

List of Comments Received on the Draft PM_{2.5} State Implementation Plan for the Washington, DC-MD-VA Nonattainment Area

Comment Number	Commenter(s)	Date Received	Recipient
1	William Skrabak, on behalf of the City of Alexandria	1/30/08	VDEQ
2	Jeffrey Holmstead, Bracewell and Giuliani, on behalf of Mirant Potomac River LLC	1/30/08	VDEQ
3	Jeffrey Holmstead, Bracewell and Giuliani, on behalf of Mirant Potomac River LLC	1/30/08	MDE
4	Ana Prados and Mike Town Sierra Club, Virginia Chapter	1/29/08	VDEQ
5	Flint Webb, Fairfax Federation of Citizens Associations	1/30/08	VDEQ
6	Julie Crenshaw Van Fleet	1/30/08	VDEQ
7	Air Quality Public Advisory Committee	2/6/08	MWAQC
8	Roger Waud	2/7/08	DC DOE
9	Tom Ballou, on behalf of Virginia DEQ	1/29/08	MWAQC
10	Marilyn Powers, U.S. EPA, Region III	1/30/08	VDEQ
11	Charley Baummer, on behalf of Metropolitan Washington Airports Authority	1/30/08	VDEQ
12	William Skrabak, on behalf of the City of Alexandria	2/11/08	DCDOE
13	Jeffrey Holmstead, Bracewell and Giuliani, on behalf of Mirant Potomac River LLC	2/11/08	DCDOE
14	Elizabeth Chimento	2/11/08	DCDOE

Comment Summary and Response for Comments Received on the Draft PM_{2.5} State Implementation Plan for the Washington, DC-MD-VA Nonattainment Area^a

Comment Number	Comment	Commenter	Recipient	Response
	General Comments on SIP			
1	The SIP include reference to the scientific community's insistence that the annual 15 ug/m ³ NAAQS is too high and should be reduced to 13-14 ug/m ³ to be protective of human health.	Elizabeth Chimento	DCDOE	The main purpose of this attainment plan continues to be demonstrating compliance with the 1997 standards of 15.0 ug/m ³ annually and 65 ug/m ³ daily. FRM data show that the region has already attained the 1997 standards of 15.0 ug/m ³ on an annual average and 65 ug/m ³ on a daily average. While lower levels of air pollution are desirable, MWAQC and the states do not agree that it is appropriate to comment on whether the NAAQS provides a satisfactory level of human health protection in the attainment SIP.
2	The SIP should include additional information on the health benefits expected to accrue from implementation of the plan, including the health impacts around the PRGS.	Julie Crenshaw Van Fleet, AQPAC	VDEQ, MWAQC	Language has been added to the attainment plan to indicate that attainment of the PM _{2.5} NAAQS, as well as further air quality improvements, will have a positive influence on the health and well-being of the citizens of the region. The attainment plan requires that PRGS perform an ambient air quality analysis when the methodology for such an analysis is finalized. The results of this study may show that additional controls on PRGS are needed to ensure the PM _{2.5} NAAQS is met.
3	ATSDR Health Consultations for River Terrace in the District and the Potomac River Generating Station in Alexandria should be reviewed.	Julie Crenshaw Van Fleet	VDEQ	MWAQC and the states will review and consider the identified health consultation studies.
4	The SIP should address the potential impact of the use of pollution control additives such as TRONA.	Julie Crenshaw Van Fleet, AQPAC	VDEQ, MWAQC	MWAQC and the states do not believe that the attainment plan is an appropriate place to enumerate details about a specific facility's operational considerations. Such details are routinely examined and incorporated into permits through the normal permitting process.
5	Direct primary PM _{2.5} emissions, while not a large part of the inventory, are increasing and may need to be addressed in the future.	AQPAC	MWAQC	MWAQC and the states agree that in the future more attention needs to be paid to PM _{2.5} emissions sources and emissions inventories. Much more federal guidance, including a more robust test results data base and the resulting emission factors that may be developed for various source categories for that data base, needs to be provided to state and local agencies. This information needs to contain information on both filterable and condensable PM _{2.5} . An area needing work is the area source emissions inventory. The chemistry of PM _{2.5} is still being examined by EPA scientists, and until more information is known about PM _{2.5} formation, the relative importance of various area source categories, and the need for area source controls, cannot be adequately evaluated.
6	In Section 2.6, the OCMs and the sulfates as mentioned and depicted are of greater concern if considered cumulatively. Yet there is no dialogue regarding them, and in this same section the primary aerosols, given the capacity to create new PM, should be clearly explained. The term OCM should be included in the glossary.	AQPAC	MWAQC	MWAQC and the states agree that the science related to OCM/aerosols and VOCs is rapidly developing. While the current plan shows how we will attain the annual PM _{2.5} standard changes in the PM _{2.5} standard are eventual and there will be a need to further develop our understanding of the complex science of PM _{2.5} . However, for the purpose of this SIP the region has completed a plan that shows how the region will meet the current annual standard.
7	Section 9.4.5 dubs .5 percent a "margin of safety." The SIP should clearly explain this percentage and justify its adequacy as a margin, since it may not be adequate.	AQPAC	MWAQC	The commenter appears to be referring to the statement in Section 9.4.5 that notes, "EPA modeling guidance states that those modeling analyses that show that attainment with the NAAQS will be reached in the future with some margin of safety (i.e., estimated concentration below 14.5 ug/m ³ for annual PM _{2.5} and 62 ug/m ³ for 24-hour PM _{2.5}) need more limited supporting material." The weight of evidence range, as suggested by EPA guidance for the annual PM _{2.5} standard of 15.0 ug/m ³ , is 14.5 ug/m ³

