

# Proposed Amended Dry Cleaning Rule for Philadelphia

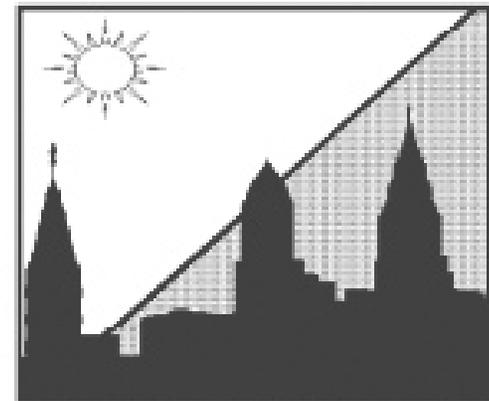
Roger Fey

Prasad Philip

Dawn Mason

Air Management Services

November 05, 2008



PHILADELPHIA DEPT. OF PUBLIC HEALTH  
**AIR MANAGEMENT  
SERVICES**

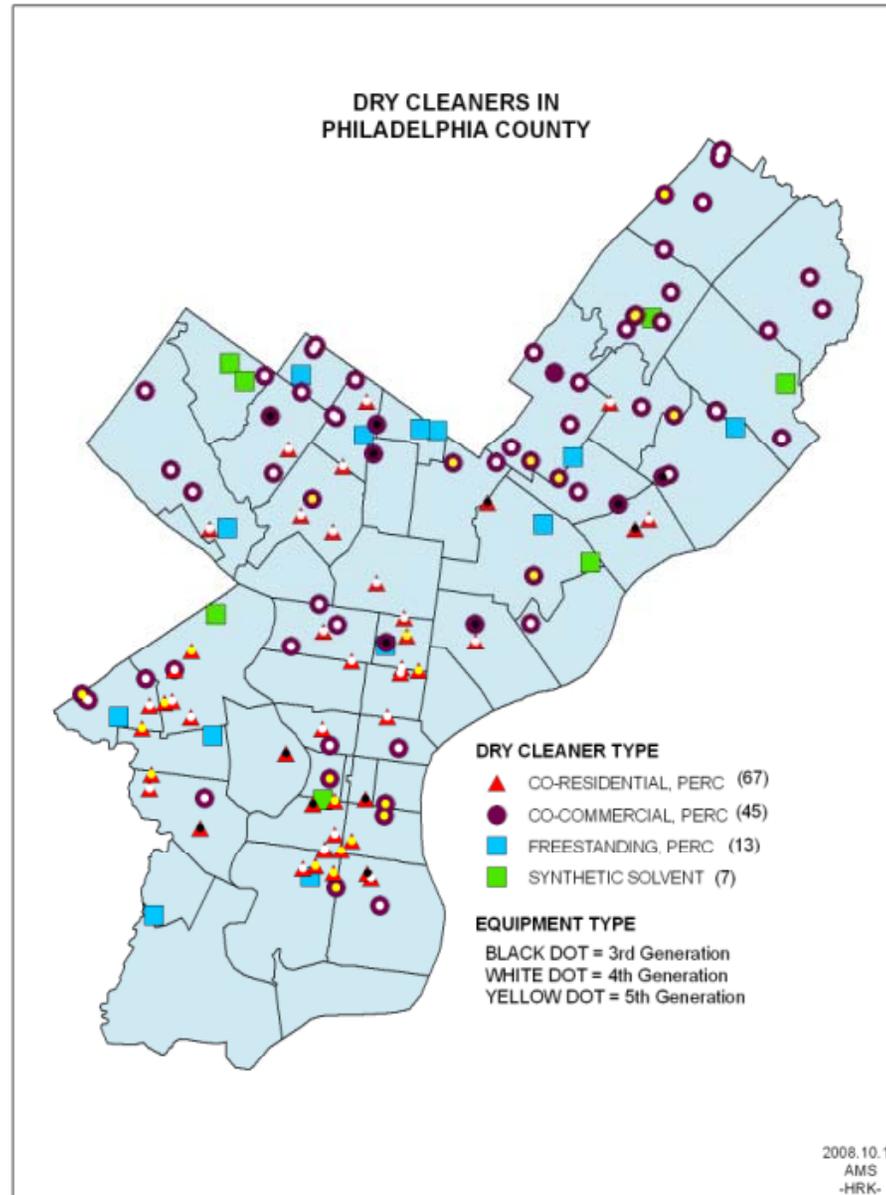
# Introduction

- **On September 4, 2007, the Air Pollution Control Board (APCB) directed Air Management Services (AMS) to draft a regulation to control dry cleaning facilities using Perchloroethylene (perc) as a cleaning solvent**
- **On August 5, 2008, the draft regulation was proposed to the APCB**
- **On September 10, 2008, the APCB met with the PA & DE Dry Cleaner Association (DCA)**
- **On September 16, 2008, AMS met with the Korean Dry Cleaners Association (KDCA)**
- **On October 16, 2008, the DCA e-mailed its draft version to AMS**
- **On October 24, 2008, AMS revises the draft regulation for APCB consideration**

