

APPENDIX A: Descriptions of the Proposed SIP Revisions

Updates to ARB's Rulemaking Calendar

ARB staff is proposing updates to ARB's Rulemaking Calendar to reflect the current status of adopted PM2.5 measures and changes to expected action dates for three of these measures: new emission standards for recreational boats, expanded off-road recreational vehicle emission standards, and additional evaporative emission standards. ARB proposes to modify the action date for all three measures from the existing range of 2009-2010 to 2013. ARB action on these measures in this timeframe will allow implementation to occur by the 2014 attainment date. ARB's commitments to achieve emission reductions by specified dates, as identified in the 2007 State Strategy, remain unchanged and are not altered by the proposed changes to ARB's rulemaking calendar. Appendix B provides the PM2.5 SIP revision for the updated rulemaking calendar.

Reasonable Further Progress

The federal Clean Air Act (Act) requires that SIPs show there will be steady progress in reducing emissions during the years leading to the attainment date, called reasonable further progress (RFP). ARB staff is proposing updates to the RFP tables to reflect the current status of adopted measures and account for changes due to the recession. These revisions are necessary to reflect current forecasted emissions as a result of the impacts of the recession on key source categories in the SIPs. Appendix C provides the SIP revision for the updated RFP tables.

The Act also requires attainment plans to identify "contingency measures" to be implemented if nonattainment areas fail to meet RFP requirements or to attain the federal air quality standards on time. These contingency measures are to take effect without further ARB or air district action, and thus must be measures that have already been adopted when the SIP is submitted to U.S. EPA.

For PM2.5, U.S. EPA requires that the RFP plan show generally linear progress for the precursor pollutants identified in the attainment demonstration. For the San Joaquin Valley this includes direct PM2.5, NOx, and SOx. For the South Coast Air Basin it also includes ROG. Since both the San Joaquin Valley and South Coast Air Basin show attainment in 2014, 2009 and 2012 are the milestone years for RFP. ARB is providing contingency measures for the 2012 RFP milestone and 2014 attainment years as appropriate.

ARB is updating the RFP milestone emission levels to reflect the impact of the recession and recent changes to the in-use heavy-duty truck and off-road equipment

rules, and also the ocean-going vessels rule for the South Coast. Appendix C Tables 1 and 2 display projected emission levels in each of the RFP years, showing continuous progress towards the attainment levels for the San Joaquin Valley and the South Coast Air Basin, respectively. The RFP levels in both areas meet U.S. EPA requirements for demonstrating generally linear progress.

For the San Joaquin Valley, the estimates of emission levels in the RFP milestone years consider baseline emissions and emission reductions accomplished by District adopted rules. Approximately one year's worth of RFP reductions are reserved from existing emission reductions for contingency purposes for NOx and SOx in 2012. For PM2.5, SOx reductions that are in excess of those needed to meet RFP and contingency are reserved for PM2.5 contingency purposes.

For the South Coast, emission estimates for the milestone years considered baseline emissions, emission reductions from ARB adopted rules, and emission reductions accomplished by District adopted rules. All existing emission reductions are credited towards meeting the RFP milestones, with no reductions withheld for contingency purposes. This is appropriate given recent air quality progress in the South Coast.

For the 2014 attainment year, the additional emission reductions accrued in 2015 from baseline emission reductions are relied upon to meet the contingency requirements for both the San Joaquin Valley and the South Coast.

Updates to the Transportation Conformity Budgets

ARB is proposing to update the transportation conformity budgets applicable to the federal annual PM2.5 standard for the South Coast and San Joaquin Valley and establish a trading mechanism that will ensure that the impact of on-road emissions will be consistent with the attainment demonstration in future years. The basis for the trading mechanism is the SIP attainment modeling which established the relative contribution of each PM2.5 precursor pollutant. These updates account for the action taken by the Board in December to amend the truck and bus regulations to include better data and improvements to the emissions inventory, and reflects the current rulemaking calendar. Appendix D provides the SIP revision and description of the trading mechanism.

The Act requires metropolitan planning organizations (MPO) to demonstrate that their regional transportation plans (RTP) and transportation improvement programs (TIP) are consistent with progress toward and attainment of the NAAQS. MPOs use modeling to estimate regional emissions based on projected motor vehicle travel on the region's road and transit facilities.

The level of emissions for on-road motor vehicles, such as cars, trucks, and buses, consistent with SIP progress and attainment, is called a "motor vehicle emissions

budget.” For conformity, projected emissions from highway and transit use must be less than or equal to the budget. Budgets are developed during the air quality planning process in consultation with ARB, regional air districts, U.S. EPA, the U.S. Department of Transportation, and MPOs and provide for public review and comment.

The conformity budgets use the SIP on-road mobile source inventory which includes an updated heavy duty diesel truck and bus inventory that reflects the 2010 truck and bus regulatory amendments. This adjustment reflects the difference between the baseline SIP on-road motor vehicle emissions inventory from EMFAC2007 and the new truck and bus inventory that incorporates the impacts of both the recession and final regulations. The ton per day change in emissions is incorporated as a line item adjustment to the updated transportation conformity budgets (see “State Strategy Adjustments” line item in Tables A-1 and A-2 below).

