

SJTPO 2005 Tier 2/Sulfur Program Benefit Estimation and Resulting Transportation Conformity Budget

This workbook was developed to establish the transportation conformity budget for the SJTPO area.
It includes the benefits of the USEPA Tier 2/Sulfur program, per USEPA guidance.

This workbook was developed by Chris N. Salmi, NJDEP, December 12, 1999. Revised on 02/16/00 by R. B. Benton

<u>Worksheet</u>	<u>Description</u>
Documentation	This worksheet.
Constants	Contains the constants used in the calculations.
Emissions	Contains the base 2005 emissions, the Tier 2/Sulfur adjustments using Tables 8&9, and the resulting budget.
EPA T2 Credits	Contains the USEPA Tier 2/Sulfur Credits.
sjei05c	Contains the output (data base file) from PPAQ for the centralized enhanced I/M program. <<Hidden>> The VMT from this worksheet is used in the analysis.
NOx Em by Veh Clas by Co	Contains the centralized/decentralized enh. I/M composite NOx emissions.
VOC Em by Veh Clas by Co	Contains the centralized/decentralized enh. I/M composite VOC emissions.
T2 Adj by Veh Class	Contains the calculation of the benefits of Tier 2/Sulfur program by vehicle class (Table 8&9 method).
Comparison of EPA Methods	Contains a comparison of the Table 8&9 method to the Tables 1-5 method.

Constants

Conversion Factor

kg->lbs	2.2046
lbs->tons	0.0005

Source: Slade, David, Meteorology and Atomic Energy, 1968, U.S. Atomic Energy Commission

Emission Estimates

Base	VOC (kg)	NOx (kg)	VOC (lbs)	NOx (lbs)	VOC (tons)	NOx (tons)
Atlantic	4,331.1	10,350.2	9,548	22,818	4.77	11.41
Cape May	1,723.4	4,306.8	3,799	9,495	1.90	4.75
Cumberland	2,137.2	5,060.4	4,712	11,156	2.36	5.58
Salem	1,508.7	5,152.5	3,326	11,359	1.66	5.68
Total	9,700.4	24,869.8	21,386	54,828	10.69	27.41

T2 Adjustment (Using Tables 8&9)

Atlantic	197	1,063	435	2,343	0.22	1.17
Cape May	86	461	189	1,015	0.09	0.51
Cumberland	93	477	205	1,052	0.10	0.53
Salem	74	355	163	783	0.08	0.39
Total	450	2,356	992	5,193	0.50	2.60

Revised Budget

Atlantic	4,134	9,287	9,113	20,475	4.56	10.24
Cape May	1,638	3,846	3,611	8,479	1.81	4.24
Cumberland	2,044	4,583	4,507	10,105	2.25	5.05
Salem	1,434	4,797	3,162	10,576	1.58	5.29
Total	9,250	22,514	20,393	49,635	10.20	24.82

USEPA Tier 2/Sulfur Credits

		Final Reform. Base-T2	Final Reform. Base-T2	Final Reform. Base-T2	Final Reform. Base-T2	Final Reform. Base-T2
HC		LDGV	LDGT1	LDGT2	LDDT	HDGV
2005		0.018	0.023	0.033	0.133	0.038
NOx						
2005		0.106	0.118	0.144	0.233	0.204

Source

USEPA Memorandum, Wegman, Lydia N. & Zaw-Mon, Merrylin To Air Directors, Regions I-VI, dated November 8, 1999,
Regarding: 1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking, Tables 8&9

VOC - 2005	LDGV	LDGT1	LDGT2	LDDT	HDGV	Total
Atlantic						
Cape May						
Cumberland	0.0144	0.0256	0.0155	0.001	0.0029	0.0594
Salem	0.008	0.0147	0.0084	0.0003	0.0017	0.0331
Total						
NOx - 2005						
Atlantic						
Cape May						
Cumberland	0.1485	0.1744	0.0714	0.0029	0.0207	0.4179
Salem	0.0947	0.1108	0.0453	0.0012	0.0141	0.2661
Total						