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				<p>to 15.5 ug/m³. Should the design values predicted by the regional modeling fall into this range, EPA has provided guidance on what must be included in a weight of evidence showing to demonstrate that attainment of the standard will be achieved in 2009.</p> <p>Modeling results that fall beneath 14.5 ug/m³, such as those for metropolitan Washington, need a less comprehensive weight of evidence demonstration. Modeling, which includes the additional suite of control measures prescribed by the 8-hour ozone attainment plan, projects the area's 2009 design value to be 13.9 ug/m³. See Table 9-3 of the draft PM_{2.5} attainment demonstration.</p>
	Control Strategy/Measures			
8	<p>The states and the Metropolitan Washington Council of Governments for their considerable efforts to reduce particle pollution below the annual standard.</p> <p>The commenter urges that alternative and non-air-polluting energy sources be promoted by measures like Green Buildings and LED lighting.</p>	AQPAC	MWAQC	MWAQC and the states agree and appreciate the recognition for the considerable progress being made to improve air quality in the region, including adoption of local innovative programs.
9	The draft SIP does not adequately outline a process that will assure that the DC-MD-VA Region meets the NAAQS standard for PM _{2.5} . How will existing permit programs be specifically implemented, or enhanced, in regards to PM _{2.5} .	City of Alexandria, Roger Waud	VDEQ, DCDOE	<p>MWAQC and the states disagree; they believe that the programs outlined in the attainment plan are sufficient to accomplish the SIP goal. The main purpose of this attainment plan continues to be demonstrating compliance with the 1997 standards of 15.0 ug/m³ annually and 65 ug/m³ daily. FRM data show that the region has already attained the 1997 standards of 15.0 ug/m³ on an annual average and 65 ug/m³ on a daily average. These accomplishments may be attributed to many of the control programs implemented in previous attainment plans for ozone. Additional federal, state, and supplemental control programs, as outlined in the draft attainment plan, will continue to reduce precursor and direct emissions of PM_{2.5}.</p> <p>MWAQC and the states agree that it is important to be mindful of the 2006 PM_{2.5} NAAQS standard on a regional basis. Section 8.2 of the draft attainment plan discusses the changes made to the major stationary source permitting program in regards to PM_{2.5}.</p> <p>Section 8.4 notes the intention by the state agencies to adopt further PM_{2.5} nonattainment permitting requirements, including requirements for precursor emissions, controls, and offsets, when these regulations are finalized by EPA.</p>
10	The attainment plan should contain more rigorous monitoring, permitting, and enforcement programs. Rigorous monitoring programs and more severe limitations are necessary due to model uncertainty. Lax permitting, monitoring, and compliance programs allow increases of emissions over this attainment plan's emissions inventories and caps.	Alexandria, Elizabeth Chimento	VDEQ, DCDOE	MWAQC and the states disagree with the comment that current permitting, enforcement, and monitoring program requirements are lax and that there is an absence of a compliance and enforcement apparatus. Facilities that trigger major new source review permitting, either as new or modified sources, must install technology deemed to meet lowest achievable emission rates (LAER). Monitoring and enforcement programs in the Northern Virginia Regional Office (NRO), VDEQ, MDE, and DCDOE are strong.
11	VDEQ's proposed permit for PRGS is contradictory to SIP goals. The inventory used in the attainment plan regional modeling exercise is less than proposed permit limits and therefore underestimates emissions.	City of Alexandria	VDEQ, DCDOE	MWAQC and the states disagree. The main purpose of this attainment plan continues to be demonstrating compliance with the 1997 standards of 15.0 ug/m ³ annually and 65 ug/m ³ daily. FRM data show that the region has already attained the 1997 standards of 15.0 ug/m ³ on an annual average and 65 ug/m ³ on a daily average.

