

## Rollback Documentation – Appendix N

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### Design Value Recalculations

Reflecting Final Emission Inventory and Reduction Changes

Annual	Site	Design Value	Draft	Final 2010	Quality Assurance completed
	Bakersfield -Golden State	57	50	48.60	y
	Fresno - Drummond	50	44	44.88	y
	Hanford	53	45	46.56	y
	Visalia	54	45	46.23	y

24-hour	Date	Design Value	Draft	Final 2010	Quality Assurance completed
Bakersfield -Golden State	1/1/2001	205	154	151.48	y
Bakersfield - California	1/4/2001	190	148	137.43	y
Clovis	1/1/2001	155	121	119.67	y
Corcoran	10/21/1999	174	136	143.27	y
Corcoran	12/17/1999	174	134	138.37	y
Fresno - Drummond	1/1/2001	186	143	139.73	y
Fresno - First Street	1/1/2001	193	147	144.03	y
Hanford	1/7/2001	185	143	143.24	y
Modesto	1/7/2001	158	117	120.61	y
Oildale	1/1/2001	158	128	119.64	y
Turlock	10/21/1999	157	117	116.06	y

Highlighted items are fall episodes performed with a winter EI.

Other Episodes

**Other District Episodes and CRPAQS Episodes**

Reflecting Final Emission Inventory and Reduction Changes

Site	Date	Observed		Quality Assurance completed	Note
		Value	Final 2010		
Bakersfield California Avenue	1/1/01	186	134.54	y	Geologic dominated by local sources L1-75, L2-10, R-10 SJV-5
Bakersfield Golden State	1/4/01	208	152.29	y	
Oildale	1/4/01	195	146.47	y	
Fresno Drummond	1/4/01	159	119.48	y	
<b>Approximate result, specific PM2.5 area of influence not used</b>				<b>Accuracy + or - 5 micrograms</b>	
Bakersfield California Avenue	1/7/01	159	116.24	y	EI correct for SJV, Co., Local1, not correct for L2-PM2.5 AOI
Bakersfield Golden State	11/14/99	183	136.89	y	EI correct for SJV, Co., Local1, not correct for L2-PM2.5 AOI
Bakersfield Golden State	1/7/01	174	128.69	y	EI correct for SJV, Co., Local1, not correct for L2-PM2.5 AOI
Oildale	1/12/99	156	116.70	y	EI correct for SJV, Co., Local1, not correct for L2-PM2.5 AOI
Fresno Drummond	12/23/99	168	129.07	y	EI correct for SJV, Co., Local1, not correct for L2-PM2.5 AOI
Fresno Drummond	10/21/99	162	132.36	y	Evaluated with winter inventory, areas of influence are correct
Corcoran Patterson	01/07/01	165	129.48	y	EI correct for SJV, Co., Local1, not correct for L2-PM2.5 AOI
Hanford	12/23/99	156	121.34	y	EI correct for SJV, Co., Local1, not correct for L2-PM2.5 AOI

Highlighted items are fall episodes performed with a winter EI.

	A	B	C	D	E	F	G	H	I	J	K	L	M	
	Fresno - Drummond, Annual, Design value = 50	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned			
1	Line1 Source Contribution from Analysis	From CMB monthly analysis Feb 2000 to Dec 2000, adding January 2001 episode for chemistry equivalent to annual design value	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.			
2	LINE 1	50.00	19.50	4.60	0.70	2.25	5.25	12.00	2.60	0.00	3.1			
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions. = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes wildfires and biogenic. =20% + 10%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass			
4	LINE 2	8.25	4.0	0.0	0.0	0.7	1.6	1.0	1.0					
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result				
6	LINE 3	41.75	15.5	4.6	0.7	1.6	3.7	11.0	1.6	0.0	3.1			
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net			
8	LINE 4	24.74	10.9	2.3	0.5	0.8	1.8	5.5	0.8			2.2		
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5		
10	LINE 5	9.63	2.3	1.4	0.1	0.47	1.1	3.3	0.5			0.5		
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5		
12	LINE 6	5.30	1.6	0.7	0.1	0.24	0.6	1.65	0.24			0.3		
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates, episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5		
14	LINE 7	2.09	0.8	0.2	0.0	0.08	0.2	0.55	0.08		0.2			
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 off road mobile+ PM10 farm operations+ PM10 construction+ PM10 windblown	PM10, TOG & CO onroad mobile+ PM10, TOG & CO 860 offroad equipment PM10, TOG & CO 870 farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning PM10 & CO waste burning and disposal PM10 cooking PM10 & CO fires CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background)	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10			
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)												
17	PM10	L1= Area 3	7.236852297	1.55746265		0.270246847	1.54732371		2.946320228				15.67865618	
18		L2= Areas 3,4	26.02510179	2.26760773		0.375484581	2.955506973		5.732736172				39.92145356	
19		Sr= Fresno, Madera	74.4504	4.1236		0.511	5.6266		10.4843				94.6839	
20		R= SJV	230.9463	14.9086		1.92	24.7498		34.9152				305.5217	
21	NOx	L1= Area 3							53.21489079					
22		L2= Areas 3,4							88.61773631					
23		Sr= Fresno, Madera							144.7763					
24		R= SJV							565.19					
25	TOG	L1= Area 3		22.7065618			132.7691237							
26		L2= Areas 3,4		33.470797			257.6874576							
27		Sr= Fresno, Madera		58.2653			396.7168							
28		R= SJV		205.9787			1241.6439							
29	SOx	L1= Area 3								3.438823609				
30		L2= Areas 3,4								5.665348981				
31		Sr= Fresno, Madera								9.0772				
32		R= SJV								30.2452				
33														

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Fresno - Drummond, Annual, Design value = 50	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning			Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 3	8.129557667	1.44348865		0.367960339	1.747683078		3.262499732				17.31537711
135		L2= Areas 3,4	29.27326116	2.15521975		0.543853899	3.283480261		6.107828372				44.15866903
136		Sr= Fresno, Madera	83.727	3.8288		0.746828157	6.2618		10.8882				104.7058
137		R= SJV	255.0794	13.3523		2.63	27.9931		35.1798				331.6046
138	PM10 2010 EI with new controls	L1= Area 3	6.809440309	1.38943472		0.367960339	1.5244012		2.650942087				15.31076142
139		L2= Areas 3,4	24.51972576	2.07451381		0.543853899	2.863986791		4.962912068				37.05429637
140		Sr= Fresno, Madera	70.131	3.68542395		0.746828157	5.4618		8.8472				84.47342395
141		R= SJV	205.8304	12.8523		2.63	26.3051		29.2898				265.2426
142	NOx 2010 EI without new controls	L1= Area 3								34.57241458			
143		L2= Areas 3,4								62.07171354			
144		Sr= Fresno, Madera								103.4162			
145		R= SJV								401.6368			
146	NOx 2010 EI with new controls	L1= Area 3								31.73589191			
147		L2= Areas 3,4								56.97898788			
148		Sr= Fresno, Madera								94.93133136			
149		R= SJV								364.0558			
150	TOG 2010 EI without new controls	L1= Area 3			11.5234286		156.7815607						
151		L2= Areas 3,4			17.8329166		304.4959518						
152		Sr= Fresno, Madera			31.9684		468.3626						
153		R= SJV			111.1259		1484.1355						
154	TOG 2010 EI with new controls	L1= Area 3			11.5234286		156.7815607						
155		L2= Areas 3,4			17.8329166		304.4959518						
156		Sr= Fresno, Madera			31.9684		468.3626						
157		R= SJV			111.1259		1458.6195						
158	SOx 2010 EI without new controls	L1= Area 3									4.027627725		
159		L2= Areas 3,4									6.605602158		
160		Sr= Fresno, Madera									10.6469		
161		R= SJV									33.341		
162	SOx 2010 EI with new controls	L1= Area 3									3.749205461		
163		L2= Areas 3,4									6.148969412		
164		Sr= Fresno, Madera									9.9109		
165		R= SJV									27.083		
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	= (2010 L1/1999 L1) * LINE 4	12.2	1.1	0.6	0.7	0.4	0.5	2.0	4.2	0.9		2.4
213	Local Contribution Area of Influence of PM2.5	= (2010 L2/1999 L2) * LINE 5	2.6	0.7	0.4	0.2	0.3	0.3	1.2	2.6	0.6		0.5
214	Sub regional Contribution	= (2010 Sr1/1999 Sr2) * LINE 6	1.7	0.3	0.2	0.1	0.1	0.1	0.6	1.3	0.3		0.3
215	Regional Contribution	= (2010 R/1999 R) * LINE 7	0.9	0.1	0.1	0.0	0.0	0.0	0.2	0.4	0.1		0.2
216	+ Natural Background contribution	= LINE 2	4.0	0.0		0.0	0.7		1.6	1.0	1.0	0.0	0.0
217	2010-2011 projected Annual Result		49.67	21.4	1.2	1.0	1.6	0.9	5.5	9.6	2.9	0.0	3.4
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	= (2010 L1/1999 L1) * LINE 4	10.2	1.0	0.6	0.7	0.4	0.5	1.7	4.0	0.9		2.1
220	Local Contribution Area of Influence of PM2.5	= (2010 L2/1999 L2) * LINE 5	2.2	0.6	0.4	0.2	0.2	0.3	1.0	2.5	0.5		0.4
221	Sub regional Contribution	= (2010 Sr1/1999 Sr2) * LINE 6	1.5	0.3	0.2	0.1	0.1	0.1	0.5	1.3	0.3		0.3
222	Regional Contribution	= (2010 R/1999 R) * LINE 7	0.7	0.1	0.1	0.0	0.0	0.0	0.2	0.4	0.1		0.1
223	+ Natural Background contribution	= LINE 2	4.0	0.0		0.0	0.7		1.6	1.0	1.0	0.0	0.0
224	2010-2011 projected Annual Result		44.88	18.6	1.2	1.0	1.4	0.9	4.8	9.2	2.7	0.0	3.0
225													

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Kern - Bakersfield Golden state, Annual, Design Value = 57	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	Line1 Source Contribution from Analysis	From CMB monthly analysis Feb 2000 to Dec 2000, adding January 2001 episode for chemistry equivalent to annual design value	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	From CMB, if any.		
2	LINE 1	57.00	26.70	3.60	1.10	1.89	4.41	14.90	3.00	0.00	1.4		
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to local control, added back to projected future concentrations	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions. =20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes wildfires and biogenic. =20% + 10%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass		
4	LINE 2	7.89	4.0	0.0	0.0	0.6	1.3	1.0	1.0	Removed entirely from rollback, added back to result			
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics					
6	LINE 3	49.11	22.7	3.6	1.1	1.3	3.1	13.9	2.0	0.0	1.4		
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net		
8	LINE 4	29.60	15.9	1.8	0.8	0.7	1.5	7.0	1.0			1.0	
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5	
10	LINE 5	10.95	3.4	1.1	0.2	0.40	0.9	4.2	0.6			0.2	
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5	
12	LINE 6	6.11	2.3	0.5	0.1	0.20	0.5	2.09	0.30			0.1	
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates - episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5	
14	LINE 7	2.46	1.1	0.2	0.1	0.07	0.2	0.70	0.10		0.1		
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 off road mobile+ PM10 farm operations+ PM10 construction+ PM10 windblown	PM10, TOG & CO onroad mobile+ PM10, TOG & CO 860 offroad equipment PM10, TOG & CO 870 farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning PM10 & CO waste burning and disposal PM10 cooking PM10 & CO fires CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background)	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10		
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)											
17	PM10	L1= 12	11.03358816	1.86013502		0.32245184	3.544494187		2.22460778			19.25500973	
18		L2= Kern	33.4683	2.5679		0.385975235	7.902		3.7496			47.694	
19		S= Kern	33.4683	2.5679		0.385975235	7.902		3.7496			47.694	
20		R= SJV	230.9463	14.9086		1.92	24.7498		34.9152			305.5217	
21	NOx	L1= 12								102.0700607			
22		L2= Kern								156.4546			
23		S= Kern								156.4546			
24		R= SJV								565.1907			
25	TOG	L1= 12		26.686689			88.47924915						
26		L2= Kern		36.6317			181.1592						
27		S= Kern		36.6317			181.1592						
28		R= SJV		205.9787			1241.6439						
29	SOx	L1= 12								3.063829679			
30		L2= Kern								11.0342			
31		S= Kern								11.0342			
32		R= SJV								30.2452			

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Kern - Bakersfield Golden state, Annual, Design Value = 57	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning			Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned
1													
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= 12	12.56890734	1.70808265		0.466797727	3.929400598		2.33341034				21.39238808
135		L2= Kern	38.1163	2.3033		0.558757433	8.7601		3.8441				53.0238
136		Sr= Kern	38.1163	2.3033		0.558757433	8.7601		3.8441				53.0238
137		R= SJV	255.0794	13.3523		2.63	27.9931		35.1798				331.6046
138	PM10 2010 EI with new controls	L1= 12	9.359180014	1.64412054		0.466797727	3.790348055		1.772532331				16.95732469
139		L2= Kern	28.3893	2.21704894		0.558757433	8.4501		2.9201				41.97654894
140		Sr= Kern	28.3893	2.21704894		0.558757433	8.4501		2.9201				41.97654894
141		R= SJV	196.7944	12.8523		2.63	26.3051		29.2898				265.2426
142	NOx 2010 EI without new controls	L1= 12								76.55788003			
143		L2= Kern								119.9136			
144		Sr= Kern								119.9136			
145		R= SJV								401.5368			
146	NOx 2010 EI with new controls	L1= 12								67.5854598			
147		L2= Kern								105.8599772			
148		Sr= Kern								105.8599772			
149		R= SJV								363.7858			
150	TOG 2010 EI without new controls	L1= 12			15.771761			96.34351451					
151		L2= Kern			22.3177			197.2611					
152		Sr= Kern			22.3177			197.2611					
153		R= SJV			111.1259			1484.1355					
154	TOG 2010 EI with new controls	L1= 12			15.771761			87.59420854					
155		L2= Kern			22.3177			179.3471					
156		Sr= Kern			22.3177			179.3471					
157		R= SJV			111.1259			1458.6195					
158	SOx 2010 EI without new controls	L1= 12									3.281946052		
159		L2= Kern									12.3121		
160		Sr= Kern									12.3121		
161		R= SJV									33.341		
162	SOx 2010 EI with new controls	L1= 12									2.000579374		
163		L2= Kern									7.5051		
164		Sr= Kern									7.5051		
165		R= SJV									27.083		
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	= (2010 L1/1999 L1) * LINE 4	18.1	0.8	0.5	1.1	0.4	0.4	1.6	5.8	1.1		1.1
213	Local Contribution Area of Influence of PM2.5	= (2010 L2/1999 L2) * LINE 5	3.9	0.5	0.3	0.2	0.2	0.2	0.9	3.5	0.7		0.2
214	Sub regional Contribution	= (2010 Sr1/1999 Sr2) * LINE 6	2.6	0.2	0.2	0.2	0.1	0.1	0.5	1.8	0.3		0.2
215	Regional Contribution	= (2010 R/1999 R) * LINE 7	1.3	0.1	0.0	0.1	0.0	0.0	0.2	0.6	0.1		0.1
216	+ Natural Background contribution	= LINE 2	4.0	0.0		0.0	0.6		1.3	1.0	1.0	0.0	0.0
217	2010-2011 projected Annual Result		58.03	29.8	1.6	1.1	1.6	1.3	0.7	4.5	12.6	3.2	1.6
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	= (2010 L1/1999 L1) * LINE 4	13.5	0.8	0.5	1.1	0.4	0.3	1.2	5.4	0.7		0.9
220	Local Contribution Area of Influence of PM2.5	= (2010 L2/1999 L2) * LINE 5	2.9	0.5	0.3	0.2	0.2	0.2	0.7	3.3	0.4		0.2
221	Sub regional Contribution	= (2010 Sr1/1999 Sr2) * LINE 6	1.9	0.2	0.2	0.2	0.1	0.1	0.4	1.6	0.2		0.1
222	Regional Contribution	= (2010 R/1999 R) * LINE 7	1.0	0.1	0.0	0.1	0.0	0.0	0.1	0.5	0.1		0.1
223	+ Natural Background contribution	= LINE 2	4.0	0.0		0.0	0.6		1.3	1.0	1.0	0.0	0.0
224	2010-2011 projected Annual Result		48.60	23.3	1.6	1.1	1.6	1.3	0.7	3.8	11.8	2.4	1.2
225													

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Kings - Hanford , Annual, Design Value = 53	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	Line1 Source Contribution from Analysis	From CMB monthly analysis Feb 2000 to Dec 2000, adding January 2001 episode for chemistry equivalent to annual design value	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.		
2	LINE 1	53.00	23.20	4.00	0.50	1.98	4.62	15.70	3.00	0.00	0		
3	Line2 Natural and Transport Contribution see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions. = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes wildfires and biogenic. =20% + 10%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass		
4	LINE 2	7.98	4.0	0.0	0.0	0.6	1.4	1.0	1.0				
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result			
6	LINE 3	45.02	19.2	4.0	0.5	1.4	3.2	14.7	2.0	0.0	0.0		
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net		
8	LINE 4	26.45	13.4	2.0	0.4	0.7	1.6	7.4	1.0			0.0	
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5	
10	LINE 5	10.55	2.9	1.2	0.1	0.42	1.0	4.4	0.6			0.0	
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5	
12	LINE 6	5.77	1.9	0.6	0.1	0.21	0.5	2.21	0.30			0.0	
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5	
14	LINE 7	2.25	1.0	0.2	0.0	0.07	0.2	0.74	0.10		0.0		
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 off road mobile+ PM10 farm operations+ PM10 construction+ PM10 windblown	PM10, TOG & CO onroad mobile+ PM10, TOG & CO 860 offroad equipment PM10, TOG & CO 870 farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning PM10 & CO waste burning and disposal PM10 cooking PM10 & CO fires CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background)	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10		
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)											
17	PM10	L1= Area 5	10.62726401	0.34354204		0.054081039	0.305464261	1.704288207				13.44158539	
18		L2= Areas 5,6,7,8	39.31045835	1.76730805		0.270093113	3.393649713	2.96197731				45.81837627	
19		S= Tulare, Kings	49.3218	2.5364		0.294086989	4.5008	4.5846				60.9543	
20		R= SJV	230.9463	14.9086		1.92	24.7498	34.9152				305.5217	
21	NOx	L1= Area 5						20.44159256					
22		L2= Areas 5,6,7,8						72.19531862					
23		S= Tulare, Kings						77.774					
24		R= SJV						565.1907					
25	TOG	L1= Area 5			5.87213601		91.01532476						
26		L2= Areas 5,6,7,8			26.9341378		277.6758466						
27		S= Tulare, Kings			34.3569		249.4981						
28		R= SJV			205.9787		1241.6439						
29	SOx	L1= Area 5							2.195643579				
30		L2= Areas 5,6,7,8							3.154201496				
31		S= Tulare, Kings							1.7691				
32		R= SJV							30.2452				
33													



