



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103

MAR 22 2011

Mr. Hassan Raza  
Federal Highway Administration  
Delaware Division Administrator  
300 South New Street, Suite 2101  
Dover, Delaware 19904

Dear Mr. Raza:

The United States Environmental Protection Agency (EPA) has reviewed the 1997 8-Hour Ozone, 1997 Fine Particulate Matter (PM<sub>2.5</sub>), and 2006 PM<sub>2.5</sub> Conformity Determinations for the New Castle County, Delaware Portion of the Wilmington Area Planning Council (WILMAPCO) 2040 Regional Transportation Plan. EPA reviewed the conformity determinations in accordance with the procedures and criteria of the Transportation Conformity Rule contained in 40 CFR part 93.

Enclosed, please find EPA's detailed evaluation titled, "Technical Support Document for the Review of the 1997 8-Hour Ozone, 1997 Fine Particulate Matter (PM<sub>2.5</sub>), and 2006 PM<sub>2.5</sub> Conformity Determination for the New Castle County, Delaware Portion of the Wilmington Area Planning Council (WILMAPCO) 2040 Regional Transportation Plan Update."

If you have any questions, please contact Ms. Cristina Fernandez, Associate Director, Office of Air Program Planning, at 215-814-2178 or Mr. Martin Kotsch at 215-814-3335.

Sincerely,

A handwritten signature in black ink that reads "Diana Esher".

Diana Esher, Director  
Air Protection Division


Enclosure

cc: Anna Price (FHWA)  
Kwame Ahrin (FHWA)  
Phil Wheeler (DNREC)  
Mike DuRoss (DelDOT)


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103

February 23, 2011

**SUBJECT:** Technical Support Document for the Review of the 1997 8-Hour Ozone, 1997 Fine Particulate Matter (PM<sub>2.5</sub>), and 2006 PM<sub>2.5</sub> Conformity Determination for the New Castle County, Delaware Portion of the Wilmington Area Planning Council (WILMAPCO) 2040 Regional Transportation Plan Update

**FROM:**   
Martin Kotsch,  
Office of Air Program Planning (3AP30)

**TO:** Administrative Record of EPA's Review of the 1997 8-Hour Ozone, 1997 PM<sub>2.5</sub>, and 2006 PM<sub>2.5</sub> Conformity Determination for the New Castle County, Delaware Portion of the WILMAPCO 2040 Regional Transportation Plan Update

**THRU:**   
Cristina Fernandez, Associate Director  
Office of Air Program Planning (3AP30)

The purpose of this document is to review the New Castle County, Delaware portion of the WILMAPCO 2040 Regional Transportation Plan (Plan) Update and to determine whether or not the conformity determinations meet the requirements of the Clean Air Act and the applicable regulations promulgated at 40 CFR part 93. The U.S. Environmental Protection Agency (EPA) Region 3 received the WILMAPCO conformity determinations for the Plan with a request on February 16, 2011 from the Delaware Division Office of the Federal Highway Administration (FHWA). The conformity determinations were prepared by the WILMAPCO Metropolitan Planning Organization (MPO).

The New Castle County area is a part of the larger Philadelphia-Wilmington-Atlantic City, PA-DE-NJ-MD nonattainment area a moderate nonattainment area for the 1997 8 ozone standard. For the 1997 ozone standard, under section 93.109 of the Federal conformity rule, the existing 2008 Reasonable Further Progress (RFP) State Implementation Plan (SIP) with Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NOx) mobile emissions budgets are applicable for the ozone conformity determinations.

The New Castle County area is a part of the larger Philadelphia-Wilmington-Atlantic City, PA-DE-NJ nonattainment area for the 1997 and 2006 PM<sub>2.5</sub> annual standard. WILMAPCO utilizes its own transportation model for New Castle County portion of the larger non-attainment area. Its conformity determination results will be combined with the remaining nonattainment area which will then allow FHWA to make a conformity determination for the entire non-attainment area when all the affected MPOs have completed their individual conformity determinations for their respective planning areas.

The conformity determinations were reviewed in accordance with the procedures and criteria of the Transportation Conformity Rule contained in 40 CFR part 93, sections 93.102(b)(1), 93.102 (b)(2)(iv), 93.102(b)(2)(v), 93.102(b)(3), 93.106, 93.108, 93.110, 93.111, 93.112, 93.113(b), 93.113(c) 93.118, and 93.119.

