

Memorandum

MWAQC Meeting Items - May 24, 2006

DATE: May 24, 2006
TO: MWAQC
FROM: Joan Rohlf, Chief, Air Quality Planning
SUBJECT: SIP Development Update

Progress is being made on the SIP, although a major decision on the control strategy is waiting for the Ozone Transport Commission's meeting in June. At the meeting the states expect to reach a consensus on adopting a number of control measures throughout the northeast and mid-Atlantic states.

Beyond the control strategy and modeling the two remaining SIP tasks are 1) develop a weight of evidence to demonstrate attainment and 2) develop a list of contingency measures.

The following is an update on the SIP tasks. A draft SIP is still expected to be completed later this year and to be submitted ahead of the June 2007 deadline.

SIP Development Status

- **Emissions Inventory**

The base case 2002 inventory is complete, except for possible revisions to point source data. All source categories (area, nonroad, mobile and point sources) are completed.

Future year inventories for 2008 is complete. Only the mobile inventory for 2009 is needed to do the attainment year analysis. The 2009 mobile inventory will be completed by the end of May.

- **Attainment Modeling**

Preliminary future case modeling indicates that the Washington region will not achieve the 8-hour ozone standard by the 2009 deadline unless more controls are implemented.

OTC modeling results for measures that are in place and are expected by 2009 ("On The Books" and "On the Way") show that the Washington region is very close to meeting the ozone standard. Virginia modeling results are in line with the OTC results.

The region's control strategy needs to be modeled to show how effective the new measures will be in getting the reductions needed for attainment by 2009. Results from these sensitivity runs are expected in July after the OTC agrees on model rules to be adopted region-wide.

- **Control Measure Analysis/Control Strategy Development**

The Control Measures Work Group will select measures to be modeled as a control strategy for attainment. The measures will include those agreed upon by the OTC in February as well as other local measures.

Model rules are needed for each measure adopted by the OTC. These model rules must be promulgated in time to be included in the SIP going to EPA in a year. If effective, the OTC process will lead to benefits throughout the Ozone Transport Region and the Mid-West. However, the process is time-consuming and may not provide the benefits in time to be included in our SIP.

- **Local Government Initiatives**

The Local Government Initiatives Subcommittee is developing a list of priority voluntary measures to be included in the 8-hour SIP. The lead jurisdictions are Arlington, Montgomery County, Prince George's County and Fairfax County.

Next Steps

- Complete mobile inventories for 2009
- Calculate reduction requirements for attainment
- Propose control measure strategy (June)
- Conduct sensitivity runs for a regional control measure strategy
- Propose 8-hour mobile budgets (June-August 2006)
- Complete weight of evidence analysis
- Complete list of contingency measures
- Draft SIP to TAC, September 2006
- Draft SIP to MWAQC, October 2006

SIP due to EPA by June 2007

RATE-OF-FURTHER PROGRESS - DRAFT RESULTS
Washington, DC-MD-VA 8-Hour Ozone Nonattainment Area

RFP 15 % Reduction Target	
VOC =	7.5
NOx =	7.5
Total =	15

VOC

Source	Base Year 2002	Adjusted 2002	Adjusted 2008	Non-creditable (Adj 2002 - Adj 2008)	Difference (BY 2002 - Non- creditable)	RFP Target (2008)	2008 Controlled
	t/d	t/d	t/d	t/d	t/d	t/d	t/d
Point	12.91	12.91	12.91				13.00
Area	201.66	201.66	201.66				194.90
Non-road	123.55	123.55	123.55				89.80
On-road	117.20	166.89	154.24				70.27
Total	455.32	505.01	492.36	12.65	442.67	409.47	367.97

NOx

Source	Base Year 2002	Adjusted 2002	Adjusted 2008	Non-creditable (Adj 2002 - Adj 2008)	Difference (BY 2002 - Non- creditable)	RFP Target (2008)	2008 Controlled
	t/d	t/d	t/d	t/d	t/d	t/d	t/d
Point	220.60	220.60	220.60				226.75
Area	35.72	35.72	35.72				39.24
Non-road	73.85	73.85	73.85				64.55
On-road	266.73	308.24	276.15				160.14
Total	596.90	638.41	606.32	32.09	564.81	522.45	490.68

Note: 2008 Mobile emissions included 2005 registration data for the District of Columbia provided by TPB.
 Bus emissions in this analysis will be revised with new bus registration and diesel sales fraction files.