	A	B	C	D	E	F	G	H	I	J	K	L	M
	Kings - Hanford , Annual, Design Value = 53	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 5	11.71676419	0.31680007		0.078620969	0.348794276		1.692896835				14.5826762
135		L2= Areas 5,6,7,8	43.74474024	1.5914437		0.402170266	4.202372951		2.997549258				50.95668471
136		Sr= Tulare, Kings	54.7212	2.2327		0.438789405	5.5343		4.5763				67.0645
137		R= SJV	255.0794	13.3523		2.63	27.9931		35.1798				331.6046
138	PM10 2010 EI with new controls	L1= Area 5	9.60813547	0.30493694		0.078620969	0.320748552		1.637533764				11.76737321
139		L2= Areas 5,6,7,8	35.87213872	1.53184933		0.402170266	3.864470062		2.296179391				40.43037948
140		Sr= Tulare, Kings	44.8732	2.14909268		0.438789405	5.0893		3.8233				53.88789268
141		R= SJV	205.8304	12.8523		2.63	26.3051		29.2898				265.2426
142	NOx 2010 EI without new controls	L1= Area 5								13.78371425			
143		L2= Areas 5,6,7,8								49.36328821			
144		Sr= Tulare, Kings								52.7948			
145		R= SJV								401.6368			
146	NOx 2010 EI with new controls	L1= Area 5								12.44632963			
147		L2= Areas 5,6,7,8								44.57374446			
148		Sr= Tulare, Kings								47.6723089			
149		R= SJV								364.0558			
150	TOG 2010 EI without new controls	L1= Area 5			3.40459935		112.9643685						
151		L2= Areas 5,6,7,8			14.8601553		354.3705663						
152		Sr= Tulare, Kings			20.4143		322.0508						
153		R= SJV			111.1259		1484.1355						
154	TOG 2010 EI with new controls	L1= Area 5			3.40459935		112.7861796						
155		L2= Areas 5,6,7,8			14.8601553		353.8115854						
156		Sr= Tulare, Kings			20.4143		321.5428						
157		R= SJV			111.1259		1458.6195						
158	SOx 2010 EI without new controls	L1= Area 5								2.569842275			
159		L2= Areas 5,6,7,8								3.49721152			
160		Sr= Tulare, Kings								1.7466			
161		R= SJV								33.341			
162	SOx 2010 EI with new controls	L1= Area 5								2.537472797			
163		L2= Areas 5,6,7,8								3.453160991			
164		Sr= Tulare, Kings								1.7246			
165		R= SJV								27.083			
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	14.8	0.9	0.6	0.5	0.4	0.4	1.6	5.8	1.2		0.0
213	Local Contribution Area of Influence of PM2.5	=(2010 L2/1999 L2) * LINE 5	3.2	0.5	0.3	0.1	0.3	0.3	1.0	3.5	0.7		0.0
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	2.1	0.3	0.2	0.1	0.1	0.1	0.5	1.7	0.3		0.0
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.1	0.1	0.1	0.0	0.0	0.0	0.2	0.6	0.1		0.0
216	+ Natural Background contribution	= LINE 2	4.0	0.0		0.0	0.6		1.4	1.0	0.0		0.0
217	2010-2011 projected Annual Result	51.61	25.2	1.8	1.1	0.7	1.4	0.9	4.6	12.6	3.2	0.0	0.0
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	12.2	0.9	0.6	0.5	0.4	0.4	1.6	5.4	1.2		0.0
220	Local Contribution Area of Influence of PM2.5	=(2010 L2/1999 L2) * LINE 5	2.6	0.5	0.3	0.1	0.2	0.3	0.8	3.3	0.7		0.0
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	1.7	0.3	0.2	0.1	0.1	0.1	0.4	1.6	0.3		0.0
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	0.9	0.1	0.1	0.0	0.0	0.0	0.1	0.6	0.1		0.0
223	+ Natural Background contribution	= LINE 2	4.0	0.0		0.0	0.6		1.4	1.0	0.0		0.0
224	2010-2011 projected Annual Result	46.56	21.4	1.7	1.1	0.7	1.3	0.9	4.2	11.9	3.2	0.0	0.0
225													

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Tulare - Visalia Church St., Annual, Design Value =53	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	Line1 Source Contribution from Analysis	From CMB monthly analysis Feb 2000 to Dec 2000, adding January 2001 episode for chemistry equivalent to annual design value	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.		
2	LINE 1	53.00	21.70	4.00	0.50	2.01	4.69	15.90	3.10	0.00	1.1		
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions. = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes wildfires and biogenic. =20% + 10%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass		
4	LINE 2	8.01	4.0	0.0	0.0	0.6	1.4	1.0	1.0				
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result			
6	LINE 3	44.99	17.7	4.0	0.5	1.4	3.3	14.9	2.1	0.0	1.1		
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net		
8	LINE 4	26.36	12.4	2.0	0.4	0.7	1.6	7.5	1.1			0.8	
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5	
10	LINE 5	10.60	2.7	1.2	0.1	0.42	1.0	4.5	0.6			0.2	
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5	
12	LINE 6	5.78	1.8	0.6	0.1	0.21	0.5	2.24	0.32			0.1	
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates, episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5	
14	LINE 7	2.25	0.9	0.2	0.0	0.07	0.2	0.75	0.11		0.1		
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 off road mobile+ PM10 farm operations+ PM10 construction+ PM10 windblown	PM10, TOG & CO onroad mobile+ PM10, TOG & CO 860 offroad equipment PM10, TOG & CO 870 farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning PM10 & CO waste burning and disposal PM10 cooking PM10 & CO fires CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background)	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10		
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)											
17	PM10	L1= Area 7	10.56623993	0.89425904		0.150936689	1.811192465		1.289762432			19.6725921	
18		L2= Areas 5,6,7,8	39.31045835	1.76730805		0.270093113	3.393649713		2.96197731			45.81837627	
19		Sr= Kings, Tulare	49.3218	2.5364		0.294086989	4.5008		4.5846			60.9543	
20		R= SJV	230.9463	14.9086		1.92	24.7498		34.9152			305.5217	
21	NOx	L1= Area 7							31.60341191				
22		L2= Areas 5,6,7,8							72.19531862				
23		Sr= Kings, Tulare							77.774				
24		R= SJV							565.1907				
25	TOG	L1= Area 7		14.0088756			110.9205375						
26		L2= Areas 5,6,7,8		26.9341378			277.6759466						
27		Sr= Kings, Tulare		34.3569			249.4961						
28		R= SJV		205.9787			1241.6439						
29	SOx	L1= Area 7								0.61608148			
30		L2= Areas 5,6,7,8								3.154201496			
31		Sr= Kings, Tulare								1.7691			
32		R= SJV								30.2452			
33													

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Tulare - Visalia Church St., Annual, Design Value =53	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 7	11.92128958	0.81186303		0.226265922	2.327694829		1.306268216				17.21351538
135		L2= Areas 5,6,7,8	43.74474024	1.5914437		0.402170266	4.202372951		2.997549258				50.95666471
136		Sr= Kings, Tulare	54.7212	2.2327		0.438789405	5.5343		4.5763				67.0645
137		R= SJV	255.0794	13.3523		2.63	27.9931		35.1798				331.6046
138	PM10 2010 EI with new controls	L1= Area 7	9.77585308	0.78146141		0.226265922	2.140530382		1.000626145				14.33073764
139		L2= Areas 5,6,7,8	35.87213872	1.53184933		0.402170266	3.864470062		2.296179391				40.43037948
140		Sr= Kings, Tulare	44.8732	2.14909268		0.438789405	5.0893		3.8233				53.88789268
141		R= SJV	205.8304	12.8523		2.63	26.3051		29.2898				265.2426
142	NOx 2010 EI without new controls	L1= Area 7								21.71305361			
143		L2= Areas 5,6,7,8								49.36328821			
144		Sr= Kings, Tulare								52.7948			
145		R= SJV								401.6368			
146	NOx 2010 EI with new controls	L1= Area 7								19.60631348			
147		L2= Areas 5,6,7,8								44.57374446			
148		Sr= Kings, Tulare								47.6723089			
149		R= SJV								364.0558			
150	TOG 2010 EI without new controls	L1= Area 7		7.48994723			143.4957947						
151		L2= Areas 5,6,7,8		14.8601553			354.3705663						
152		Sr= Kings, Tulare		20.4143			322.0508						
153		R= SJV		111.1259			1484.1355						
154	TOG 2010 EI with new controls	L1= Area 7		7.48994723			143.2684457						
155		L2= Areas 5,6,7,8		14.8601553			353.8115854						
156		Sr= Kings, Tulare		20.4143			321.5428						
157		R= SJV		111.1259			1458.6195						
158	SOx 2010 EI without new controls	L1= Area 7								0.59221336			
159		L2= Areas 5,6,7,8								3.49721152			
160		Sr= Kings, Tulare								1.7466			
161		R= SJV								33.341			
162	SOx 2010 EI with new controls	L1= Area 7								0.584751901			
163		L2= Areas 5,6,7,8								3.453160991			
164		Sr= Kings, Tulare								1.7246			
165		R= SJV								27.083			
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	14.0	0.9	0.5	0.5	0.5	0.5	1.7	5.9	1.0		0.7
213	Local Contribution Area of Influence of PM2.5	=(2010 L2/1999 L2) * LINE 5	3.0	0.5	0.3	0.1	0.3	0.3	1.0	3.5	0.7		0.2
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	2.0	0.3	0.2	0.1	0.1	0.1	0.5	1.8	0.3		0.1
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.0	0.1	0.1	0.0	0.0	0.0	0.2	0.6	0.1		0.1
216	+ Natural Background contribution	= LINE 2	4.0	0.0		0.0	0.6		1.4	1.0	1.0	0.0	0.0
217	2010-2011 projected Annual Result		23.9	1.8	1.1	0.7	1.5	0.9	4.7	12.8	3.1	0.0	1.0
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	11.5	0.9	0.5	0.5	0.4	0.5	1.3	5.6	1.0		0.6
220	Local Contribution Area of Influence of PM2.5	=(2010 L2/1999 L2) * LINE 5	2.4	0.5	0.3	0.1	0.2	0.3	0.8	3.3	0.7		0.1
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	1.6	0.3	0.2	0.1	0.1	0.1	0.4	1.7	0.3		0.1
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	0.8	0.1	0.1	0.0	0.0	0.0	0.1	0.6	0.1		0.0
223	+ Natural Background contribution	= LINE 2	4.0	0.0		0.0	0.6		1.4	1.0	1.0	0.0	0.0
224	2010-2011 projected Annual Result		46.23	20.3	1.7	1.1	0.7	1.4	0.9	4.0	12.1	3.1	0.9
225													

**ANNUAL Average, based on CMB results for February to December 2000 plus the Jan 2001 Episode**

SITEID	CONC	UONC	PCMASS	Design Value	Sum of species	Burning		Motor Vehicle		Tire/Brake		Sulfate		Nitrate		Geological		Geological Profile	Unassigned
								Mass		Mass		Mass		Mass		Mass			
<b>BGS</b>	57.7	3.6	98.5	57.0	55.6	6.3	2.3	3.6	2.4	1.1	1.2	3.0	0.3	14.9	1.3	26.7	5.8	FDKERANN	1.4
<b>FSD</b>	49.5	3.2	98.4	50.0	46.9	7.5	2.4	4.6	2.8	0.7	0.7	2.6	0.3	12.0	1.1	19.5	3.3	DFDSDANN	3.1
<b>HAN</b>	51.5	3.3	104.1	53.0	52.9	6.6	2.0	4.0	2.3	0.5	0.7	3.0	0.3	15.7	1.4	23.2	4.2	FDHANANN	0.1
<b>VCS</b>	52.5	3.3	99.6	54.0	51.8	6.7	2.5	4.0	2.5	0.5	1.0	3.1	0.3	15.9	1.5	21.7	3.8	FDVCSANN	2.2

This analysis provides a seasonally adjusted annual average, using the January episode to reflect the dominant winter chemistry.

Annual based on Monthly

Bakersfield Golden State Monthly							Burning		Motor Vehicle		Tire/Brake		Sulfate		Nitrate		Geological	
SITEID	DATE	CONC	UONC	PCMAS	RSQ	CHISQ	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc
BGS	1/1/01	205	10.3	93.6	1.0	0.9	23.3	6.3	6.7	4.7	1.3	1.7	7.0	0.7	95.4	7.8	58.2	9.6
BGS	Feb	24.4	1.9	96.4	1.0	0.7	4.1	2.3	1.7	1.3	0.6	0.6	1.2	0.1	5.1	0.6	10.9	3.2
BGS	Mar	22.2	2.1	107.7	1.0	1.0	2.1	2.2	2.1	1.4	0.6	0.6	1.9	0.2	5.5	0.6	11.7	3.1
BGS	Apr	31.5	2.4	107.8	1.0	0.4	6.3	3.2	2.1	1.7	0.5	0.7	3.0	0.3	4.9	0.6	17.3	4.6
BGS	May*	34.6	2.5	118.5	1.0	0.5	0.3	0.4	5.3	2.6			3.1	0.3	4.5	0.5	27.8	5.7
BGS	Jun*	41.3	2.7	102.7	1.0	0.6	0.9	0.4	5.1	2.6			3.8	0.3	3.1	0.4	29.4	6.0
BGS	Jul*	37.0	2.6	101.3	0.9	2.2	7.1	1.1	0.2	1.4	2.4	1.4	2.1	0.2	2.2	0.3	23.4	5.9
BGS	Aug*	43.5	2.6	97.8	1.0	1.2	4.1	0.8	2.2	1.9	0.5	1.4	2.5	0.3	2.9	0.4	30.2	6.5
BGS	Sep*	78.6	4.7	98.3	0.9	1.2	3.5	1.4	4.5	3.3	0.8	2.7	3.0	0.4	3.6	0.4	61.9	12.5
BGS	Oct*	36.1	2.8	83.9	1.0	1.0	3.5	0.7	1.6	1.3	1.4	1.0	1.9	0.2	5.2	0.6	16.7	4.3
BGS	Nov	48.4	2.9	86.3	1.0	0.4	7.9	3.4	4.6	2.7	0.6	0.7	2.2	0.2	14.0	1.2	12.3	3.1
BGS	Dec	90.2	5.1	87.4	1.0	0.6	12.5	5.1	7.0	4.2	2.1	1.2	4.3	0.4	32.2	2.7	20.9	5.4
Min		22.2	1.9	83.9	0.9	0.4	0.3	0.4	0.2	1.3	0.5	0.6	1.2	0.1	2.2	0.3	10.9	3.1
Avg		57.7	3.6	98.5	1.0	0.9	6.3	2.3	3.6	2.4	1.1	1.2	3.0	0.3	14.9	1.3	26.7	5.8
Max		205.0	10.3	118.5	1.0	2.2	23.3	6.3	7.0	4.7	2.4	2.7	7.0	0.7	95.4	7.8	61.9	12.5

Fresno Drummond Monthly							Burning		Motor Vehicle		Tire/Brake		Sulfate		Nitrate		Geological	
SITEID	DATE	CONC	UONC	PCMAS	RSQ	CHISQ	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc
FSD	1/1/01	186	9.4	87.9	1.0	1.1	40.1	11.3	18.5	9.6	2.5	1.5	5.0	0.7	62.4	5.1	35.1	6.8
FSD	Feb	27.0	2.1	97.3	1.0	0.7	5.7	2.5	3.1	1.8	0.3	0.4	1.1	0.2	7.7	0.8	8.3	2.1
FSD	Mar	23.9	2.1	116.0	1.0	0.7	4.6	2.4	3.1	1.8	0.1	0.4	1.8	0.2	8.2	0.9	9.9	2.3
FSD	Apr	24.8	2.2	112.1	1.0	0.6	3.4	2.7	2.4	1.6	0.2	0.5	2.4	0.2	5.0	0.5	14.4	3.0
FSD	May**	20.0	2.1	99.5	1.0	0.6	0.34456	0.32946	2.1	1.4			2.32687	0.22637	2.47743	0.32112	12.63	1.7055
FSD	Jun*	34.1	2.5	105.8	1.0	1.0	1.9	0.4	3.8	2.3	0.0	0.6	4.2	0.4	3.6	0.4	22.5	3.8
FSD	Jul*	26.4	2.3	100.6	1.0	0.6	1.0	0.4	1.5	1.3			1.7	0.2	2.7	0.3	19.6	2.2
FSD	Aug*	38.2	2.5	90.2	0.9	2.7	3.8	0.7	0.9	1.5	1.4	0.9	2.0	0.3	3.3	0.4	23.1	4.3
FSD	Sep*	56.7	3.3	92.8	1.0	0.9	1.5	0.6	3.4	2.5	0.9	1.0	2.6	0.4	3.6	0.4	40.6	6.0
FSD	Oct*	50.7	3.4	93.5	1.0	0.5	1.8	0.4	4.5	2.6			2.2	0.3	8.4	0.8	30.6	3.3
FSD	Nov	40.5	2.6	95.7	1.0	0.4	11.9	3.3	4.5	2.7	0.4	0.4	2.1	0.2	13.1	1.2	6.8	1.8
FSD	Dec	65.8	3.9	89.7	1.0	0.8	13.7	4.3	7.3	3.8	0.8	0.6	3.2	0.3	23.4	2.0	10.6	2.6
Min		20.0	2.1	87.9	0.9	0.4	0.3	0.3	0.9	1.3	0.0	0.4	1.1	0.2	2.5	0.3	6.8	1.7
Avg		49.5	3.2	98.4	1.0	0.9	7.5	2.4	4.6	2.8	0.7	0.7	2.6	0.3	12.0	1.1	19.5	3.3
Max		186.0	9.4	116.0	1.0	2.7	40.1	11.3	18.5	9.6	2.5	1.5	5.0	0.7	62.4	5.1	40.6	6.8

