

Progress on Planning for a Redesignation Request and Maintenance Plan

(1) Would 2010 and 2020 be acceptable interim and out years?

EPA's Response and VDEQ's thoughts: Those years are not optimal since 2010 is not really close to the center of the 10 year maintenance time frame (2010-2020). Also, the TAC probably couldn't, at this point in time, create a plan and submit it soon enough to get it approved by January, 2010.

Possible solution: Develop inventories for 2015 and 2025.

(2) How would a Mobile Source Budgets be handled for PM_{2.5}?

EPA's Response and VDEQ's thoughts: One solution provided by EPA would be to use language in the conformity rule (93.109(k)) to justify not including a PM_{2.5} mobile source budget. I have reviewed how WV performed this analysis/justification, and the DC area could easily use the same type of rationale. Another solution is to develop modeling to establish a DC-specific mobile source trading analysis for mobile PM, mobile NO_x, and mobile SO₂. This modeling effort would be extensive, and expensive, so it may not be worth the effort.

Possible solutions: Use 93.109(k) to provide justification for no PM_{2.5} MSB in a maintenance plan. The other option is to do the modeling work.

(3) How can the area demonstrate compliance with current maintenance plan requirements that mandate the area's total emissions of PM_{2.5} in interim and out years remain beneath the total emission rate for PM_{2.5} in the attainment year?

EPA's Response and VDEQ's thoughts: It took EPA a while to wrap their minds around this question. We explained that this issue exists because of the predominance of area and nonroad emissions for PM_{2.5} in future years. We asked EPA to examine (a) whether we can default to the NSR offset thresholds (200 to 1 for NO_x and 40 to 1 for SO₂)? (b) If the NSR offset thresholds are too conservative, how would we set up modeling to develop area specific ratios? (c) Can dispensation be made for PM_{2.5} since the chemistry of PM_{2.5} is so different from VOC?

I am unsure if future year inventories would allow us to use the NSR offset thresholds. I've done some very back-of-the-envelope calculations, and the potential exists that the NSR offset thresholds may not provide enough trading credits to allow us to remain beneath the attainment year inventory caps. EPA is working on these issues, but Region 3 staff has had a hard time getting the attention of headquarters on this issue.

(4) New measures to assure continued compliance with the NAAQS: Right now, VDEQ may support additional measures in the maintenance plan to assure future year compliance with the 1997 standard, such as the continued requirement for LAER past redesignation to attainment or rules/board policies dealing with DG, if needed.

Doris's Back-Of-The-Envelope Future Year Calculations (Do not quote or cite unless you want to be embarrassed...)

NOx			SO2			PM2.5			PM2.5		
	Source of Estimate			Source of Estimate			Source of Estimate		Source of Estimate		
2002	119,594	PM2.5 SIP	2002	223,360	PM2.5 SIP	2002	22,179	PM2.5 SIP	2002	22,179	PM2.5 SIP
2005	118,526	Linear interpolation between 2002 and 2009	2005	227,019	Linear interpolation between 2002 and 2009	2005	22,687	Linear interpolation between 2002 and 2009	2005	22,687	Linear interpolation between 2002 and 2009
2009	117,102	PM2.5 SIP	2009	231,898	PM2.5 SIP	2009	23,364	PM2.5 SIP	2009	23,364	PM2.5 SIP
2015	101,602	Used 2009 except subtracted NOx reductions from mobile. CLRP shows 45,000 tpy in 2010 and 16,000 in 2020 so assumed (45,000+16,000)/2=30,500 tpy in 2015. Subtracted 14,500 tpy (45,000-30,500).	2015	73,898	Used 2009 except subtracted so2 reductions for 2010 from MDE only, 158,000 tpy	2015	25,242	Linear extrapolation between 2009 and 2015 (313 tons increase/year from area and pt)	2015	25,068	Using the CLRP assumption of a 26% population growth between 2008 and 2030, assumed a 1.18% per year growth.
2025	92,526	Used 2009 except subtracted NOx reductions from mobile. CLRP shows 45,000 in 2010, 16,000 tpy in 2020 and 12,000 in 2030 so assumed (16,000+12,000)/2=14,000 tpy in 2025. Subtracted 26,000 tpy (45,000-14,000).	2025	81,288	Used 2015 except assumed a 10% growth rate over 10 years.	2025	28,372	Linear extrapolation between 2009 and 2025 (313 tons increase/year)	2025	28,188	Using the CLRP assumption of a 26% population growth between 2008 and 2030, assumed a 1.18% per year growth.
200 to 1			40 to 1								
16,924	NOx decreases, attainment year to interim year	85	153,121	SO2 decreases, attainment year to interim year	3,828	2,555	PM2.5 increases, attainment year to interim year	2,381	PM2.5 increases, attainment year to interim year		
26,000	NOx decreases, attainment year to out year	130	145,731	SO2 decreases, attainment year to out year	3,643	5,685	PM2.5 increases, attainment year to out year	5,501	PM2.5 increases, attainment year to out year		