

Potential OTC Regional Control Measures

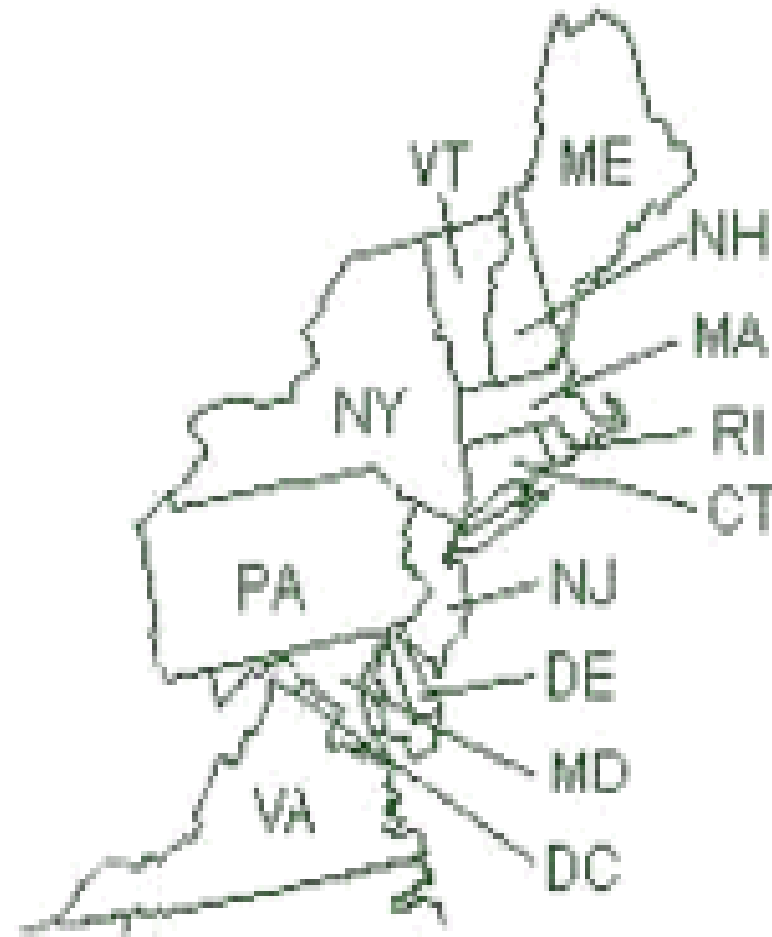
New Jersey Department of Environmental Protection
Division of Air Quality

