



Attainment Modeling Status Report

Metropolitan Washington Air Quality Committee
(MWAQC)

Technical Advisory Committee Meeting

June 9, 2006

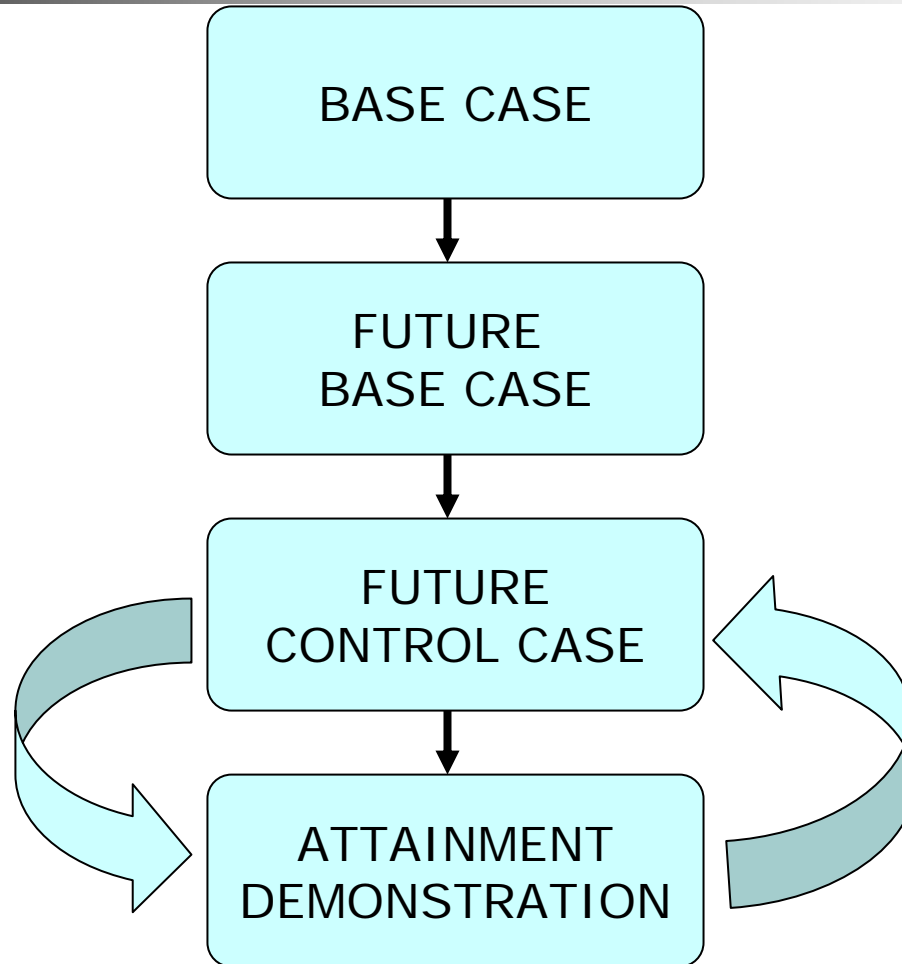
Presented by: VA Department of Environmental Quality



Presentation Topics

- **Review of 2009 Modeling Results**
 - Ozone Transport Commission (OTC) 2009 future base case
 - VADEQ 2009 future base case (Case #2)
 - VADEQ 2009 future control case (Case #5)
- **Next Steps**
 - Additional future control case modeling
 - Weight of Evidence (WOE)
- **Modeling Schedule**

Attainment Modeling Steps



2009 Future Base Case Ozone Transport Commission

- EPA/RPO (IPM) Utility Projections for CAIR emissions & controls
- Does not include all Virginia CAIR controls
- Does not include OTC VOC controls in Northern VA