DRAFT COG Control Strategy Workgroup: Control Measure Inputs (last modified May 2, 2006) for Scenario 2. On-the-Books and On-the-Way Controls, including CAIR, plus additional VOC and NOx reductions from "new" local controls, plus additional controls across broader region (the Ozone Transport Region).							
	Measure	Description	Percent Reduction	Pollutant	Applicability Local	Applicability OTR Regional	SCC Code
NOx Reductions							
1	ICI Boiler Standards	Adopt OTC Model Rule on Standards for Industrial, Commercial, and Institutional Boilers. Only Sources Greater than 250 mmBtu.	16%	NOx	√	√	102 and 103 series. Exclude 10201201 for VA.
2	State RACT Updates	Update RACT for Portland Cement, MSW Facilities, Natural Gas Transmission, Asphalt Production, Generators	10-30%	NOx	√	√	501 and 502 series for MD. Only 10201201 series for VA. 30500706 and 30500915. 201, 202, 203 series. 305 series.
4	Diesel Chip Reflash	Adopt Mandatory Program Requiring Chip Reflash	<1%	NOx	√	√	Mobile.
3	Voluntary Bundle	Wind Energy Purchases, Renewable Portfolio, Retire Allowances. Fleet management.	<1%	NOx	√		101 series. Mobile. Nonroad.
VOC Reductions							
1	OTC Consumer Products Rule (Phase II)	Expand Number of Products Covered by OTC Consumer Product Rule. Require Lower VOC Content of Products Already Covered.	2.0%	VOC	√	√	Commercial/Consumer Solvent Use
2	OTC AIMS Rule (Phase II)	Expand Number of Products Covered by OTC AIMS Rule. Require Lower VOC Content of Products Already Covered.	6.0%	VOC	√	√	Surface Coatings: Architectural and Traffic Markings
3	Portable Fuel Containers Rule (Phase II)	Expand Number of Products Covered by OTC RFC Rule.	4%	VOC	√	√	Area Source: Gasoline
VOC and NOx Reductions							
1	OTC Corridor Strategy: Anti-Idling, Truck Stop Electrification, and APUs	Implement Truck Stop Electrification projects and other anti-idling programs (APUs) along the I-95 corridor.	<1%	VOC/NOx	√	√	Mobile Sources: Heavy Duty Diesel Trucks
2	Airport Emission Reduction	Establish Agreement with Airports Authority to Cap or Reduce Emissions.	1%	VOC/NOx	√		Commercial Airports
Source: COG Control Strategy Workgroup. Note: Tonnage information to be provided.							