Air Compliance and Enforcement Academy
May 10, 2012

How Ground Level Ozone is Formed

Ozone Transport

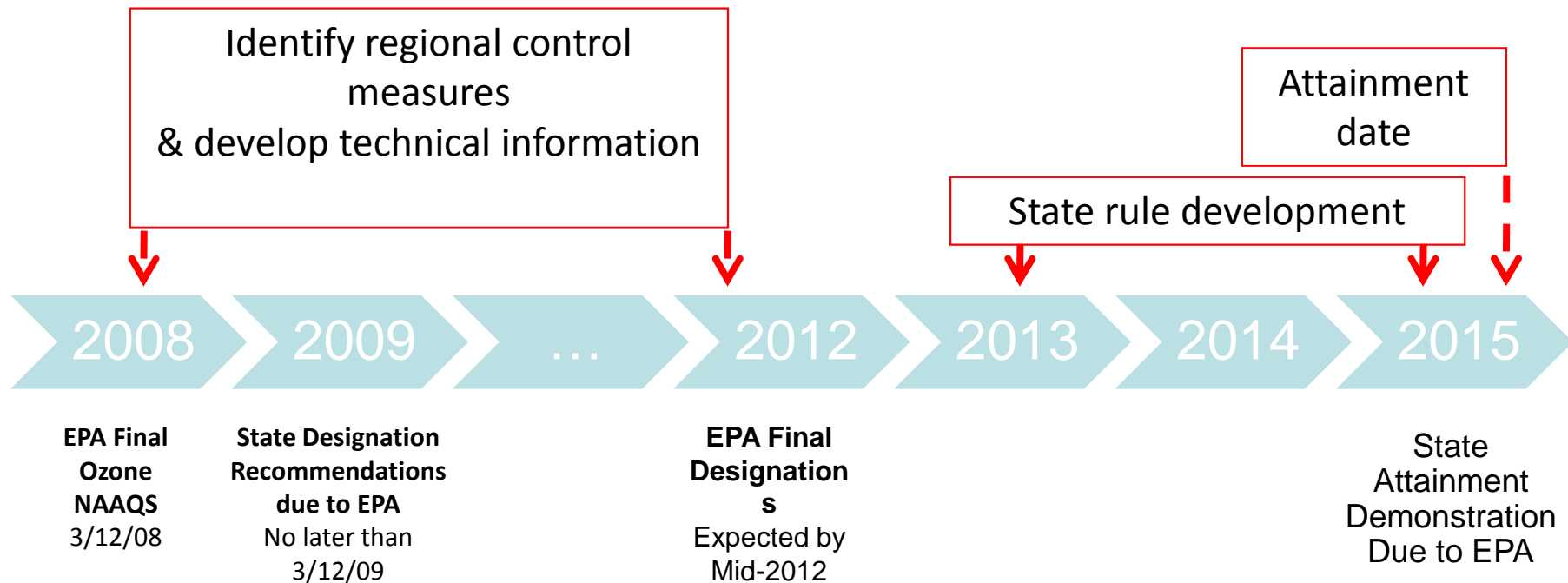
www.otcair.org



**OZONE TRANSPORT COMMISSION (OTC) –
A MULTI-STATE ORGANIZATION CREATED
UNDER THE CLEAN AIR ACT**

OTC Strategy Development

- Stationary and Area Source (SAS) Committee
- Mobile Source Committee
- Modeling Committee
- Transport Committee



Potential 2008 Ozone NAAQS Attainment Dates 2015 - 2032

Potential Nonattainment by CSA (2008-2010 DV)

OTC Focus Areas

Potential Regional SAS Control Strategies

NO_x sources:

OTC model rules

1. Oil and gas-fired boilers serving EGUs*
2. New small gas-fired boilers
3. Stationary generators
4. High Electric Demand Day (HEDD) turbines*

Draft model rule

5. Natural gas compressor stations

Categories under review

6. Municipal waste incinerators* (EPA)
7. Energy efficiency strategies
8. Coal-fired boilers (EPA)

VOC sources:

OTC model rules

1. Architectural and industrial maintenance (revision)
2. Auto refinishing (revision)
3. Large VOC stationary storage tanks*
4. Consumer products (revision)

Draft model rule

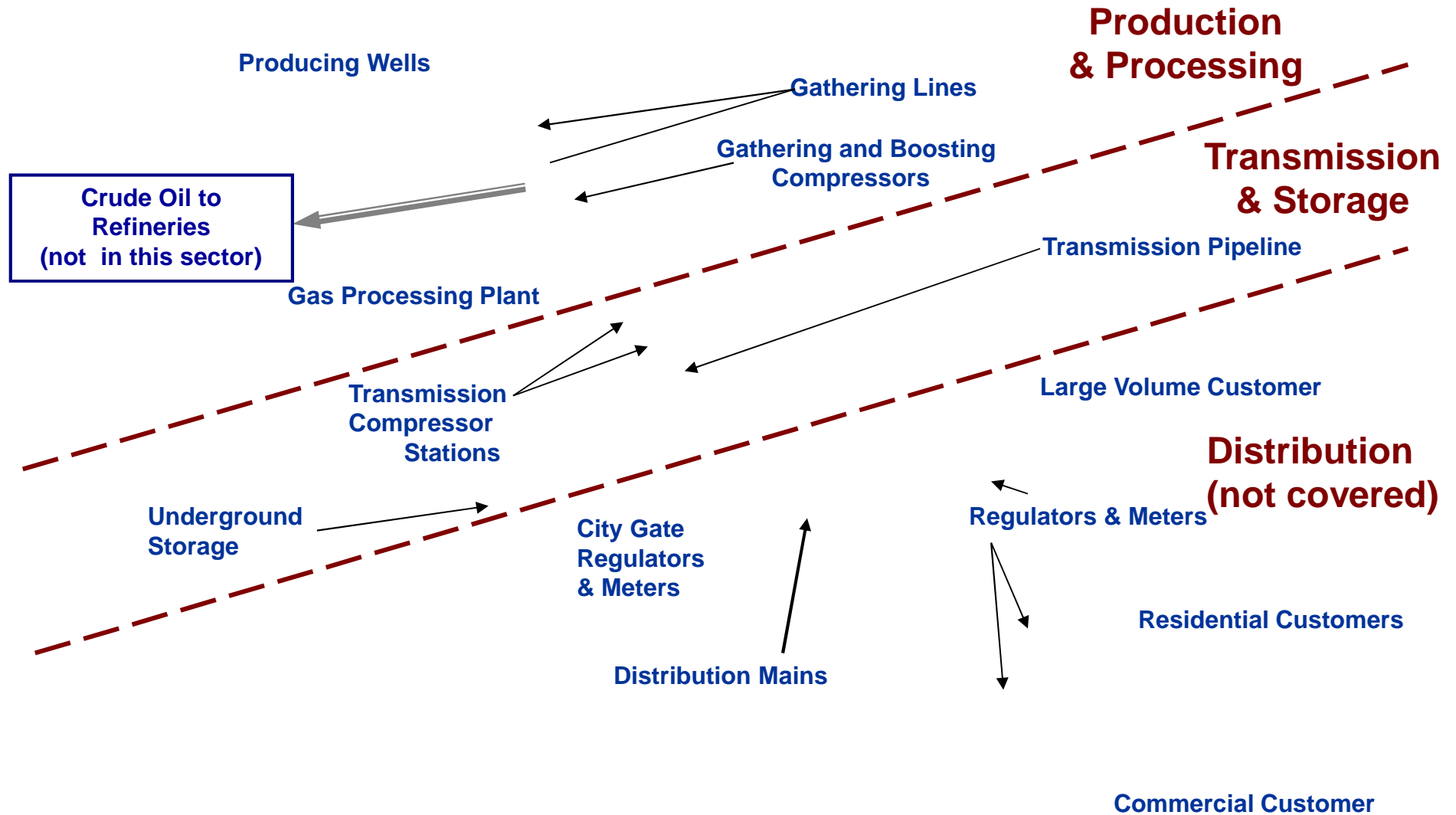
4. Consumer products (amendment)
5. Low VOC solvent cleaning (revision)