Source

USEPA Memorandum, Wegman, Lydia N. & Zaw-Mon, Merrylin To Air Directors, Regions I-VI, dated November 8, 1999,
Regarding: 1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking, Tables 1-5

sjei05c

AREA	FACGROUP	TIMEGROUP	VMT1	VMT2	VMT3	VMT4	VMT5	VMT6	VMT7	VMT8	VMTTOTAL	VHT1
33		1	1 246313	16594	11714	14642	4881	1627	26356	3253	325380	4446
33		1	2 332451	24911	17211	23099	6794	2265	41670	4530	452931	6168
33		1	3 339809	18831	13267	15835	5564	1712	28674	4279	427971	6448
33		1	4 273921	18841	13044	16305	5435	1812	29349	3622	362329	4558
33		2	1 112209	6424	4568	5568	1856	571	10136	1427	142759	2640
33		2	2 174100	11839	8357	11142	3250	1161	19964	2321	232134	3904
33		2	3 162918	7522	5345	6137	2178	792	11086	1978	197956	3926
33		2	4 96168	5506	3793	4894	1591	489	8687	1223	122351	1987
33		3	1 165876	19053	13449	5828	5380	1793	10535	2243	224157	4275
33		3	2 261231	26721	18634	11251	7383	2461	20392	3516	351589	6564
33		3	3 230448	31655	22159	6331	8863	2849	11079	3166	316550	6195
33		3	4 145601	16944	11822	5123	4729	1576	9260	1970	197025	3551
1			8357736	535345	375236	124082	150525	50326	222697	99144	9915091	
9			3429914	311327	217822	47263	87726	28673	86727	42519	4251971	
11			3418158	338164	236509	91218	95211	30314	164107	44175	4417856	
33			2541045	204841	143363	126155	57904	19108	227188	33528	3353132	

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VHT2	VHT3	VHT4	VHT5	VHT6	VHT7	VHT8	VHTTOTAL	COLDPCT	HOTPCT	AMBIENT	MINTEMP
300	211	264	88	29	476	59	5873	0.0	0.0	78.6	72.0
462	319	429	126	42	773	84	8403	0.0	0.0	92.9	84.0
357	252	300	106	32	544	81	8121	0.0	0.0	92.6	90.0
313	217	271	90	30	488	60	6029	0.0	0.0	83.5	71.0
151	107	131	44	13	238	34	3359	0.0	0.0	78.6	72.0
265	187	250	73	26	448	52	5205	0.0	0.0	92.9	84.0
181	129	148	52	19	267	48	4770	0.0	0.0	92.6	90.0
114	78	101	33	10	179	25	2528	0.0	0.0	83.5	71.0
491	347	150	139	46	272	58	5777	0.0	0.0	78.6	72.0
671	468	283	186	62	512	88	8834	0.0	0.0	92.9	84.0
851	596	170	238	77	298	85	8509	0.0	0.0	92.6	90.0
413	288	125	115	38	226	48	4805	0.0	0.0	83.5	71.0