**EVALUATION OF CONFORMITY DETERMINATIONS FOR THE NEW CASTLE COUNTY  
PORTION OF THE WILMAPCO PLAN SUBMITTED TO EPA BY FHWA ON  
FEBRUARY 16, 2011**

**GENERAL CRITERIA APPLICABLE TO THE PLAN**

SECTION of 40 CFR Part 93	CRITERIA	Y/N	COMMENTS
93.110	<p>Are the conformity determinations based upon the latest planning assumptions?</p> <p>(a) Are the conformity determinations, with respect to all other applicable criteria in §§93.111 - 93.119, based upon the most recent planning assumptions in force at the time of the conformity determinations?</p> <p>(b) Are the assumptions derived from the estimates of current and future population, employment, travel, and congestion the most recently developed by the MPO or other designated agency? Are the conformity determinations based upon the latest assumptions about current and future background concentrations?</p>	<p>Y</p> <p>Y</p> <p>Y</p>	<p>(a, b) The conformity determination is based upon the latest planning assumptions in force and approved by the MPO at the time of the determination. The travel demand model was updated in 2010. Year 2010 vehicle fleet data was used in the analysis. The analyses utilized socio-economic data based upon the year 2000 U.S. Census demographic data and projected to each of the analysis years and adopted in March 2006 by the WILMAPCO Council.</p>
	<p>(c) Are any changes in the transit operating policies (including fares and service levels) and</p>	Y	<p>There have been no changes in any operating policies or assumptions for ridership since the last conformity determination.</p>

	assumed transit ridership since the previous conformity determination discussed?		
	(d) Does the conformity determinations include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time?	Y	The conformity determinations included reasonable transit service and fare assumptions as well as assumptions about tolls associated with bridges and roadways.
	(e) Does the conformity determination use the latest existing information regarding the effectiveness of Transportation Control Measures (TCMs) and other implementation plan measures which have already been implemented?	Y	There are no TCMs in the SIP. However, the following implementation plan measures were accounted for in the conformity analyses: the Federal Motor Vehicle Control Program, reformulated gas, Reid Vapor Pressure of 7.8 psi for all analysis years, Stage II vapor recovery, Inspection and Maintenance, On Board Diagnostics and anti-tampering programs.
	(f) Are key assumptions specified and included in the draft documents and supporting materials used for the interagency and public consultation required by §93.105?	Y	Key assumptions have been included in the documents and supporting materials used for interagency and public consultation. They were included in the materials made available during the public review period.
93.111	Are the conformity determinations based upon the latest emissions model?	Y	The conformity determinations were based upon emission factors developed using MOBILE6.2, the currently-approved EPA mobile emissions model at the time of the conformity determination.
93.112	Did the MPO make the conformity determinations according to the consultation procedures of the conformity rule or the state's conformity SIP?	Y	Consultation has occurred among all appropriate agencies in accordance with the State conformity regulation. The MPO provided a public comment period from November 5, 2010 until January 6, 2011 on the Plan. A public hearing was held on November 17, 2010 during the public comment period. There were no public comments received on the Plan conformity determination.

**SPECIFIC CRITERIA APPLICABLE TO THE PLAN**

SECTION of 40 CFR PART 93	CRITERIA	Y/N	COMMENTS
93.102(b)(2)(iv)	Have the EPA and the State made a finding that NOx is an insignificant contributor to the direct mobile PM emissions or does any applicable implementation plan (or implementation plan submission) fail to establish an approved (or adequate) NOx budget as part of a PM <sub>2.5</sub> reasonable further progress, attainment or maintenance strategy?	N	NOx is included in the PM emission analysis.
93.102(b)(2)(v)	Has the EPA or State made a finding that VOCs, Sulfur Oxides (SOx) or Ammonia (NH <sub>3</sub> ) as precursors to be a significant contributor to the mobile PM emissions or has an applicable implementation plan (or implementation plan submission) establish an approved (or adequate) budget for VOCs, SOx or NH <sub>3</sub> as part of a PM <sub>2.5</sub> reasonable further progress, attainment or maintenance strategy?	N	VOCs, SOx and NH <sub>3</sub> as precursors are not included in the PM emissions analysis.
93.102(b)(3)	Has the EPA or State made a finding that re-entrained road dust is a significant contributor to the PM mobile emissions or has an applicable implementation plan (or implementation plan submission) establish an approved (or adequate) budget that includes re-entrained road dust as part of a PM <sub>2.5</sub> reasonable further progress, attainment or maintenance strategy?	N	Re-entrained road dust is not included in the PM emissions analysis.

