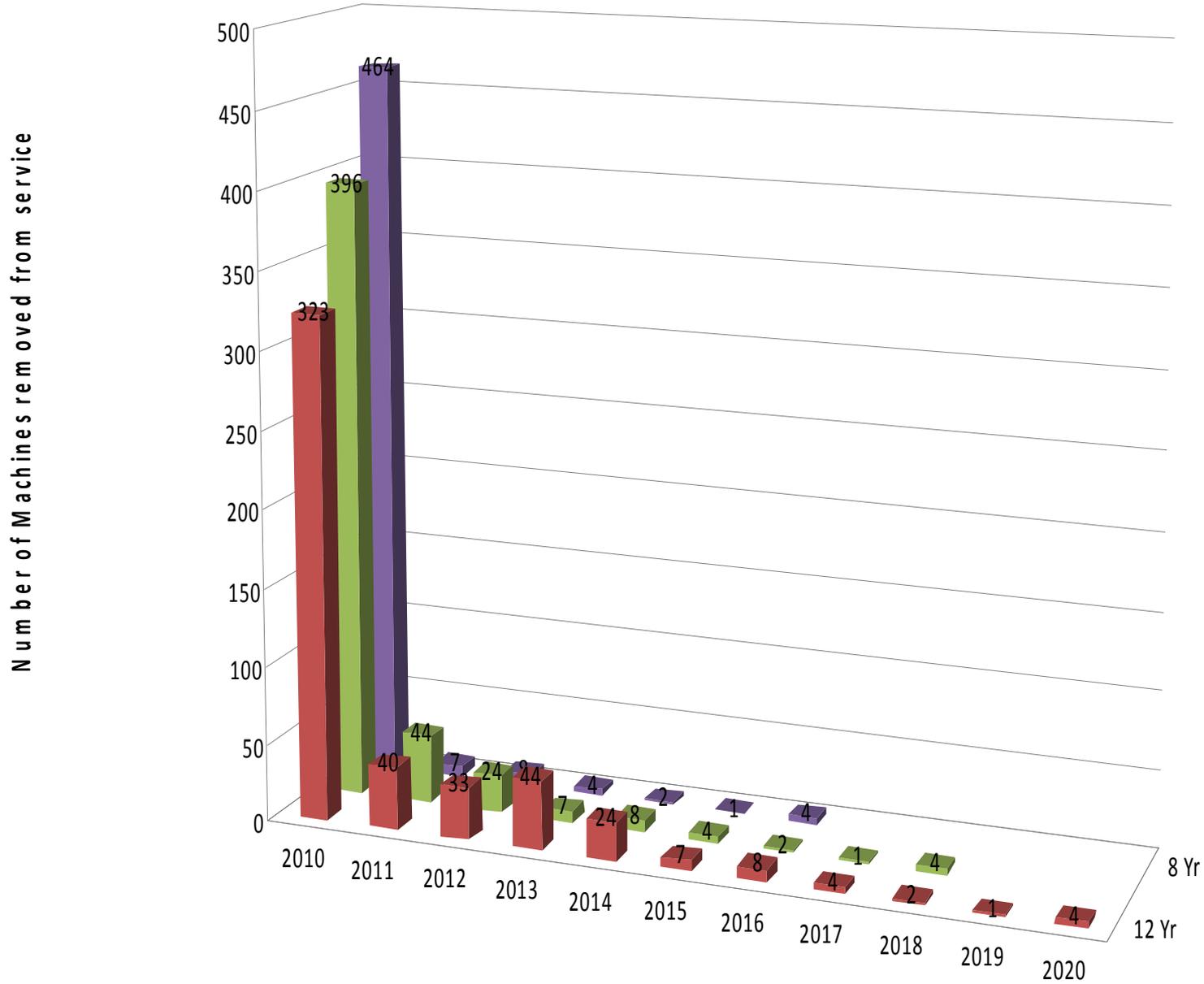
# Proposed Amendments to District Regulation 11, Rule 16