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				<p>The proposed PRGS permit reduces emissions from the baseline year for this facility. MWAQC and the states believe that the proposed permit will improve air quality and is not contrary to the goals of the PM_{2.5} attainment plan.</p> <p>In addition, the attainment plan requires that PRGS perform an ambient air quality analysis when the methodology for such an analysis is finalized. The results of this study may show that additional controls on PRGS are needed to ensure the PM_{2.5} NAAQS is met.</p> <p>MWAQC and the states do not support the approach of setting projection year emission inventories equal to permitted limits or potential to emit. Regional modeling inventories are based on actual emissions and projected emissions. Projected emissions are rarely, if ever, as high as the potential to emit of a facility. Projected emissions are generally extrapolated using a base year's actual emissions inventory and applying a conservative growth factor, as required by EPA. In some instances, projected emissions are adjusted based on control estimates. However, projected emissions are almost never based on potential to emit of a facility. MWAQC and the states believe that the 2009 projection year inventory is quite conservative.</p>
12	The attainment plan does not discuss additional RACT/RACM in enough detail.	City of Alexandria	VDEQ, DCDOE	40 CFR 51.1010, which delineates requirements for reasonably available control measures (RACT) and reasonably available control technology (RACT), predicates the implementation of a suite of measures on whether those measures can collectively advance the attainment date of a nonattainment area by one year. Since the metropolitan Washington area is currently attaining the PM _{2.5} NAAQS, based on FRM data for 2003-2005 and 2004-2006, it is not possible for any suite of measures to advance attainment. This explanation is provided in section 8.3 of the draft attainment plan.
13	U.S. EPA's <i>Clean Air Fine Particulate Implementation Rule</i> suggests the use of more stringent monitoring and opacity standards. Virginia's current opacity standard of 20% allows PM _{2.5} emission increases without adequate review. Opacity limitations should be strengthened to no more than 10%.	City of Alexandria	VDEQ, DCDOE	MWAQC and the states disagree with the comment. The justification for examining monitoring and opacity standards is discussed in EPA's <i>Clean Air Fine Particulate Implementation Rule</i> (72 FR 20586, April 25, 2007) in the RACT/RACM requirements. RACT/RACM requirements are predicated on advancing the attainment date, which is not possible for the metropolitan Washington area. Unless a facility undergoes a major modification as part of the new source review major permitting process, in which case LAER must be applied, or undergoes a minor modification in which case state Best Available Control Technology (BACT) must be applied, there currently is no basis for reviewing source-specific opacity standards applied to major stationary sources.
14	Both proactive and prescriptive measures to reduce fine particle pollution are of significant interest to the public and we encourage their development and implementation. Pushing forward on these initiatives now, especially since some require medium- to long-term planning, is essential in light of the reduction of the daily standard to 35 ug/m ³ .	AQPAC	MWAQC	MWAQC and the states agree that additional measures need to be implemented to continue to improve air quality in the region, especially considering the pending new lower daily PM _{2.5} standard. States and local governments continue to identify and develop new policies and programs to reduce emissions in the region and in areas upwind of the region.
15	Education of the public on the health related issues of fine particles should also be intensified, since it will facilitate future voluntary or regulatory reductions for both fine particles as well as expected requirements to reduce other pollutants with similar sources, such as greenhouse gases.	AQPAC	MWAQC	MWAQC and the states agree that public education programs are an important part of the region's strategy to protect human health and improve air quality.
	Attainment Modeling			
16	CMAQ generally over-predicts during winter months and under-predicts during summer months. Statistical metrics such as fractional	City of Alexandria	VDEQ, DCDOE	The Model Performance Evaluation (MPE) included in the metropolitan Washington attainment plan was developed based on input from several regional planning groups such as the Mid-Atlantic/Northeast Visibility Union (MANE-VU),

