Appendix 4E

Emission Projections for 2008, 2009, & 2012 Including Calculation of Emission Reductions Resulting from Control Strategies

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)	48.52		1.11	1.13	1.19	54.03	0.00	54.95	0.00	57.70	0.00	
Gasoline/Crude Oil Storage Floating Roof	827.51		1.11	1.13	1.19	921.44	0.00	937.10	0.00	984.07	0.00	
Volatile Organic Liquid (VOL) Storage			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	6,177.75		1.11	1.13	1.19	6,879.01	0.00	6,995.89	0.00	7,346.52	0.00	
Gasoline Bulk Plants			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading		1,333.37	1.11	1.13	1.19	0.00	1,484.73	0.00	1,509.95	0.00	1,585.63	
Vehicle Fuel		4,120.81	1.11	1.13	1.19	0.00	4,588.58	0.00	4,666.54	0.00	4,900.43	PV-Vent Control reductions listed below
Underground Tank Breathing		1,382.58	1.11	1.13	1.19	0.00	1,539.52	0.00	1,565.68	0.00	1,644.15	PV-Vent Control reductions listed below
Aircraft Refueling		87.15	1.18	1.21	1.30	0.00	102.70	0.00	105.29	0.00	113.06	
Gasoline Trucks in Transit		161.96	1.11	1.13	1.19	0.00	180.34	0.00	183.41	0.00	192.60	
Leaking Underground Storage Tanks		158.31	0.97	0.96	0.95	0.00	153.27	0.00	152.43	0.00	149.91	
Spills		324.33	0.97	0.96	0.95	0.00	314.01	0.00	312.29	0.00	307.13	
Unaccounted Gas Can Emissions												Permeation, diurnal, transport-spillage emissions.
(not in 2002 PEI)		9,406.14	1.11	1.13	1.19	0.00	10,473.86	0.00	10,651.82	0.00	11,185.68	Gas Can Control reductions listed below.
Sub-Total: VOC Stor/Trans/Market	7,053.78	16,974.65				7,854.48	18,837.01	7,987.93	19,147.41	8,388.28	20,078.59	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	4,942.96		1.03	1.03	1.04	5,069.89	0.00	5,091.05	0.00	5,154.52	0.00	
SOCMI Fugitive			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks		263.66	1.03	1.03	1.04	0.00	270.43	0.00	271.56	0.00	274.94	
Inorganic Chemical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes		1.01	1.20	1.23	1.33	0.00	1.21	0.00	1.24	0.00	1.34	
Pharmaceutical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Plastic Products Manufacture	1,207.77		0.97	0.97	0.95	1,174.53	0.00	1,168.99	0.00	1,152.37	0.00	
Rubber Tire Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture	414.33		0.97	0.97	0.95	402.93	0.00	401.03	0.00	395.32	0.00	
Textile Polymers & Resin Mfg			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	1.37		0.97	0.97	0.95	1.33	0.00	1.33	0.00	1.31	0.00	
Other	948.56		0.95	0.94	0.92	901.92	0.00	894.15	0.00	870.83	0.00	
Sub-Total: Industrial Processes	7,514.99	264.67				7,550.60	271.64	7,556.54	272.80	7,574.35	276.29	

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
INDUSTRIAL SURFACE COATING	2,602.92	10,512.87	0.97	0.96	0.95	2,520.08	10,178.28	2,506.27	10,122.51	2,464.85	9,955.21	All sub-categories grouped togeher in 2002 PEI.
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	2,602.92	10,512.87				2,520.08	10,178.28	2,506.27	10,122.51	2,464.85	9,955.21	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings		22,495.79	1.03	1.03	1.05	0.00	23,180.26	0.00	23,271.51	0.00	23,518.08	AIM Control reductions listed below.
Auto Refinishing		2,352.27	1.05	1.05	1.08	0.00	2,460.31	0.00	2,478.32	0.00	2,532.34	Assumes HVLP Control reductions accounted for in 2002 PEI.
Traffic Markings		867.88	1.07	1.09	1.12	0.00	932.66	0.00	942.86	0.00	970.22	
Sub-Total: Non-Ind Surf Coating	0.00	25,715.94				0.00	26,573.23	0.00	26,692.69	0.00	27,020.63	
OTHER SOLVENT USE												
Degreasing	98.75	32,675.15	0.97	0.96	0.947	95.61	31,635.19	95.08	31,461.87	93.51	30,941.89	Solvent Cleaning control reductions listed below.
Petroleum Dry Cleaning		113.53	1.03	1.03	1.05	0.00	116.98	0.00	117.44	0.00	118.69	
Graphic Arts	1,463.99	7,993.70	1.07	1.08	1.119	1,568.95	8,566.78	1,586.44	8,662.30	1,638.92	8,948.84	
Adhesives	25.92	4,730.15	0.97	0.96	0.947	25.10	6,235.90	24.96	6,487.64	24.55	7,242.88	Area adhesives added per OTC estimates for 2002, then grown. Adhesive/Sealant Control reductions listed below.
Cutback Asphalt Paving		813.30	1.07	1.09	1.118	0.00	874.01	0.00	883.56	0.00	909.20	Asphalt Paving Control reductions listed below.
Emulsified Asphalt Paving		1,507.72	1.07	1.09	1.118	0.00	1,620.26	0.00	1,637.97	0.00	1,685.51	Asphalt Paving Control reductions listed below.
Solvent Extraction Processes	4.00		0.97	0.96	0.947	3.87	0.00	3.85	0.00	3.79	0.00	
Consumer/Commercial Solvent Use		47,596.89	1.03	1.03	1.05	0.00	49,045.10	0.00	49,238.17	0.00	49,759.86	Consumer Product Controls (OTC2001 & 2006) listed below.
Other	698.16		0.97	0.96	0.947	675.94	0.00	672.24	0.00	661.13	0.00	
Sub-Total: Other Solvent Use	2,290.82	95,430.44				2,369.46	98,094.22	2,382.57	98,488.96	2,421.89	99,606.86	

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	358.24		1.00	1.00	1.00	358.24	0.00	358.24	0.00	358.24	0.00	
Municipal Waste Landfills		529.38	1.00	1.00	1.00	0.00	529.38	0.00	529.38	0.00	529.38	
TSDFs		1,143.73	0.97	0.96	0.95	0.00	1,107.33	0.00	1,101.26	0.00	1,083.06	
POTWs		3,682.21	1.03	1.03	1.05	0.00	3,794.25	0.00	3,809.18	0.00	3,849.54	
ITWs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	358.24	5,355.32				358.24	5,430.96	358.24	5,439.83	358.24	5,461.98	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	1,208.48		1.09	1.10	1.14	1,311.94	0.00	1,329.19	0.00	1,380.92	0.00	
Industrial Fuel Combustion	86.02	117.17	0.97	0.96	0.95	83.28	113.44	82.83	112.82	81.46	110.95	
Commercial Fuel Combustion	62.83	264.27	1.06	1.07	1.10	66.70	280.56	67.35	283.28	69.29	291.42	
Residential Fuel Combustion		237.51	1.03	1.03	1.05	0.00	244.74	0.00	245.70	0.00	248.30	
Wood Stoves		5,392.10	1.03	1.03	1.05	0.00	5,556.16	0.00	5,578.04	0.00	5,637.14	
Forest Fires		1.18	1.00	1.00	1.00	0.00	1.18	0.00	1.18	0.00	1.18	
Structural Fires		284.08	1.03	1.03	1.05	0.00	292.72	0.00	293.88	0.00	296.99	
Open Burning		53.27	1.03	1.03	1.05	0.00	54.89	0.00	55.11	0.00	55.69	
Slash Burning			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications		5,968.20	1.02	1.02	1.03	0.00	6,058.69	0.00	6,073.77	0.00	6,119.02	
Asphalt Roofing			1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	733.22		1.05	1.06	1.09	770.74	0.00	777.00	0.00	795.76	0.00	
Sub-Total: Other Stationary Sources	2,090.55	12,317.78				2,232.67	12,602.39	2,256.36	12,643.77	2,327.42	12,760.70	
COMMERCIAL PROCESSES												
Bakeries	664.26	1700.17	0.97	0.96	0.94	641.01	1,640.66	637.14	1,630.75	625.51	1,600.99	
Breweries		1.01	1.20	1.23	1.33	0.00	1.21	0.00	1.24	0.00	1.34	
Sub-Total: Commercial Processes	664.26	1,701.18				641.01	1,641.87	637.14	1,631.99	625.51	1,602.34	