# Summary of Proposed Regulation

- Permits and licenses are required for installing and operating dry cleaning machines using perchloroethylene (perc) as a cleaning solvent
- Dry cleaning machines using perc shall not be installed nor operated in facilities adjacent to residential or sensitive population locations after 2 years of the effective date
- All perc cleaning machines older than 15 years shall be replaced with non-perc machines
- No co-located perc dry cleaning facilities will be permitted after 2016
- Within 2 years of the effective date, the dry cleaning machines must be at a minimum a 4<sup>th</sup> generation machine
- The time frame for the co-located perc facilities to implement the vapor barrier or exhaust system and a buffer zone has been lengthened from 6 months to 1 year after the effective date
- The requirements for both a vapor barrier and a general exhaust system has been amended to give the option of a barrier or a professionally designed ventilation system
- A trained operator must inspect the machines weekly for leaks

# Dry Cleaners in Philadelphia County



# Results of Grab Samples

- AMS collected 15 grab one-minute samples in businesses next to 15 different dry cleaning facilities (designated as co-commercial) in Philadelphia
- AMS found that perc concentrations in these locations vary from zero to 5792  $\mu\text{g}/\text{m}^3$

# Results of 24-hr Samples

- AMS analyzed twenty six (26) 24-hour samples in businesses next to eight (8) different dry cleaning facilities (designated as co-commercial) in Philadelphia
- AMS found that perc concentrations in these locations vary from three to 5860  $\mu\text{g}/\text{m}^3$
- On Tuesday November 4<sup>th</sup>, two (2) additional businesses were sampled for perc
- The NY State Dept. of Health derived a health-based guideline for perc in residential air and recommends that the average air level in a residential community not exceed 100  $\mu\text{g}/\text{m}^3$  of perc (  $1 \times 10^{-4}$  cancer risk)

# Perc Concentrations (24-hr) at Businesses Neighboring Perc Plants (Results in $\mu\text{g}/\text{m}^3$ )

Location	Sampling Dates (2008)									
	08/28	09/03	09/09	09/12	09/18	09/24	10/05	10/15	10/22	10/29
A	491	1489	2140	---	---	---	---	---	---	---
B	1452	881	319	---	---	---	---	---	---	---
C	2747	436	338	---	---	---	---	---	---	---
D	---	---	---	3	9	INV	---	---	---	---
E	---	---	---	25	INV	15	---	---	---	---
F	---	---	---	58	57	95	1281*	3968*	1372*	N/A
G	---	---	---	---	---	---	1162	128	380	---
H	---	---	---	---	---	---	---	5860	1715	N/A

# Adopted Standards for Perc in CA

- SCAQMD (South Coast Air Quality Management District) in CA - Rule 1421 (adopted 12/1994 last amended 12/2002)
  - New facilities shall not use perc machines and existing facilities shall not install additional perc machines after 01/2003
  - Facilities shall not operate any converted machines after 07/2004
  - Facilities shall not operate a system w/o a secondary control after 11/2007
  - Full transition to non-perc alternatives by end of 2020
- CARB (California Air Resource Board) - (adopted 12/2007)
  - Use of perc will be completely banned by start of 2023
  - No new perc-using machines will be installed in CA beginning 01/2008
  - No existing perc-using machines in co-residential facilities will be allowed to operate by 07/2010
  - Perc machines that have been converted to use a primary emission control device or are 15 years or older must also be removed from service by 07/2010

# Adopted Standards for Perc in NY

- NYSDEC (NY State Dept. of Environmental Conservation) and NYCDEP (NYC Dept. of Environmental Protection) - (adopted 1997-1998) – 6 NYCRR Part 232
  - Only new NYSDEC certified 4<sup>th</sup> generation machines may be installed when replacing old, or adding new equipment beginning 06/2003
  - Perc containment (vapor barriers/room enclosures) and ventilation required for dry cleaning facilities in mixed-use buildings

# Proposed Standards for Perc in NJ

- NJDEP (NJ Department of Environmental Protection) - (proposed 12/2007)
  - All existing co-residential perc plants to eliminate use of perc by 07/27/2009
  - Starting in 2010, replace 3<sup>rd</sup> generation machines with 4<sup>th</sup> generations machines or install a vapor barrier (applies to co-located commercial and stand-alone facilities)
  - Starting 2009, perc dry cleaning facilities must use a spill proof, vapor balance connection to add perc to the machines
  - Fully eliminate perc usage from dry cleaners by beginning of 2021

Questions?

# Business Types Neighboring Plants

Neighbors and Machine Generation of Perc Plants 24-hr Samples		
Location	Businesses	Generation of Machine
A	Restaurant & Bar	4 <sup>th</sup>
B	Office	4 <sup>th</sup>
C	Office	3 <sup>rd</sup> (2 machines) and 4 <sup>th</sup> (1 machine)
D	Barber Shop	3 <sup>rd</sup>
E	Beauty Salon	3 <sup>rd</sup>
F	Children Daycare	4 <sup>th</sup>
G	Delicatessen	4 <sup>th</sup>
H	Office	4 <sup>th</sup> (2 machines)
I	Retail Shop	4 <sup>th</sup>
J	Retail Shop	5 <sup>th</sup>