Annual based on Monthly

**Hanford Monthly**

SITEID	DATE	CONC	UONC	PCMAS	RSQ	CHISQ	Burning		Motor Vehicle		Tire/Brake		Sulfate		Nitrate		Geological	
							Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc
HAN	1/7/01	185	9.6	102.9	1.0	0.4	27.6	9.7	14.7	7.8	1.7	1.1	7.2	0.7	96.9	7.9	42.4	7.7
HAN	Feb	20.0	1.8	105.0	0.9	0.5	5.0	1.7	1.4	1.0	0.0	0.3	1.4	0.2	8.6	0.9	4.6	1.3
HAN	Mar	21.4	2.0	100.3	0.9	0.5	4.0	1.8	1.6	1.0	0.2	0.3	1.8	0.2	7.1	0.7	6.8	1.8
HAN	Apr*	22.3	2.1	120.6	1.0	0.3	0.4	0.3	3.2	1.6			2.2	0.2	5.0	0.5	16.1	2.8
HAN	May*	24.4	2.1	107.3	1.0	0.3	1.16725	0.35652	2.4	1.4			2.44716	0.22382	3.77466	0.44049	16.4	2.79498
HAN	Jun*	31.3	2.5	107.9	1.0	0.4	3.2	0.5	2.4	1.6	0.2	0.6	3.8	0.3	4.1	0.5	20.1	4.1
HAN	Jul*	38.7	2.6	107.9	0.9	0.7	3.6	0.6	2.7	1.6	0.2	0.7	3.4	0.3	5.6	0.6	26.3	4.7
HAN	Aug*	43.3	2.6	103.7	0.9	0.5	4.2	0.6	1.9	1.5	0.3	0.8	2.0	0.2	2.7	0.4	33.8	5.7
HAN	Sep*	70.5	4.0	105.3	0.9	0.5	2.5	0.8	4.3	2.7	0.5	1.2	3.1	0.4	5.0	0.7	58.8	8.8
HAN	Oct*	51.8	3.4	90.9	1.0	0.3	1.0	0.5	3.7	2.2	0.2	0.8	2.4	0.3	7.6	0.8	32.2	5.8
HAN	Nov	46.4	2.8	107.6	1.0	0.4	13.5	3.6	4.8	2.9	1.0	0.5	2.4	0.3	17.7	1.5	10.5	2.7
HAN	Dec	62.8	3.6	89.4	1.0	0.5	12.4	3.4	4.4	2.5	0.9	0.5	3.7	0.4	23.9	2.1	10.7	2.8

Min		20.0	1.8	89.4	0.9	0.3	0.4	0.3	1.4	1.0	0.0	0.3	1.4	0.2	2.7	0.4	4.6	1.3
Avg		51.5	3.3	104.1	1.0	0.4	6.6	2.0	4.0	2.3	0.5	0.7	3.0	0.3	15.7	1.4	23.2	4.2
Max		185.0	9.6	120.6	1.0	0.7	27.6	9.7	14.7	7.8	1.7	1.2	7.2	0.7	96.9	7.9	58.8	8.8

**Visalia Church Street Monthly**

SITEID	DATE	CONC	UONC	PCMAS	RSQ	CHISQ	Burning		Motor Vehicle		Tire/Brake		Sulfate		Nitrate		Geological	
							Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc
HAN	1/7/01	185	9.6	102.9	1.0	0.4	27.6	9.7	14.7	7.8	1.7	1.1	7.2	0.7	96.9	7.9	42.4	7.7
VCS	Feb	25.0	2.1	99.8	1.0	0.5	5.3	2.1	2.0	1.3	0.0	0.5	1.1	0.1	9.0	1.0	7.6	1.9
VCS	Mar	27.5	2.2	102.9	1.0	1.0	4.8	2.2	2.9	1.7	0.1	0.5	2.1	0.2	10.0	0.9	8.4	1.9
VCS	Apr	26.2	2.2	115.3	1.0	0.7	5.6	2.8	1.7	1.6	0.6	0.6	2.8	0.3	5.9	0.6	13.7	2.9
VCS	May**	29.1	2.3	112.8	1.0	0.7	5.4	3.6	1.4	1.6			2.8	0.3	3.8	0.5	19.4	3.2
VCS	Jun*	42.0	2.7	106.1	1.0	0.7	0.8	0.4	4.9	2.7			5.4	0.5	5.2	0.6	28.2	3.9
VCS	Jul*	34.7	2.5	107.8	0.9	1.4	3.7	0.6	1.8	1.7	0.5	1.1	2.9	0.3	4.9	0.6	23.7	3.8
VCS	Aug*	44.9	2.7	98.5	0.9	1.3	3.6	0.7	1.4	1.6	0.3	1.4	2.3	0.3	4.2	0.5	32.4	4.9
VCS	Sep*	59.1	3.5	84.4	0.9	1.3	3.4	0.8	1.9	1.9	0.7	1.6	3.0	0.3	4.8	0.6	36.0	5.7
VCS	Oct*	53.7	3.5	83.6	1.0	0.6	1.6	0.7	4.4	2.6	0.0	1.4	2.4	0.3	9.8	1.0	26.7	4.5
VCS	Nov	37.3	2.5	94.1	1.0	0.6	5.8	3.1	6.1	2.9			1.8	0.2	10.9	1.0	10.5	2.1
VCS	Dec	65.0	3.8	87.5	1.0	0.9	12.7	3.6	4.6	2.7	0.6	0.7	3.2	0.3	24.8	2.1	11.2	2.6

Min		25.0	2.1	83.6	0.9	0.4	0.8	0.4	1.4	1.3	0.0	0.5	1.1	0.1	3.8	0.5	7.6	1.9
Avg		52.5	3.3	99.6	1.0	0.9	6.7	2.5	4.0	2.5	0.5	1.0	3.1	0.3	15.9	1.5	21.7	3.8
Max		185.0	9.6	115.3	1.0	1.4	27.6	9.7	14.7	7.8	1.7	1.6	7.2	0.7	96.9	7.9	42.4	7.7

NOTES: Burning profile was switched from wood burning to agricultural burning based on ARB monthly emissions inventory estimates.  
 Asterisk \* denotes AgBWheat profile used; \*\* denotes WBAmond (some AgBWheat/WBAmond used in April/May)

**Source Profiles**

	<u>Jan-May and Nov-</u> <u>Dec</u>	<u>June-Oct</u>
Burning	22 WBOakEuc	27 AgBWheat*
Sulfate	57 Amsul	57 Amsul
Nitrate	60 Amnit	60 Amnit
Motor Vehicle	65 CAMV	65 CAMV
Tire/Brake	67 TireBrke	67 TireBrke
Geological	92 FDHANANN	92 FDHANANN
	93 FDFREANN	93 FDFREANN
	94 FDVCSANN	94 FDVCSANN
	95 FDKERANN	95 FDKERANN

Note: (not used if run came out negative)

DATE		Rollback default percentage, adjust by episode properties					Total	
			Local	PM2.5	Sub regional	Regional		
		Default 2.5-10	70	15	10	5	100	
		Default 2.5	50	30	15	5	100	
		Note: distribution of anthropogenic contribution after subtraction of background						
	<b>Mapping of local, PM2.5-local, and sub-regional based on trajectory analysis</b>							
					Areas used			
24-hr date	Site Name	Value	Local	PM2.5	Sub regional	Regional	# of dates	
11/6/97	Corcoran-Patterson Avenue	199						
12/31/98	Bakersfield-Golden State Highway	159						
	Visalia-N Church Street	160						
1/12/99	Oildale-3311 Manor Street	156	12	12,13	Kern	SJV	1	
10/21/99	Corcoran-Patterson Avenue	174	6	5,6,7,8	Kings-Tulare	SJV	2	
	Fresno-Drummond Street	162	3	3,4	Fresno-Madera	SJV	3	
	Turlock-S Minaret Street	157	1	1,2	Stanislaus-Merced	SJV	4	
11/14/99	Bakersfield-Golden State Highway	183	12	6,7,8,10,12	Kings-Tulare-Kern	SJV	5	
12/11/99	Hanford-S Irwin Street	183						
12/17/99	Corcoran-Patterson Avenue	174	6	6,8	Kings-Tulare	SJV	6	
12/23/99	Fresno-Drummond Street	168	3	3,4,7	Fresno-Tulare	SJV	7	
	Hanford-S Irwin Street	156	5	5,6,8	Kings-Tulare	SJV	8	
1/1/01	Bakersfield-5558 California Avenue	186	12	9,10,11,12	Kern	SJV	9	
	Bakersfield-Golden State Highway	205	12	9,10,11,12	Kern	SJV	10	
	Clovis-N Villa Avenue	155	3	3,4	Fresno-Madera	SJV	11	
	Fresno-1st Street	193	3	3,4	Fresno-Madera	SJV	12	
	Fresno-Drummond Street	186	3	3,4	Fresno-Madera	SJV	13	
	Oildale-3311 Manor Street	158	12	9,10,11,12	Kern	SJV	14	
1/4/01	Bakersfield-5558 California Avenue	190	12	10,12,13	Kern	SJV	15	
	Bakersfield-Golden State Highway	208	12	10,12,13	Kern	SJV	16	
	Fresno-Drummond Street	159	3	3,4	Fresno-Madera	SJV	17	
	Oildale-3311 Manor Street	195	12	10,12,13	Kern	SJV	18	
1/7/01	Bakersfield-5558 California Avenue	159	12	10,12	Kern	SJV	19	
	Bakersfield-Golden State Highway	174	12	10,12	Kern	SJV	20	
	Corcoran-Patterson Avenue	165	6	6,8,10,12	Kings-Tulare-Kern	SJV	21	
	Hanford-S Irwin Street	185	5	5,6,7,8,10	Kings-Tulare-Kern	SJV	22	
	Modesto-14th Street	158	1	1,2	St-Me-Ma- Fr-Tu	SJV	23	
11/9/01	Hanford-S Irwin Street	155	5	5,7,8	Kings-Tulare	SJV	24	



AOI

<b>Annual</b>	<b>County</b>	<b>Value</b>	<b>Site</b>	<b>EPA Value</b>			
	Fresno	50	Fresno-Drummond	47-53			
	Kings	53	Hanford, Irwin St	51			
	Tulare	53	Visalia, Church Street	54			
	Kern	57	Bakersfield-Golden	55			
					<b>Areas used</b>		
<b>Annual</b>	<b>County</b>	<b>Value</b>	<b>Local</b>	<b>PM2.5</b>	<b>Sub regional</b>	<b>Regional</b>	
	Fresno	50	3	3,4	Fresno-Madera	SJV	
	Kings	53	5	5,6,7,8	Kings-Tulare	SJV	
	Tulare	53	7	5,6,7,8	Tulare-Kings	SJV	
	Kern	57	12	Kern	Kern	SJV	

A	B	C	D	E	F	G	H	I	J	K	L	M
Corcoran, 10/21/99, Design Value = 174	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.		
2	LINE 1	COP 10/21/99 174	92.7	15.38	0.0	5.47	12.76	24.6	3.5	0.00	19.64	
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations, except for tire fire and wildfire emissions unique to this episode.	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%	see background sheet, includes biogenic emissions = 20% removed prior to rollback as not subject to local control, added back to projected future concentrations. Wildfire and tire fire emissions estimated as 10 micrograms will not be added back to the future year.	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass	
4	LINE 2		16.51	4.6	0.0	1.1	8.6	1.2	1.0			
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result		
6	LINE 3		157.49	88.1	15.4	0.0	4.4	4.2	23.3	2.5	19.6	
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net		70%PM10 50%PM2.5 of net	
8	LINE 4		100.29	61.7	7.7	0.0	2.2	2.1	11.7	1.2	13.7	
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5		15%PM10 30%PM2.5	
10	LINE 5		31.09	13.2	4.6	0.0	1.31	1.3	7.0	0.7	2.9	
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5		10%PM10 15%PM2.5	
12	LINE 6		18.24	8.8	2.3	0.0	0.66	0.6	3.50	0.37	2.0	
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5		5%PM10 5%PM2.5	
14	LINE 7		7.87	4.4	0.8	0.0	0.22	0.2	1.17	0.12	1.0	
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary, Cooking CO presumed to add minimal mass	PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by no burn status PM10 & CO fires CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind	
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)										
17	PM10	L1= Area 6	8.090996974	0.07011068		0.010191073	0.701900918	0.792501794			9.594216264	
18		L2= Areas 5,6,7,8	33.04521175	1.61918706		0.26881955	3.537727901	3.44769525			41.28704671	
19		S= Kings, Tulare	41.8723	2.2949		0.292697229	4.6994	3.72884			52.59544	
20		R= SJV	169.7463	13.6135		1.92	25.3075	25.50111			234.16841	
21	NOx	L1= Area 6							5.111869314			
22		L2= Areas 5,6,7,8							70.00799717			
23		S= Kings, Tulare							75.597214			
24		R= SJV							566.106052			
25	TOG	L1= Area 6		1.12128052			15.69464415					
26		L2= Areas 5,6,7,8		28.0117516			266.6699746					
27		S= Kings, Tulare		35.3014			237.7348					
28		R= SJV		208.124			1241.4875					
29	SOx	L1= Area 6							0.113101131			
30		L2= Areas 5,6,7,8							2.865902692			
31		S= Kings, Tulare							1.5647			
32		R= SJV							29.2425			
33												

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Corcoran, 10/21/99, Design Value = 174	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1													
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 6	8.994995716	0.06426388		0.01502518	0.79453837		0.765694156				10.53555057
135		L2= Areas 5,6,7,8	37.37577597	1.46920543		0.400903334	4.386143898		10.27791254				53.16106187
136		S= Kings, Tulare	47.143	2.0369		0.437456258	5.7943		11.112322				66.086522
137		R= SJV	194.0865	12.1004		2.63	28.7677		27.38678				262.34138
138	PM10 2010 EI with new controls	L1= Area 6	7.046712806	0.06160843		0.01502518	0.704722062		0.079566768				7.808668523
139		L2= Areas 5,6,7,8	29.28032068	1.40849647		0.400903334	3.89032486		1.068024712				35.29919076
140		S= Kings, Tulare	36.932	1.95273336		0.437456258	5.1393		1.154732				45.17876536
141		R= SJV	150.7995	11.6004		2.63	26.2947		6.98712				195.68172
142	NOx 2010 EI without new controls	L1= Area 6								3.29593365			
143		L2= Areas 5,6,7,8								47.14013794			
144		S= Kings, Tulare								50.439232			
145		R= SJV								400.830212			
146	NOx 2010 EI with new controls	L1= Area 6								2.962887997			
147		L2= Areas 5,6,7,8								42.66279803			
148		S= Kings, Tulare								45.64854627			
149		R= SJV								363.712212			
150	TOG 2010 EI without new controls	L1= Area 6		0.65980505			20.44330532						
151		L2= Areas 5,6,7,8		15.5430338			343.4174279						
152		S= Kings, Tulare		21.1157			310.4611						
153		R= SJV		113.1861			1484.3529						
154	TOG 2010 EI with new controls	L1= Area 6		0.65980505			20.19775737						
155		L2= Areas 5,6,7,8		15.5430338			339.292584						
156		S= Kings, Tulare		21.1157			306.7321						
157		R= SJV		113.1861			1440.6909						
158	SOx 2010 EI without new controls	L1= Area 6								0.114722914			
159		L2= Areas 5,6,7,8								3.173690113			
160		S= Kings, Tulare								1.5189			
161		R= SJV								32.2467			
162	SOx 2010 EI with new controls	L1= Area 6								0.113061248			
163		L2= Areas 5,6,7,8								3.127721858			
164		S= Kings, Tulare								1.4969			
165		R= SJV								25.9547			
226	end												
227													
228													
229	2010-2011 Rollback Projection without additional controls	Quick format County Rollback only											
230	County Emissions Rollback	=1999 County EI/2010 County EI with Emission Reductions	99.19924109	6.82704992	4.60087771	0	2.696588851	2.856081545	12.53482462	18.1	2.3856447		24.67219985
231	+ Natural Background contribution	= LINE 2	4.64	0.00		0.00	1.09		3.55	1.23	1.00	0.00	0.00
232	2010-2011 projected Annual Result		185.43	103.8	6.8	4.6	0.0	3.8	2.9	19.4	3.4	0.0	24.7
233													
234	2010-2011 Rollback Projection with additional controls	Quick format County Rollback only											
235	County Emissions Rollback	=1999 County EI/2010 County EI with Emission Reductions	77.71305118	6.54494975	4.60087771	0	2.39176071	2.821776674	1.302550727	17.2	2.351090626		16.86666955
236	+ Natural Background contribution	= LINE 2	4.64	0.00		0.00	1.09		3.55	1.23	1.00	0.00	0.00
237	2010-2011 projected Annual Result		143.27	82.4	6.5	4.6	0.0	3.5	2.8	18.4	3.4	0.0	16.9

A	B	C	D	E	F	G	H	I	J	K	L	M	
Corcoran, 12/17/99, Design Value = 174	General Note	Geologic and Construction	Mobile Exhaust		Tire and Brake Wear	Organic Carbon		Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned	
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%		From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.	
2	LINE 1	<b>COP 12/17/99 174</b>	51.7	6.38	0.9	7.51		17.53	71.4	4.9	0.00	13.68	
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%		see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. No wildfires except 10/21/99. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass	
4	LINE 2		12.16	2.6	0.0	0.0	1.5	3.5	3.6	1.0			
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.							Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result		
6	LINE 3		161.84	49.1	6.4	0.9	6.0	14.0	67.8	3.9	0.0	13.7	
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net	
8	LINE 4		93.66	34.4	3.2	0.6	3.0	7.0	33.9	2.0			9.6
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5
10	LINE 5		38.99	7.4	1.9	0.1	1.80	4.2	20.3	1.2			2.1
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5
12	LINE 6		21.09	4.9	1.0	0.1	0.90	2.1	10.17	0.59			1.4
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5
14	LINE 7		8.09	2.5	0.3	0.0	0.30	0.7	3.39	0.20		0.7	
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass		PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by no burn status PM10 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind	
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)											
18	PM10	L1= Area 6	8.09096974	0.07011088		0.010191073	0.701900918		0.792501794			9.594216264	
19		L2= Areas 6,8	15.38845796	0.47570323		0.06472039	1.347954357		4.579832724			21.00338221	
20		S= Kings, Tulare	41.8723	2.2949		0.292697229	4.6994		3.72884			52.59544	
21		R= SJV	169.7463	13.6135		1.92	25.3075		25.50111			234.16841	
22	NOx	L1= Area 6								5.111869314			
23		L2= Areas 6,8								19.27396272			
24		S= Kings, Tulare								75.597214			
25		R= SJV								566.106052			
26	TOG	L1= Area 6		1.12128052			15.69464415						
27		L2= Areas 6,8		7.28136385			71.6415634						
28		S= Kings, Tulare		35.3014			237.7348						
29		R= SJV		208.124			1241.4875						
30	SOx	L1= Area 6								0.113101131			
31		L2= Areas 6,8								0.302209071			
32		S= Kings, Tulare								1.5647			
33		R= SJV								29.2425			