DRAFT SWCT VOC Summer Day Emission Projections

MOBILE SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002: 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)
Light Duty Gas Vehicles		50,588.13					25,555.26		22,553.54		14,833.31	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 1 & 2		27,232.72					19,194.77		18,231.93		14,651.71	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 3 & 4		12,534.23					9,174.90		8,914.69		7,413.98	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Gas Vehicles		2,612.48					1,552.55		1,371.48		1,116.89	Federal HDT & Fuel Standards included.
Light Duty Diesel Vehicle		36.55					10.05		7.21		3.55	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Diesel Truck		114.61					77.44		71.63		55.15	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Diesel Vehicle		2,538.87					1,754.18		1,659.23		1,402.26	Federal HDT & Fuel Standards included.
Motorcycles		885.06					835.20		823.00		823.87	
Sub-Total: On-Road Mobile Sources	0.00	96,542.64					58,154.36		53,632.70		40,300.73	w/o 2% contingency for conformity budgets
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)
Airport Equipment		0.00				0.00	0.00	0.00	0.00	0.00	0.00	Federal Engine & Fuel Standards included.
Commercial Equipment		9,340.00				0.00	7,500.00	0.00	7,160.00	0.00	7,220.00	Federal Engine & Fuel Standards included.
Construction Equipment		5,060.00				0.00	3,460.00	0.00	3,300.00	0.00	2,940.00	Federal Engine & Fuel Standards included.
Farm Equipment		60.00				0.00	40.00	0.00	40.00	0.00	40.00	Federal Engine & Fuel Standards included.
Industrial Equipment		5,040.00				0.00	3,160.00	0.00	2,740.00	0.00	1,520.00	Federal Engine & Fuel Standards included.
Lawn & Garden		59,100.00				0.00	39,080.00	0.00	37,460.00	0.00	36,600.00	Federal Engine & Fuel Standards included.
Logging Equipment		40.00				0.00	20.00	0.00	20.00	0.00	20.00	Federal Engine & Fuel Standards included.
Recreational Equipment		3,740.00				0.00	5,100.00	0.00	5,060.00	0.00	4,840.00	Federal Engine & Fuel Standards included.
Recreational Vessels		48,240.00				0.00	39,240.00	0.00	37,840.00	0.00	34,280.00	Federal Engine & Fuel Standards included.
Rail (equipment + engines)		445.34	0.98	0.97	0.96	0.00	435.41	0.00	433.76	0.00	408.80	
Aircraft		729.46	1.18	1.21	1.30	0.00	859.58	0.00	881.27	0.00	946.33	
Commercial Vessels		172.07	1.05	1.05	1.08	0.00	180.12	0.00	181.46	0.00	185.48	
Sub-Total: Non-Road Mobile Sources	0.00	131,966.87				0.00	99,075.11	0.00	95,116.49	0.00	89,000.61	

DRAFT SWCT VOC Summer Day Emission Projections

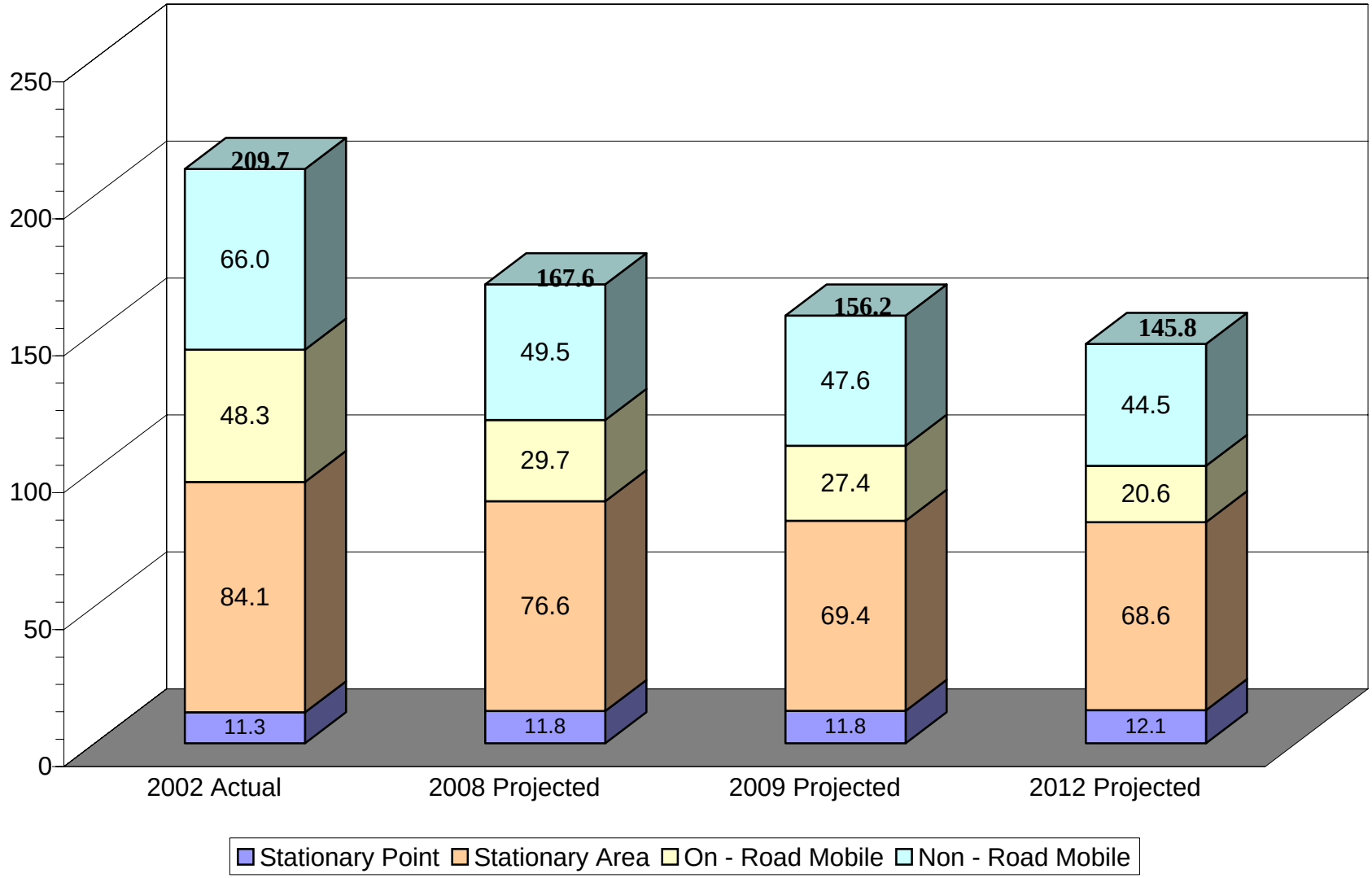
VOC EMISSION TOTALS	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	7,053.78	16,974.65				7,854.48	18,837.01	7,987.93	19,147.41	8,388.28	20,078.59	
Sub-Total: Industrial Processes	7,514.99	264.67				7,550.60	271.64	7,556.54	272.80	7,574.35	276.29	
Sub-Total: Ind Surface Coating	2,602.92	10,512.87				2,520.08	10,178.28	2,506.27	10,122.51	2,464.85	9,955.21	
Sub-Total: Non-Ind Surf Coating	0.00	25,715.94				0.00	26,573.23	0.00	26,692.69	0.00	27,020.63	
Sub-Total: Other Solvent Use	2,290.82	95,430.44				2,369.46	98,094.22	2,382.57	98,488.96	2,421.89	99,606.86	
Sub-Total: Waste Disposal	358.24	5,355.32				358.24	5,430.96	358.24	5,439.83	358.24	5,461.98	
Sub-Total: Other Stationary Srcs	2,090.55	12,317.78				2,232.67	12,602.39	2,256.36	12,643.77	2,327.42	12,760.70	
Sub-Total: Commercial Processes	664.26	1,701.18				641.01	1,641.87	637.14	1,631.99	625.51	1,602.34	
Sub-Total: Stationary Sources	22,575.56	168,272.85				23,526.55	173,629.59	23,685.05	174,439.95	24,160.54	176,762.60	
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	96,542.64				0.00	59,317.45	0.00	54,705.36	0.00	41,106.75	Includes 2% contingency for conformity budgets
Sub-Total: Non-Road Mobile Sources	0.00	131,966.87				0.00	99,075.11	0.00	95,116.49	0.00	89,000.61	
Sub-Total: Mobile Sources	0.00	228,509.51				0.00	158,392.56	0.00	149,821.84	0.00	130,107.35	
Sub-Total: Biogenic VOC Emissions	0.00	251,261.51	1.00	1.00	1.00	0.00	251,261.51	0.00	251,261.51	0.00	251,261.51	
GRAND TOTAL VOC	22,575.56	648,043.87				23,526.55	583,283.67	23,685.05	575,523.30	24,160.54	558,131.46	

POST-2002 CONTROL REDUCTIONS	2008	2009	2012	
PV Vent Valves at Gasoline Stations	-756.59	-769.45	-808.01	Underground tank breathing reductions
Automobile Refinishing (HVLP Guns)	0.00	0.00	0.00	Assumed accounted for in 2002 base inventory
Portable Fuel Containers	-2042.40	-3226.65	-6503.80	Not including reductions from non-road refueling
Solvent Cleaning Volatilty & Work Practices	-10433.10	-10371.76	-10206.04	Based on OTC calcs, with updated population & 80% RE & RP
Consumer Products (2006 OTC Model Rule)	0.00	-7836.75	-7919.78	Includes OTC2001 & OTC2006 Model Rules effective May 2009
AIM Coatings (2001 OTC Model Rule)	-7185.88	-7214.17	-7290.60	
Asphalt Paving (2006 OTC Model Rule)	0.00	-2017.22	-2075.76	Assumes reg effective May 2009
Adhesives & Sealants (2006 OTC Model Rule):				Assumes reg effective May 2009 (may actually be 2008)
Point Source	0.00	0.00	0.00	
Area Source	0.00	-4178.04	-4664.41	Uses OTC/MACTEC growth rate for area sources

SUMMARY BY SOURCE CATEGORY (includes listed Post-2002 controls)