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	error and bias do not provide assurance that the model predictions meet the modeling performance goals on either a 24-hour or an annual basis. There is no observed error in model performance on the end model result in the target year of 2010. The design value calculations should include columns of maximum predicted values that reflect the model's worst-case performance for this modeling domain. The analysis relies too heavily on the trend in observed PM _{2.5} levels.			<p>the Ozone Transport Commission (OTC) and the Association for Southeastern Integrated Planning (ASIP). Specifically, all elements of the modeling platform, including the emissions, meteorology, and air quality model, have undergone extensive evaluation.</p> <p>The results of the MPE for the metropolitan Washington area for PM_{2.5} and its individual species indicate that the CMAQ model performance for surface PM_{2.5} is good, with acceptable bias and error. The MPE was consistent with EPA guidance and includes the proper statistical performance metrics.</p> <p>MWAQC and the states believe the issues identified by the commenter are not regulatory requirements and are not appropriate for inclusion in the attainment demonstration since attainment tests are based on the application of relative response factors.</p>
17	The analysis relies too heavily on the trend in observed PM _{2.5} levels.	City of Alexandria	VDEQ, DCDOE	MWAQC and the states recognize that model results and projections will continue to have associated uncertainty. The attainment demonstration that EPA recommends recognizes this by including modeling plus other supplemental analyses such as air quality trends to determine whether all available evidence supports a conclusion that a proposed emission reduction plan will suffice to meet the NAAQS.
18	VDEQ should not rely on PM ₁₀ as a surrogate for PM _{2.5} in the permitting process for PRGS.	City of Alexandria	VDEQ, DCDOE	MWAQC and the States not believe that the PM _{2.5} attainment plan is an appropriate arena in which to discuss federal permitting guidance. Such permitting concerns are more appropriately addressed through the many significant public participation opportunities afforded the public during the permitting process.
19	The SIP does not address the reduced operational loads of PRGS that were important events in relation to the downward 24-hour design level trends between 2002-04 and 2003-05. Chapter 9 should include a thorough discussion, along with a timeline that matches the implementation of the regional programs with the FRM monitoring results and include the effects of various actions concerning PRGS on the decline in regional values.	City of Alexandria	VDEQ, DCDOE	<p>The goal of the attainment plan is to demonstrate compliance with the 1997 PM_{2.5} NAAQS by 2009 on a regional basis.</p> <p>MWAQC and the States do not agree that detailed discussions of every facility's operational changes between 2002 and 2009 are necessary.</p>
	Local Hotspots			
20	Local hotspots should be addressed in the SIP.	City of Alexandria, Julie Crenshaw, Van Fleet, AQPAC, Roger Waud, Elizabeth Chimento	VDEQ, DCDOE, MWAQC	EPA does not define a hotspot in the implementation rule. The current EPA guidance for regional modeling to support attainment plans notes that local area analyses are required for areas within a region that show elevated monitored PM _{2.5} concentrations at monitors within the federal reference monitoring network when compared to data from other federal reference monitors in the region. There is no identified gradient in PM concentrations in the FRM network in the metropolitan Washington region. Therefore, by EPA's definition, there is no requirement to conduct a local area analysis. MWAQC and the states are aware of highly conservative micro-scale modeling that indicates the possibility of a "hotspot" in the City of Alexandria even though current data from the monitors located in the modeled area show that concentrations are well beneath the NAAQS. Additionally, FRM monitoring data at the monitoring station in Arlington show compliance with the NAAQS. Regardless, the SIP does include requirements for further actions to address the concerns regarding emissions from PRGS through additional analyses, when methodologies become available, as required by Section 9.4.3.