MAXTEMP	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL	CO1	CO2	CO3	CO4	CO5	CO6
80.0	64.04	5.31	5.62	13.18	0.98	0.46	25.30	7.84	122.73	465.53	43.64	46.86	162.09	2.88	1.09
95.0	96.41	8.97	9.12	31.88	1.36	0.66	40.42	17.17	205.99	605.06	63.27	66.09	267.26	3.94	1.47
93.0	95.15	6.59	6.90	19.95	1.11	0.50	28.10	14.68	172.98	618.45	47.83	50.95	178.78	3.17	1.11
87.0	82.18	6.97	7.30	17.61	1.09	0.51	27.59	12.06	155.31	739.59	71.22	76.31	211.97	3.48	1.30
80.0	31.42	2.25	2.42	5.79	0.43	0.19	11.35	3.45	57.30	245.74	18.82	20.14	54.40	1.08	0.38
95.0	55.71	4.62	4.68	16.71	0.75	0.37	21.56	8.84	113.24	355.16	32.79	34.93	117.10	1.85	0.74
93.0	53.76	2.93	3.15	8.84	0.52	0.26	12.64	6.88	88.98	369.82	22.64	24.21	65.05	1.26	0.52
87.0	26.93	1.87	1.90	5.63	0.33	0.15	8.86	3.66	49.33	175.03	13.99	14.57	49.58	0.89	0.31
80.0	51.42	7.05	7.53	6.47	1.35	0.63	12.64	5.54	92.63	414.69	61.92	65.63	58.75	3.28	1.24
95.0	91.43	11.22	11.37	18.11	1.85	0.86	24.06	13.61	172.51	629.57	84.44	88.33	121.17	4.43	1.67
93.0	82.96	13.30	14.18	9.81	2.30	1.05	13.74	11.24	148.58	612.99	107.94	113.23	70.46	5.58	2.02
87.0	46.59	6.27	6.62	6.51	1.13	0.54	10.65	6.01	84.32	336.34	51.68	54.26	51.74	2.79	1.06

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CO7	CO8	COTOTAL	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL	HCEXHSTTOT
142.06	22.90	887.05	226.61	17.59	19.21	77.02	6.20	2.31	231.41	4.39	584.74	77.99
220.43	41.40	1268.92	302.53	25.91	27.71	121.73	8.29	3.08	350.03	5.12	844.40	102.20
150.25	38.81	1089.35	299.03	18.83	20.56	82.82	6.57	2.24	233.12	4.71	667.88	86.82
171.40	58.89	1334.16	284.88	22.99	24.65	88.86	8.15	3.03	302.59	5.22	740.37	91.75
53.82	10.07	404.45	84.16	5.27	5.80	26.78	1.80	0.62	67.51	1.53	193.47	35.59
104.01	22.40	668.98	134.06	10.06	10.95	55.04	3.22	1.29	136.75	2.18	353.55	56.18
59.53	20.20	563.23	125.45	6.32	7.00	29.64	2.07	0.84	72.95	1.84	246.11	46.04
44.74	8.85	307.96	74.05	4.63	4.97	24.67	1.69	0.58	63.76	1.31	175.66	26.98
58.89	17.36	681.76	124.41	15.62	17.08	27.22	5.00	1.86	67.63	2.36	261.18	59.58
112.16	37.73	1079.50	201.15	22.45	24.41	53.67	6.94	2.58	131.94	3.23	446.37	87.77
63.82	36.31	1012.35	177.44	26.59	29.03	29.57	8.15	2.93	70.46	2.85	347.02	77.50
50.10	16.25	564.22	110.66	14.06	15.25	24.44	4.49	1.67	60.56	1.99	233.12	48.29

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HCEVAPTOT	HCREFLTOT	HCRUNTOT	HCRESTTOT	HOTSOAK1	HOTSOAK2	HOTSOAK3	HOTSOAK4	HOTSOAK5
20.02	13.50	3.74	7.48	0.25	0.26	0.29	1.93	0.00
49.88	24.42	10.67	18.82	0.35	0.43	0.49	3.71	0.00
36.87	21.52	9.64	18.13	0.35	0.43	0.49	3.69	0.00
32.86	15.19	4.17	11.34	0.28	0.33	0.37	2.55	0.00
8.59	5.70	4.14	3.28	0.25	0.26	0.29	1.93	0.00
25.20	12.32	9.86	9.68	0.35	0.43	0.49	3.71	0.00
16.53	9.62	8.32	8.47	0.35	0.43	0.49	3.69	0.00
10.92	4.98	2.58	3.87	0.28	0.33	0.37	2.55	0.00
12.64	8.46	6.67	5.28	0.25	0.26	0.29	1.93	0.00
34.86	17.11	17.88	14.89	0.35	0.43	0.49	3.71	0.00
24.63	14.44	18.42	13.59	0.35	0.43	0.49	3.69	0.00
16.27	7.50	5.96	6.30	0.28	0.33	0.37	2.55	0.00