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	22,575.56	11.3	23,526.55	11.8	23,685.05	11.8	24,160.54	12.1	
Stationary Area	168,272.85	84.1	153,211.62	76.6	138,825.91	69.4	137,294.19	68.6	
On - Road Mobile	96,542.64	48.3	59,317.45	29.7	54,705.36	27.4	41,106.75	20.6	Conformity Budgets for 2002, 2005, and 2007
Non - Road Mobile	131,966.87	66.0	99,075.11	49.5	95,116.49	47.6	89,000.61	44.5	
TOTAL ANTHROPOGENIC VOC	419,357.92	209.7	335,130.73	167.6	312,332.80	156.2	291,562.09	145.8	
		335.3	vs 2002	-20.1%	vs 2002	-25.5%	vs 2002	-30.5%	
				293.2		281.8		271.4	

Projected VOC Emission Trends for Greater Connecticut



	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline/Crude Oil Storage Floating Roof	131.48		1.11	1.13	1.19	146.40	0.00	148.89	0.00	156.35	0.00	
Volatile Organic Liquid (VOL) Storage			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	791.74		1.11	1.13	1.19	881.61	0.00	896.59	0.00	941.53	0.00	
Gasoline Bulk Plants			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading		1,271.03	1.11	1.13	1.19	0.00	1,415.31	0.00	1,439.36	0.00	1,511.50	
Vehicle Fuel		4,077.58	1.11	1.13	1.19	0.00	4,540.44	0.00	4,617.59	0.00	4,849.02	PV-Vent Control reductions listed below
Underground Tank Breathing		1,317.94	1.11	1.13	1.19	0.00	1,467.54	0.00	1,492.48	0.00	1,567.28	PV-Vent Control reductions listed below
Aircraft Refueling		284.00	1.18	1.21	1.30	0.00	334.66	0.00	343.10	0.00	368.43	
Gasoline Trucks in Transit		153.00	1.11	1.13	1.19	0.00	170.37	0.00	173.26	0.00	181.95	
Leaking Underground Storage Tanks		150.77	0.97	0.96	0.95	0.00	145.97	0.00	145.17	0.00	142.77	
Spills		497.20	0.97	0.96	0.95	0.00	481.38	0.00	478.74	0.00	470.83	
Unaccounted Gas Can Emissions												Permeation, diurnal, transport-spillage emissions.
(not in 2002 PEI)		8,029.28	1.11	1.13	1.19	0.00	8,940.72	0.00	9,092.62	0.00	9,548.34	Gas Can Control reductions listed below.
Sub-Total: VOC Stor/Trans/Market	923.22	15,780.80				1,028.02	17,496.39	1,045.48	17,782.32	1,097.88	18,640.11	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	251.43		1.03	1.03	1.04	257.89	0.00	258.96	0.00	262.19	0.00	
SOCMI Fugitive			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks		399.85	1.03	1.03	1.04	0.00	410.12	0.00	411.83	0.00	416.96	
Inorganic Chemical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes		2.01	1.20	1.23	1.33	0.00	2.41	0.00	2.47	0.00	2.67	
Pharmaceutical Manufacture	107.40		1.03	1.03	1.04	110.16	0.00	110.62	0.00	112.00	0.00	
Plastic Products Manufacture	488.00		0.97	0.97	0.95	474.57	0.00	472.33	0.00	465.61	0.00	
Rubber Tire Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture	32.60		0.97	0.97	0.95	31.70	0.00	31.55	0.00	31.10	0.00	
Textile Polymers & Resin Mfg			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	4.32		0.97	0.97	0.95	4.20	0.00	4.18	0.00	4.12	0.00	
Other	364.26		0.95	0.94	0.92	346.35	0.00	343.37	0.00	334.41	0.00	
Sub-Total: Industrial Processes	1,248.01	401.86				1,224.87	412.53	1,221.01	414.30	1,209.44	419.64	

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002	
INDUSTRIAL SURFACE COATING	3,380.23	9,041.96	0.97	0.96	0.95	3,272.65	8,754.18	3,254.72	8,706.22	3,200.92	8,562.33	All sub-categories grouped togeher in 2002 PEI.	
Large Appliances													
Magnet Wire													
Autos and Light Trucks													
Cans													
Metal Coils													
Paper													
Fabric													
Metal and Wood Furniture													
Miscellaneous Metal Products													
Flatwood Products													
Plastic Products													
Large Ships													
Large Aircraft													
High Performance Maintenance Coating													
Special Purpose Coating													
Others													
Sub-Total: Ind Surface Coating	3,380.23	9,041.96				3,272.65	8,754.18	3,254.72	8,706.22	3,200.92	8,562.33		
NON - INDUSTRIAL SURFACE COATING													
Architectural Coatings		18,659.48	1.03	1.03	1.05	0.00	19,227.22	0.00	19,302.92	0.00	19,507.43	AIM Control reductions listed below.	
Auto Refinishing		1,951.13	1.05	1.05	1.08	0.00	2,040.75	0.00	2,055.68	0.00	2,100.49	Assumes HVLP Control reductions accounted for in 2002 PEI.	
Traffic Markings		719.88	1.07	1.09	1.12	0.00	773.61	0.00	782.07	0.00	804.77		
Sub-Total: Non-Ind Surf Coating	0.00	21,330.49				0.00	22,041.58	0.00	22,140.67	0.00	22,412.69		
OTHER SOLVENT USE													
Degreasing	127.19	31,572.93	0.97	0.96	0.95	123.14	30,568.05	122.47	30,400.57	120.44	29,898.13	Solvent Cleaning control reductions listed below.	
Petroleum Dry Cleaning		77.01	1.03	1.03	1.05	0.00	79.35	0.00	79.67	0.00	80.51		
Graphic Arts	126.18	7,718.64	1.07	1.08	1.12	135.23	8,272.01	136.73	8,364.23	141.26	8,640.92		
												Area adhesives added per OTC estimates for 2002, then grown.	
Adhesives	41.60	4,848.27	0.97	0.96	0.95	40.28	6,391.61	40.06	6,649.65	39.39	7,423.74	Adhesive/Sealant Control reductions listed below.	
Cutback Asphalt Paving		3,103.22	1.07	1.09	1.12	0.00	3,334.85	0.00	3,371.30	0.00	3,469.14	Asphalt Paving Control reductions listed below.	
Emulsified Asphalt Paving		3,647.98	1.07	1.09	1.12	0.00	3,920.27	0.00	3,963.13	0.00	4,078.14	Asphalt Paving Control reductions listed below.	
Solvent Extraction Processes			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00		
Consumer/Commercial Solvent Use		32,539.84	1.03	1.03	1.05	0.00	33,529.91	0.00	33,661.91	0.00	34,018.56	Consumer Product Controls (OTC2001 & 2006) listed below.	Big jump from 1996 base year/Chris?
Other	142.20		0.97	0.96	0.95	137.67	0.00	136.92	0.00	134.66	0.00		
Sub-Total: Other Solvent Use	437.17	83,507.89				436.32	86,096.06	436.18	86,490.46	435.75	87,609.14		

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	959.66		1.00	1.00	1.00	959.66	0.00	959.66	0.00	959.66	0.00	
Municipal Waste Landfills		1,776.01	1.00	1.00	1.00	0.00	1,776.01	0.00	1,776.01	0.00	1,776.01	
TSDFs		527.12	0.97	0.96	0.95	0.00	510.34	0.00	507.55	0.00	499.16	
POTWs		3,031.86	1.03	1.03	1.05	0.00	3,124.11	0.00	3,136.41	0.00	3,169.64	
ITWs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	959.66	5,334.99				959.66	5,410.46	959.66	5,419.96	959.66	5,444.81	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	446.66		1.09	1.10	1.14	484.90	0.00	491.27	0.00	510.39	0.00	
Industrial Fuel Combustion	188.21	104.58	0.97	0.96	0.95	182.22	101.25	181.22	100.70	178.23	99.03	
Commercial Fuel Combustion	29.49	235.75	1.06	1.07	1.10	31.31	250.28	31.61	252.71	32.52	259.97	
Residential Fuel Combustion		201.90	1.03	1.03	1.05	0.00	208.04	0.00	208.86	0.00	211.08	
Wood Stoves		8,302.76	1.03	1.03	1.05	0.00	8,555.38	0.00	8,589.06	0.00	8,680.07	
Forest Fires		13.65	1.00	1.00	1.00	0.00	13.65	0.00	13.65	0.00	13.65	
Structural Fires		180.23	1.03	1.03	1.05	0.00	185.71	0.00	186.44	0.00	188.42	
Open Burning		56.76	1.03	1.03	1.05	0.00	58.49	0.00	58.72	0.00	59.34	
Slash Burning			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications		4,603.95	1.02	1.02	1.03	0.00	4,673.76	0.00	4,685.39	0.00	4,720.30	
Asphalt Roofing			1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	1,490.06		1.05	1.06	1.09	1,566.32	0.00	1,579.03	0.00	1,617.16	0.00	
Sub-Total: Other Stationary Sources	2,154.42	13,699.58				2,264.75	14,046.57	2,283.13	14,095.53	2,338.30	14,231.85	
COMMERCIAL PROCESSES												
Bakeries	0.58	1960.63	0.97	0.96	0.94	0.56	1,892.01	0.56	1,880.57	0.55	1,846.26	
Breweries		2.01	1.20	1.23	1.33	0.00	2.41	0.00	2.47	0.00	2.67	
Sub-Total: Commercial Processes	0.58	1,962.64				0.56	1,894.42	0.56	1,883.05	0.55	1,848.93	