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Corcoran, 12/17/99, Design Value = 174	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1													
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 6	8.994995716	0.06426388		0.01502518	0.79453837		0.765694156				10.53555057
135		L2= Areas 6,8	17.33036355	0.41830855		0.096925115	1.622380789		4.441317954				23.06594825
136		S= Kings, Tulare	47.143	2.0369		0.437456258	5.7943		11.112322				66.086522
137		R= SJV	194.0865	12.1004		2.63	28.7677		27.38678				262.34138
138	PM10 2010 EI with new controls	L1= Area 6	7.046712806	0.06160843		0.01502518	0.704722062		0.079566768				7.808668523
139		L2= Areas 6,8	13.57667069	0.40102365		0.096925115	1.438983413		0.461517581				15.13177274
140		S= Kings, Tulare	36.932	1.95273336		0.437456258	5.1393		1.154732				45.17876536
141		R= SJV	150.7995	11.6004		2.63	26.2947		6.98712				195.68172
142	NOx 2010 EI without new controls	L1= Area 6								3.29593365			
143		L2= Areas 6,8								13.06873413			
144		S= Kings, Tulare								50.439232			
145		R= SJV								400.830212			
146	NOx 2010 EI with new controls	L1= Area 6								2.962887997			
147		L2= Areas 6,8								11.82747419			
148		S= Kings, Tulare								45.64854627			
149		R= SJV								363.712212			
150	TOG 2010 EI without new controls	L1= Area 6		0.65980505			20.44330532						
151		L2= Areas 6,8		4.15410786			93.85625593						
152		S= Kings, Tulare		21.1157			310.4611						
153		R= SJV		113.1861			1484.3529						
154	TOG 2010 EI with new controls	L1= Area 6		0.65980505			20.19775737						
155		L2= Areas 6,8		4.15410786			92.72794482						
156		S= Kings, Tulare		21.1157			306.7321						
157		R= SJV		113.1861			1440.6909						
158	SOx 2010 EI without new controls	L1= Area 6									0.114722914		
159		L2= Areas 6,8									0.289261411		
160		S= Kings, Tulare									1.5189		
161		R= SJV									32.2467		
162	SOx 2010 EI with new controls	L1= Area 6									0.113061248		
163		L2= Areas 6,8									0.2850717		
164		S= Kings, Tulare									1.4969		
165		R= SJV									25.9547		
226	end												
227													
228													
229	2010-2011 Rollback Projection without additional controls	Quick format County Rollback only											
230	County Emissions Rollback	=1999 County EI/2010 County EI with Emission Reductions	55.31111249	2.82998537	1.90718052	1.360879968	3.704468584	3.923573425	41.78353707	52.8	3.804200421		17.18751622
231	+ Natural Background contribution	= LINE 2	2.59	0.00		0.00	1.50		3.51	3.57	1.00	0.00	0.00
232	2010-2011 projected Annual Result		196.73	57.9	2.8	1.9	1.4	5.2	3.9	45.3	56.3	4.8	0.0
233													
234	2010-2011 Rollback Projection with additional controls	Quick format County Rollback only											
235	County Emissions Rollback	=1999 County EI/2010 County EI with Emission Reductions	43.33092943	2.7130477	1.90718052	1.360879968	3.285707573	3.876446731	4.341917677	49.9	3.74909975		11.74991116
236	+ Natural Background contribution	= LINE 2	2.59	0.00		0.00	1.50		3.51	3.57	1.00	0.00	0.00
237	2010-2011 projected Annual Result		138.37	45.9	2.7	1.9	1.4	4.8	3.9	7.8	53.5	4.7	0.0

	A	B	C	D	E	F	G	H	I	J	K	L	M	
	Hanford, 1/7/01, Design Value 185	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned			
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.			
2	LINE 1	HAN 1/7/01 185	41.21	14.25	1.63	8.04	18.75	94.16	6.96	0.00	0.00			
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	0, no natural background; transport estimated at 0	0, no natural background; transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. No wildfires except 10/21/99. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass			
4	LINE 2	13.13	2.1	0.0	0.0	1.6	3.7	4.7	1.0					
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result				
6	LINE 3	171.87	39.1	14.3	1.6	6.4	15.0	89.5	6.0	0.0	0.0			
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net			
8	LINE 4	94.09	27.4	7.1	1.1	3.2	7.5	44.7	3.0			0.0		
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5		
10	LINE 5	45.45	5.9	4.3	0.2	1.93	4.5	26.8	1.8			0.0		
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5		
12	LINE 6	23.74	3.9	2.1	0.2	0.96	2.2	13.42	0.89			0.0		
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates - episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5		
14	LINE 7	8.59	2.0	0.7	0.1	0.32	0.7	4.47	0.30		0.0			
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by no burn status PM10 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblow for episodes which are not high wind			
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)												
17	PM10	L1= Area 5	8.443339393	0.32129402		0.054143538	0.331818841	0.825241434					9.411236974	
18		L2= Areas 5,6,7,8,10	38.64459588	2.07449706		0.304445561	4.017166383	4.709413133					45.84441997	
19		S= Kings, Tulare	41.8723	2.2949		0.292697229	4.6994	4.777636					53.644236	
20		R= SJV	169.7463	13.6135		1.92	25.3075	25.50111					234.16841	
21	NOx	L1= Area 5							19.87194629					
22		L2= Areas 5,6,7,8,10							86.70044986					
23		S= Kings, Tulare							75.597214					
24		R= SJV							566.106052					
25	TOG	L1= Area 5		6.06945456			90.49702776							
26		L2= Areas 5,6,7,8,10		34.2012043			285.0377755							
27		S= Kings, Tulare		35.3014			237.7348							
28		R= SJV		208.124			1241.4875							
29	SOx	L1= Area 5							2.024265211					
30		L2= Areas 5,6,7,8,10							3.516290861					
31		S= Kings, Tulare							1.5647					
32		R= SJV							29.2425					
33														

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Hanford, 1/7/01, Design Value 185	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1													
133	2010-2011 Emissions Inventory												
	PM10 2010 EI without new controls	L1= Area 5	9.521588026	0.29889051		0.078753398	0.383010025			0.765694156			11.72665154
134		L2= Areas 5,6,7,8,10											
135		S= Kings, Tulare	43.99523114	1.83558723		0.452449137	4.921886739			10.98191719			61.25957225
136		R= SJV	47.143	2.0369		0.437456258	5.7943			11.112322			66.086522
137		L1= Area 5	194.0865	12.1004		2.63	28.7677			27.38678			262.34138
138	PM10 2010 EI with new controls	L1= Area 5	7.459247162	0.28654007		0.078753398	0.339713757			0.130071719			8.41324821
139		L2= Areas 5,6,7,8,10	34.46602627	1.75973902		0.452449137	4.36550619			1.141181043			41.25740248
140		S= Kings, Tulare	36.932	1.9573336		0.437456258	5.1393			1.154732			45.17876536
141		R= SJV	150.7995	11.6004		2.63	26.2947			6.98712			195.68172
142	NOx 2010 EI without new controls	L1= Area 5								13.0941913			
143		L2= Areas 5,6,7,8,10								60.23829325			
144		S= Kings, Tulare								50.438232			
145		R= SJV								400.830212			
146	NOx 2010 EI with new controls	L1= Area 5								11.85051345			
147		L2= Areas 5,6,7,8,10								54.516899			
148		S= Kings, Tulare								45.64854627			
149		R= SJV								363.712212			
150	TOG 2010 EI without new controls	L1= Area 5			3.49350812			112.3990741					
151		L2= Areas 5,6,7,8,10			19.9495808			363.5395791					
152		S= Kings, Tulare			21.1157			310.4611					
153		R= SJV			113.1861			1484.3529					
154	TOG 2010 EI with new controls	L1= Area 5			3.49350812			111.0490301					
155		L2= Areas 5,6,7,8,10			19.9495808			359.1730447					
156		S= Kings, Tulare			21.1157			306.7321					
157		R= SJV			113.1861			1440.6909					
158	SOx 2010 EI without new controls	L1= Area 5									2.38479726		
159		L2= Areas 5,6,7,8,10									3.89360954		
160		S= Kings, Tulare									1.5189		
161		R= SJV									32.2467		
162	SOx 2010 EI with new controls	L1= Area 5									2.3502546		
163		L2= Areas 5,6,7,8,10									3.837213852		
164		S= Kings, Tulare									1.4969		
165		R= SJV									25.9547		
225	end												
227													
228													
229	2010-2011 Rollback Projection without additional controls	Quick format County Rollback only											
230	County Emissions Rollback	=1999 County EI/2010 County EI with Emission Reductions	44.07489698	6.32531607	4.26274981	2.437941248	3.963067426	4.197467378	34.88762749	69.6	5.786031476		0
231	+ Natural Background contribution	= LINE 2	2.06	0.00		0.00	1.61		3.75	4.71	1.00	0.00	0.00
232	2010-2011 projected Annual Result		188.67	46.1	6.3	4.3	2.4	5.6	4.2	74.3	6.8	0.0	0.0
233													
234	2010-2011 Rollback Projection with additional controls	Quick format County Rollback only											
235	County Emissions Rollback	=1999 County EI/2010 County EI with Emission Reductions	34.52843835	6.06394801	4.26274981	2.437941248	3.515073852	4.147050898	3.6253323	65.8	5.702225634		0
236	+ Natural Background contribution	= LINE 2	2.06	0.00		0.00	1.61		3.75	4.71	1.00	0.00	0.00
237	2010-2011 projected Annual Result		143.24	36.6	6.1	4.3	2.4	5.1	4.1	7.4	7.0	6.7	0.0

A	B	C	D	E	F	G	H	I	J	K	L	M	
Turlock, 10/21/99, Design Value = 157	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned			
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.		
2	LINE 1	Turlock 10/21/99 157	62.04	10.79	1.63	7.69	17.93	16.16	2.75	0.00	38.02		
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations, except for tire fire and wildfire emissions unique to this episode.	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	0, no natural background; transport estimated at 0	0, no natural background; transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%	see background sheet, includes biogenic emissions = 20%; removed prior to rollback as not subject to local control, added back to projected future concentrations. Wildfire and tire fire emissions estimated as 10 micrograms will not be added back to the future year.	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass		
4	LINE 2	20.03	3.1	0.0	0.0	1.5	13.6	0.8	1.0				
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result			
6	LINE 3	136.97	58.9	10.8	1.6	6.1	4.3	15.4	1.7	0.0	38.0		
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 30%PM2.5 of net		
8	LINE 4	88.20	41.3	5.4	1.1	3.1	2.2	7.7	0.9			26.6	
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5	
10	LINE 5	26.30	8.8	3.2	0.2	1.84	1.3	4.6	0.5			5.7	
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5	
12	LINE 6	15.62	5.9	1.6	0.2	0.92	0.7	2.30	0.26			3.8	
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5	
14	LINE 7	6.85	2.9	0.5	0.1	0.31	0.2	0.77	0.09		1.9		
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary, Cooking CO presumed to add minimal mass	PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by no burn status PM10 & CO fires CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind		
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)											
17	PM10	L1= Area 1	3,914311622	0.88535358		0.159282324	0.830152647					7.884562191	
18		L2= Areas 1,2	27.21210196	2.51046832		0.383740994	3.516030297					40.68002916	
19		S= Stanislaus, Merced	30.9755	2.6659		0.401151503	3.9363					45.650332	
20		R= SJV	169.7463	13.6135		1.92	25.3075					234.16841	
21	NOx	L1= Area 1							33.19264105				
22		L2= Areas 1,2							90.56965984				
23		S= Stanislaus, Merced							94.778398				
24		R= SJV							566.106052				
25	TOG	L1= Area 1		15.9348141			38.56381538						
26		L2= Areas 1,2		39.101363			328.3923334						
27		S= Stanislaus, Merced		40.8055			327.6706						
28		R= SJV		208.124			1241.4875						
29	SOx	L1= Area 1							2.280581915				
30		L2= Areas 1,2							3.850438327				
31		S= Stanislaus, Merced							4.0138				
32		R= SJV							29.2425				
33													



	A	B	C	D	E	F	G	H	I	J	K	L	M
	Turlock, 10/21/99, Design Value = 157	General Note	Geologic and Construction	Mobile Exhaust		Tire and Brake Wear	Organic Carbon		Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 1	4.34145019	0.80715225		0.20385051	0.905495776		2.444215411				9.135323973
135		L2= Areas 1,2	29.7645551	2.18518744		0.480374606	3.832713237		5.166912834				41.03793609
136		Sr= Stanislaus, Merced	33.7602	2.311		0.502641623	4.2726		5.530998				45.874798
137		R= SJV	194.0865	12.1004		2.63	28.7677		27.38678				262.34138
138	PM10 2010 EI with new controls	L1= Area 1	3.327850967	0.63251957		0.20385051	0.863957329		1.356117058				5.108761106
139		L2= Areas 1,2	22.81541904	1.71240781		0.480374606	3.656892474		1.208492363				28.9064511
140		Sr= Stanislaus, Merced	25.8782	2.21550729		0.502641623	4.0766		1.272658				33.44296529
141		R= SJV	150.7995	11.6004		2.63	26.2947		6.98712				195.68172
142	NOx 2010 EI without new controls	L1= Area 1								21.69581345			
143		L2= Areas 1,2								59.96758871			
144		Sr= Stanislaus, Merced								62.817036			
145		R= SJV								400.830212			
146	NOx 2010 EI with new controls	L1= Area 1								20.00669041			
147		L2= Areas 1,2								55.29882456			
148		Sr= Stanislaus, Merced								57.92642873			
149		R= SJV								363.712212			
150	TOG 2010 EI without new controls	L1= Area 1		7.53943316			46.03555833						
151		L2= Areas 1,2		18.7112699			395.903297						
152		Sr= Stanislaus, Merced		19.6476			396.7628						
153		R= SJV		113.1861			1484.3529						
154	TOG 2010 EI with new controls	L1= Area 1		7.53943316			45.42211877						
155		L2= Areas 1,2		18.7112699			390.6277502						
156		Sr= Stanislaus, Merced		19.6476			391.4758						
157		R= SJV		113.1861			1440.6909						
158	SOx 2010 EI without new controls	L1= Area 1									2.424840634		
159		L2= Areas 1,2									3.990444315		
160		Sr= Stanislaus, Merced									4.1637		
161		R= SJV									32.2467		
162	SOx 2010 EI with new controls	L1= Area 1									2.188978191		
163		L2= Areas 1,2									3.602296766		
164		Sr= Stanislaus, Merced									3.7587		
165		R= SJV									25.9547		
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	45.8	2.5	1.3	1.5	1.7	1.8	2.7	5.9	0.9		30.8
213	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	9.7	1.4	0.8	0.3	1.0	1.1	0.9	3.6	0.5		5.8
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	6.4	0.7	0.4	0.2	0.5	0.6	0.4	1.8	0.3		3.8
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	3.4	0.2	0.1	0.1	0.2	0.2	0.2	0.6	0.1		2.1
216	+ Natural Background contribution	= LINE 2	3.1	0.0		0.0	1.5		13.6	0.6	1.0	0.0	0.0
217	2010-2011 projected Annual Result		68.3	4.8	2.6	2.1	4.9	3.7	17.9	12.7	2.8	0.0	42.5
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	35.1	1.9	1.3	1.5	1.6	1.8	1.5	5.6	0.8		17.2
220	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	7.4	1.1	0.8	0.3	1.0	1.1	0.2	3.4	0.5		4.1
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	4.9	0.7	0.4	0.2	0.5	0.6	0.1	1.7	0.2		2.8
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	2.6	0.2	0.1	0.1	0.2	0.2	0.1	0.6	0.1		1.6
223	+ Natural Background contribution	= LINE 2	3.1	0.0		0.0	1.5		3.6	0.8	1.0	0.0	0.0
224	2010-2011 projected Annual Result		116.06	53.1	3.9	2.6	2.1	4.7	3.6	5.5	12.2	2.7	0.0
225													
226	end												

A	B	C	D	E	F	G	H	I	J	K	L	M	
Modesto 14th Street, 1/7/01, Design Value	General Note	Geologic and Construction	Mobile Exhaust		Tire and Brake Wear	Organic Carbon		Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned	
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB		From CMB	Estimated portion of mass included if Vegetative Burning =30%		From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.	
2	LINE 1	M14 1/7/01 158	10.44	5.37	4.73	9.05		21.11	83.88	7.40	0.00	16.04	
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%		see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. No wildfires except 10/21/99. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass	
4	LINE 2		11.75	0.5	0.0	0.0	1.8	4.2	4.2	1.0			
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.							Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result		
6	LINE 3		146.25	9.9	5.4	4.7	7.2	16.9	79.7	6.4	0.0	16.0	
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net	
8	LINE 4		79.26	6.9	2.7	3.3	3.6	8.4	39.8	3.2			11.2
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5
10	LINE 5		39.27	1.5	1.6	0.7	2.17	5.1	23.9	1.9			2.4
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5
12	LINE 6		20.40	1.0	0.8	0.5	1.09	2.5	11.95	0.96			1.6
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5
14	LINE 7		7.31	0.5	0.3	0.2	0.36	0.8	3.98	0.32		0.8	
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by burn status PM10 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind		
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)											
17	PM10	L1= Area 1	3.914311622	0.88535358		0.159282324	0.830152647		1.932497784			7.884562191	
18		L2= Areas 1,2	27.21210196	2.51046832		0.383740994	3.516030297		7.506347646			40.68002916	
19		Sr= St, Me	30.9755	2.6659		0.401151503	3.9363		8.072632			45.650332	
20		R= SJV	169.7463	13.6135		1.92	25.3075		25.50111			234.16841	
21	NOx	L1= Area 1								33.19264105			
22		L2= Areas 1,2								90.56968594			
23		Sr= St, Me								84.778398			
24		R= SJV								566.106052			
25	TOG	L1= Area 1		15.9348141			38.56381538						
26		L2= Areas 1,2		39.101963			328.3923334						
27		Sr= St, Me		40.8055			327.6706						
28		R= SJV		208.124			1241.4875						
29	SOx	L1= Area 1								2.280581915			
30		L2= Areas 1,2								3.850438327			
31		Sr= St, Me								4.0138			
32		R= SJV								29.2425			
33													