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HOTSOAK6	HOTSOAK7	HOTSOAK8	DIURNAL1	DIURNAL2	DIURNAL3	DIURNAL4	DIURNAL5	DIURNAL6
0.00	0.00	6.49	0.14	0.18	0.22	2.85	0.00	0.00
0.00	0.00	14.72	0.23	0.29	0.37	4.66	0.00	0.00
0.00	0.00	14.66	0.02	0.02	0.03	0.38	0.00	0.00
0.00	0.00	9.54	0.24	0.30	0.39	4.96	0.00	0.00
0.00	0.00	6.49	0.14	0.18	0.22	2.85	0.00	0.00
0.00	0.00	14.72	0.23	0.29	0.37	4.66	0.00	0.00
0.00	0.00	14.66	0.02	0.02	0.03	0.38	0.00	0.00
0.00	0.00	9.54	0.24	0.30	0.39	4.96	0.00	0.00
0.00	0.00	6.49	0.14	0.18	0.22	2.85	0.00	0.00
0.00	0.00	14.72	0.23	0.29	0.37	4.66	0.00	0.00
0.00	0.00	14.66	0.02	0.02	0.03	0.38	0.00	0.00
0.00	0.00	9.54	0.24	0.30	0.39	4.96	0.00	0.00

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DIURNAL7	DIURNAL8	MULTIPLE1	MULTIPLE2	MULTIPLE3	MULTIPLE4	MULTIPLE5	MULTIPLE6	MULTIPLE7
0.00	2.62	1.96	2.05	2.27	12.59	0.00	0.00	0.00
0.00	4.27	1.97	2.27	2.51	16.46	0.00	0.00	0.00
0.00	0.34	1.93	2.12	2.34	11.24	0.00	0.00	0.00
0.00	4.55	1.98	2.21	2.44	16.70	0.00	0.00	0.00
0.00	2.62	1.96	2.05	2.27	12.59	0.00	0.00	0.00
0.00	4.27	1.97	2.27	2.51	16.46	0.00	0.00	0.00
0.00	0.34	1.93	2.12	2.34	11.24	0.00	0.00	0.00
0.00	4.55	1.98	2.21	2.44	16.70	0.00	0.00	0.00
0.00	2.62	1.96	2.05	2.27	12.59	0.00	0.00	0.00
0.00	4.27	1.97	2.27	2.51	16.46	0.00	0.00	0.00
0.00	0.34	1.93	2.12	2.34	11.24	0.00	0.00	0.00
0.00	4.55	1.98	2.21	2.44	16.70	0.00	0.00	0.00

sjei05c

MULTIPLE8	CRANKCASE1	CRANKCASE2	CRANKCASE3	CRANKCASE4	CRANKCASE5	CRANKCASE6
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.00	0.00

sjei05c

CRANKCASE7	CRANKCASE8	REFUEL1	REFUEL2	REFUEL3	REFUEL4	REFUEL5	REFUEL6	REFUEL7
0.00	0.00	0.76	0.76	0.76	3.32	0.00	0.00	0.00
0.00	0.00	0.87	0.87	0.87	4.05	0.00	0.00	0.00
0.00	0.00	0.90	0.90	0.90	4.23	0.00	0.00	0.00
0.00	0.00	0.78	0.78	0.78	3.46	0.00	0.00	0.00
0.00	0.00	0.76	0.76	0.76	3.32	0.00	0.00	0.00
0.00	0.00	0.87	0.87	0.87	4.05	0.00	0.00	0.00
0.00	0.00	0.90	0.90	0.90	4.23	0.00	0.00	0.00
0.00	0.00	0.78	0.78	0.78	3.46	0.00	0.00	0.00
0.00	0.00	0.76	0.76	0.76	3.32	0.00	0.00	0.00
0.00	0.00	0.87	0.87	0.87	4.05	0.00	0.00	0.00
0.00	0.00	0.90	0.90	0.90	4.23	0.00	0.00	0.00
0.00	0.00	0.78	0.78	0.78	3.46	0.00	0.00	0.00