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21	The SIP should include either an Unmonitored Area Analysis or a Local Area Analysis for the Potomac River Generating Station and other large point sources. The regional monitoring network is not robust enough to detect exceedances of the NAAQS in the City of Alexandria that are caused by the Mirant facility, modeling tools are available, and the SIP is the appropriate means to address the situation.	City of Alexandria, Julie Crenshaw, Van Fleet, AQPAC, Roger Waud, Elizabeth Chimento, Sierra Club, Flint Webb	VDEQ, DCDOE, MWAQC	<p>MWAQC and the states believe that the most appropriate means to address the concerns raised about the emissions from PRGS on the surrounding community is through the Virginia permitting process, but the SIP does contain a requirement for Mirant to prepare and submit a modeling analysis once federal guidance is available.</p> <p>VDEQ is currently in the process of conducting the Unmodeled Area Analysis (UAA) for the metropolitan Washington area. VDEQ is also part of the test group for the recently released beta version of EPA's "Model Attainment Test Software (MATS)" which is the tool required to conduct the UAA. Unfortunately, this tool is limited and does not have the spatial field feature necessary to complete the UAA. EPA expects that this component will be added in the next version of MATS and VDEQ will complete the analysis upon release of the updated software.</p>
22	The requirement for a Local Area Analysis for the Potomac River Generating Station should be removed from the SIP.	Mirant Potomac River LLC	VDEQ, MDE, DCDOE	<p>MWAQC and the states disagree. The Commonwealth of Virginia has the authority to require analysis of the emissions from the PRGS to determine whether the facility causes or contributes to exceedances of the NAAQS in the City of Alexandria or elsewhere within the nonattainment area.</p> <p>The PM SIP is a regional document to address the regional PM health concerns within an EPA designated nonattainment area. The SIP therefore provides a nonattainment control approach to health concerns that are jointly shared by all jurisdictions in the designated metropolitan Washington area.</p>
23	An FRM monitor should be sited in the City of Alexandria and at other locations that have large PM _{2.5} sources.	Julie Crenshaw, Van Fleet, AQPAC, Roger Waud	VDEQ, DCDOE, MWAQC	<p>For a number of reasons, it is impractical to locate PM_{2.5} FRMs near every source, or even every major point source, of PM_{2.5} emissions in the metropolitan Washington area. However, the Commonwealth of Virginia is considering siting a new FRM monitor in the City of Alexandria. Two special purpose monitors located near the PRGS are providing data on the impacts of the facility on air quality in the City. These data will continue to be collected and analyzed.</p>
24	<p>The language in Section 9.4.3 that requires an ambient air quality analysis is deficient since it fails to insure that the analysis will be done in a timely manner. It also suggests that methodology to conduct such an analysis is not available at the present time, which is contrary to existing EPA guidance. The language should be revised to read:</p> <p><i>Using an available Gaussian dispersion model, such as AEROMOD, for stationary sources, which has been approved by USEPA to model primary PM_{2.5} impacts, VDEQ shall conduct an ambient air quality analysis of the emissions of PM_{2.5} from the Mirant Potomac River Power Generating facility. VDEQ shall complete this analysis within 120 days of adoption of the SIP by MWAQC.</i></p>	City of Alexandria	VDEQ, DCDOE	<p>MWAQC and the states do not believe the language suggested by the commenter is appropriate. It is not certain that Gaussian dispersion modeling will be a requirement of PM_{2.5} ambient air quality analyses. EPA has not yet published modeling guidance for PM_{2.5} pollution. Use of published guidance for other pollutants, such as SO₂, is not prudent given that the highly complex nature of PM_{2.5} chemistry may not make the use of guidance for other pollutants applicable. If Gaussian dispersion modeling is eventually required, no federal guidance currently exists explaining the application to PM_{2.5} of this technique, which is multi-faceted and highly complicated.</p> <p>The language included in Section 9.4.3 states that the timeline for submitting the analysis will be determined by VDEQ management. This language was included to account for the fact that the requirements of the ambient air quality methodology are not known so that a reasonable timeframe cannot currently be fixed. However, VDEQ can require that PRGS submit a protocol once the final methodologies are approved by the SAPCB within a certain time frame, for instance 60 days. Section 9.4.3 has been updated to reflect this change and now reads:</p> <p><i>Based on a schedule and protocol to be established by VDEQ after US EPA promulgates final rules for PM_{2.5} analysis, or US EPA promulgates revised implementation guidance or policy for PM_{2.5} analysis, or VDEQ establishes a more appropriate implementation methodology for PM_{2.5}, Mirant Potomac River Power Station shall conduct an ambient air quality analysis for the emissions of PM_{2.5} from the facility. No later than 60 days after approval of the implementation methodology by the Virginia State Air Pollution Control Board, Mirant Potomac River Power Station shall provide to</i></p>