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
MOBILE SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)
Light Duty Gas Vehicles		47,630.65					24,667.70		21,833.43		14,399.40	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 1 &2		25,538.99					18,502.05		17,627.67		14,195.02	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 3 & 4		11,761.13					8,827.12		8,605.83		7,186.33	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Gas Vehicles		2,217.56					1,356.10		1,197.82		984.79	Federal HDT & Fuel Standards included.
Light Duty Diesel Vehicle		33.20					9.39		6.95		3.35	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Diesel Truck		104.35					73.10		67.52		52.56	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Diesel Vehicle		2,066.89					1,471.09		1,395.73		1,195.58	Federal HDT & Fuel Standards included.
Motorcycles		908.15					885.92		876.23		879.82	
Sub-Total: On-Road Mobile Sources	0.00	90,260.92					55,792.48		51,611.19		38,896.85	w/o 2% contingency for conformity budgets
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)
Airport Equipment		40.00				0.00	20.00	0.00	20.00	0.00	20.00	Federal Engine & Fuel Standards included.
Commercial Equipment		6,200.00				0.00	5,060.00	0.00	4,840.00	0.00	4,900.00	Federal Engine & Fuel Standards included.
Construction Equipment		4,020.00				0.00	2,760.00	0.00	2,640.00	0.00	2,340.00	Federal Engine & Fuel Standards included.
Farm Equipment		280.00				0.00	220.00	0.00	200.00	0.00	180.00	Federal Engine & Fuel Standards included.
Industrial Equipment		4,400.00				0.00	2,760.00	0.00	2,400.00	0.00	1,340.00	Federal Engine & Fuel Standards included.
Lawn & Garden		37,500.00				0.00	26,360.00	0.00	25,460.00	0.00	24,980.00	Federal Engine & Fuel Standards included.
Logging Equipment		100.00				0.00	60.00	0.00	60.00	0.00	60.00	Federal Engine & Fuel Standards included.
Recreational Equipment		11,820.00				0.00	16,760.00	0.00	16,620.00	0.00	15,840.00	Federal Engine & Fuel Standards included.
Recreational Vessels		45,840.00				0.00	37,040.00	0.00	35,660.00	0.00	32,180.00	Federal Engine & Fuel Standards included.
Rail (equipment + engines)		219.71	0.98	0.97	0.96	fix	195.31	fix	194.58	fix	192.37	
Aircraft		1,843.69	1.18	1.21	1.30	0.00	2172.56	0.00	2227.38	0.00	2391.81	
Commercial Vessels		82.81	1.05	1.05	1.08	0.00	86.68	0.00	87.33	0.00	89.27	
Sub-Total: Non-Road Mobile Sources	0.00	112,346.21				0.00	93,494.56	0.00	90,409.28	0.00	84,513.45	

DRAFT GrCT VOC Summer Day Emission Projections

VOC EMISSION TOTALS	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002: 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	923.22	15,780.80				1,028.02	17,496.39	1,045.48	17,782.32	1,097.88	18,640.11	
Sub-Total: Industrial Processes	1,248.01	401.86				1,224.87	412.53	1,221.01	414.30	1,209.44	419.64	
Sub-Total: Ind Surface Coating	3,380.23	9,041.96				3,272.65	8,754.18	3,254.72	8,706.22	3,200.92	8,562.33	
Sub-Total: Non-Ind Surf Coating	0.00	21,330.49				0.00	22,041.58	0.00	22,140.67	0.00	22,412.69	
Sub-Total: Other Solvent Use	437.17	83,507.89				436.32	86,096.06	436.18	86,490.46	435.75	87,609.14	
Sub-Total: Waste Disposal	959.66	5,334.99				959.66	5,410.46	959.66	5,419.96	959.66	5,444.81	
Sub-Total: Other Stationary Srcs	2,154.42	13,699.58				2,264.75	14,046.57	2,283.13	14,095.53	2,338.30	14,231.85	
Sub-Total: Commercial Processes	0.58	1,962.64				0.56	1,894.42	0.56	1,883.05	0.55	1,848.93	
Sub-Total: Stationary Sources	9,103.29	151,060.21				9,186.82	156,152.18	9,200.74	156,932.51	9,242.50	159,169.50	
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	90,260.92				0.00	56,908.33	0.00	52,643.41	0.00	39,674.79	Includes 2% contingency for conformity budgets
Sub-Total: Non-Road Mobile Sources	0.00	112,346.21				0.00	93,494.56	0.00	90,409.28	0.00	84,513.45	
Sub-Total: Mobile Sources	0.00	202,607.13				0.00	150,402.89	0.00	143,052.69	0.00	124,188.24	
Sub-Total: Biogenic VOC Emissions	0.00	537,197.30	1.00	1.00	1.00	0.00	537,197.30	0.00	537,197.30	0.00	537,197.30	
GRAND TOTAL VOC	9,103.29	890,864.64				9,186.82	843,752.37	9,200.74	837,182.51	9,242.50	820,555.04	

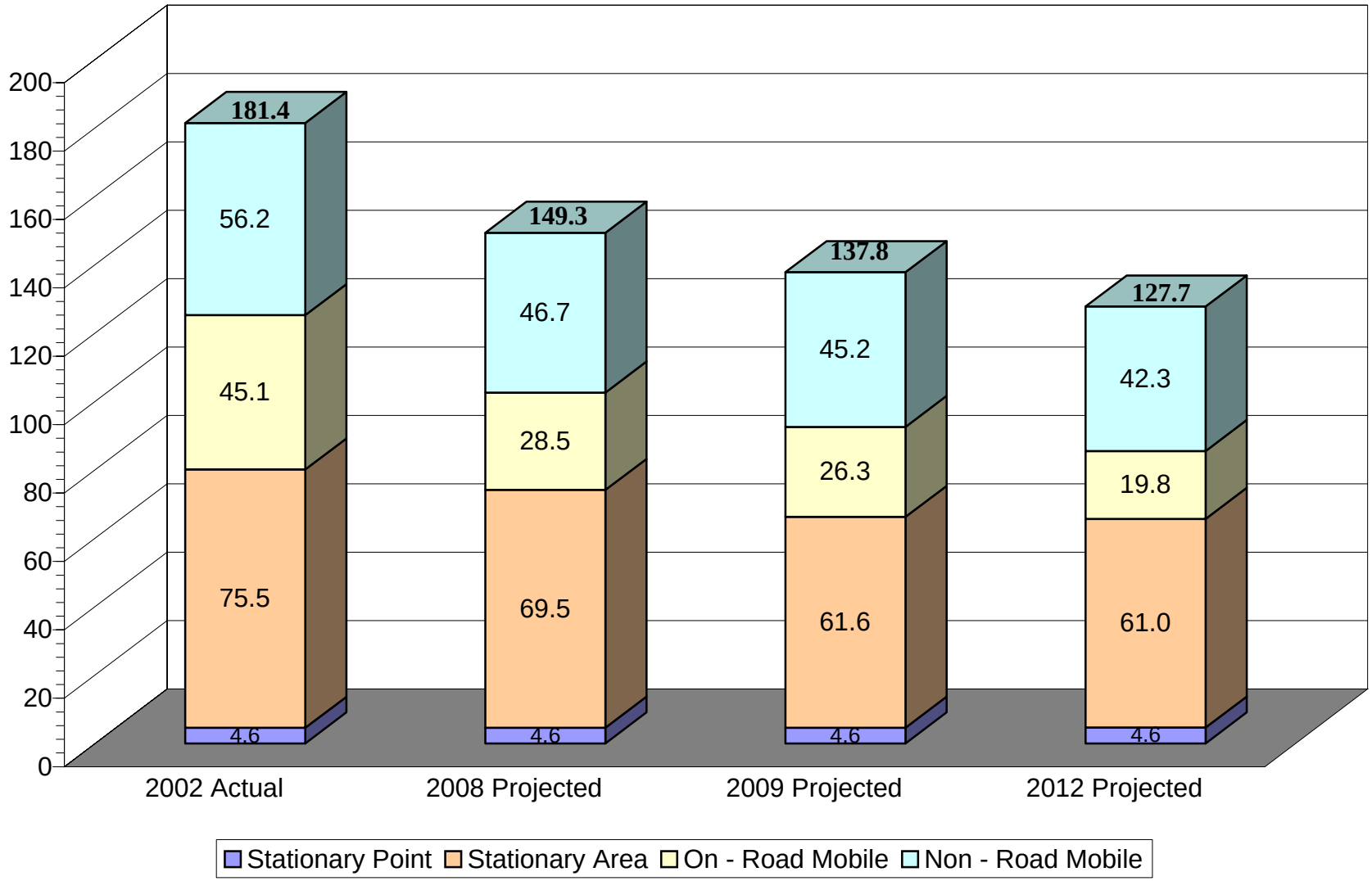
POST-2002 CONTROL REDUCTIONS

PV Vent Valves at Gasoline Stations		-721.22		-733.47	-770.23	Underground tank breathing reductions
Automobile Refinishing (HVLP Guns)		0.00		0.00	0.00	Assumed accounted for in 2002 base inventory
Portable Fuel Containers		-1743.44		-2754.34	-5551.79	Not including reductions from non-road refueling
Solvent Cleaning Volatilty & Work Practices		-8716.85		-8665.60	-8527.14	Based on OTC calcs, with updated population & 80% RE & RP
Consumer Products (~ 2006 OTC Model Rule)		0.00		-5357.63	-5414.3944	Includes OTC2001 & OTC2006 Model Rules effective May 2009
AIM Coatings (2001 OTC Model Rule)		-5960.44		-5983.90	-6047.30	
Asphalt Paving (2006 OTC Model Rule)		0.00		-5867.55	-6037.83	Assumes reg effective May 2009
Adhesives & Sealants (2006 OTC Model Rule):						Assumes reg effective May 2009 (may actually be 2008)
Point Source	0.00		-25.80		-25.37	
Area Source		0.00		-4282.37	-4780.89	Uses OTC/MACTEC growth rate for area sources