TABLE: DRAFT Reduction Estimates for Modeling of Control Measures

Source Category	Cmmr 2/22- 23/06	Measure	Implementation Method	Expected BOTW % Reduction in 2009				Modeled Ton Per Year 2009 Reductions				CMAQ	Cost (\$/Ton)
				NOx	VOC	SO2	PM	NOx	VOC	SO2	PM		
EGU	A	Multi-P 4/4/06 (0.12 NOx, 0.35 SO2)	Model Rule	14		7		31,317		38,330		N*	See IPM
AIM 1	A	States)	Model Rule/ Fed		2				1,884			Y	6,400
Consumer Products	A	CARB 7/20/05 (-2 categories)	Model Rule		2				4,139			Y	4,800
Chip Reflash Diesel	A	Mandatory Reflash	Model Rule					63^				N	20 to 30
Diesel Retrofit	B/MV	Sub-Reg. Diesel Collaborative	Voluntary Prgms	Depends on funding				Depends on funding				N	
ICI >250	A	SCR FGD "	Model Rule	16		80		7,050		80,521		Y	3,000-10,000
ICI 100-250	A	LNB -SNCR "	State Rule Update	43		57		13,218		29,603		Y	1,000-3000
ICI 25-100	A	Combustion Modification "	State Rule Update	15		26		8,448		21,191		Y	
PFC	A	CARB 2005	Model Rule		4				2,168			Y	800 to 1400
EGU		Multi-P 4/4/06 (0.12 NOx, 0.35 SO2)	Model Rule	24		43		100,695		773,436		N*	See IPM
AIM 1		OTC Model Phase 1 (MRPO)	Model Rule/ Fed		31				33,263			Y	6,400
Consumer Products		OTC & CARB 7/20/05 (-2) (MRPO)	Model Rule		16				26,505			Y	800 to 4,800
Chip Reflash Diesel		Mandatory Reflash (MRPO)	Model Rule					46^				N	20 to 30
Diesel Retrofit		Sub-Reg. Diesel Collaboratives	Voluntary Prgms	Depends on funding				Depends on funding				N	
ICI >250		SCR FGD " (MRPO)	Model Rule	19		82		12,268		96,419		Y	
ICI 100-250		LNB -SNCR " (MRPO)	State Rule Update	49		63		19,428		42,106		Y	
ICI 25-100		Combustion Modification" (MRPO)	State Rule Update	15		37		8,716		33,223		Y	
PFC		OTC Model Rule + CARB 2005 (MRPO)	Model Rule		21				10,848			Y	250 to 480
TOTAL Super Region		With 04/04/06 Multi P proposal						201,031	78,807	1,114,829	0		
AIM 2	A	OTC Model Phase 2	Model Rule/ OTC		6				5,941			N	4,229 to 13,317
Asphalt paving	A	Emulsified	State Rule Update		20				4,460			Y	
Asphalt paving	A	Cutback	State Rule Update		20				2,240			Y	
Asphalt production	A	LNB + FGR; low sulfur oil	State Rule Update	43		75		549		950		Y	1000 to 2000
Cement Kilns	A	SNCR "	State Rule Update	47				11,761				Y	<2,500
Distillate Oil - Residential	MV	500 ppm sulfur fuel	MOU - MV	10		75	80	4,675		96,823	3,456	Y	
Distillate Oil - ICI Boiler	MV	500 ppm sulfur fuel	MOU - MV	10		75	80	2,396		45,385	2,238	Y	
EGU Peaking	A	TBD	Pricing/Dispatch	25				32^				N	
Glass	A	Oxyfiring	State Rule or Permit	85				18,392				Y	1254 to 2500
Industrial Adhesives	B	CARB Dec 1998	Model Rule		64				27,990			Y	2500
MWC	A	Federal Rule Development	State Rule or Permit									Y	
Regional Fuel	A	under review	MOU - OTC					4.8^	139.4^			Y	
TOTAL OTR		Local Measures (no EGU's)						64,093	48,822	274,473	5,694		
Auto Refinish Recoating	A	CARB October 20 2005 SCM	NA		65				13,981			N	2860
Industrial Surface Coating	B	EPA CTG RACT Limits	State Rule Update									N	
Lime Kiln	A	Good combustion practices	NA									N	<2000
Metal Production	B	under review	NA									N	
Printing and Graphic Arts	B	under review	NA									N	
POTWs	B	under review	NA									N	
Refinery	A	Consent Orders / RACT	State Rule, Pmt or Ord									N	
Stage 1	B	EPA Rule	Fed Rule									?	<2000
TOTAL Modeling		All modeled reductions						104,505	113,497	400,836			
TOTAL Reductions		All reductions, with 04/04.06 Multi P proposal						236,517	119,438	1,212,602			

A = Special Meeting recommendation to model
 B = Special Meeting recommendation for further review
 *UMD Sensitivity Runs
 " Performance Based Standard, (no particular technology mandated)
 ^ expressed in tons per summer day (not included in totals on this sheet)

(other SC) = States other than OTR states in the State Collaborative.
 This chart does not include: Off-road restrictions, Construction, or Low-S (#4 and #6, non-road fuel, marine fuel)
 Stage 1 and Small Engine proposals include a multi-state letter supporting EPA