Pilot Project to Collect Multipollutant Control Data

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Project Goals

- Identify source categories of interest to the three AQMP project areas
- Identify future control strategy possibilities for those categories
- For the future strategies, identify co-impacts (both positive and negative)
- Quantitative, not just direction
- Populate CoST data base (successor to Air ControlNet) for the selected categories

Control Measure Co-Impacts

- Positive
  - Control measure for one pollutant also reduces emissions of other pollutants
  - Many examples:
    - Increase steel mill PM capture results in co-control of metals such as Cr, Cd, Mn
    - Utility boilers:
      - Improve PM controls, collect metals such as Pb, Cd, As, Ni .
      - SCR for NOx can enhance Hg removal
      - SO2 scrubbers – Hg, HCl,HF, SO3 reductions
    - EE/RE programs: reduce CO2, reduce NOx and SO2
    - Restaurant catalysts: PM and VOC reduction
    - Mobile source: VMT, fuel eff: reduce pollutants across the board: VOC, NOx, PM, CO2, mobile source HAPs
    - Diesel retrofits: PM, EC, OC, HAPs
    - Reduce sulfur in fuel: Reduce SO2, primary sulfate PM

Control Measure Co-Impacts

- Negative
  - Control measure for one pollutant leads to increases in another pollutant
  - Examples:
    - Utility scrubbers: energy penalty, more CO2 per MW
    - SCR with high S coal: higher SO3, condensable PM
    - Thermal oxidizer for VOC: some NOx increase
    - SCR: NH3 slip
    - Refinery: NH3 injection improves filterable PM, increases condensable PM (Brenda will discuss)
    - Reformulated gasoline: Improved VOC, benzene, 1,3-butadiene; formaldehyde likely increased

Why do this?

- NAS/NRC (2004) concluded/theorized:
  - The major air pollution challenges today involve multiple emissions from common mobile and stationary sources,
  - Challenges can be more effectively addressed using a multipollutant approach.
  - Such an approach can simultaneously seek reductions of pollutants posing the most significant risks.
  - It can also focus on achieving the most cost-effective mix of emission reductions of key pollutants from any one source rather than asking that source to separately address reductions of different pollutants at different times in response to different SIPs."

Since 2004

- Increasing importance for climate change and greenhouse gases
- Many programs for climate change being developed more or less independently from the NAAQS/SIP/air toxics process
- Thus increasing need to understand relationship between measures for GHGs and criteria pollutants and HAPs

Status of Project

- Contractor seeking input from pilot areas on source categories of interest
- Should have categories selected soon
- Likely will focus on stationary/area sources for this project (mobile likely fairly straightforward for CoST tool)