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				<i>VDEQ a detailed protocol outlining how the facility will implement the approved methodologies. VDEQ will make this document available to the public by publishing this protocol on the VDEQ website.</i>
	Technical Corrections			
25	The SIP should be revised to include reference to the 24-hour PM _{2.5} standard.	Marilyn Powers, U.S. EPA Region III	VDEQ	MWAQC and the states agree. The SIP was revised to incorporate the commenter's suggestion.
26	The SIP should be revised to reflect the fact that Virginia's rule capping emissions from power plants in the region is a state-only requirement and is not part of the CAIR rule. The commenter also suggested a minor editorial change for Section 9.3.1.	Marilyn Powers, U.S. EPA Region III	VDEQ	MWAQC and the states agree. The SIP was revised to incorporate the commenter's suggestions.
27	<p>The commenter requests that the following revisions be incorporated into the SIP document for the nine jurisdictions in Northern Virginia that are a part of the Washington, DC-MD-VA PM_{2.5} nonattainment area:</p> <p>1. For the following source categories, update emissions, associated documentation and NIF 3.0 emission files in the BY 2002 emission inventory document and its appendices (Appendix B of SIP) to reflect the BY 2002 emission estimates for these categories: 1) The emissions for the 9 Northern Virginia jurisdictions coded under SCC 2810015000 should be moved to SCC 2810014000; 2) The emissions for the 9 Northern Virginia jurisdictions coded under SCC 2285002005 should be moved to SCC 2285002006; 3) Zero out the emissions for SCC 2610000500, Open Burning-Land Clearing for all 9 Northern Virginia jurisdictions. The emissions for this SCC that were included in the SIP inventory were originally developed by the EPA and added to the National Emission Inventory as part of EPA's augmentation process. Since the SIP inventory was compiled, we have discovered that EPA has reviewed these emissions and for jurisdictions that were greater than 80% urban, those emissions were zero'ed out of the EPA 2002 National Emission Inventory. Therefore, we are requesting that MWCOG remove those corresponding emissions from the PM_{2.5} SIP.</p> <p>2. Changes in the BY 2002 emission inventory made above will change the future year inventories and associated analyses and documentation. Therefore, also update future year emissions and</p>	Thomas Ballou, VDEQ	MWAQC	MWAQC and the states agree. The SIP was revised to incorporate the commenter's suggestions.

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	<p>associated analyses and documentation in the main SIP document and related appendices.</p> <p>The recommended changes do not change the overall SIP conclusions.</p>			
28	The commenter requests additional detail on an appropriate method to determine whether and how airport construction emissions are reflected in the SIP.	Charley Baummer, Metropolitan Washington Airports Authority	VDEQ	Through the MWAQC process an airports subcommittee was formed and discussions were held regarding the development of specific airport emission inventory line items for regional airports. This emissions information would be the metric to examine all the emissions related to airport operations (construction, airplanes, operation emissions, etc.). Stakeholders declined the offer to pursue airport specific emission inventory line items. Details of what can be done to estimate the construction emissions attributable to airport construction in the SIP can be determined at the time the information is needed.
29	The commenter provided a list of voluntary local air quality improvement initiatives and asked that they be included in the SIP, for no emission reduction credit.	City of Alexandria	VDEQ	MWAQC and the states support inclusion of local voluntary initiatives in the SIP. The SIP was revised to include the measures identified by the commenter.
30	The Figure (Figure 2-5) does not include data for March through Sept 05.	Flint Webb	VDEQ	Included data in the graph through December 2005 as requested and also to be consistent with other graphs in Chapter 2.
31	The text (in Section 2.2 4) doesn't appear to be supported by the figure. The figure is of ammonium ion concentrations but the text discusses ammonium nitrates and ammonium sulfates. Perhaps there should be two plots, one of ammonium sulfates and one for ammonium nitrates.	Flint Webb	VDEQ	Updated Figure 2-6 to replace ammonium ion data with ammonium nitrate and ammonium sulfate and section 2.2 4) to provide information on ammonium nitrate and ammonium sulfate as requested.
32	The Figure The terms on the figure need to be explained (i.e. what is "Passive"). What are the units - I presume it is % by mass but it is not stated.	Flint Webb	VDEQ	Figure 2-10 title was updated to better explain the content and terms of the figure as requested.
33	Section 3.2.2 - Need to clarify the difference between area "non-stationary" sources and mobile sources. Perhaps examples like mobile generators which are stationary when operated but could operated anywhere in the region.	Flint Webb	VDEQ	The difference between area "non-stationary" sources and mobile sources was clarified by providing a few examples.
34	Section 3.2.2 - "or county-equivalent" should probably be defined earlier on in the document or perhaps footnoted.	Flint Webb	VDEQ	Since MWAQC area inventory is calculated at county level, the term "county-equivalent" is not relevant in the discussion in this paragraph and therefore is being deleted.
35	Section 3.2.2 - The distinctions between Area and Mobile sources	Flint Webb	VDEQ	A line has been added in the 1 st paragraph of the Section 3.2.3 (Onroad mobile sources) to define what constitute mobile