sjei05c

REFUEL8	RESTING1	RESTING2	RESTING3	RESTING4	RESTING5	RESTING6	RESTING7	RESTING8
0.00	0.03	0.04	0.04	0.05	0.00	0.00	0.00	0.14
0.00	0.05	0.05	0.06	0.07	0.00	0.00	0.00	0.21
0.00	0.05	0.05	0.06	0.07	0.00	0.00	0.00	0.21
0.00	0.03	0.04	0.05	0.05	0.00	0.00	0.00	0.16
0.00	0.03	0.04	0.04	0.05	0.00	0.00	0.00	0.14
0.00	0.05	0.05	0.06	0.07	0.00	0.00	0.00	0.21
0.00	0.05	0.05	0.06	0.07	0.00	0.00	0.00	0.21
0.00	0.03	0.04	0.05	0.05	0.00	0.00	0.00	0.16
0.00	0.03	0.04	0.04	0.05	0.00	0.00	0.00	0.14
0.00	0.05	0.05	0.06	0.07	0.00	0.00	0.00	0.21
0.00	0.05	0.05	0.06	0.07	0.00	0.00	0.00	0.21
0.00	0.03	0.04	0.05	0.05	0.00	0.00	0.00	0.16

NOx Emissions by Vehicle Class by County

Units = Kg

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Atlantic	1	6,898.36	473.83	514.95	586.01	148.53	55.25	1,570.67	102.59	10,350.19
Cape May	9	2,750.07	273.14	296.96	227.99	86.43	31.41	597.10	43.66	4,306.75
Cumberland	11	2,768.71	292.32	318.37	418.87	90.77	32.21	1,094.99	44.13	5,060.36
Salem	33	2,192.59	195.08	212.37	641.46	62.57	23.03	1,788.71	36.73	5,152.53
Total		14,609.72	1,234.35	1,342.65	1,874.33	388.30	141.90	5,051.47	227.11	24,869.84

Units = lbs

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Atlantic	1	15,208	1,045	1,135	1,292	327	122	3,463	226	22,818
Cape May	9	6,063	602	655	503	191	69	1,316	96	9,495
Cumberland	11	6,104	644	702	923	200	71	2,414	97	11,156
Salem	33	4,834	430	468	1,414	138	51	3,943	81	11,359
Total		32,209	2,721	2,960	4,132	856	313	11,136	501	54,828

Units = tons

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Atlantic	1	7.60	0.52	0.57	0.65	0.16	0.06	1.73	0.11	11.41
Cape May	9	3.03	0.30	0.33	0.25	0.10	0.03	0.66	0.05	4.75
Cumberland	11	3.05	0.32	0.35	0.46	0.10	0.04	1.21	0.05	5.58
Salem	33	2.42	0.22	0.23	0.71	0.07	0.03	1.97	0.04	5.68
Total		16.10	1.36	1.48	2.07	0.43	0.16	5.57	0.25	27.41
									0.14	16.01

VOC Emissions by Vehicle Class by County

Units = kg

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Atlantic	1	3,013.36	234.12	248.92	177.97	40.94	19.28	282.69	313.83	4,331.11
Cape May	9	1,141.38	125.62	132.70	61.56	21.45	9.87	100.04	130.80	1,723.42
Cumberland	11	1,279.82	156.67	165.73	135.81	27.68	12.44	219.39	139.68	2,137.22
Salem	33	814.50	81.16	85.24	160.49	13.20	6.18	236.91	110.98	1,508.66

Total		6,249.06	597.57	632.59	535.83	103.27	47.77	839.03	695.29	9,700.41
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Units = lbs

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Atlantic	1	6,643	516	549	392	90	43	623	692	9,548
Cape May	9	2,516	277	293	136	47	22	221	288	3,799
Cumberland	11	2,821	345	365	299	61	27	484	308	4,712
Salem	33	1,796	179	188	354	29	14	522	245	3,326