Methodologically, the State Strategy Adjustments line item is then subtracted from the baseline SIP on-road motor vehicle emissions inventory from EMFAC2007. Importantly, the SIP baseline emissions inventory continues to be based on the activity data (e.g. vehicle miles travelled) provided by the SIPs.

This line item approach to account for State strategy reductions is consistent with the approach used to develop the originally submitted budgets. Following is an example of how the line item adjustment is calculated and used to develop the conformity budgets.

This example reflects the derivation of the 2014 NO_x budget for South Coast Air Basin.

- The combined NO_x emissions from medium and heavy heavy-duty trucks, school buses and other buses are retrieved from the baseline EMFAC2007 SIPs inventory (145 tpd NO_x) and the new truck inventory (132 tpd NO_x).
- The difference between these emissions is calculated (145 tpd – 132 tpd = 13 tpd NO_x).
- 13 tpd NO_x reflects the difference between the SIPs baseline inventory and the new truck inventory.
- 13 tpd is then added to the emission reductions in CY 2014 that were already identified in the SIPs from State and local strategies, including: Smog Check improvements and AB 923 Light and Medium-Duty High-Emitter Identification programs (13 tpd + 0.7 tpd = 13.7 tpd NO_x)
- 13.7 tpd NO_x is the total “State Strategy Adjustments” and is then entered into the conformity worksheet

The transportation conformity budget development worksheets are included in Tables A-1 and A-2 below, with the proposed SIPs budgets found in Appendix D.

Note that the “Adjustments to Baseline” line item originally included benefits for adopted regulations for solid waste collection and public fleet vehicles, heavy duty chip re-flash, and heavy duty truck idling, since the impacts of these regulations were not included in EMFAC2007. The benefits of these regulations are now reflected in the new truck and bus inventory baseline, and, therefore, are no longer included as a line item adjustment.

The remaining “Adjustments to Baseline” consist of reductions from AB 1493 (Pavley) and benefits from the on-road portion of the Carl Moyer program.

Table A-1
South Coast Air Basin
PM2.5 Transportation Conformity Emission Budget Worksheets*
(Annual Average – Tons per Day)

South Coast Air Basin	2012			2014		
	ROG	NOx	PM2.5	ROG	NOx	PM2.5
Baseline Inventory	162.6	350.8	17.5	146.1	305.7	17.2
Re-entrained Road Dust (Paved)			18.8			19.0
Re-entrained Road Dust (Unpaved)			1.0			1.0
Road Construction Dust			0.2			0.2
State Strategy Adjustments	-3.8	-21.2	-1.2	-9.2	-13.7	-2.7
Adjustments to Baseline	-0.4	-1.2	-0.1	-0.6	-1.3	-0.2
Budget	159	329	37	137	291	35

*Budgets are rounded up to the nearest ton.

Table A-2
San Joaquin Valley Air Basin
PM2.5 Transportation Conformity Emission Budget Worksheets*
(Annual Average – Tons per Day)

County		2012		2014	
		PM2.5	NOx	PM2.5	NOx
Fresno	Baseline Inventory	1.82	47.82	1.65	40.6
	State Strategy Adjustments	0.29	11.61	0.54	9.07
	Adjustments to Baseline	0.01	0.35	0.02	0.29
	Budget	1.6	35.9	1.1	31.3
Kern (SJV)	Baseline Inventory	2.98	81.58	2.63	70.28
	State Strategy Adjustments	1.02	31.77	1.42	26.29
	Adjustments to Baseline	0.01	0.57	0.01	0.40
	Budget	2.0	49.3	1.3	43.6
Kings	Baseline Inventory	0.59	16.00	0.51	13.52
	State Strategy Adjustments	0.18	5.33	0.25	4.20
	Adjustments to Baseline	0.00	0.12	0.00	0.09
	Budget	0.5	10.6	0.3	9.3
Madera	Baseline Inventory	0.50	12.30	0.46	10.62
	State Strategy Adjustments	0.10	3.04	0.17	2.55
	Adjustments to Baseline	0.00	0.10	0.01	0.09
	Budget	0.5	9.2	0.3	8.0
Merced	Baseline Inventory	1.19	29.15	1.05	24.67
	State Strategy Adjustments	0.35	9.11	0.49	7.16
	Adjustments to Baseline	0.01	0.23	0.01	0.18
	Budget	0.9	19.9	0.6	17.4
San Joaquin	Baseline Inventory	1.39	35.24	1.29	30.27
	State Strategy Adjustments	0.32	10.51	0.45	8.58
	Adjustments to Baseline	0.01	0.26	0.01	0.20
	Budget	1.1	24.5	0.9	21.5
Stanislaus	Baseline Inventory	0.84	22.25	0.76	18.69
	State Strategy Reductions	0.13	5.42	0.22	4.04
	Adjustments to Baseline	0.00	0.15	0.00	0.10
	Budget	0.8	16.7	0.6	14.6
Tulare	Baseline Inventory	0.75	20.87	0.69	17.88
	State Strategy Adjustments	0.11	5.05	0.20	4.05
	Adjustments to Baseline	0.00	0.16	0.01	0.14
	Budget	0.7	15.7	0.5	13.7

*Budgets are rounded up to the nearest tenth ton (0.1).