SUMMARY BY SOURCE CATEGORY

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	9,103.29	4.6	9,186.82	4.6	9,174.94	4.6	9,217.13	4.6	
Stationary Area	151,060.21	75.5	139,010.24	69.5	123,287.64	61.6	122,039.92	61.0	
On - Road Mobile	90,260.92	45.1	56,908.33	28.5	52,643.41	26.3	39,674.79	19.8	Conformity Budgets for 2008 and 2009 (2012?)
Non - Road Mobile	112,346.21	56.2	93,494.56	46.7	90,409.28	45.2	84,513.45	42.3	
TOTAL ANTHROPOGENIC VOC	362,770.63	181.4	298,599.94	149.3	275,515.28	137.8	255,445.30	127.7	
			vs 2002	-17.7%	vs 2002	-24.1%	vs 2002	-29.6%	

Projected VOC Emission Trends for Greater Connecticut



DRAFT State of CT VOC Summer Day Emission Projections

STATIONARY SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)	48.52	0.00	1.11	1.13	1.19	54.03	0.00	54.95	0.00	57.70	0.00	
Gasoline/Crude Oil Storage Floating Roof	958.99	0.00	1.11	1.13	1.19	1,067.85	0.00	1,085.99	0.00	1,140.42	0.00	
Volatile Organic Liquid (VOL) Storage	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	6969.49	0.00	1.11	1.13	1.19	7,760.62	0.00	7,892.48	0.00	8,288.05	0.00	
Gasoline Bulk Plants	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading	0.00	2,604.40	1.11	1.13	1.19	0.00	2,900.04	0.00	2,949.31	0.00	3,097.13	
Vehicle Fuel	0.00	8,198.39	1.11	1.13	1.19	0.00	9,129.02	0.00	9,284.13	0.00	9,749.44	PV-Vent Control reductions listed below
Underground Tank Breathing	0.00	2,700.52	1.11	1.13	1.19	0.00	3,007.07	0.00	3,058.16	0.00	3,211.43	PV-Vent Control reductions listed below
Aircraft Refueling	0.00	371.15	1.18	1.21	1.30	0.00	437.36	0.00	448.39	0.00	481.49	
Gasoline Trucks in Transit	0.00	314.96	1.11	1.13	1.19	0.00	350.71	0.00	356.67	0.00	374.55	
Leaking Underground Storage Tanks	0.00	309.08	0.97	0.96	0.95	0.00	299.24	0.00	297.60	0.00	292.68	
Spills	0.00	821.53	0.97	0.96	0.95	0.00	795.38	0.00	791.03	0.00	777.95	
Unaccounted Gas Can Emissions												Permeation, diurnal, transport-spillage emissions.
(not in 2002 PEI)	0.00	17,435.42	1.11	1.13	1.19	0.00	19,414.58	0.00	19,744.44	0.00	20,734.02	Gas Can Control reductions listed below.
Sub-Total: VOC Stor/Trans/Market	7,977.00	32,755.45				8,882.50	36,333.40	9,033.42	36,929.73	9,486.17	38,718.70	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	5194.39	0.00	1.03	1.03	1.04	5,327.78	0.00	5,350.01	0.00	5,416.71	0.00	
SOCMI Fugitive	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks	0.00	663.51	1.03	1.03	1.04	0.00	680.55	0.00	683.39	0.00	691.91	
Inorganic Chemical Manufacture	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes	0.00	3.02	1.20	1.23	1.33	0.00	3.62	0.00	3.72	0.00	4.02	
Pharmaceutical Manufacture	107.40	0.00	1.03	1.03	1.04	110.16	0.00	110.62	0.00	112.00	0.00	
Plastic Products Manufacture	1695.77	0.00	0.97	0.97	0.95	1,649.10	0.00	1,641.32	0.00	1,617.98	0.00	
Rubber Tire Manufacture	0.00	0.00	0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture	446.93	0.00	0.97	0.97	0.95	434.63	0.00	432.58	0.00	426.43	0.00	
Textile Polymers & Resin Mfg	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	5.69	0.00	0.97	0.97	0.95	5.53	0.00	5.51	0.00	5.43	0.00	
Other	1312.82	0.00	0.95	0.94	0.92	1,248.28	0.00	1,237.52	0.00	1,205.25	0.00	
Sub-Total: Industrial Processes	8,763.00	666.53				8,775.47	684.17	8,777.55	687.11	8,783.79	695.93	

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls Implemented
	Point	Area				Point	Area	Point	Area	Point	Area	
STATIONARY SOURCES (cont)	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
INDUSTRIAL SURFACE COATING	5,983.15	19,554.83	0.97	0.96	0.95	5,792.72	18,932.46	5,760.99	18,828.73	5,665.77	18,517.54	All sub-categories grouped togeher in 2002 PEI.
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	5,983.15	19,554.83				5,792.72	18,932.46	5,760.99	18,828.73	5,665.77	18,517.54	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings	0.00	41,155.27	1.03	1.03	1.05	0.00	42,407.48	0.00	42,574.43	0.00	43,025.51	AIM Control reductions listed below.
Auto Refinishing	0.00	4,303.40	1.05	1.05	1.08	0.00	4,501.06	0.00	4,534.00	0.00	4,632.83	Assumes HVLP Control reductions accounted for in 2002 PEI.
Traffic Markings	0.00	1,587.76	1.07	1.09	1.12	0.00	1,706.27	0.00	1,724.93	0.00	1,774.98	
Sub-Total: Non-Ind Surf Coating	0.00	47,046.43				0.00	48,614.81	0.00	48,833.36	0.00	49,433.32	
OTHER SOLVENT USE												
Degreasing	225.94	64,248.08	0.968	0.963	0.947	218.75	62,203.25	217.55	61,862.44	213.95	60,840.02	Solvent Cleaning control reductions listed below.
Petroleum Dry Cleaning	0.00	190.54	1.03	1.03	1.05	0.00	196.34	0.00	197.11	0.00	199.20	
Graphic Arts	1,590.17	15,712.34	1.072	1.084	1.119	1,704.17	16,838.79	1,723.17	17,026.53	1,780.17	17,589.76	
Adhesives	67.52	9,578.42	0.968	0.963	0.947	65.37	12,627.51	65.01	13,137.29	63.94	14,666.62	Area adhesives added per OTC estimates for 2002, then grown. Adhesive/Sealant Control reductions listed below.
Cutback Asphalt Paving	0.00	3,916.52	1.075	1.086	1.118	0.00	4,208.85	0.00	4,254.86	0.00	4,378.34	Asphalt Paving Control reductions listed below.
Emulsified Asphalt Paving	0.00	5,155.70	1.075	1.086	1.118	0.00	5,540.53	0.00	5,601.10	0.00	5,763.64	Asphalt Paving Control reductions listed below.
Solvent Extraction Processes	4.00	0.00	0.968	0.963	0.947	3.87	0.00	3.85	0.00	3.79	0.00	
Consumer/Commercial Solvent Use	0.00	80,136.73	1.03	1.03	1.05	0.00	82,575.01	0.00	82,900.09	0.00	83,778.42	Consumer Product Controls (OTC2001 & 2006) listed below.
Other	840.36	0.00	0.968	0.963	0.947	813.61	0.00	809.16	0.00	795.78	0.00	
Sub-Total: Other Solvent Use	2,727.99	178,938.33				2,805.78	184,190.27	2,818.74	184,979.42	2,857.64	187,216.00	

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	1,317.90	0.00	1.00	1.00	1.00	1,317.90	0.00	1,317.90	0.00	1,317.90	0.00	
Municipal Waste Landfills	0.00	2,305.39	1.00	1.00	1.00	0.00	2,305.39	0.00	2,305.39	0.00	2,305.39	
TSDFs	0.00	1,670.85	0.97	0.96	0.95	0.00	1,617.67	0.00	1,608.81	0.00	1,582.22	
POTWs	0.00	6,714.07	1.03	1.03	1.05	0.00	6,918.36	0.00	6,945.59	0.00	7,019.18	
ITWs	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	1,317.90	10,690.31				1,317.90	10,841.42	1,317.90	10,859.79	1,317.90	10,906.79	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	1,655.14	0.00	1.09	1.10	1.14	1,796.85	0.00	1,820.46	0.00	1,891.32	0.00	
Industrial Fuel Combustion	274.23	221.75	0.97	0.96	0.95	265.50	214.69	264.05	213.52	259.68	209.99	
Commercial Fuel Combustion	92.32	500.02	1.06	1.07	1.10	98.01	530.84	98.96	535.98	101.81	551.39	
Residential Fuel Combustion	0.00	439.41	1.03	1.03	1.05	0.00	452.78	0.00	454.56	0.00	459.38	
Wood Stoves	0.00	13,694.86	1.03	1.03	1.05	0.00	14,111.55	0.00	14,167.10	0.00	14,317.20	
Forest Fires	0.00	14.83	1.00	1.00	1.00	0.00	14.83	0.00	14.83	0.00	14.83	
Structural Fires	0.00	464.31	1.03	1.03	1.05	0.00	478.44	0.00	480.32	0.00	485.41	
Open Burning	0.00	110.03	1.03	1.03	1.05	0.00	113.38	0.00	113.82	0.00	115.03	
Slash Burning	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications	0.00	10,572.15	1.02	1.02	1.03	0.00	10,732.45	0.00	10,759.17	0.00	10,839.32	
Asphalt Roofing	0.00	0.00	1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	2,223.28	0.00	1.05	1.06	1.09	2,337.06	0.00	2,356.03	0.00	2,412.92	0.00	
Sub-Total: Other Stationary Sources	4,244.97	26,017.36				4,497.42	26,648.96	4,539.50	26,739.30	4,665.72	26,992.55	
COMMERCIAL PROCESSES												
Bakeries	664.84	3660.8	0.97	0.96	0.94	641.57	3,532.67	637.69	3,511.32	626.06	3,447.25	
Breweries	0.00	3.02	1.20	1.23	1.33	0.00	3.62	0.00	3.72	0.00	4.02	
Sub-Total: Commercial Processes	664.84	3,663.82				641.57	3,536.29	637.69	3,515.04	626.06	3,451.27	