Total		13,777	1,317	1,395	1,181	228	105	1,850	1,533	21,386
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Units = tons

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Atlantic	1	3.32	0.26	0.27	0.20	0.05	0.02	0.31	0.35	4.77
Cape May	9	1.26	0.14	0.15	0.07	0.02	0.01	0.11	0.14	1.90
Cumberland	11	1.41	0.17	0.18	0.15	0.03	0.01	0.24	0.15	2.36
Salem	33	0.90	0.09	0.09	0.18	0.01	0.01	0.26	0.12	1.66

Total		6.89	0.66	0.70	0.59	0.11	0.05	0.92	0.77	10.69
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Tier 2/Sulfur Adjustments by Vehicle Class

VT									
County	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	Total
Atlantic	8,357,736	535,345	375,236	124,082	150,525	50,326	222,697	99,144	9,915,091
Cape May	3,429,914	311,327	217,822	47,263	87,726	28,673	86,727	42,519	4,251,971
Cumberland	3,418,158	338,164	236,509	91,218	95,211	30,314	164,107	44,175	4,417,856
Salem	2,541,045	204,841	143,363	126,155	57,904	19,108	227,188	33,528	3,353,132
Total	17,746,853	1,389,677	972,930	388,718	391,366	128,421	700,719	219,366	21,938,050
HC Adj Factor	0.018	0.023	0.033	0.133	0.038	0	0	0	
HC Adjustment									
Atlantic	150,439	12,313	12,383	16,503	5,720	-	-	-	197,358
Cape May	61,738	7,161	7,188	6,286	3,334	-	-	-	85,707
Cumberland	61,527	7,778	7,805	12,132	3,618	-	-	-	92,859
Salem	45,739	4,711	4,731	16,779	2,200	-	-	-	74,160
Total	319,443	31,963	32,107	51,699	14,872	-	-	-	450,084
NOx Adj Factor	0.106	0.118	0.144	0.233	0.204	0	0	0	
NOx Adjustment									
Atlantic	885,920	63,171	54,034	28,911	30,707	-	-	-	1,062,743
Cape May	363,571	36,737	31,366	11,012	17,896	-	-	-	460,582
Cumberland	362,325	39,903	34,057	21,254	19,423	-	-	-	476,962
Salem	269,351	24,171	20,644	29,394	11,812	-	-	-	355,373
Total	1,881,166	163,982	140,102	90,571	79,839	-	-	-	2,355,660

Source

USEPA Memorandum, Wegman, Lydia N. & Zaw-Mon, Merrylin To Air Directors, Regions I-VI, dated November 8, 1999,
Regarding: 1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking, Tables 8 & 9

Comparison of the USEPA Methods to Calculate the Tier 2/Sulfur Credits

	Base Budget		Adjustment w/ Tables 8&9		Resulting Budget	
	VOC (tons)	NOx (tons)	VOC (tons)	NOx (tons)	VOC (tons)	NOx (tons)
Atlantic	4.77	11.41	0.22	1.17	4.56	10.24
Cape May	1.90	4.75	0.09	0.51	1.81	4.24
Cumberland	2.36	5.58	0.10	0.53	2.25	5.05
Salem	1.66	5.68	0.08	0.39	1.58	5.29
Total	10.69	27.41	0.50	2.60	10.20	24.82

	Base Budget		Adjustment w/ Tables 1-5			
	VOC (tons)	NOx (tons)	VOC (tons)	NOx (tons)		
Atlantic	4.77	11.41	0	0	4.77	11.41
Cape May	1.90	4.75	0	0	1.90	4.75
Cumberland	2.36	5.58	0.0594	0.4179	2.30	5.16
Salem	1.66	5.68	0.0331	0.2661	1.63	5.41
Total	10.69	27.41	0	0	10.69	27.41

Ratio Table 8&9: Tables 1-5

Atlantic	#DIV/0!	#DIV/0!
Cape May	#DIV/0!	#DIV/0!
Cumberland	1.72	1.26
Salem	2.47	1.47
Total	#DIV/0!	#DIV/0!