2009 Future Base Case

VADEQ Case #2 Assumptions

- Uses initial estimates from MDE for CPR & VA/DC CAIR emission reduction estimates
- Includes SIP Call Phase II reductions in VA
- Includes OTC VOC controls in Northern VA
 - Rule 4-42, OTC Portable Fuel Containers
 - Rule 4-47, OTC Solvent Metal Cleaning
 - Rule 4-48, OTC Mobile Equipment Repair/Refinishing
 - Rule 4-49, OTC AIM
 - Rule 4-50, OTC Consumer Products

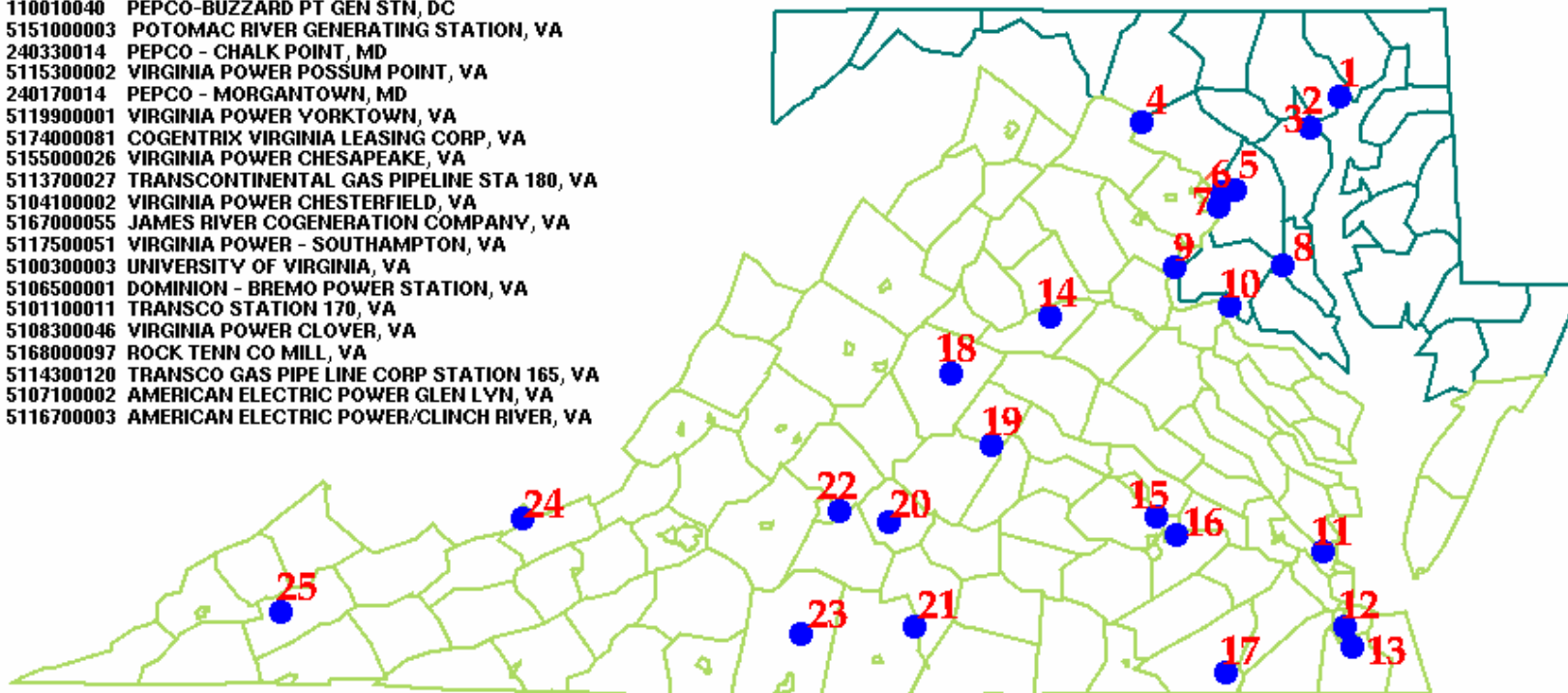
2009 Future Control Case

VADEQ Case #5 Assumptions

- Uses VADEQ Case #2 assumptions with the following exceptions:
 - MD CPR estimates updated to reflect the precise numbers used in the CPR modeling conducted by University of Maryland
 - 1 ton per day NO_x increase from original estimates
 - VADEQ updated emissions for Mirant Potomac River and Dominion Possum Point to include “no trading” estimates
 - Results in a additional 11 tons per day reduction in NO_x
 - These reductions come from the VA CAIR rule which contains a “no trade” clause for nonattainment areas