DRAFT State of CT VOC Summer Day Emission Projections

MOBILE SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)
Light Duty Gas Vehicles	0.00	98,218.78				0.00	50,222.97	0.00	44,386.97	0.00	29,232.71	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 1 &2	0.00	52,771.70				0.00	37,696.82	0.00	35,859.60	0.00	28,846.73	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 3 & 4	0.00	24,295.36				0.00	18,002.02	0.00	17,520.53	0.00	14,600.31	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Gas Vehicles	0.00	4,830.03				0.00	2,908.65	0.00	2,569.29	0.00	2,101.68	Federal HDT & Fuel Standards included.
Light Duty Diesel Vehicle	0.00	69.75				0.00	19.44	0.00	14.15	0.00	6.91	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Diesel Truck	0.00	218.96				0.00	150.54	0.00	139.15	0.00	107.71	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Diesel Vehicle	0.00	4,605.76				0.00	3,225.28	0.00	3,054.96	0.00	2,597.84	Federal HDT & Fuel Standards included.
Motorcycles	0.00	1,793.21				0.00	1,721.13	0.00	1,699.24	0.00	1,703.69	
Sub-Total: On-Road Mobile Sources	0.00	186,803.56				0.00	113,946.84	0.00	105,243.89	0.00	79,197.58	w/o 2% contingency for conformity budgets
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)
Airport Equipment	0.00	40.00				0.00	20.00	0.00	20.00	0.00	20.00	Federal Engine & Fuel Standards included.
Commercial Equipment	0.00	15,540.00				0.00	12,560.00	0.00	12,000.00	0.00	12,120.00	Federal Engine & Fuel Standards included.
Construction Equipment	0.00	9,080.00				0.00	6,220.00	0.00	5,940.00	0.00	5,280.00	Federal Engine & Fuel Standards included.
Farm Equipment	0.00	340.00				0.00	260.00	0.00	240.00	0.00	220.00	Federal Engine & Fuel Standards included.
Industrial Equipment	0.00	9,440.00				0.00	5,920.00	0.00	5,140.00	0.00	2,860.00	Federal Engine & Fuel Standards included.
Lawn & Garden	0.00	96,600.00				0.00	65,440.00	0.00	62,920.00	0.00	61,580.00	Federal Engine & Fuel Standards included.
Logging Equipment	0.00	140.00				0.00	80.00	0.00	80.00	0.00	80.00	Federal Engine & Fuel Standards included.
Recreational Equipment	0.00	15,560.00				0.00	21,860.00	0.00	21,680.00	0.00	20,680.00	Federal Engine & Fuel Standards included.
Recreational Vessels	0.00	94,080.00				0.00	76,280.00	0.00	73,500.00	0.00	66,460.00	Federal Engine & Fuel Standards included.
Rail (equipment + engines)	0.00	665.05	0.976	0.97	0.96	0.00	630.72	0.00	628.33	0.00	601.17	
Aircraft	0.00	2,573.15	1.18	1.21	1.30	0.00	3,032.14	0.00	3,108.64	0.00	3,338.14	
Commercial Vessels	0.00	254.88	1.05	1.05	1.08	0.00	266.80	0.00	268.79	0.00	274.75	
Sub-Total: Non-Road Mobile Sources	0.00	244,313.08				0.00	192,569.67	0.00	185,525.77	0.00	173,514.06	

DRAFT State of CT VOC Summer Day Emission Projections

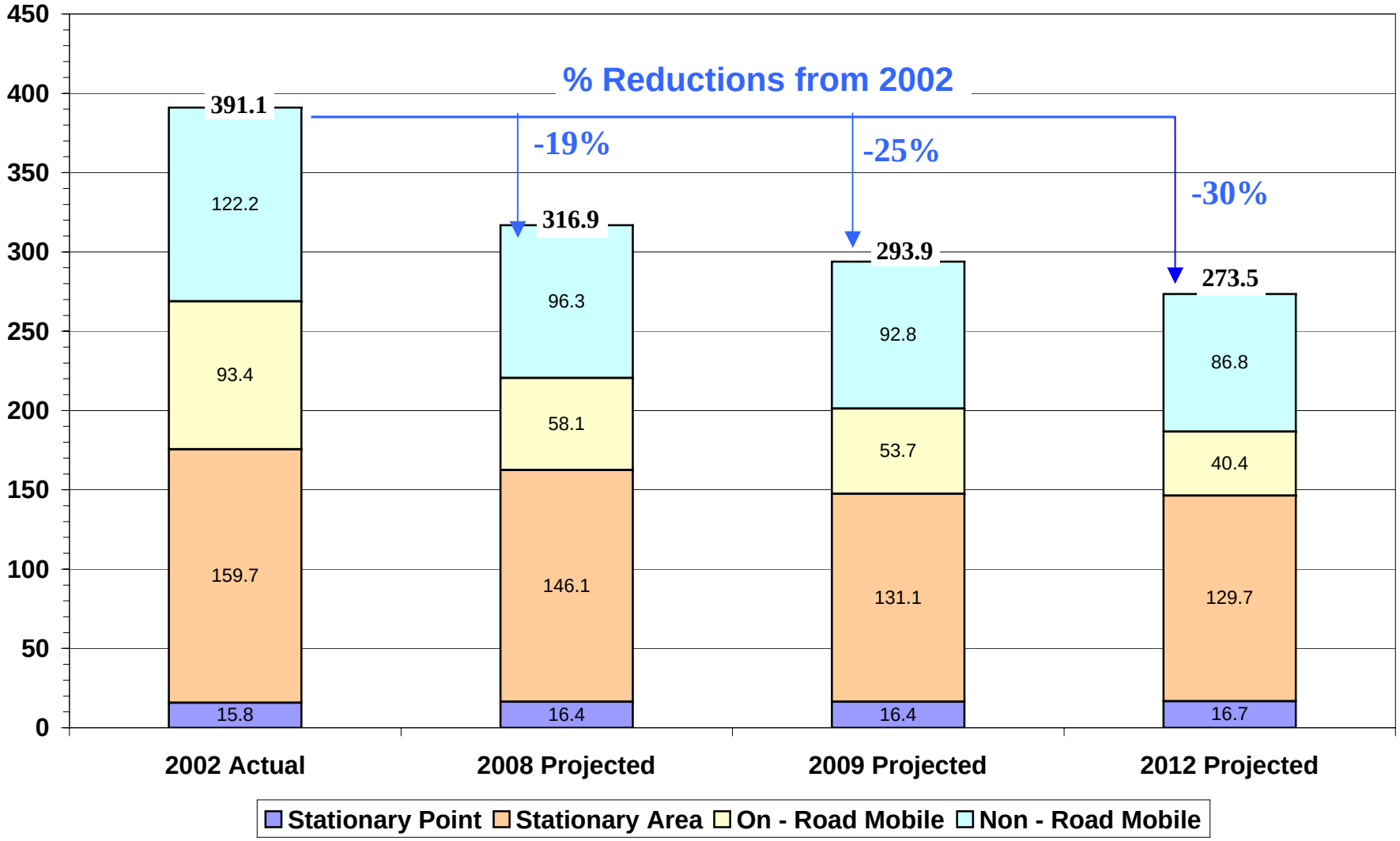
VOC EMISSION TOTALS	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	7,977.00	32,755.45				8,882.50	36,333.40	9,033.42	36,929.73	9,486.17	38,718.70	
Sub-Total: Industrial Processes	8,763.00	666.53				8,775.47	684.17	8,777.55	687.11	8,783.79	695.93	
Sub-Total: Ind Surface Coating	5,983.15	19,554.83				5,792.72	18,932.46	5,760.99	18,828.73	5,665.77	18,517.54	
Sub-Total: Non-Ind Surf Coating	0.00	47,046.43				0.00	48,614.81	0.00	48,833.36	0.00	49,433.32	
Sub-Total: Other Solvent Use	2,727.99	178,938.33				2,805.78	184,190.27	2,818.74	184,979.42	2,857.64	187,216.00	
Sub-Total: Waste Disposal	1,317.90	10,690.31				1,317.90	10,841.42	1,317.90	10,859.79	1,317.90	10,906.79	
Sub-Total: Other Stationary Srcs	4,244.97	26,017.36				4,497.42	26,648.96	4,539.50	26,739.30	4,665.72	26,992.55	
Sub-Total: Commercial Processes	664.84	3,663.82				641.57	3,536.29	637.69	3,515.04	626.06	3,451.27	
Sub-Total: Stationary Sources	31,678.85	319,333.06				32,713.37	329,781.78	32,885.79	331,372.46	33,403.05	335,932.10	
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	186,803.56				0.00	116,225.78	0.00	107,348.77	0.00	80,781.53	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	244,313.08				0.00	192,569.67	0.00	185,525.77	0.00	173,514.06	
Sub-Total: Mobile Sources	0.00	431,116.64				0.00	308,795.45	0.00	292,874.54	0.00	254,295.59	
Sub-Total: Biogenic VOC Emissions	0.00	788,458.81	1.00	1.00	1.00	0.00	788,458.81	0.00	788,458.81	0.00	788,458.81	
GRAND TOTAL VOC	31,678.85	1,538,908.51				32,713.37	1,427,036.04	32,885.79	1,412,705.80	33,403.05	1,378,686.50	
PV Vent Valves at Gasoline Stations							-1,477.81		-1,502.92		-1,578.25	Underground tank breathing reductions
Automobile Refinishing (HVLP Guns)							0.00		0.00		0.00	Assumed accounted for in 2002 base inventory
Portable Fuel Containers (OTC MR#1 (1-hr) and #2 (8-hr))							-3,785.84		-5,980.99		-12,055.59	Not including reductions from non-road refueling
Solvent Cleaning Volatilty & Work Practices							-19,149.94		-19,037.36		-18,733.17	Based on OTC calcs, with updated population & 80% RE & RP
Consumer Products (~ 2006 OTC Model Rule)							0.00		-13,194.38		-13,334.17	Includes OTC2001 & OTC2006 Model Rules effective May 2009
AIM Coatings (2001 OTC Model Rule)							-13,146.32		-13,198.07		-13,337.91	
Asphalt Paving (2006 OTC Model Rule)							0.00		-7,884.77		-8,113.59	Assumes reg effective May 2009
Adhesives & Sealants (2006 OTC Model Rule):												Assumes reg effective May 2009 (may actually be 2008)
Point Source						0.00		-25.80		-25.37		
Area Source							0.00		-8,460.41		-9,445.30	Uses OTC/MACTEC growth rate for area sources