Category under review

6. Stage 1 and 2 vapor recovery

*Note: Model rule equivalent to existing NJ rule (operative May 19, 2009)

Oil and Natural Gas Operations



Source: Adapted from American Gas Association and EPA Natural Gas STAR Program

Dynamics at a gas station with stage I vapor recovery

Vapor, HC, emitted at night

Air ingested during the day

Gasoline evaporation
→ Pressure growth

- Stage I – Deliveries
 - As fuel enters the UST
 - Vapors are returned to the tanker via a separate vapor connection
 - Eliminating vapor loss through the vent in to the environment
- Stage I – Dispensing & Idle Time
 - During dispensing (day) the fuel level goes down and fresh air enters the tank
 - The air interrupts fuel-vapor balance and the fuel will evaporate until the air is fully saturated
 - Saturated vapor has a larger volume than fresh air so the pressure in the tank grows and excess vapor is emitted through the vent pipe

Source: Adapted from NYSDEC

Dynamics at a gas station with stage II vapor recovery



- Stage II – Vehicle Fueling
 - As fuel enters the vehicle tank
 - Vapors are collected at the vehicle fill neck when fueling non-ORVR cars and returned to the tank
 - Fresh air is collected at vehicle fill neck when fueling ORVR cars and returned to the tank
 - The returned air from fueling ORVR cars will be saturated by the fuel, grow in volume, and the excess vapor is emitted through the vent pipe both during daytime dispensing and idle time

NJDEP Contacts by Source Category

- Small gas-fired boilers
Judy Rand: 609-984-1950
- Stationary Generators/NG Compressors
Doug Bruckman: 609-633-8244
- AIM/Auto refinishing/CPs
Judy Rand: 609-984-1950
- Low VOC Solvent Cleaning
Laura Scatena: 609-292-1942
- Stage 1 & 2 Vapor Recovery
Judy Rand: 609-984-1950
Mike Adhanom: 609-633-8242
Myra Reyes: 609-984-6072
- MWCs
Sunila Agrawal: 609-292-9202
- Coal-fired Boilers (Transport/CSAPR)
Danny Wong: 609-984-2608

For further information regarding OTC materials, go to: <http://www.otcair.org/document.asp?fview=meeting>

For information regarding current and recent NJ Air rule proposals, visit the following web site: <http://www.state.nj.us/dep/aqm/>

Also visit the web site listed below to sign up for the AQPP Listserv for email updates: <http://www.state.nj.us/dep/aqpp/listserv.html>

Or subscribe to the BAQP AIRRULES Listserv: www.state.nj.us/dep/baqp/airrules.html

Thank You

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