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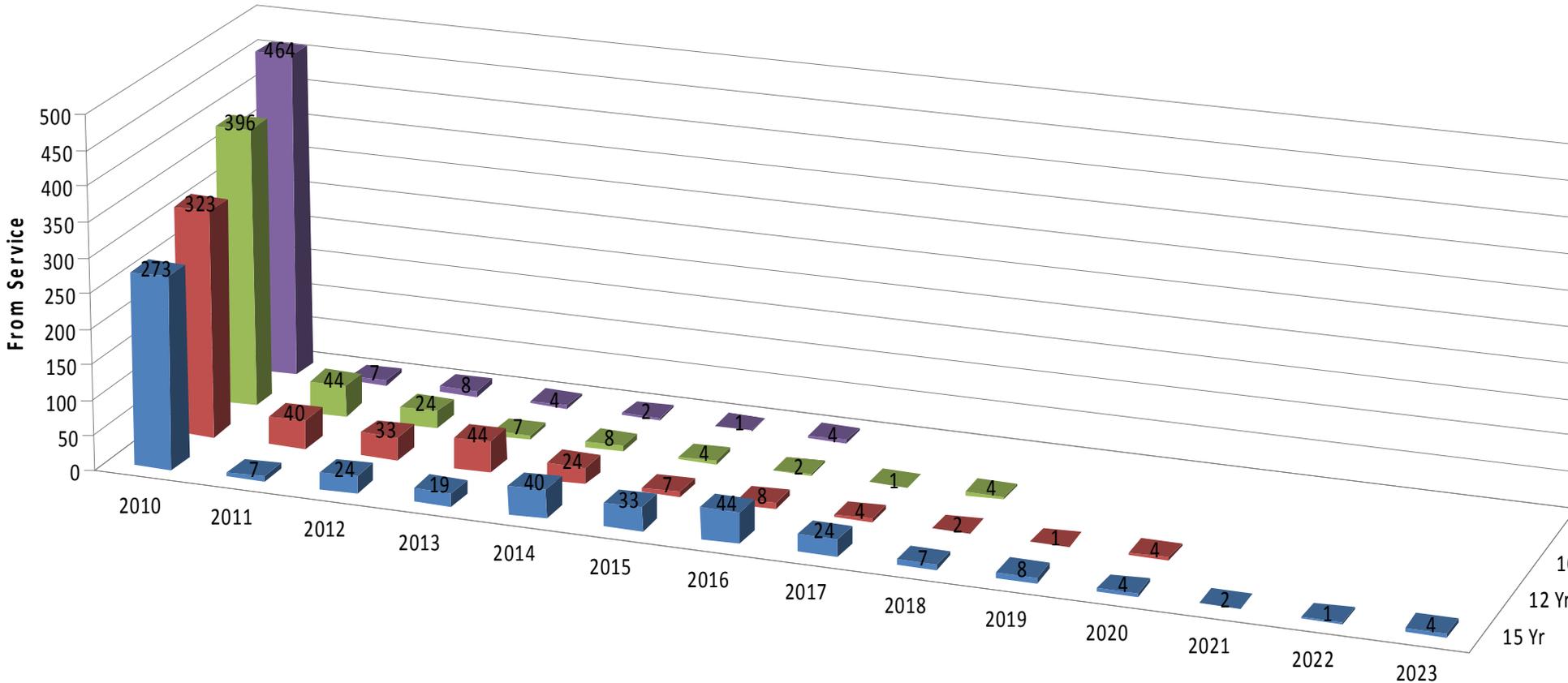
## ➤ Optional machine lifespan for Perc phase-out:

- 12 year equipment phase out.
- 10 year equipment phase out.
- 8 year equipment phase out.

# Proposed Machine Phase-out Timelines



# Existing vs. Proposed Machine Phase-out Timeline



# Remaining Rule Development Schedule

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## ➤ **Written Public Comments**

- Due on July 01, 2009
- Stationary Source Committee July 20, 2009

## ➤ **Review Additional Information**

- Draft Final Proposal

## ➤ **Public Hearing to Consider Adoption**

- August/September 2009



## Address all Dry Cleaner Questions to:

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Q & A