SUMMARY BY SOURCE CATEGORY (including listed Post-2002 controls)

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	31,678.85	15.8	32,713.37	16.4	32,859.99	16.4	33,377.68	16.7	
Stationary Area	319,333.06	159.7	292,221.86	146.1	262,113.55	131.1	259,334.11	129.7	
On - Road Mobile	186,803.56	93.4	116,225.78	58.1	107,348.77	53.7	80,781.53	40.4	**Conformity Budgets for 2008 and 2009 (2012?)**
Non - Road Mobile	244,313.08	122.2	192,569.67	96.3	185,525.77	92.8	173,514.06	86.8	
TOTAL ANTHROPOGENIC VOC	782,128.55	391.1	633,730.67	316.9	587,848.08	293.9	547,007.38	273.5	
			vs 2002	-19%	vs 2002	-25%	vs 2002	-30%	
		785.3							

Projected Anthropogenic VOC Emission Trends for Connecticut

(Draft May 16, 2007)



DRAFT SWCT NOx Summer Day Emission Projections

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline/Crude Oil Storage Floating Roof			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Volatile Organic Liquid (VOL) Storage			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline Bulk Plants			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Vehicle Fuel			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Underground Tank Breathing			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Aircraft Refueling			1.18	1.21	1.30	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline Trucks in Transit			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Leaking Underground Storage Tanks			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Spills			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: VOC Stor/Trans/Market	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	9.80		1.03	1.03	1.04	10.05	0.00	10.09	0.00	10.22	0.00	
SOCMI Fugitive			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Inorganic Chemical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes			1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Pharmaceutical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Plastic Products Manufacture	4.10		0.97	0.97	0.95	3.99	0.00	3.97	0.00	3.91	0.00	
Rubber Tire Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Textile Polymers & Resin Mfg			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	209.32		0.97	0.97	0.95	203.54	0.00	202.57	0.00	199.68	0.00	
Other	26.11		0.95	0.94	0.92	24.83	0.00	24.61	0.00	23.97	0.00	
Sub-Total: Industrial Processes	249.33	0.00				242.40	0.00	241.25	0.00	237.78	0.00	

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
INDUSTRIAL SURFACE COATING	34.64		0.97	0.96	0.95	33.54	0.00	33.35	0.00	32.80	0.00	check w/ChrisM on subcategories
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	34.64	0.00				33.54	0.00	33.35	0.00	32.80	0.00	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Auto Refinishing			1.05	1.05	1.08	0.00	0.00	0.00	0.00	0.00	0.00	
Traffic Markings			1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
OTHER SOLVENT USE												
Degreasing			0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Petroleum Dry Cleaning			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Graphic Arts	42.32		1.072	1.084	1.119	45.35	0.00	45.86	0.00	47.38	0.00	
Adhesives			0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Cutback Asphalt Paving			1.075	1.086	1.118	0.00	0.00	0.00	0.00	0.00	0.00	
Emulsified Asphalt Paving			1.075	1.086	1.118	0.00	0.00	0.00	0.00	0.00	0.00	
Solvent Extraction Processes			0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Consumer/Commercial Solvent Use			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Other			0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	42.32	0.00				45.35	0.00	45.86	0.00	47.38	0.00	

DRAFT SWCT NOx Summer Day Emission Projections

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	9,583.21		1.00	1.00	1.00	9,583.21	0.00	9,583.21	0.00	9,583.21	0.00	CT MWC Rule-Phase 2 (2003) reductions included below
Municipal Waste Landfills			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
TSDFs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
POTWs			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
ITWs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	9,583.21	0.00				9,583.21	0.00	9,583.21	0.00	9,583.21	0.00	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	42,887.50		1.03	1.00	1.00	43,964.05	0.00	42,887.50	0.00	42,887.50	0.00	See Post-2002 Control section below for 2009/2012 reductions
Industrial Fuel Combustion	2,819.26	2,837.91	0.97	0.96	0.95	2,729.53	2,747.59	2,714.58	2,732.53	2,669.71	2,687.37	Check on CAIR budgets; ICI ??? Wendy???
Commercial Fuel Combustion	1,130.20	6,130.74	1.06	1.07	1.10	1,199.87	6,508.68	1,211.48	6,571.67	1,246.32	6,760.64	ICI controls???
Residential Fuel Combustion		5,186.68	1.03	1.03	1.05	0.00	5,344.49	0.00	5,365.53	0.00	5,422.38	
Wood Stoves		106.21	1.03	1.03	1.05	0.00	109.44	0.00	109.87	0.00	111.04	
Forest Fires		0.54	1.00	1.00	1.00	0.00	0.54	0.00	0.54	0.00	0.54	
Structural Fires		36.16	1.03	1.03	1.05	0.00	37.26	0.00	37.41	0.00	37.80	
Open Burning		2.59	1.03	1.03	1.05	0.00	2.67	0.00	2.68	0.00	2.71	
Slash Burning			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Asphalt Roofing			1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	18,697.95		1.05	1.06	1.09	19,654.87	0.00	19,814.35	0.00	20,292.81	0.00	Sec 22 controls??
Sub-Total: Other Stationary Sources	65,534.91	14,300.83				67,548.32	14,750.67	66,627.91	14,820.23	67,096.34	15,022.48	
COMMERCIAL PROCESSES												
Bakeries	52.40		0.97	0.96	0.94	50.57	0.00	50.26	0.00	49.34	0.00	
Breweries			1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Commercial Processes	52.40	0.00				50.57	0.00	50.26	0.00	49.34	0.00	

DRAFT SWCT NOx Summer Day Emission Projections

MOBILE SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002	
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)	
Light Duty Gas Vehicles		52,114.72					22,142.53		19,346.50		12,893.49	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Gas Truck 1 & 2		35,998.74					23,872.80		21,702.37		16,248.57	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Gas Truck 3 & 4		14,802.85					11,753.84		10,960.24		8,788.41	Federal Tier 2; CT OBD2/ASM2525 I&M	
Heavy Duty Gas Vehicles		10,237.58					6,531.46		5,834.03		3,928.47	Federal HDT & Fuel Standarda	
Light Duty Diesel Vehicle		91.98					25.81		16.70		7.72	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Diesel Truck		286.20					165.50		147.63		100.07	Federal Tier 2; CT OBD2/ASM2525 I&M	
Heavy Duty Diesel Vehicle		91,611.96					53,885.95		48,761.70		32,614.50	Federal HDT & Fuel Standarda	
Motorcycles		215.46					232.73		235.02		240.48		
Sub-Total: On-Road Mobile Sources	0.00	205,359.49				0.00	118,610.62	0.00	107,004.20	0.00	74,821.71	w/o 2% contingency for conformity budgets	
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)	
Airport Equipment		0.00				0.00	0.00	0.00	0.00	0.00	0.00	Federal Engine & Fuel Standards	
Commercial Equipment		5,680.00				0.00	5,460.00	0.00	5,360.00	0.00	5,160.00	Federal Engine & Fuel Standards	
Construction Equipment		27,440.00				0.00	23,820.00	0.00	23,000.00	0.00	19,880.00	Federal Engine & Fuel Standards	
Farm Equipment		360.00				0.00	320.00	0.00	320.00	0.00	280.00	Federal Engine & Fuel Standards	
Industrial Equipment		20,340.00				0.00	14,320.00	0.00	12,760.00	0.00	8,340.00	Federal Engine & Fuel Standards	
Lawn & Garden		8,840.00				0.00	8,420.00	0.00	8,180.00	0.00	7,960.00	Federal Engine & Fuel Standards	
Logging Equipment		60.00				0.00	40.00	0.00	40.00	0.00	20.00	Federal Engine & Fuel Standards	
Recreational Equipment		260.00				0.00	300.00	0.00	300.00	0.00	300.00	Federal Engine & Fuel Standards	
Recreational Vessels		4,540.00				0.00	6,120.00	0.00	6,320.00	0.00	6,820.00	Federal Engine & Fuel Standards	
Rail (equipment + engines)		8,764.00	0.976	0.97	0.96	fix	8,552.80	fix	8,517.60	fix	8,392.00	Federal Rules(2000+ phase-in)	2007 Rule Controls??
Aircraft		231.04	1.18	1.21	1.30	0.00	272.25	0.00	279.12	0.00	299.73		
Commercial Vessels		943.45	1.05	1.05	1.08	0.00	987.58	0.00	994.94	0.00	1,017.00		2007 Rule Controls??
Sub-Total: Non-Road Mobile Sources	0.00	77,458.49				0.00	68,612.63	0.00	66,071.66	0.00	58,468.73		(see http://www.epa.gov/otaq/marine.htm