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Modesto 14th Street, 1/7/01, Design Value	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	158	2010-2011 Emissions Inventory											
133	PM10 2010 EI without new controls	L1= Area 1	4.341450109	0.80715225		0.20385051	0.905495776		2.444215411				9.135323973
134		L2= Areas 1,2	29.7645551	2.18518744		0.480374606	3.832713237		5.166912834				41.03793609
135		Sr= St, Me	33.7602	2.311		0.502641623	4.2726		5.530998				45.874798
136		R= SJV	194.0865	12.1004		2.63	28.7677		27.38678				262.34138
137	PM10 2010 EI with new controls	L1= Area 1	3.327850967	0.63251957		0.20385051	0.863957329		1.356117058				5.108761106
138		L2= Areas 1,2	22.81541904	1.71240781		0.480374606	3.656892474		1.208492363				28.9064511
139		Sr= St, Me	25.8782	2.21550729		0.502641623	4.0766		1.272658				33.44296529
140		R= SJV	150.7995	11.6004		2.63	26.2947		6.98712				195.68172
141	NOx 2010 EI without new controls	L1= Area 1								21.69581345			
142		L2= Areas 1,2								59.96758871			
143		Sr= St, Me								62.817036			
144		R= SJV								400.830212			
145	NOx 2010 EI with new controls	L1= Area 1								20.00669041			
146		L2= Areas 1,2								55.29882456			
147		Sr= St, Me								57.92642873			
148		R= SJV								363.712212			
149	TOG 2010 EI without new controls	L1= Area 1		7.53943316			46.03555833						
150		L2= Areas 1,2		18.7112699			395.903297						
151		Sr= St, Me		19.6476			396.7628						
152		R= SJV		113.1861			1484.3529						
153	TOG 2010 EI with new controls	L1= Area 1		7.53943316			45.42211877						
154		L2= Areas 1,2		18.7112699			390.6277502						
155		Sr= St, Me		19.6476			391.4758						
156		R= SJV		113.1861			1440.6909						
157	SOx 2010 EI without new controls	L1= Area 1									2.424840634		
158		L2= Areas 1,2									3.990444315		
159		Sr= St, Me									4.1637		
160		R= SJV									32.2467		
161	SOx 2010 EI with new controls	L1= Area 1									2.188978191		
162		L2= Areas 1,2									3.602296766		
163		Sr= St, Me									3.7587		
164		R= SJV									25.9547		
165													
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	7.7	1.2	0.6	4.2	2.0	2.2	10.7	30.6	3.4		13.0
213	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	1.6	0.7	0.4	0.9	1.2	1.3	3.5	18.5	2.0		2.4
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	1.1	0.3	0.2	0.6	0.6	0.7	1.7	9.3	1.0		1.6
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	0.6	0.1	0.1	0.3	0.2	0.2	0.9	3.2	0.4		0.9
216	+ Natural Background contribution	= LINE 2	0.5	0.0		0.0	1.8		4.2	4.2	1.0	0.0	0.0
217	2010-2011 projected Annual Result		11.5	2.4	1.3	6.0	5.8	4.3	21.0	65.8	7.7	0.0	18.0
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	5.9	1.0	0.6	4.2	1.9	2.1	5.9	29.3	3.1		7.3
220	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	1.2	0.5	0.4	0.9	1.1	1.3	0.8	17.7	1.8		1.7
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	0.8	0.3	0.2	0.6	0.6	0.6	0.4	8.9	0.9		1.2
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	0.4	0.1	0.1	0.3	0.2	0.2	0.2	3.0	0.3		0.7
223	+ Natural Background contribution	= LINE 2	0.5	0.0		0.0	1.8		4.2	4.2	1.0	0.0	0.0
224	2010-2011 projected Annual Result		8.9	2.0	1.3	6.0	5.6	4.3	11.6	63.1	7.0	0.0	10.8
225													
226	end												

A	B	C	D	E	F	G	H	I	J	K	L	M	
Clovis, 1/1/01, Design Value 155	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned			
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included if Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.		
2	LINE 1	CLO 1/1/01 155	30.17	13.68	2.10	6.96	16.25	74.80	4.39	0.00	6.66		
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. No wildfires except 10/21/99. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass		
4	LINE 2		10.89	1.5	0.0	0.0	1.4	3.7	1.0				
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result			
6	LINE 3		144.11	28.7	13.7	2.1	5.6	71.1	3.4	0.0	6.7		
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net		
8	LINE 4		79.54	20.1	6.8	1.5	2.8	6.5	1.7			4.7	
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5	
10	LINE 5		37.62	4.3	4.1	0.3	1.67	3.9	1.0			1.0	
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5	
12	LINE 6		19.75	2.9	2.1	0.2	0.84	1.9	0.51			0.7	
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5	
14	LINE 7		7.21	1.4	0.7	0.1	0.28	0.6	0.17		0.3		
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by burn status PM10 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind		
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)											
17	PM10	L1= Area 3	5.144282278	1.44037889		0.271790529	1.717942798	4.687279203				13.19882599	
18		L2= Areas 3,4	18.12910868	2.08123615		0.377333809	3.190830859	6.733970955				32.64108469	
19		S= Fresno, Madera	52.0082	3.6939		0.513282065	6.0925	8.80858				77.1245	
20		R= SJV	169.7463	13.6135		1.92	25.3075	25.66167				259.4796	
21	NOx	L1= Area 3							53.0929716				
22		L2= Areas 3,4							87.42667368				
23		S= Fresno, Madera							141.091558				
24		R= SJV							566.106052				
25	TOG	L1= Area 3		23.6155704			134.6108355						
26		L2= Areas 3,4		34.6974925			261.9739073						
27		S= Fresno, Madera		59.7409			403.8383						
28		R= SJV		208.124			1241.4875						
29	SOx	L1= Area 3								3.208421732			
30		L2= Areas 3,4								5.196267289			
31		S= Fresno, Madera								8.3462			
32		R= SJV								29.2425			
33													

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Clovis, 1/1/01, Design Value 155	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1													
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 3	6.026318953	1.33688393		0.369115715	1.952368306		5.160014131				14.81755579
135		L2= Areas 3,4	21.36949755	1.98011231		0.545118257	3.564545348		7.380738312				34.83889825
136		S= Fresno, Madera	61.2556	3.411		0.748475684	6.8186		9.660982				81.146182
137		R= SJV	194.0865	12.1004		2.63	28.7677		27.386678				262.34138
138	PM10 2010 EI with new controls	L1= Area 3	4.81929613	1.28164262		0.369115715	1.602759632		0.417086349				8.462755209
139		L2= Areas 3,4	17.08936046	1.89829219		0.545118257	2.926245716		2.143966047				24.60186919
140		S= Fresno, Madera	48.9866	3.27005425		0.748475684	5.5976		2.707562				60.56181625
141		R= SJV	150.7995	11.6004		2.63	26.2947		6.98712				195.68172
142	NOx 2010 EI without new controls	L1= Area 3								33.84924681			
143		L2= Areas 3,4								60.32164287			
144		S= Fresno, Madera								99.461182			
145		R= SJV								400.830212			
146	NOx 2010 EI with new controls	L1= Area 3								31.13954172			
147		L2= Areas 3,4								55.49276547			
148		S= Fresno, Madera								91.49910021			
149		R= SJV								363.712212			
150	TOG 2010 EI without new controls	L1= Area 3		12.1987148			158.2284228						
151		L2= Areas 3,4		18.8901037			307.8758327						
152		S= Fresno, Madera		33.9576			474.4962						
153		R= SJV		113.1861			1484.3529						
154	TOG 2010 EI with new controls	L1= Area 3		12.1987148			154.9894661						
155		L2= Areas 3,4		18.8901037			301.5735736						
156		S= Fresno, Madera		33.9576			464.7832						
157		R= SJV		113.1861			1440.6909						
158	SOx 2010 EI without new controls	L1= Area 3								3.767808727			
159		L2= Areas 3,4								6.083482512			
160		S= Fresno, Madera								9.8315			
161		R= SJV								32.2467			
162	SOx 2010 EI with new controls	L1= Area 3								3.485745235			
163		L2= Areas 3,4								5.628064404			
164		S= Fresno, Madera								9.0955			
165		R= SJV								25.9547			
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	23.5	3.2	1.8	2.0	1.6	1.6	7.2	26.9	2.0		5.2
213	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	5.1	2.0	1.1	0.5	0.9	1.0	4.3	16.9	1.2		1.1
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	3.4	0.9	0.6	0.3	0.5	0.5	2.1	8.6	0.6		0.7
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.6	0.3	0.2	0.1	0.2	0.2	0.7	2.9	0.2		0.3
216	+ Natural Background contribution	= LINE 2	1.5	0.0		0.0	1.4		3.2	3.7	1.0	0.0	0.0
217	2010-2011 projected Annual Result		144.66	6.4	3.7	2.9	4.5	3.3	17.5	59.0	5.0	0.0	7.3
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	18.8	3.0	1.8	2.0	1.3	1.6	0.6	25.7	1.8		3.0
220	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	4.1	1.9	1.1	0.5	0.8	1.0	1.2	16.1	1.1		0.8
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	2.7	0.9	0.6	0.3	0.4	0.5	0.6	8.2	0.6		0.5
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.3	0.3	0.2	0.1	0.1	0.2	0.2	2.7	0.2		0.3
223	+ Natural Background contribution	= LINE 2	1.5	0.0		0.0	1.4		3.2	3.7	1.0	0.0	0.0
224	2010-2011 projected Annual Result		119.67	6.1	3.7	2.9	4.0	3.2	5.8	56.5	4.6	0.0	4.5
225	end												
227													

A	B	C	D	E	F	G	H	I	J	K	L	M
Fresno Drummond, 1/1/01, Design Value	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included if Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.	
2	LINE 1	FSD 1/1/01 186	35.06	18.52	2.47	12.03	28.08	62.39	5.01	0.00	22.44	
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. No wildfires except 10/21/99. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass	
4	LINE 2		13.89	1.8	0.0	0.0	2.4	5.6	3.1	1.0		
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.							Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result	
6	LINE 3		172.11	33.3	18.5	2.5	9.6	22.5	59.3	4.0	0.0	22.4
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net			70%PM10 50%PM2.5 of net
8	LINE 4		97.70	23.3	9.3	1.7	4.8	11.2	29.6	2.0		15.7
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5
10	LINE 5		42.90	5.0	5.6	0.4	2.89	6.7	17.8	1.2		3.4
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5
12	LINE 6		22.90	3.3	2.8	0.2	1.44	3.4	8.89	0.60		2.2
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5
14	LINE 7		8.61	1.7	0.9	0.1	0.48	1.1	2.96	0.20		1.1
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by burn status PM10 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind	
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)										
17	PM10	L1= Area 3	5.144282278	1.44037889	0.271790529	1.717942798	4.687279203					13.19882599
18		L2= Areas 3,4	18.12910868	2.08123615	0.377333809	3.190830859	6.733970955					32.64108469
19		S= Fresno, Madera	52.0082	3.6939	0.513282065	6.0925	8.80858					77.1245
20		R= SJV	169.7463	13.6135	1.92	25.3075	25.66167					259.4796
21	NOx	L1= Area 3						53.0929716				
22		L2= Areas 3,4						87.42667368				
23		S= Fresno, Madera						141.091558				
24		R= SJV						566.106052				
25	TOG	L1= Area 3		23.6155704		134.6108355						
26		L2= Areas 3,4		34.6974925		261.9739073						
27		S= Fresno, Madera		59.7409		403.8383						
28		R= SJV		208.124		1241.4875						
29	SOx	L1= Area 3								3.208421732		
30		L2= Areas 3,4								5.196267289		
31		S= Fresno, Madera								8.3462		
32		R= SJV								29.2425		
33												

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Fresno Drummond, 1/1/01, Design Value	General Note	Geologic and Construction	Mobile Exhaust		Tire and Brake Wear	Organic Carbon		Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned
1	186												
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 3	6.026318953	1.33688393		0.369115715	1.952368306		5.160014131				14.81755579
135		L2= Areas 3,4	21.36949755	1.98011231		0.545118257	3.564545348		7.380738312				34.83889825
136		S= Fresno, Madera	61.2556	3.411		0.748475684	6.8186		9.660982				81.146182
137		R= SJV	194.0865	12.1004		2.63	28.7677		27.38678				262.34138
138	PM10 2010 EI with new controls	L1= Area 3	4.81929613	1.28164262		0.369115715	1.602759632		0.417086349				8.462755205
139		L2= Areas 3,4	17.08936046	1.89829219		0.545118257	2.926245716		2.143966047				24.60186915
140		S= Fresno, Madera	48.9866	3.27005425		0.748475684	5.5976		2.707562				60.56181625
141		R= SJV	150.7995	11.6004		2.63	26.2947		6.98712				195.68172
142	NOx 2010 EI without new controls	L1= Area 3								33.84924681			
143		L2= Areas 3,4								60.32164287			
144		S= Fresno, Madera								99.461182			
145		R= SJV								400.830212			
146	NOx 2010 EI with new controls	L1= Area 3								31.13954172			
147		L2= Areas 3,4								55.49276547			
148		S= Fresno, Madera								91.49910021			
149		R= SJV								363.712212			
150	TOG 2010 EI without new controls	L1= Area 3		12.1987148				158.2284228					
151		L2= Areas 3,4		18.8901037				307.8758327					
152		S= Fresno, Madera		33.9576				474.4962					
153		R= SJV		113.1861				1484.3529					
154	TOG 2010 EI with new controls	L1= Area 3		12.1987148				154.9894661					
155		L2= Areas 3,4		18.8901037				301.5735736					
156		S= Fresno, Madera		33.9576				464.7832					
157		R= SJV		113.1861				1440.6909					
158	SOx 2010 EI without new controls	L1= Area 3									3.767808727		
159		L2= Areas 3,4									6.083482512		
160		S= Fresno, Madera									9.8315		
161		R= SJV									32.2467		
162	SOx 2010 EI with new controls	L1= Area 3									3.485745235		
163		L2= Areas 3,4									5.628064404		
164		S= Fresno, Madera									9.0955		
165		R= SJV									25.9547		
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	27.3	4.3	2.4	2.3	2.7	2.8	12.4	22.5	2.4		17.6
213	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	5.9	2.6	1.5	0.5	1.6	1.7	7.4	14.1	1.4		3.6
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	3.9	1.3	0.8	0.4	0.8	0.8	3.7	7.1	0.7		2.4
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.9	0.4	0.3	0.2	0.3	0.3	1.2	2.4	0.2		1.1
216	+ Natural Background contribution	= LINE 2	1.8	0.0		0.0	2.4		5.6	3.1	1.0	0.0	0.0
217	2010-2011 projected Annual Result		40.8	8.6	4.9	3.4	7.8	5.7	30.3	49.2	5.7	0.0	24.7
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	21.8	4.1	2.4	2.3	2.2	2.8	1.0	21.5	2.2		10.1
220	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	4.7	2.5	1.5	0.5	1.3	1.7	2.1	13.5	1.3		2.5
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	3.1	1.2	0.8	0.4	0.7	0.8	1.0	6.8	0.7		1.8
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.5	0.4	0.3	0.2	0.3	0.3	0.3	2.3	0.2		0.8
223	+ Natural Background contribution	= LINE 2	1.8	0.0		0.0	2.4		5.6	3.1	1.0	0.0	0.0
224	2010-2011 projected Annual Result		32.9	8.3	4.9	3.4	6.9	5.5	10.1	47.1	5.3	0.0	15.2
225													
226	end												

A	B	C	D	E	F	G	H	I	J	K	L	M	
Fresno First Street, 1/1/01, Design Value	General Note	Geologic and Construction	Mobile Exhaust		Tire and Brake Wear	Organic Carbon		Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned	
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included if Vegetative Burning =30%		From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.	
2	LINE 1	FSF 1/1/01 193	38.31	25.54	0.00	10.17		23.72	73.87	3.81	0.00	17.59	
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations < 5%	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%		see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. No wildfires except 10/21/99. Includes biogenic emissions < 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations < 5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass	
4	LINE 2		11.03	1.5	0.0	2.0		4.0	2.5	1.0			
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.							Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result		
6	LINE 3		181.97	36.8	25.5	8.1		19.7	71.4	2.8	0.0	17.6	
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net		70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net	
8	LINE 4		101.86	25.8	12.8	0.0	4.1	9.9	35.7	1.4			12.3
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5		15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5
10	LINE 5		46.43	5.5	7.7	0.0	2.44	5.9	21.4	0.8			2.6
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5		10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5
12	LINE 6		24.58	3.7	3.8	0.0	1.22	3.0	10.71	0.42		1.8	
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates - episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5		5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5		5%PM10 5%PM2.5	
14	LINE 7		9.10	1.8	1.3	0.0	0.41	1.0	3.57	0.14		0.9	
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass		PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by no burn status PM10 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind	
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)											
17	PM10	L1= Area 3	5.144282278	1.440378891	0.271790529	1.717942798		4.687279203				13.19892599	
18		L2= Areas 3,4	18.12910868	2.081236153	0.377333809	3.190830859		6.73397055				32.64108465	
19		S= Fresno, Madera	52.0082	3.6939	0.513282065	6.0925		8.80858				77.1245	
20		R= SJV	169.7463	13.6135	1.92	25.3075		25.66167				259.4796	
21	NOx	L1= Area 3							53.09297716				
22		L2= Areas 3,4							87.42667368				
23		S= Fresno, Madera							141.091558				
24		R= SJV							586.106052				
25	TOG	L1= Area 3		23.6155704		134.6108355							
26		L2= Areas 3,4		34.6974925		261.9739073							
27		S= Fresno, Madera		59.7409		403.8383							
28		R= SJV		208.124		1241.4875							
29	SOx	L1= Area 3								3.208421732			
30		L2= Areas 3,4								5.196267289			
31		S= Fresno, Madera								8.3462			
32		R= SJV								29.2425			
33													