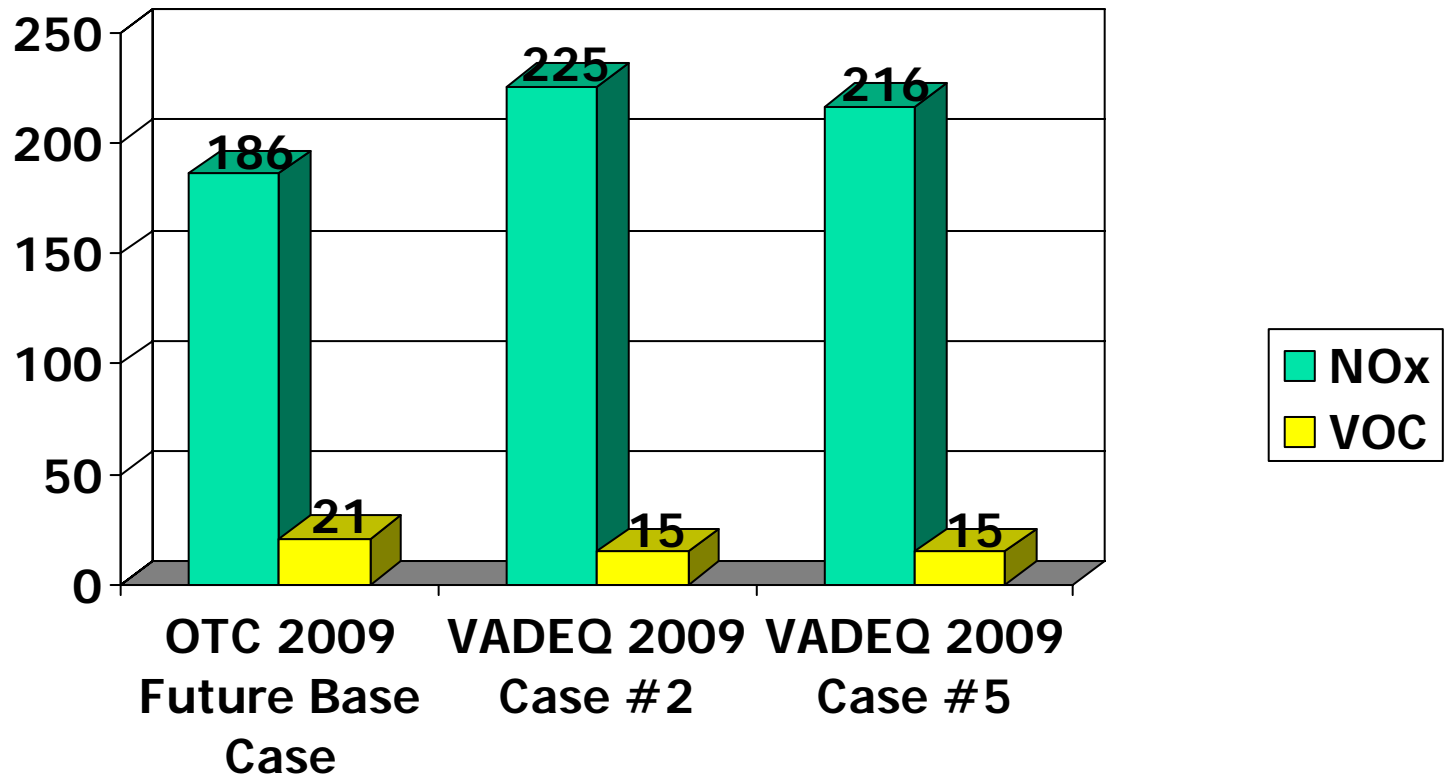
Location of Facilities

- 1 240050079 B G E - CRANE, MD
- 2 240030014 B G E - WAGNER STATION, MD
- 3 240030468 B G E - BRANDON SHORES, MD
- 4 240310019 PEPCO - DICKERSON, MD
- 5 110010001 BENNING, DC
- 6 110010040 PEPCO-BUZZARD PT GEN STN, DC
- 7 515100003 POTOMAC RIVER GENERATING STATION, VA
- 8 240330014 PEPCO - CHALK POINT, MD
- 9 511530002 VIRGINIA POWER POSSUM POINT, VA
- 10 240170014 PEPCO - MORGANTOWN, MD
- 11 511990001 VIRGINIA POWER YORKTOWN, VA
- 12 517400081 COGENTRIX VIRGINIA LEASING CORP, VA
- 13 515500026 VIRGINIA POWER CHESAPEAKE, VA
- 14 511370027 TRANSCONTINENTAL GAS PIPELINE STA 180, VA
- 15 510410002 VIRGINIA POWER CHESTERFIELD, VA
- 16 516700055 JAMES RIVER COGENERATION COMPANY, VA
- 17 511750051 VIRGINIA POWER - SOUTHAMPTON, VA
- 18 510030003 UNIVERSITY OF VIRGINIA, VA
- 19 510650001 DOMINION - BREMO POWER STATION, VA
- 20 510110011 TRANSCO STATION 170, VA
- 21 5108300046 VIRGINIA POWER CLOVER, VA
- 22 516800097 ROCK TENN CO MILL, VA
- 23 5114300120 TRANSCO GAS PIPE LINE CORP STATION 165, VA
- 24 510710002 AMERICAN ELECTRIC POWER GLEN LYN, VA
- 25 511670003 AMERICAN ELECTRIC POWER/CLINCH RIVER, VA