93.106(a) (1)	Are the horizon years correct?	Y	The years 2015, 2020, 2030, and 2040 are appropriate horizon years for the 8-hour ozone. The years 2013, 2020 and 2030, 2035, and 2040 are appropriate horizon years for the 1997 and 2006 PM <sub>2.5</sub> standards, 2013 is within the first 5 years of the plan.																														
93.106(a) (2)(i)	Does the plan quantify and document the demographic and employment factors influencing transportation demand?	Y	Appendix D of the Plan discusses demographic and employment forecasts for New Castle County.																														
93.106(a) (2)(ii)	Is the highway and transit system adequately described in terms of the regionally significant additions or modifications to the existing transportation network which is envisioned to be operational in the horizon years?	Y	The highway and transit system is adequately described in terms of regionally significant additions or modifications to the existing transportation network, which the transportation plan envisions to be operational in the horizon years.																														
93.108	Is the Transportation Plan fiscally constrained?	Y	The MPO and FHWA have found the Plan to be fiscally constrained.																														
93.113(b)	Are Transportation Control Measures (TCMs) being implemented in a timely manner?	N/A	There are no TCMs in the SIP.																														
93.118	For areas with SIP budgets: Is the Transportation Plan, TIP or Project consistent with the motor vehicle emissions budget(s) in the applicable SIP?	Y	For New Castle County, projected emissions for 2015, 2020, 2030 and 2040 are less than the 2008 RPF SIP emission budgets as shown below:  <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>2008 Budget</u></td> <td style="text-align: center;"><u>2015 Analysis</u></td> </tr> <tr> <td style="text-align: center;">10.61 tpd (VOCs)</td> <td style="text-align: center;">7.19 tpd (VOCs)</td> </tr> <tr> <td style="text-align: center;">21.35 tpd (NOx)</td> <td style="text-align: center;">10.61 tpy (NOx)</td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"><u>2008 Budget</u></td> <td style="text-align: center;"><u>2020 Analysis</u></td> </tr> <tr> <td style="text-align: center;">10.61 tpd (VOCs)</td> <td style="text-align: center;">5.73 tpy (VOCs)</td> </tr> <tr> <td style="text-align: center;">21.35 tpd (NOx)</td> <td style="text-align: center;">6.1 tpy (NOx)</td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"><u>2008 Budget</u></td> <td style="text-align: center;"><u>2030 Analysis</u></td> </tr> <tr> <td style="text-align: center;">10.61 tpd (VOCs)</td> <td style="text-align: center;">5.38 tpy (VOCs)</td> </tr> <tr> <td style="text-align: center;">21.35 tpd (NOx)</td> <td style="text-align: center;">4.44 tpy (NOx)</td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"><u>2008 Budget</u></td> <td style="text-align: center;"><u>2040 Analysis</u></td> </tr> <tr> <td style="text-align: center;">10.61 tpd (VOCs)</td> <td style="text-align: center;">5.83 tpy (VOCs)</td> </tr> <tr> <td style="text-align: center;">21.35 tpd (NOx)</td> <td style="text-align: center;">4.68 tpy (NOx)</td> </tr> </table>	<u>2008 Budget</u>	<u>2015 Analysis</u>	10.61 tpd (VOCs)	7.19 tpd (VOCs)	21.35 tpd (NOx)	10.61 tpy (NOx)			<u>2008 Budget</u>	<u>2020 Analysis</u>	10.61 tpd (VOCs)	5.73 tpy (VOCs)	21.35 tpd (NOx)	6.1 tpy (NOx)			<u>2008 Budget</u>	<u>2030 Analysis</u>	10.61 tpd (VOCs)	5.38 tpy (VOCs)	21.35 tpd (NOx)	4.44 tpy (NOx)			<u>2008 Budget</u>	<u>2040 Analysis</u>	10.61 tpd (VOCs)	5.83 tpy (VOCs)	21.35 tpd (NOx)	4.68 tpy (NOx)