	A	B	C	D	E	F	G	H	I	J	K	L	M
	Fresno First Street, 1/1/01, Design Value	General Note	Geologic and Construction	Mobile Exhaust		Tire and Brake Wear	Organic Carbon		Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned
1	193												
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 3	6.026318953	1.336883929		0.369115715	1.952368306		5.160014131				14.81755579
135		L2= Areas 3,4	21.36949755	1.980112305		0.545118257	3.564545348		7.380738312				34.8389825
136		S= Fresno, Madera	61.2556	3.411		0.748475684	6.8186		9.660982				81.146182
137		R= SJV	194.0865	12.1004		2.63	28.7677		27.38678				262.34138
138	PM10 2010 EI with new controls	L1= Area 3	4.81929613	1.281642617		0.369115715	1.602759632		0.417086349				8.462755205
139		L2= Areas 3,4	17.08936046	1.898292188		0.545118257	2.926245716		2.143966047				24.60186915
140		S= Fresno, Madera	48.9866	3.270054246		0.748475684	5.5976		2.707562				60.56181625
141		R= SJV	150.7995	11.6004		2.63	26.2947		6.98712				195.68172
142	NOx 2010 EI without new controls	L1= Area 3								33.84924681			
143		L2= Areas 3,4								60.32164287			
144		S= Fresno, Madera								99.461182			
145		R= SJV								400.830212			
146	NOx 2010 EI with new controls	L1= Area 3								31.13954172			
147		L2= Areas 3,4								55.49276547			
148		S= Fresno, Madera								91.49910021			
149		R= SJV								363.712212			
150	TOG 2010 EI without new controls	L1= Area 3			12.1987148			158.2284228					
151		L2= Areas 3,4			18.8901037			307.8758327					
152		S= Fresno, Madera			33.9576			474.4962					
153		R= SJV			113.1861			1484.3529					
154	TOG 2010 EI with new controls	L1= Area 3			12.1987148			154.9894661					
155		L2= Areas 3,4			18.8901037			301.5735736					
156		S= Fresno, Madera			33.9576			464.7832					
157		R= SJV			113.1861			1440.6909					
158	SOx 2010 EI without new controls	L1= Area 3									3.767808727		
159		L2= Areas 3,4									6.083482512		
160		S= Fresno, Madera									9.8315		
161		R= SJV									32.2467		
162	SOx 2010 EI with new controls	L1= Area 3									3.485745235		
163		L2= Areas 3,4									5.628064404		
164		S= Fresno, Madera									9.0955		
165		R= SJV									25.9547		
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	30.2	5.9	3.3	0.0	2.3	2.4	10.9	27.1	1.7		13.8
213	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	6.5	3.6	2.1	0.0	1.4	1.4	6.5	17.0	1.0		2.8
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	4.3	1.8	1.1	0.0	0.7	0.7	3.2	8.6	0.5		1.9
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	2.1	0.6	0.3	0.0	0.2	0.2	1.1	2.9	0.2		0.9
216	+ Natural Background contribution	= LINE 2	1.5	0.0		0.0	2.0		4.0	2.5	1.0	0.0	0.0
217	2010-2011 projected Annual Result		44.6	11.9	6.8	0.0	6.6	4.8	25.6	58.0	4.3	0.0	19.4
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	24.1	5.7	3.3	0.0	1.9	2.3	0.9	25.8	1.5		7.9
220	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	5.2	3.5	2.1	0.0	1.1	1.4	1.9	16.2	0.9		2.0
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	3.5	1.7	1.1	0.0	0.6	0.7	0.9	8.2	0.5		1.4
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.6	0.5	0.3	0.0	0.2	0.2	0.3	2.7	0.1		0.7
223	+ Natural Background contribution	= LINE 2	1.5	0.0		0.0	2.0		4.0	2.5	1.0	0.0	0.0
224	2010-2011 projected Annual Result		35.9	11.4	6.8	0.0	5.8	4.7	7.9	55.5	4.0	0.0	11.9
225													
226	end												

A	B	C	D	E	F	G	H	I	J	K	L	M
Bakersfield Golden State, 1/1/01, Design Value 205	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included if Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.	
2												
3	LINE 1 Line1 Natural and Transport Contribution, see "Background" sheet	BGS 1/1/01 205 Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	58.15 see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations <5%	6.75 0, no natural background, transport estimated at 0	1.27 0, no natural background, transport estimated at 0	7.00 see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%	16.34 see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations < 20%	95.39 see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations < 5%	7.02 see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	0.00 100% because marine salts are a natural emission	13.07 0, background estimate at maximum, no additional background estimate for unexplained mass	
4												
5	LINE 2 Line 3 Net for Rollback	10.40 Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.	2.0	0.0	0.0	1.4	3.0	3.0	1.0	Removed entirely from rollback, added back to result		
6												
7	LINE 3 Line2 Local Contribution PM2.5-PM10 Area of Influence	194.60 Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	56.15 70%PM10 50%PM2.5 of net	6.75 70%PM10 50%PM2.5 of net	1.27 70%PM10 50%PM2.5 of net	5.60 70%PM10 50%PM2.5 of net	13.34 70%PM10 50%PM2.5 of net	92.39 70%PM10 50%PM2.5 of net, non-linear rollback	6.02 70%PM10 50%PM2.5 of net		13.07 70%PM10 50%PM2.5 of net	
8												
9	LINE 4 Line5 Local Contribution Area of Influence of PM2.5	111.40 Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	39.3 15%PM10 30%PM2.5	3.4 15%PM10 30%PM2.5	0.9 15%PM10 30%PM2.5	2.8 15%PM10 30%PM2.5	6.7 15%PM10 30%PM2.5	46.2 15%PM10 30%PM2.5 non-linear rollback	3.0 15%PM10 30%PM2.5		9.1 15%PM10 30%PM2.5	
10												
11	LINE 5 Line6 Sub regional Contribution	47.81 Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	8.4 10%PM10 15%PM2.5	2.0 10%PM10 15%PM2.5	0.2 10%PM10 15%PM2.5	1.68 10%PM10 15%PM2.5	4.0 10%PM10 15%PM2.5	27.7 10%PM10 15%PM2.5 non-linear rollback	1.8 10%PM10 15%PM2.5		2.0 10%PM10 15%PM2.5	
12												
13	LINE 6 Line7 Regional Contribution	25.67 Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5.6 5%PM10 5%PM2.5	1.0 5%PM10 5%PM2.5	0.1 5%PM10 5%PM2.5	0.84 5%PM10 5%PM2.5	2.0 5%PM10 5%PM2.5	13.86 5%PM10 5%PM2.5 non-linear rollback	0.90 5%PM10 5%PM2.5		1.3 5%PM10 5%PM2.5	
14												
15	LINE 7 Associated Emissions Categories	9.73 Based upon appropriate seasonal or annual inventory	2.8 PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	0.3 PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	0.1 Tire and brake wear as predicted by EMFAC2002	0.28 Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	0.7 PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by no burn status PM10 cooking CO presumed to add minimal mass	4.62 Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	0.30 Total SOx	None, natural emission from the ocean, bay and delta waters	0.7 Total PM10 minus PM10 windblown for episodes which are not high wind	
16												
17	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)										
18	PM10	L1= Area 12	8.358392295	1.79239253		0.32	3.523501738				16.89795022	
19		L2= Areas 9,10,11,12	20.55826921	2.36476969		0.37	6.636098661				34.28796622	
20		S= Kern	25.3536	2.4814		0.39	7.8552				41.0477	
21		R= SJV	169.7463	13.6135		1.92	25.3075				259.4796	
22	NOx	L1= Area 12							108.8043665			
23		L2= Areas 9,10,11,12							154.98103			
24		S= Kern							166.955848			
25		R= SJV							566.106052			
26	TOG	L1= Area 12		27.4510997			89.28091883					
27		L2= Areas 9,10,11,12		35.6538981			170.8270031					
28		S= Kern		37.5297			182.8006					
29		R= SJV		208.124			1241.4875					
30	SOx	L1= Area 12								3.03719247		
31		L2= Areas 9,10,11,12								10.39566984		
32		S= Kern								10.9429		
33		R= SJV								29.2425		

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Bakersfield Golden State, 1/1/01, Design Value 205	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	2010-2011 Emissions Inventory												
133	PM10 2010 EI without new controls	L1= Area 12	9.879205888	1.64193036		0.47	3.937295194		2.966009799				18.23596999
134		L2= Areas 9,10,11,12	24.29885641	2.1134908		0.54	7.415429679		4.040352903				37.64323715
135		S= Kern	29.9667	2.1993		0.56	8.7777		4.294114				45.237814
136		R= SJV	194.0865	12.1004		2.63	28.7677		27.54244				262.49704
137	PM10 2010 EI with new controls	L1= Area 12	5.498189907	1.57408424		0.47	3.757424001		0.221099555				10.86232645
138		L2= Areas 9,10,11,12	17.31840739	2.02615936		0.54	7.076663567		0.766714635				26.9630523
139		S= Kern	21.9647	2.10842284		0.56	8.3767		0.939934				33.38975684
140		R= SJV	150.7995	11.6004		2.63	26.2947		13.641585				195.68172
141	NOx 2010 EI without new controls	L1= Area 12								82.99741715			
142		L2= Areas 9,10,11,12								120.6925435			
143		S= Kern								130.52272			
144		R= SJV								400.830212			
145	NOx 2010 EI with new controls	L1= Area 12								73.75010428			
146		L2= Areas 9,10,11,12								107.2453574			
147		S= Kern								115.9802864			
148		R= SJV								363.642212			
149	TOG 2010 EI without new controls	L1= Area 12		16.2649111			97.80834193						
150		L2= Areas 9,10,11,12		21.8621255			187.1430777						
151		S= Kern		22.957			200.2603						
152		R= SJV		113.1861			1484.3529						
153	TOG 2010 EI with new controls	L1= Area 12		16.2649111			89.48639126						
154		L2= Areas 9,10,11,12		21.8621255			171.2201468						
155		S= Kern		22.957			217.2993						
156		R= SJV		113.1861			1440.6909						
157	SOx 2010 EI without new controls	L1= Area 12									3.258351419		
158		L2= Areas 9,10,11,12									11.61570068		
159		S= Kern									12.2303		
160		R= SJV									32.2467		
161	SOx 2010 EI with new controls	L1= Area 12									1.976622542		
162		L2= Areas 9,10,11,12									7.046463948		
163		S= Kern									7.4193		
164		R= SJV									25.9547		
165													
210	2010-2011 Rollback Projection												
211	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	46.5	1.5	1.0	1.3	1.6	1.5	7.2	38.9	3.2		9.9
212	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	10.0	0.9	0.6	0.3	0.9	0.9	4.3	23.6	2.0		2.2
213	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	6.6	0.5	0.3	0.2	0.5	0.5	2.1	11.8	1.0		1.4
214	Regional Contribution	=(2010 R/1999 R) * LINE 7	3.2	0.1	0.1	0.1	0.2	0.2	0.7	3.7	0.3		0.7
215	+ Natural Background contribution	= LINE 2	2.0	0.0		0.0	1.4		3.0	3.0	1.0	0.0	0.0
216	2010-2011 projected Annual Result	202.97	68.3	3.1	2.0	1.9	4.5	3.1	17.4	81.1	7.6	0.0	14.1
217	2010-2011 Rollback Projection with additional controls												
218	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	25.9	1.5	1.0	1.3	1.5	1.4	0.5	36.3	2.0		5.9
219	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	7.1	0.9	0.6	0.3	0.9	0.8	0.8	22.0	1.2		1.5
220	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	4.9	0.4	0.3	0.2	0.4	0.5	0.5	11.0	0.6		1.1
221	Regional Contribution	=(2010 R/1999 R) * LINE 7	2.5	0.1	0.1	0.1	0.1	0.2	0.4	3.5	0.3		0.5
222	+ Natural Background contribution	= LINE 2	2.0	0.0		0.0	1.4		3.0	3.0	1.0	0.0	0.0
223	2010-2011 projected Annual Result	151.48	42.3	2.9	2.0	1.9	4.4	2.9	5.2	75.9	5.1	0.0	9.0
224													
225	end												
226													

A	B	C	D	E	F	G	H	I	J	K	L	M
Oildale, 1/1/01, Design Value 158	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.	
2	LINE 1	32.84	4.74	0.91	4.35	10.15	93.88	6.53	0.00	4.60		
3	Line2 Natural and Transport Contribution, see "Background" sheet	OLD 1/1/01 158 Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. No wildfires except 10/21/99. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations =5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass	
4	LINE 2	10.24	1.6	0.0	0.0	0.9	4.7	1.0				
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.					Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result			
6	LINE 3	147.76	31.2	4.7	0.9	3.5	89.2	5.5	0.0	4.6		
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net		
8	LINE 4	81.22	21.8	2.4	0.6	1.7	44.6	2.8			3.2	
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5	
10	LINE 5	38.82	4.7	1.4	0.1	1.04	26.8	1.7			0.7	
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5	
12	LINE 6	20.33	3.1	0.7	0.1	0.52	13.38	0.83			0.5	
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates - episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5	
14	LINE 7	7.39	1.6	0.2	0.0	0.17	4.46	0.28		0.2		
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by no burn status PM10 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind		
16	1990 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)										
17	PM10	L1= Area 12	8.358392295	1.79239253	0.32	3.523501738	2.738835489				16.89795022	
18		L2= Areas 9,10,11,12	20.55826921	2.36476969	0.37	6.636098661	3.774940533				34.28796622	
19		S= Kern	25.3536	2.4614	0.39	7.8552	4.023728				41.0477	
20		R= SJV	169.7463	13.6135	1.92	25.3075	25.50111				259.4796	
21	NOx	L1= Area 12						108.8043665				
22		L2= Areas 9,10,11,12						154.98103				
23		S= Kern						166.955848				
24		R= SJV						566.106052				
25	TOG	L1= Area 12		27.4510997		89.28091883						
26		L2= Areas 9,10,11,12		35.6538981		170.8270031						
27		S= Kern		37.5297		182.8006						
28		R= SJV		208.124		1241.4875						
29	SOx	L1= Area 12							3.03719247			
30		L2= Areas 9,10,11,12							10.39566984			
31		S= Kern							10.9429			
32		R= SJV							29.2425			
33												

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Oildale, 1/1/01, Design Value 158	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1													
133	2010-2011 Emissions Inventory												
134	PM10 2010 EI without new controls	L1= Area 12	9.879205888	1.64193036		0.47	3.937295194		2.966009799				18.23596999
135		L2= Areas 9,10,11,12	24.29885641	2.1134908		0.54	7.415429679		4.040352903				37.64323715
136		S= Kern	29.9667	2.1993		0.58	8.7777		4.294114				45.237814
137		R= SJV	194.0865	12.1004		2.63	28.7677		27.54244				262.43704
138	PM10 2010 EI with new controls	L1= Area 12	5.498189907	1.57408424		0.47	3.757424001		0.221095655				10.86232645
139		L2= Areas 9,10,11,12	17.31840739	2.02615936		0.54	7.076663567		0.766714635				26.9630523
140		S= Kern	21.9647	2.10842284		0.56	8.3767		0.939934				33.38975684
141		R= SJV	150.7995	11.6004		2.63	26.2947		13.641585				195.68172
142	NOx 2010 EI without new controls	L1= Area 12								82.99741715			
143		L2= Areas 9,10,11,12								120.6925435			
144		S= Kern								130.52272			
145		R= SJV								400.7192			
146	NOx 2010 EI with new controls	L1= Area 12								73.75010428			
147		L2= Areas 9,10,11,12								107.2453574			
148		S= Kern								115.9802864			
149		R= SJV								363.642212			
150	TOG 2010 EI without new controls	L1= Area 12		16.2649111			97.80834193						
151		L2= Areas 9,10,11,12		21.8621255			187.1430777						
152		S= Kern		22.957			200.2603						
153		R= SJV		113.1861			1484.3529						
154	TOG 2010 EI with new controls	L1= Area 12		16.2649111			89.48639126						
155		L2= Areas 9,10,11,12		21.8621255			171.2201468						
156		S= Kern		22.957			217.2993						
157		R= SJV		113.1861			1440.6909						
158	SOx 2010 EI without new controls	L1= Area 12									3.258351419		
159		L2= Areas 9,10,11,12									11.61570068		
160		S= Kern									12.2303		
161		R= SJV									32.2467		
162	SOx 2010 EI with new controls	L1= Area 12									1.976622542		
163		L2= Areas 9,10,11,12									7.046463948		
164		S= Kern									7.4193		
165		R= SJV									25.9547		
210													
211	2010-2011 Rollback Projection												
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	25.8	1.1	0.7	0.9	1.0	1.0	4.4	37.5	3.0		3.5
213	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	5.5	0.6	0.4	0.2	0.6	0.6	2.6	22.8	1.9		0.8
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	3.7	0.3	0.2	0.1	0.3	0.3	1.3	11.4	0.9		0.5
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.8	0.1	0.1	0.1	0.1	0.1	0.4	3.6	0.3		0.2
216	+ Natural Background contribution	= LINE 2	1.6	0.0		0.0	0.9		2.0	4.7	1.0	0.0	0.0
217	2010-2011 projected Annual Result		150.95	38.5	2.1	1.4	1.3	2.8	1.9	10.8	80.1	7.1	0.0
218	2010-2011 Rollback Projection with additional controls												
219	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	14.4	1.0	0.7	0.9	0.9	0.9	0.3	35.0	1.8		2.1
220	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	3.9	0.6	0.4	0.2	0.6	0.5	0.5	21.3	1.1		0.5
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	2.7	0.3	0.2	0.1	0.3	0.3	0.3	10.7	0.6		0.4
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.4	0.1	0.1	0.1	0.1	0.1	0.2	3.4	0.2		0.2
223	+ Natural Background contribution	= LINE 2	1.6	0.0		0.0	0.9		2.0	4.7	1.0	0.0	0.0
224	2010-2011 projected Annual Result		119.64	24.0	2.1	1.4	1.3	2.7	1.8	3.4	75.0	4.7	0.0
225													
226	end												