Summary of Emissions

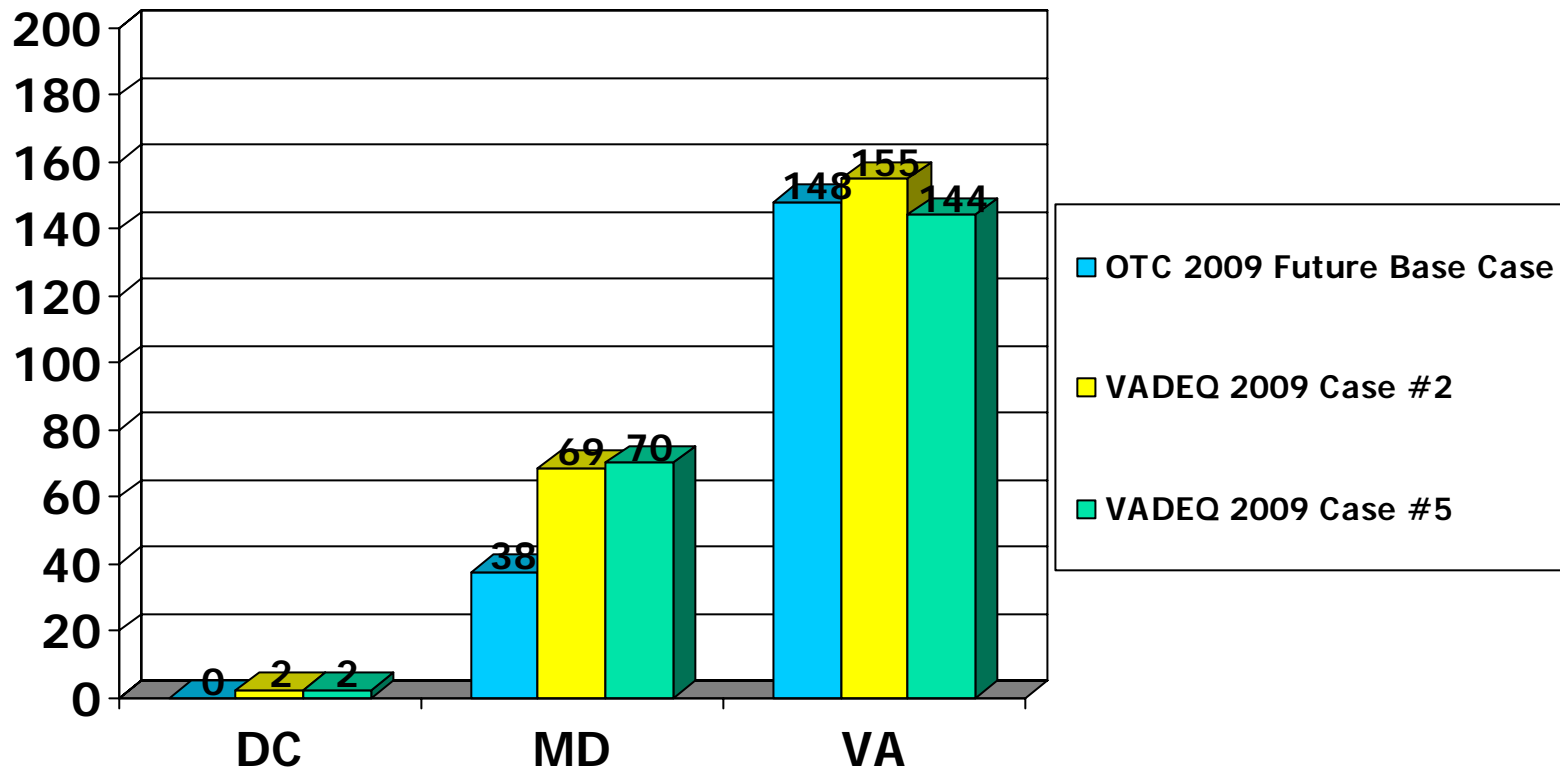
(Tons Per Day)