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93.119	For areas without emission budgets: Does the Transportation Plan, TIP or Project demonstrate contribution to emission reductions?	Y	<p>There are no 1997 PM<sub>2.5</sub> SIP budgets for the area, therefore an interim test of using the less than base year (2002) analysis was conducted and the results are showed below. Under 93.109(e), this interim test is permissible as the area had choice of either the less than base year test or build/no greater than build analysis for the area. The base year emissions are based on emissions modeling done by the Delaware Department of Transportation and agreed upon by the Delaware department of Natural Resources and Environmental Control (DNREC) and are shown in tons per year. The analysis shows that the PM<sub>2.5</sub> nonattainment area passes the interim emissions test.</p> <table> <thead> <tr> <th><u>2002 BaseYear</u></th> <th><u>2013 Analysis</u></th> </tr> </thead> <tbody> <tr> <td>208.6 tpy (Direct PM)</td> <td>110.95 tpy (Direct PM)</td> </tr> <tr> <td>11799.1 tpy (NOx)</td> <td>4957.5 tpy (NOx)</td> </tr> </tbody> </table> <table> <thead> <tr> <th><u>2002 Base Year</u></th> <th><u>2020 Analysis</u></th> </tr> </thead> <tbody> <tr> <td>208.6 tpy (Direct PM)</td> <td>93.25 tpy (Direct PM)</td> </tr> <tr> <td>11799.1 tpy (NOx)</td> <td>2159.6 tpy (NOx)</td> </tr> </tbody> </table> <table> <thead> <tr> <th><u>2002 Base Year</u></th> <th><u>2030 Analysis</u></th> </tr> </thead> <tbody> <tr> <td>208.6 tpy (Direct PM)</td> <td>96.30 tpy (Direct PM)</td> </tr> <tr> <td>11799.1 tpy (NOx)</td> <td>1564.2 tpy (NOx)</td> </tr> </tbody> </table> <table> <thead> <tr> <th><u>2002 Base Year</u></th> <th><u>2035 Analysis</u></th> </tr> </thead> <tbody> <tr> <td>208.6 tpy (Direct PM)</td> <td>99.18 tpy (Direct PM)</td> </tr> <tr> <td>11799.1 tpy (NOx)</td> <td>1589.4 tpy (NOx)</td> </tr> </tbody> </table> <table> <thead> <tr> <th><u>2002 Base Year</u></th> <th><u>2040 Analysis</u></th> </tr> </thead> <tbody> <tr> <td>208.6 tpy (Direct PM)</td> <td>103.32 tpy (Direct PM)</td> </tr> <tr> <td>11799.1 tpy (NOx)</td> <td>1656.2 tpy (NOx)</td> </tr> </tbody> </table> <p>There are no 24-hour PM<sub>2.5</sub> SIP budgets for the area, therefore an interim test of using the less than base year (2008) analysis was conducted and the results are showed below. Under 93.109(e), this interim test is permissible as the area had choice of either the less than base year test or build/no greater than build analysis for the area. The base year emissions are based on emissions modeling done by the MPO and agreed upon by DNREC and are shown in tons per day. The analysis shows that the PM<sub>2.5</sub></p>	<u>2002 BaseYear</u>	<u>2013 Analysis</u>	208.6 tpy (Direct PM)	110.95 tpy (Direct PM)	11799.1 tpy (NOx)	4957.5 tpy (NOx)	<u>2002 Base Year</u>	<u>2020 Analysis</u>	208.6 tpy (Direct PM)	93.25 tpy (Direct PM)	11799.1 tpy (NOx)	2159.6 tpy (NOx)	<u>2002 Base Year</u>	<u>2030 Analysis</u>	208.6 tpy (Direct PM)	96.30 tpy (Direct PM)	11799.1 tpy (NOx)	1564.2 tpy (NOx)	<u>2002 Base Year</u>	<u>2035 Analysis</u>	208.6 tpy (Direct PM)	99.18 tpy (Direct PM)	11799.1 tpy (NOx)	1589.4 tpy (NOx)	<u>2002 Base Year</u>	<u>2040 Analysis</u>	208.6 tpy (Direct PM)	103.32 tpy (Direct PM)	11799.1 tpy (NOx)	1656.2 tpy (NOx)
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**CONCLUSION**

Pursuant to FHWA’s February 16, 2011 request, we have reviewed the New Castle County, Delaware Portion of the WILMAPCO 2040 Regional Transportation Plan Update. EPA has determined that the Plan meets the requirements of the Clean Air Act and the applicable regulations promulgated at 40 CFR part 93.