A	B	C	D	E	F	G	H	I	J	K	L	M
Bakersfield California Avenue, 1/4/01, Design Value 190	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included if Vegetative Burning =30%	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass from CMB, if any.	
2	LINE 1	BAC 1/4/01 190	40.29	8.59	2.17	10.24	23.90	89.68	5.55	0.00	9.57	
3	Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations <5%	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. Includes biogenic emissions = 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations. No wildfires except 10/21/99. Includes biogenic emissions < 20%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations < 5%	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass	
4	LINE 2		11.05	2.0	0.0	0.0	2.0	3.0	1.0			
5	Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result		
6	LINE 3		178.95	38.3	8.6	2.2	8.2	20.9	86.7	4.6	0.0	9.6
7	Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net			70%PM10 50%PM2.5 of net
8	LINE 4		99.48	26.8	4.3	1.5	4.1	10.5	43.3	2.3		6.7
9	Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5			15%PM10 30%PM2.5
10	LINE 5		46.18	5.7	2.6	0.3	2.46	6.3	26.0	1.4		1.4
11	Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5			10%PM10 15%PM2.5
12	LINE 6		24.34	3.8	1.3	0.2	1.23	3.1	13.00	0.68		1.0
13	Line7 Regional Contribution	Rolled back against Valleywide emission estimates episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5			5%PM10 5%PM2.5
14	LINE 7		8.95	1.9	0.4	0.1	0.41	1.0	4.33	0.23		0.5
15	Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 farm operations + PM10 construction	PM10, TOG & CO onroad mobile+ PM10, TOG & CO offroad equipment PM10, TOG & CO farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area, Stationary CO presumed to add minimal mass	PM10 & CO residential burning + PM10 & CO waste burning and disposal reduced 98% by burn status PM10 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 minus PM10 windblown for episodes which are not high wind	
16	1999 Emissions Inventory	(area of influence emissions inventory, each on a separate line for automated calculations)										
17	PM10	L1= Area 12	8.358392295	1.79239253		0.32	3.523501738		2.738835489			16.89795022
18		L2= Areas 10,12,13	18.71534063	2.34433285		0.37021323	5.22204156		3.581410018			34.28796622
19		S= Kern	25.3536	2.4614		0.39	7.8552		4.023728			41.0477
20		R= SJV	169.7463	13.6135		1.92	25.3075		25.50111			259.4796
21	NOx	L1= Area 12								108.8043665		
22		L2= Areas 10,12,13								137.5813778		
23		S= Kern								166.955848		
24		R= SJV								566.106052		
25	TOG	L1= Area 12		27.4510997			89.28091883					
26		L2= Areas 10,12,13		35.5163543			119.6223166					
27		S= Kern		37.5297			162.8006					
28		R= SJV		208.124			1241.4875					
29	SOx	L1= Area 12								3.03719247		
30		L2= Areas 10,12,13								4.234810801		
31		S= Kern								10.9429		
32		R= SJV								29.2425		
33												

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Bakersfield California Avenue, 1/4/01, Design Value 190	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned		
1	2010-2011 Emissions Inventory												
133	PM10 2010 EI without new controls	L1= Area 12	9.879205888	1.64193036		0.47	3.937295194		2.966009799				18.23596999
134		L2= Areas 10,12,13	22.12060607	2.09412135		0.54	5.835308356		3.841744438				37.6409676
135		S= Kern	29.9667	2.1993		0.56	8.7777		4.294114				45.237814
136		R= SJV	194.0865	12.1004		2.63	28.7677		27.54244				262.49704
137	PM10 2010 EI with new controls	L1= Area 12	5.498189907	1.57408424		0.47	3.757424001		0.221099555				10.86232649
138		L2= Areas 10,12,13	15.2027423	2.00759027		0.54	5.568728426		0.568160747				27.09640913
139		S= Kern	21.9647	2.10842284		0.56	8.3767		0.939934				33.38975684
140		R= SJV	150.7995	11.6004		2.63	26.2947		13.641585				195.68172
141	NOx 2010 EI without new controls	L1= Area 12								82.99741715			
142		L2= Areas 10,12,13								106.005163			
143		S= Kern								130.52272			
144		R= SJV								400.7192			
145	NOx 2010 EI with new controls	L1= Area 12								73.75010428			
146		L2= Areas 10,12,13								94.24184907			
147		S= Kern								115.9802864			
148		R= SJV								363.642212			
149	TOG 2010 EI without new controls	L1= Area 12		16.2649111			97.80834193						
150		L2= Areas 10,12,13		21.7663325			131.0477155						
151		S= Kern		22.957			200.2603						
152		R= SJV		113.1861			1484.3529						
153	TOG 2010 EI with new controls	L1= Area 12		16.2649111			89.48639126						
154		L2= Areas 10,12,13		21.7663325			119.8976172						
155		S= Kern		22.957			217.2993						
156		R= SJV		113.1861			1440.6909						
157	SOx 2010 EI without new controls	L1= Area 12									3.258351419		
158		L2= Areas 10,12,13									4.592870169		
159		S= Kern									12.2303		
160		R= SJV									32.2467		
161	SOx 2010 EI with new controls	L1= Area 12									1.976622542		
162		L2= Areas 10,12,13									2.786185265		
163		S= Kern									7.4193		
164		R= SJV									25.9547		
165													
210	2010-2011 Rollback Projection												
211	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	31.7	2.0	1.3	2.2	2.3	2.2	11.3	36.5	2.4		7.2
212	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	6.8	1.2	0.8	0.5	1.4	1.3	6.7	22.0	1.5		1.6
213	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	4.5	0.6	0.4	0.3	0.7	0.7	3.3	11.1	0.8		1.1
214	Regional Contribution	=(2010 R/1999 R) * LINE 7	2.2	0.2	0.1	0.1	0.2	0.2	1.1	3.5	0.3		0.5
215	+ Natural Background contribution	= LINE 2	2.0	0.0		0.0	2.0		3.0		1.0	0.0	0.0
216	2010-2011 projected Annual Result		185.86	47.2	3.9	2.6	3.2	6.6	4.5	25.5	76.1	5.9	0.0
217	2010-2011 Rollback Projection with additional controls												
218	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	17.6	1.9	1.3	2.2	2.2	2.1	0.8	34.0	1.5		4.3
219	Local Contribution Area of Influence PM2.5	=(2010 L2/1999 L2) * LINE 5	4.7	1.1	0.8	0.5	1.3	1.2	1.0	20.5	0.9		1.1
220	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	3.3	0.6	0.4	0.3	0.7	0.7	0.7	10.4	0.5		0.8
221	Regional Contribution	=(2010 R/1999 R) * LINE 7	1.7	0.2	0.1	0.1	0.2	0.2	0.6	3.3	0.2		0.4
222	+ Natural Background contribution	= LINE 2	2.0	0.0		0.0	2.0		3.0		1.0	0.0	0.0
223	2010-2011 projected Annual Result		137.43	29.3	3.7	2.6	3.2	6.4	4.3	6.1	71.2	4.0	0.0
224													
225	end												
226													

### Source Apportionment of PM10 Concentrations Determined by Chemical Mass Balance (in ug/m3)

Using CRPAQS Data and Fugitive Dust Profiles Selected By District

Green highlight indicates accepted results used for rollback analysis

Design Value Episodes

District and CRPAQS Episodes above standard but less severe than design value episode

CRPAQS Episodes more severe than design value

Highlighted, black text are poor performance values

Red text were rejected, retested with revised chemistry estimation

SITEID	DATE	CONC	UCONC	% Mass	RSQ	CHI SQ	Wood Burning Mass	Wood Burning Unc	MV Exhaust Mass	MV Exhaust Unc	TiresAndBrakes Mass	TiresAndBrakes Unc	Nitrate Mass	Nitrate Unc	Sulfate Mass	Sulfate Unc	Geo- logical Mass	Geo- logical Unc	Geological Profile	Unassigned	
<b>January 1999</b>																					
OLD	1/12/99	156	7.9	87.4	1.0	0.6	14.5	4.8	4.6	3.0	0.9	0.9	77.0	6.8	7.1	0.7	32.2	6.3	FDOIL	19.67	
<b>November 1999</b>																					
BGS	11/14/99	183	9.2	91.1	1.0	1.0	16.5	7.0	6.1	4.2	1.9	1.5	85.3	6.9	6.3	0.6	50.6	10.5	FDBACNOV	16.27	
<b>December 1999</b>																					
COP	12/17/99	174	8.8	92.1	1.0	0.5	25.0	7.7	6.4	4.0	0.9	0.9	71.4	6.1	4.9	0.5	51.7	8.0	FDCOPDEC	13.68	
FSD	12/23/99	168	8.5	87.5	1.0	0.7	31.1	9.9	8.4	5.4	1.0	1.0	57.5	4.9	3.1	0.6	46.2	7.0	FDFREDEC	20.98	
HAN	12/23/99	156	7.9	100.9	0.9	0.6	25.4	7.5	8.2	4.6	0.5	0.8	68.6	5.8	4.6	0.5	49.8	7.2	FDCOPDEC	-1.46	
<b>Winter 2000/2001</b>																					
CLO	1/1/01	155	7.9	95.7	1.0	1.3	23.2	8.5	13.7	7.5	2.1	1.2	74.8	6.1	4.4	0.5	30.2	5.7	FDFREDEC	6.66	
FSD	1/1/01	186	9.4	87.9	1.0	1.1	40.1	11.3	18.5	9.6	2.5	1.5	62.4	5.1	5.0	0.7	35.1	6.8	FDFREDEC	22.44	
FSD	1/4/01	159	8.1	87.9	1.0	1.1	34.3	9.6	15.8	8.2	2.1	1.3	53.4	4.4	4.3	0.6	30.0	5.8	FDFREDEC	19.19	
BGS	1/1/01	205	10.3	93.6	1.0	0.9	23.3	6.3	6.7	4.7	1.3	1.7	95.4	7.8	7.0	0.7	58.2	9.6	FDBACJAN	13.07	
BGS	1/4/01	208	10.5	93.6	1.0	0.9	23.6	6.4	6.8	4.8	1.3	1.7	96.6	7.9	7.1	0.7	58.9	9.7	FDBACJAN	13.23	
BGS	1/7/01	174	8.8	93.6	1.0	0.9	19.8	5.4	5.7	4.0	1.1	1.4	81.0	6.6	6.0	0.6	49.4	8.1	FDBACJAN	11.09	
OLD	1/1/01	158	8.0	97.1	1.0	0.5	14.5	4.9	4.7	3.1	0.9	0.9	93.9	8.2	6.5	0.7	32.8	6.5	FDOIL	4.60	
OLD	1/4/01	195	9.9	93.8	1.0	0.5	17.8	6.1	5.9	3.9	1.1	1.1	109.8	9.6	7.7	0.8	40.7	8.0	FDOIL	12.09	
COP	1/7/01	165	8.4	91.7	1.0	0.5	20.5	6.2	7.6	4.3	0.9	0.7	84.8	7.5	6.8	0.7	30.8	5.5	FDCOPJAN	13.66	
HAN	1/7/01	185	9.6	102.9	1.0	0.4	27.6	9.7	14.7	7.8	1.7	1.1	96.9	7.9	7.2	0.7	42.4	7.7	FDCOPJAN	-5.38	
HAN	1/7/01	185	scaled to remove overestimate					26.7850		14.2530		1.6312		94.1627		6.9605		41.2076			0.0000



**Source Apportionment of PM10 Concentrations Determined by Chemical Mass Balance (in ug/m3)**  
Using Routine Data and Fugitive Dust Profiles Selected By District

SITEID	DATE	CONC	UCONC	% Mass	RSQ	CHI SQ	Wood Burning Mass	Wood Burning Unc	MV Exhaust Mass	MV Exhaust Unc	TiresAndBrakes Mass	TiresAndBrakes Unc	Nitrate Mass	Nitrate Unc	Sulfate Mass	Sulfate Unc	Geo- logical Mass	Geo- logical Unc	Geological Profile	Unassigned
<b>October 1999</b>																				
FSD	10/21/99	162	16.2	69.6	1.0	1.1	26.2	14.5	-6.0	10.0	3.7	1.9	15.4	1.8	3.6	0.8	70.0	7.2	FDFREOCT	38.02
TUR	10/21/99	157	15.7	75.8	0.7	6.0	25.6	10.0	10.8	7.5	1.6	0.9	16.2	1.9	2.7	0.6	62.0	6.5	FDTUR	
COP	10/21/99	174																		

**Estimated PM10 Source Contributions for Fresno-Drummond and Corcoran During October 1999 Episode**  
Concentrations and Source Contributions are in ug/m3

SITEID	DATE	CONC	UCONC	% Mass	RSQ	CHI SQ	Wood Burning		MV Exhaust		Nitrate		Sulfate		Geological		Geological Profile	Unassigned	
							Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc			
<b>Fresno-Drummond (with TC estimated at 30 ug/m3)</b>							<b>WBOakEuc</b>												
FSDC4	10/21/99	162	16.2	81.2	0.9	2.0	5.8	10.5	24.9	12.7	23.6	2.6	2.8	0.8	74.5	7.2	FDFREOCT	30.40	
Performance for Fresno meets minimal acceptance criteria, note the uncertainty for the motor vehicle estimate. Motor vehicle contribution is higher than January, but this is believable since the heavy duty traffic volume is so much less in January than October.																			
<b>Corcoran-Patterson</b>							<b>WBOakEuc</b>												
COPC	10/21/99	174	17.4	88.7	0.8	2.9	18.2	14.9	15.4	10.2	24.6	2.7	3.5	0.6	92.7	9.1	FDCOPOCT	19.64	

**Source Apportionment of PM10 Concentrations Determined by Chemical Mass Balance (in ug/m3)**  
Using Routine Data and Fugitive Dust Profiles Selected By District

SITEID	DATE	CONC	UCONC	% Mass	RSQ	CHI SQ	Wood Burning	Wood Burning	MV Exhaust	MV Exhaust	TiresAndBr	TiresAndB	Nitrate	Nitrate	Sulfate	Sulfate	Geo- logical	Geo- logical	Geological	Unassigned
							Mass	Unc	Mass	Unc	akes Mass	rakes Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	
<b>Winter 2000/2001</b>																				
FSF	1/1/01	193	19.3	91.9	0.9	2.4	73.0	11.0	0.8	3.9	1.3	0.7	73.7	7.6	3.7	0.8	24.8	3.0203	DFFREDEC	15.63
BAC	1/1/01	186	18.6	97.3	0.9	2.6	42.5	7.2	-0.2	3.8	1.7	1.4	92.3	9.5	5.6	0.8	39.0	5.2862	FDBACJAN	5.07
BAC	1/4/01	190	19.0	92.1	0.9	2.5	37.8	6.9	0.0	3.9	1.8	1.4	89.7	9.2	5.4	0.7	40.2	5.4082	FDBACJAN	15.05
BAC	1/7/01	159	13.2	91.9	0.9	2.4	29.9	5.6	0.1	3.3	1.5	1.2	76.9	7.9	4.1	0.6	33.6	4.5032	FDBACJAN	12.90
M14	1/7/01	158	8.2	89.8	0.8	2.6	30.2	7.6	5.4	5.9	4.7	1.4	83.9	8.7	7.4	0.7	10.4	3.0	FDM16	16.04

**CMB Source Contribution For Additional Runs**

FSF and BAC Routine Data were combined with geological data from CRPAQS. CRPAQS Data were scaled based on the difference in weight. FSD 1/4/01 CRPAQS data were used for estimating geological fraction at FSF. BGS 1/4/01 CRPAQS data were used for estimating geological fraction at BAC. Site Symbol Followed by C (FSFC or BACC) represents a combination in which all of the XRF Species were scaled from CRPAQS data. Site Symbol Followed by C3 (FSFC3 or BACC3) represents a combination in which only the geological species (Al, Si, Fe, Ca) were scaled from CRPAQS data. The remaining XRF species were retained from the original extrapolation (as described in the document "Estimating Chemical Composition for CMB Modeling").

SITEID	DATE	CONC	UCONC	% Mass	RSQ	CHI SQ	Wood Burning		MV Exhaust		Nitrate		Sulfate		Geological		Geological Profile	Unassigned
							Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc		
<b>Mistake (With Wrong Geological Profile)</b>																		
FSFC	1/1/01	193	19.3	100.9	0.9	1.2	38.0	14.2	27.8	11.8	72.8	7.6	4.8	0.7	51.2	6.2	DFFREDEC	
FSFC3	1/1/01	193	19.3	96.5	0.8	3.0	50.2	10.1	22.1	8.6	73.5	7.6	3.7	0.7	36.7	3.9	DFFREDEC	
<b>With Original Profile Selection</b>																		
FSFC	1/1/01	193	19.3	99.0	0.9	1.1	39.4	15.5	31.2	13.9	73.1	7.6	4.9	0.7	42.5	6.7	DFFREDEC	
FSFC3	1/1/01	193	19.3	90.9	0.9	1.8	33.9	11.4	25.5	11.1	73.9	7.6	3.8	0.7	38.3	5.7	DFFREDEC	17.59
BACC	1/1/01	186	18.6	103.7	1.0	0.9	38.3	7.0	2.2	2.7	91.6	9.4	6.9	0.8	54.0	8.5	FDBACJAN	
BACC3	1/1/01	186	18.6	100.3	0.9	2.4	38.5	6.8	2.0	2.6	92.3	9.5	5.6	0.8	48.2	7.7	FDBACJAN	
BACC	1/4/01	190	19.0	98.8	1.0	0.9	33.4	6.7	2.4	2.9	89.0	9.2	6.6	0.7	56.2	8.7	FDBACJAN	
BACC3	1/4/01	190	19.0	95.2	0.9	2.2	33.4	6.5	2.6	2.9	89.7	9.2	5.4	0.7	49.7	7.8	FDBACJAN	
BACC	1/7/01	159	13.2	98.9	1.0	0.9	26.2	5.4	2.0	2.4	76.3	7.8	5.0	0.6	47.8	7.3	FDBACJAN	
BACC3	1/7/01	159	13.2	95.1	0.9	2.1	26.3	5.3	2.2	2.4	76.9	7.9	4.1	0.5	41.8	6.5	FDBACJAN	

**BAC geological profile replaced with composite of geologic profiles**

PM10 Source Contribution Estimates in ug/m3, Rechecked 2/20/03 version

SITEID	DATE	CONC	UCONC	% Mass	RSQ	CHI SQ	Wood Burning		MV Exhaust		TiresAndBrakes		Nitrate		Sulfate		Geological		Geological Profile	Unassigned
							Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc		
BAC	1/1/01	186	18.60	98.17	0.81	3.16	40.59	9.01	8.02	6.03	1.63	0.80	92.17	9.48	5.94	0.96	34.25	4.53	Composite	
BACC3	1/1/01	186	18.60	99.64	0.80	3.12	37.65	9.77	9.14	6.82	2.12	0.97	92.15	9.48	5.98	0.99	38.28	5.49	Composite	0.67
BAC	1/4/01	190	19.00	93.44	0.80	3.22	36.79	8.85	7.68	6.00	1.67	0.83	89.68	9.21	5.54	0.92	36.17	4.70	Composite	
BACC3	1/4/01	190	19.00	94.96	0.80	3.16	34.14	9.51	8.59	6.67	2.17	0.99	89.68	9.21	5.55	0.95	40.29	5.58	Composite	9.57
BAC	1/7/01	159	13.16	93.31	0.80	3.23	29.33	7.27	6.32	4.96	1.38	0.69	76.95	7.87	4.04	0.72	30.36	3.92	Composite	
BACC3	1/7/01	159	13.16	94.90	0.79	3.16	27.19	7.81	7.04	5.50	1.80	0.82	76.96	7.88	4.02	0.74	33.88	4.65	Composite	8.11