Note: NOx emissions totals represent "adjusted facilities" only

Summary of Emissions

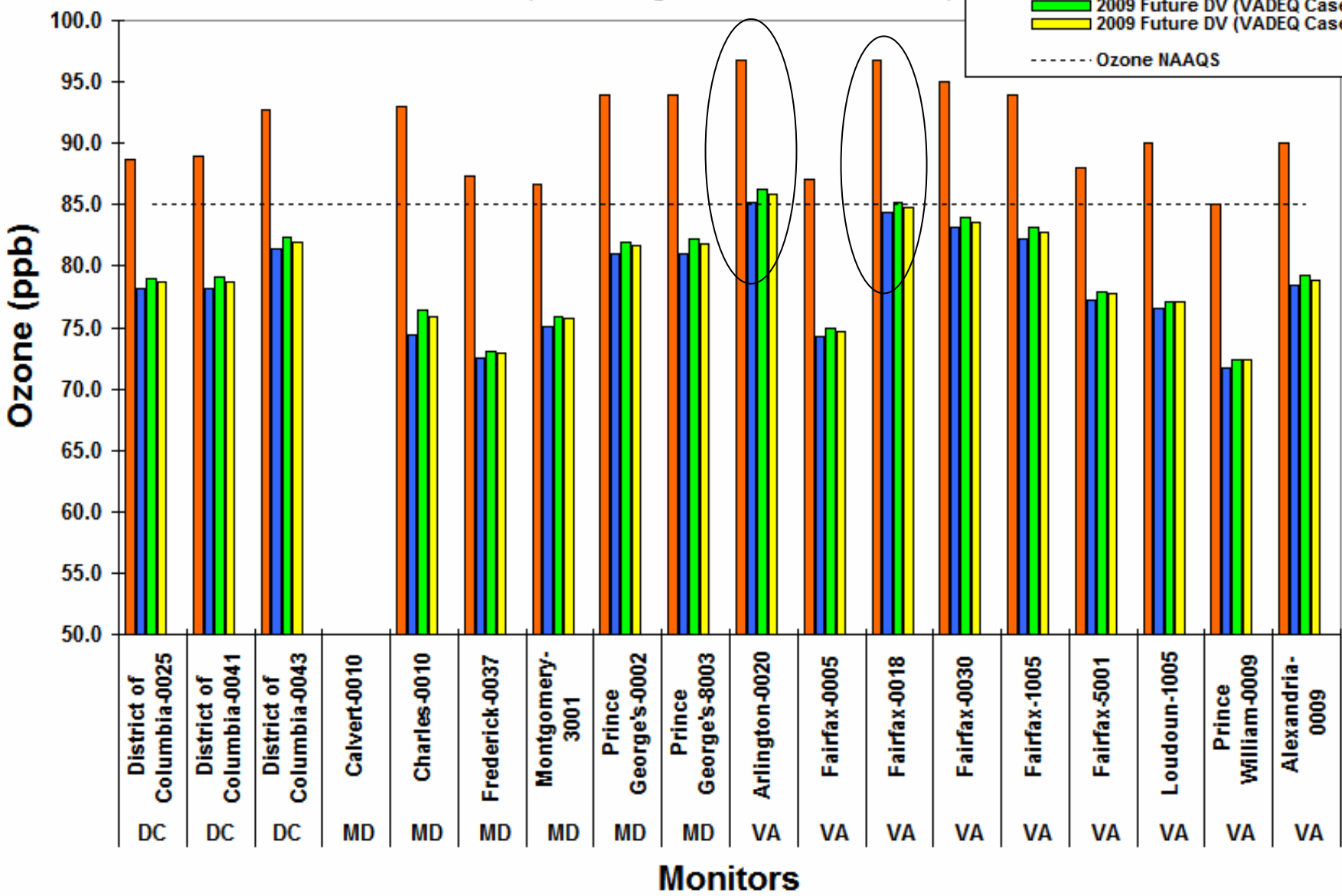
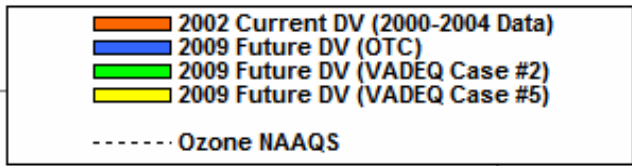
(Tons Per Day of NO_x)



Note: NO_x emissions totals represent “adjusted facilities” only

Design Values for Future Case Scenarios

(Modeling Period: 6/6 - 8/16)



Note: Calvert County monitor has insufficient data collection for design value calculations.

Design Values for Future Case Scenarios

- **Monitored values above 85 ppb**
 - OTC 2009 future base case @ 85.6 ppb (Arlington)
 - VADEQ 2009 future base case (Case #2) @ 86.3 ppb (Arlington) & 85.2 ppb (Fairfax)
 - VADEQ 2009 future control case (Case #5) @ 85.9 ppb (Arlington)

Attainment Modeling

Next Steps

■ **Additional Future Control Case Modeling**

- Identify & quantify additional control emissions
 - Awaiting decision from Interstate Air Quality Council (IAQC) on control measures to be modeled
- Run control case model to test these control strategies
- Perform attainment test (using Relative Reduction Factors)
- Repeat process as needed to demonstrates attainment

Attainment Modeling

Next Steps

- **Weight of Evidence (WOE)**
 - Supporting information that accompanies model attainment demonstration
 - Provides additional documentation that the area will (or will not) attain NAAQS



Weight of Evidence (WOE)

- **WOE techniques include:**
 - Air quality and emissions trends
 - Meteorology analysis
 - Other modeling analyses
- **Need to develop D.C. specific list**
 - Attainment modeling call scheduled for June 15 at 3 pm to discuss WOE

Attainment Modeling Schedule