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	need to be clarified.			sources. Area source section (Section 3.2.2) provides details about area sources. Discussions in these two sections make distinctions between area and mobile sources very clear.
36	This figure (Figure 2-10) still either needs much more explanation or the whole section should be deleted. The figure shows that ammoniated compounds account for 65% of the SANDWICH material and yet we are not considering ammonia emissions. The minor modification to the text from the previous version is an improvement but does not go far enough.	Flint Webb	VDEQ	The reason why ammonia is not considered a significant precursor is explained in detail in various places in the SIP including chapter 2 (section 2.8) immediately after Figure 2-10.
37	Figure 2-11 y-axis should show a jog indicating that the x-axis is not at zero or the x-axis should go down to zero. The figure makes it look like the annual concentration is almost 0. Alternatively there should be a zig-zag line indicating that the axis is not at zero.	Flint Webb	VDEQ	The range of the y axis in Figure 2-11 was defined from 14.0 to 17.5 in order to clearly visualize a declining design value trend line. Extending the y axis all the way to 0.0 instead of 14.0 will make the trend line look almost flat. Also, data are labeled for design values for different years and the annual PM2.5 standard line in the graph, which make the graph quite clear.
38	Section 3.2.4 - Non-road airport vehicles need to be mentioned in the Area source section (3.2.2).	Flint Webb	VDEQ	All nonroad vehicles are part of nonroad inventory and so must stay in nonroad section itself and should not go to area source section.
39	Section 4.1.1.2 - Since the Area sources make up a large portion of the inventory it is important that the growth factors are correct. It would be good to compare some of the factors with historical growth factors. Specifically a comparison with historical growth for the following is requested: <ul style="list-style-type: none"> •Residential Fuel Combustion - Has there been an increase in natural gas usage that may off-set the household increases? •Open Burning - Using population as a growth factor means that it would increase by 50% for Loudon County. •Municipal landfills and Incineration - much of the trash in the region is disposed of in municipal waste incinerators. Unless the municipal waste incinerators are operating at capacity it is questionable whether a zero growth factor is appropriate for incinerators and if they are at full capacity then the municipal landfill emissions may grow faster than simply the rate of population growth. •Fugitive Dust - Using VMT as the growth factor implies that all fugitive dist emissions are associated with on-road vehicles. Isn't much of it associated with construction activity? 	Flint Webb	VDEQ	Growth surrogates for different area and nonroad source categories were decided in consultation with the state air agency staff and the Emissions Inventory Sub-Committee. Though the surrogates for the categories mentioned in the comment above may not completely provide true picture of growth for those categories, they are certainly the most appropriate surrogate available to us. Also, the commenter now should not be concerned about 50% growth for "Open Burning" as these emissions are not removed from Virginia inventory as part of the public comment made by VDEQ.

Notes:

^a For additional detailed response to comments, please see Appendix K Attachment 2.

Link to PM2.5 State Implementation Plan

<http://sharepoint.mwcog.org/airquality/Shared%20Documents/Forms/AllItems.aspx>