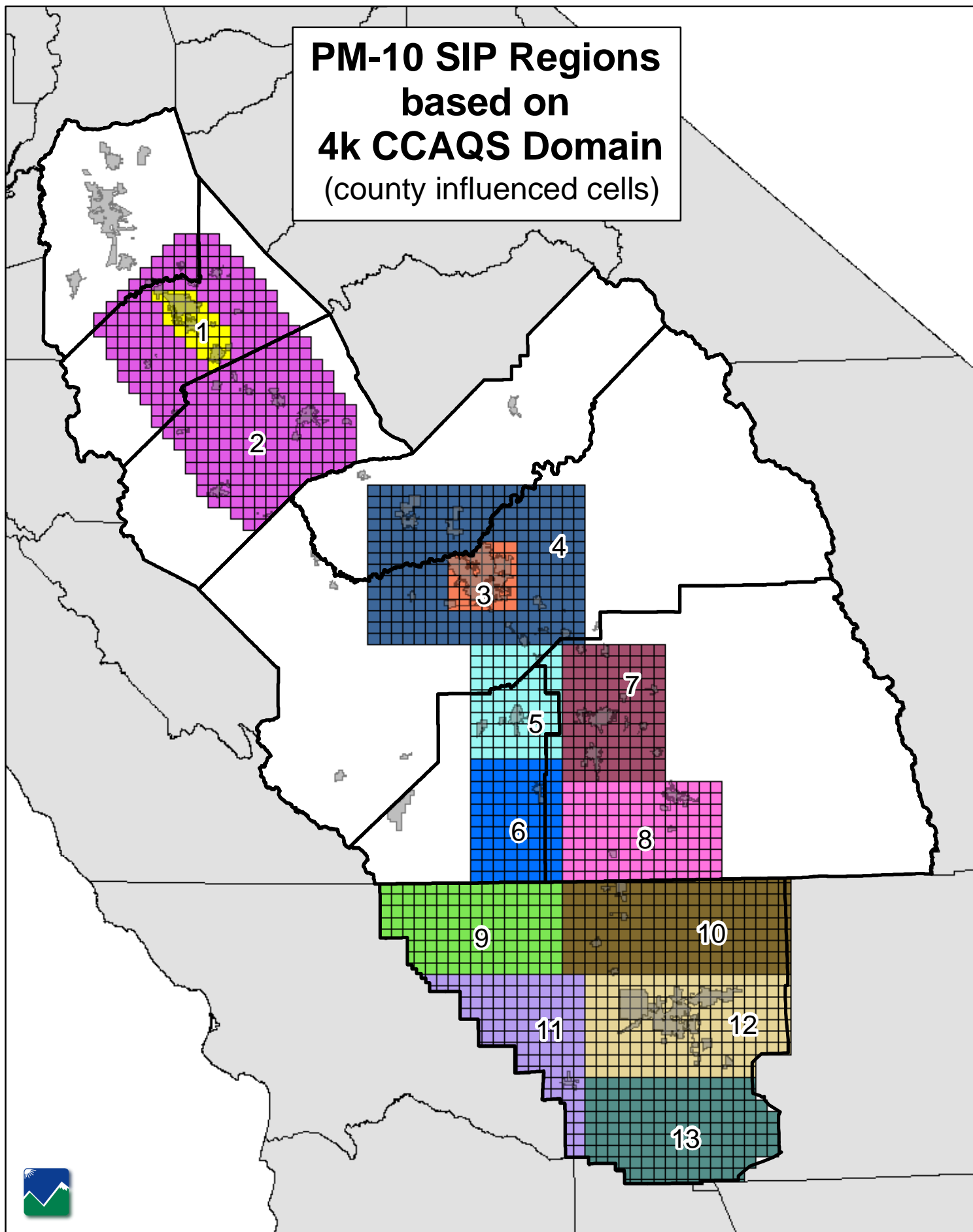
Composite profile is a composite of all fugitive dust profiles

DATE		Rollback default percentage, adjust by episode properties					Total	
		Local	PM2.5	Sub regional	Regional			
		Default 2.5-10	70	15	10	5	100	
		Default 2.5	50	30	15	5	100	
		<b>Note: distribution of anthropogenic contribution after subtraction of background</b>						
	<b>Mapping of local, PM2.5-local, and sub-regional based on trajectory analysis</b>							
					<b>Areas used</b>			
24-hr date	Site Name	Value	Local	PM2.5	Sub regional	Regional	# of dates	
11/6/97	Corcoran-Patterson Avenue	199						
12/31/98	Bakersfield-Golden State Highway	159						
	Visalia-N Church Street	160						
1/12/99	Oildale-3311 Manor Street	156	12	12,13	Kern	SJV	1	
10/21/99	Corcoran-Patterson Avenue	174	6	5,6,7,8	Kings-Tulare	SJV	2	
	Fresno-Drummond Street	162	3	3,4	Fresno-Madera	SJV	3	
	Turlock-S Minaret Street	157	1	1,2	Stanislaus-Merced	SJV	4	
11/14/99	Bakersfield-Golden State Highway	183	12	6,7,8,10,12	Kings-Tulare-Kern	SJV	5	
12/11/99	Hanford-S Irwin Street	183						
12/17/99	Corcoran-Patterson Avenue	174	6	6,8	Kings-Tulare	SJV	6	
12/23/99	Fresno-Drummond Street	168	3	3,4,7	Fresno-Tulare	SJV	7	
	Hanford-S Irwin Street	156	5	5,6,8	Kings-Tulare	SJV	8	
1/1/01	Bakersfield-5558 California Avenue	186	12	9,10,11,12	Kern	SJV	9	
	Bakersfield-Golden State Highway	205	12	9,10,11,12	Kern	SJV	10	
	Clovis-N Villa Avenue	155	3	3,4	Fresno-Madera	SJV	11	
	Fresno-1st Street	193	3	3,4	Fresno-Madera	SJV	12	
	Fresno-Drummond Street	186	3	3,4	Fresno-Madera	SJV	13	
	Oildale-3311 Manor Street	158	12	9,10,11,12	Kern	SJV	14	
1/4/01	Bakersfield-5558 California Avenue	190	12	10,12,13	Kern	SJV	15	
	Bakersfield-Golden State Highway	208	12	10,12,13	Kern	SJV	16	
	Fresno-Drummond Street	159	3	3,4	Fresno-Madera	SJV	17	
	Oildale-3311 Manor Street	195	12	10,12,13	Kern	SJV	18	
1/7/01	Bakersfield-5558 California Avenue	159	12	10,12	Kern	SJV	19	
	Bakersfield-Golden State Highway	174	12	10,12	Kern	SJV	20	
	Corcoran-Patterson Avenue	165	6	6,8,10,12	Kings-Tulare-Kern	SJV	21	
	Hanford-S Irwin Street	185	5	5,6,7,8,10	Kings-Tulare-Kern	SJV	22	
	Modesto-14th Street	158	1	1,2	St-Me-Ma- Fr-Tu	SJV	23	
11/9/01	Hanford-S Irwin Street	155	5	5,7,8	Kings-Tulare	SJV	24	

AOI

<b>Annual</b>	<b>County</b>	<b>Value</b>	<b>Site</b>	<b>EPA Value</b>			
	Fresno	50	Fresno-Drummond	47-53			
	Kings	53	Hanford, Irwin St	51			
	Tulare	53	Visalia, Church Street	54			
	Kern	57	Bakersfield-Golden	55			
					<b>Areas used</b>		
<b>Annual</b>	<b>County</b>	<b>Value</b>	<b>Local</b>	<b>PM2.5</b>	<b>Sub regional</b>	<b>Regional</b>	
	Fresno	50	3	3,4	Fresno-Madera	SJV	
	Kings	53	5	5,6,7,8	Kings-Tulare	SJV	
	Tulare	53	7	5,6,7,8	Tulare-Kings	SJV	
	Kern	57	12	Kern	Kern	SJV	

**PM-10 SIP Regions  
based on  
4k CCAQS Domain  
(county influenced cells)**



DATE	Rollback default percentage, adjust by episode properties						Total
		Local	PM2.5	Sub regional	Regional		
	Default 2.5-10	70	15	10	5	100	
	Default 2.5	50	30	15	5	100	
	Note: distribution of anthropogenic contribution after subtraction of background						
	Mapping of local, PM2.5-local, and sub-regional based on trajectory analysis						
				Areas used			
24-hr date	Site Name	Value	Local	PM2.5	Sub regional	Regional	# of dates
1/12/99	Oildale-3311 Manor Street	156	12	12,13	Kern	SJV	1
10/21/99	Corcoran-Patterson Avenue	174	6	5,6,7,8	Kings-Tulare	SJV	2
10/21/99	Fresno-Drummond Street	162	3	3,4	Fresno-Madera	SJV	3
10/21/99	Turlock-S Minaret Street	157	1	1,2	Stanislaus-Merced	SJV	4
11/14/99	Bakersfield-Golden State Highway	183	12	6,7,8,10,12	Kings-Tulare-Kern	SJV	5
12/17/99	Corcoran-Patterson Avenue	174	6	6,8	Kings-Tulare	SJV	6
12/23/99	Fresno-Drummond Street	168	3	3,4,7	Fresno-Tulare	SJV	7
12/23/99	Hanford-S Irwin Street	156	5	5,6,8	Kings-Tulare	SJV	8
1/1/01	Bakersfield-5558 California Avenue	186	12	9,10,11,12	Kern	SJV	9
1/1/01	Bakersfield-Golden State Highway	205	12	9,10,11,12	Kern	SJV	10
1/1/01	Clovis-N Villa Avenue	155	3	3,4	Fresno-Madera	SJV	11
1/1/01	Fresno-1st Street	193	3	3,4	Fresno-Madera	SJV	12
1/1/01	Fresno-Drummond Street	186	3	3,4	Fresno-Madera	SJV	13
1/1/01	Oildale-3311 Manor Street	158	12	9,10,11,12	Kern	SJV	14
1/4/01	Bakersfield-5558 California Avenue	190	12	10,12,13	Kern	SJV	15
1/4/01	Bakersfield-Golden State Highway	208	12	10,12,13	Kern	SJV	16
1/4/01	Fresno-Drummond Street	159	3	3,4	Fresno-Madera	SJV	17
1/4/01	Oildale-3311 Manor Street	195	12	10,12,13	Kern	SJV	18
1/7/01	Bakersfield-5558 California Avenue	159	12	10,12	Kern	SJV	19
1/7/01	Bakersfield-Golden State Highway	174	12	10,12	Kern	SJV	20
1/7/01	Corcoran-Patterson Avenue	165	6	6,8,10,12	Kings-Tulare-Kern	SJV	21
1/7/01	Hanford-S Irwin Street	185	5	5,6,7,8,10	Kings-Tulare-Kern	SJV	22
1/7/01	Modesto-14th Street	158	1	1,2	St-Me-Ma- Fr-Tu	SJV	23
11/9/01	Hanford-S Irwin Street	155	5	5,7,8	Kings-Tulare	SJV	24

AOI

11/9/01 Hanford event not modeled, no speciation data available to support analysis, 1/7/01 event more severe.						
Annual	County	Value	Site	EPA Value		
	Fresno	50	Fresno-Drummond	47-53		
	Kings	53	Hanford, Irwin St	51		
	Tulare	53	Visalia, Church Street	54		
	Kern	57	Bakersfield-Golden	55		
<b>Areas used</b>						
Annual	County	Value	Local	PM2.5	Sub regional	Regional
	Fresno	50	3	3,4	Fresno-Madera	SJV
	Kings	53	5	5,6,7,8	Kings-Tulare	SJV
	Tulare	53	7	5,6,7,8	Tulare-Kings	SJV
	Kern	57	12	Kern	Kern	SJV

## AREAL DISTRIBUTION

Default anthro rollback distribution:

	Local 1	Local 2	Sub Regional	Regional
Default 2.5-10	70	15	10	5
Default 2.5	50	30	15	5

Local1 = PM2.5-10 area of influence

Local2 = PM2.5 area of influence

## NATURAL BACKGROUND

Natural background to be subtracted from the gross PM10 episode day value, BEFORE ROLLBACK

Added back after rollback as attribution for source contribution not responsive to control strategy.

Natural background includes: OC natural sources, minor soil emissions not attributable to anthropogenic activity, bacterial soil NO<sub>x</sub> contribution to nitrates, natural sulfate sources and sulfates from outside the SJV, other contributions from outside the SJV.

The default values and adjustment criteria use constraints of cited paper and are consistent with previous analysis and EPA Criteria documents. Reference pages 53 to 64 of the Modeling Protocol.



# SJV

	<b>Default values</b>		
<b>Annual</b>	PM10 average	PM2.5 average	
OC		2	maximum permissible, adjustments downward  site adjustment: must be <20% PM10 sum of OC and Vegetative burning
soil - geologic	4		site adjustment: must be <20% annual PM10 geologic, annual includes periods of low anthropogenic activity as well as episodes
nitrate		1	
sulfate		1	
Total	4	4	=8 less than SJV average from A-10, A-11 P.V-7/24/02)
All marine is natural background, however none was detected I the CMB analysis			
<b>October</b>	PM10 max	PM2.5 max	
OC		7	site adjustment: must be <20% PM10 sum of OC and Vegetative burning
soil	5		site adjustment: may be higher than value shown, 5% of observed PM10 geologic
nitrate		2	site adjustment: may be higher than value shown, 5% of observed nitrate
sulfate		1	
Total	5	10	=15 SJV maximum 17 from three year data, A-10 P.V-7/24/02)
All marine is natural background			
<b>November</b>	PM10 max	PM2.5 max	
OC		7	site adjustment: must be <20% PM10 sum of OC and Vegetative burning
soil	4		site adjustment: may be higher than value shown, 5% of observed PM10 geologic
nitrate		3	site adjustment: may be higher than value shown, 5% of observed nitrate
sulfate		1	
Total	4	11	=15
All marine is natural background			
<b>December</b>	PM10 max	PM2.5 max	
OC		9	site adjustment: must be <20% PM10 sum of OC and Vegetative burning
soil	1.5		site adjustment: may be higher than value shown, 5% of observed PM10 geologic
nitrate		4	site adjustment: may be higher than value shown, 5% of observed nitrate
sulfate		1	
Total	1.5	14	=15.5
All marine is natural background			

<b>January</b>	PM10 max	PM2.5 max
OC		9
soil	1.5	
nitrate		4
sulfate		1
Total	1.5	14
All marine is natural background		

site adjustment: must be <20% PM10 sum of OC and Vegetative burning

site adjustment: may be higher than value shown, 5% of observed PM10 geologic

site adjustment: may be higher than value shown, 5% of observed nitrate

=15.5

Red font indicates the default distribution based on predominant particle size of the source type.										
Green shading indicates rollback with non-linear adjustment										
Blue shading indicates emission sources are from more than one pollutant type, complicating linear rollback										
Methodology	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium Nitrate including associated water	Ammonium Sulfate	Marine	Unassigned
Line1 Source Contribution from Analysis	From CMB analysis of most similar day to design day	From CMB	From CMB	From CMB	Estimated portion of mass included in Vegetative Burning	From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB	Unaccounted mass from CMB, if any.
Line2 Natural and Transport Contribution, see "Background" sheet	Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	0, no natural background, transport estimated at 0	0, no natural background, transport estimated at 0	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	see background sheet for numerical estimate and episode adjustment. Removed prior to rollback as not subject to local control, added back to projected future concentrations	100% because marine salts are a natural emission	0, background estimate at maximum, no additional background estimate for unexplained mass
Line 3 Net for Rollback	Net for Rollback, default percentages adjustable for episode characteristics, applicable to all columns except as indicated.						Net for non-linear rollback, default percentages adjustable for episode characteristics		Removed entirely from rollback, added back to result	
Line4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence, representative of large particle primary source area, includes all PM size emissions in the area - Rolled back against local area of influence emission estimates	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	X	70%PM10 50%PM2.5 of net
Line5 Local Contribution Area of Influence of PM2.5	Rolled back against local PM2.5 area of influence emission estimates - episode specific adjustments based on meteorology and episode duration	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear rollback	15%PM10 30%PM2.5		15%PM10 30%PM2.5
Line6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on meteorology and episode duration	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5		10%PM10 15%PM2.5
Line7 Regional Contribution	Rolled back against Valleywide emission estimates - episode specific adjustments based on meteorology and episode duration	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback	5%PM10 5%PM2.5		5%PM10 5%PM2.5
Associated Emissions Categories	Based upon appropriate seasonal or annual inventory	PM10 paved roads+ PM10 unpaved roads+ PM10 off road mobile PM10 farm operations and equipment+ PM10 construction (+ PM10 windblown for annual)	PM10, TOG & CO onroad mobile+ PM10, TOG & CO 860 offroad equipment PM10, TOG & CO 870 farm equipment CO presumed to add minimal mass	Tire and brake wear as predicted by EMFAC2002	Total TOG minus motor vehicle, OC may also include a small portion of otherwise unassigned elemental carbon PM10 & CO Area-20, Stationary 10, both 50,52,60,810,820 CO presumed to add minimal mass	PM10 & CO 610 residential burning + PM10 & CO 670 waste burning and disposal PM10 & CO 660 fires PM10 690 cooking CO presumed to add minimal mass	Total E.I. NOx (+ bacterial soil NOx estimate removed as natural background) *Previous method set aside a portion from rollback calculations due to lack of Ag E.I. NOx and ammonia sources, emissions data are now included, this set-aside is not required	Total SOx	None, natural emission from the ocean, bay and delta waters	Total PM10 (minus PM10 windblown for episodes which are not high wind)
Rollback Approach	Combination of CMB and secondary modeling	Linear	Linear	Linear	Linear - Possible use of Proportional from secondary modeling - it uses a lookup table process that is linear, therefore not different from CMB linear	Linear	Proportional from secondary modeling - using information developed from analysis of IMS 95 and selected episodes	Linear	Used as an input by the secondary modeling as a reactant	Linear