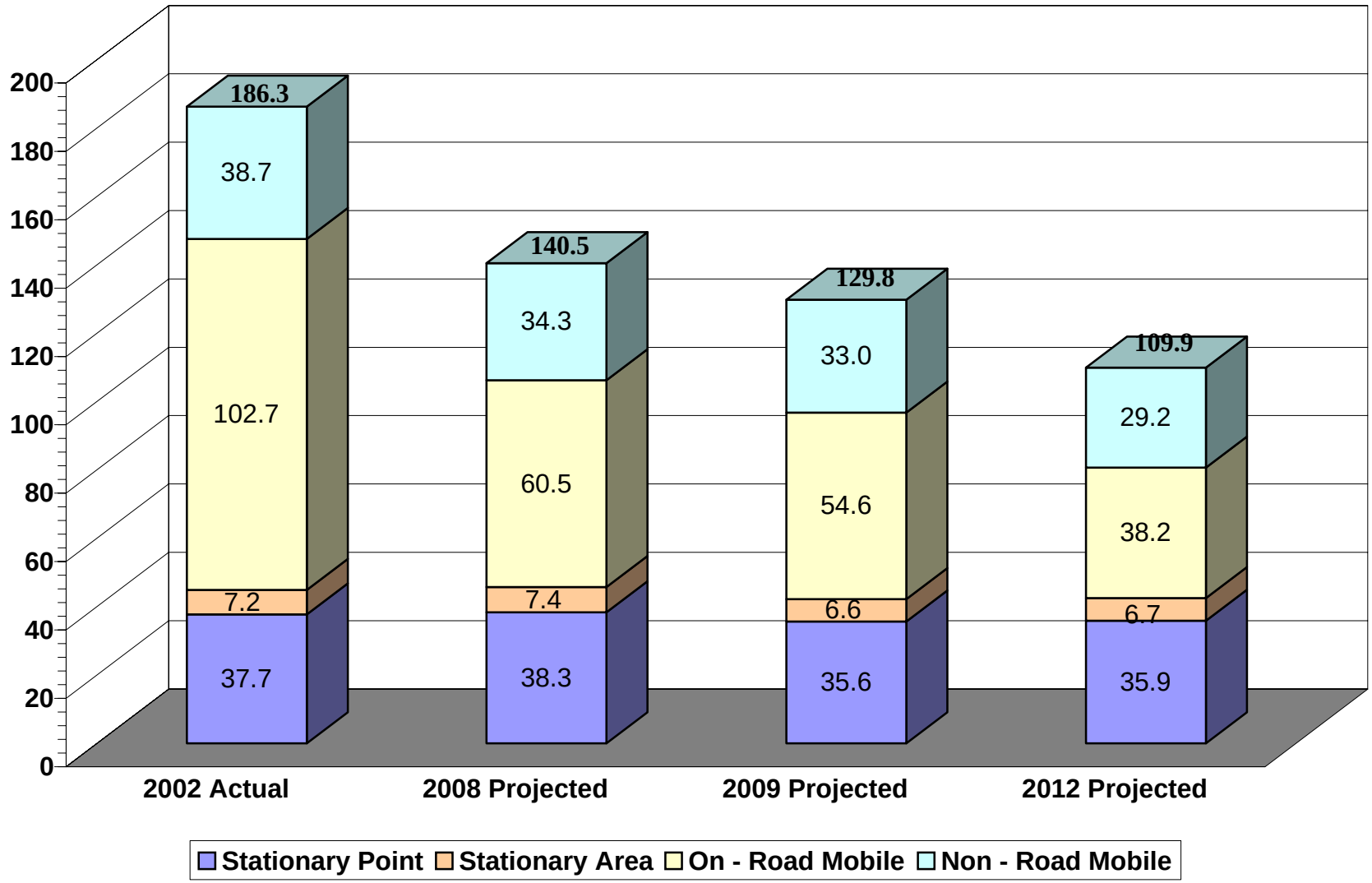
DRAFT SWCT NOx Summer Day Emission Projections

NOx EMISSION TOTALS	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Industrial Processes	249.33	0.00				242.40	0.00	241.25	0.00	237.78	0.00	
Sub-Total: Ind Surface Coating	34.64	0.00				33.54	0.00	33.35	0.00	32.80	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	42.32	0.00				45.35	0.00	45.86	0.00	47.38	0.00	
Sub-Total: Waste Disposal	9,583.21	0.00				9,583.21	0.00	9,583.21	0.00	9,583.21	0.00	
Sub-Total: Other Stationary Srcs	65,534.91	14,300.83				67,548.32	14,750.67	66,627.91	14,820.23	67,096.34	15,022.48	
Sub-Total: Commercial Processes	52.40	0.00				50.57	0.00	50.26	0.00	49.34	0.00	
Sub-Total: Stationary Sources	75,496.81	14,300.83				77,503.39	14,750.67	76,581.84	14,820.23	77,046.86	15,022.48	
NOx Reductions due to OTC/MOU & NBP						0.00		0.00		0.00		Modify for whatever controls apply now
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	205,359.49				0.00	120,982.83	0.00	109,144.28	0.00	76,318.14	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	77,458.49				0.00	68,612.63	0.00	66,071.66	0.00	58,468.73	
Sub-Total: Mobile Sources	0.00	282,817.98				0.00	189,595.46	0.00	175,215.94	0.00	134,786.87	
Sub-Total: Biogenic NOx Emissions	0.00	1,315.10	1.00	1.00	1.00	0.00	1,315.10	0.00	1,315.10	0.00	1,315.10	
GRAND TOTAL NOx	75,496.81	298,433.91				77,503.39	205,661.23	76,581.84	191,351.27	77,046.86	151,124.45	

SUMMARY BY SOURCE CATEGORY (without Post-2002 controls, except includes on-road & non-road)

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	75,496.81	37.7	77,503.39	38.8	76,581.84	38.3	77,046.86	38.5	
Stationary Area	14,300.83	7.2	14,750.67	7.4	14,820.23	7.4	15,022.48	7.5	
On - Road Mobile	205,359.49	102.7	120,982.83	60.5	109,144.28	54.6	76,318.14	38.2	**Conformity Budgets for 2008, 2009 and (?) 2012**
Non - Road Mobile	77,458.49	38.7	68,612.63	34.3	66,071.66	33.0	58,468.73	29.2	
TOTAL ANTHROPOGENIC NOx	372,615.62	186.3	281,849.52	140.9	266,618.02	133.3	226,856.21	113.4	
			vs 2002	-24.4%	vs 2002	-28.4%	vs 2002	-39.1%	

Projected NOx Emission Trends for Southwest Connecticut



DRAFT GrCT NOx Summer Day Emission Projections

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline/Crude Oil Storage Floating Roof			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Volatile Organic Liquid (VOL) Storage			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	14.74		1.11	1.13	1.19	16.41	0.00	16.69	0.00	17.53	0.00	
Gasoline Bulk Plants			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Vehicle Fuel			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Underground Tank Breathing			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Aircraft Refueling			1.18	1.21	1.30	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline Trucks in Transit			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Leaking Underground Storage Tanks			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Spills			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: VOC Stor/Trans/Market	14.74	0.00				16.41	0.00	16.69	0.00	17.53	0.00	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	6.40		1.03	1.03	1.04	6.56	0.00	6.59	0.00	6.67	0.00	
SOCMI Fugitive			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Inorganic Chemical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes			1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Pharmaceutical Manufacture	4.69		1.03	1.03	1.04	4.81	0.00	4.83	0.00	4.89	0.00	
Plastic Products Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Rubber Tire Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Textile Polymers & Resin Mfg			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	251.08		0.97	0.97	0.95	244.14	0.00	242.99	0.00	239.52	0.00	
Other	158.80		0.95	0.94	0.92	150.99	0.00	149.69	0.00	145.79	0.00	
Sub-Total: Industrial Processes	420.97	0.00				406.51	0.00	404.10	0.00	396.87	0.00	

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
INDUSTRIAL SURFACE COATING	109.46		0.97	0.96	0.95	105.98	0.00	105.40	0.00	103.65	0.00	check w/ChrisM on subcategories
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	109.46	0.00				105.98	0.00	105.40	0.00	103.65	0.00	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Auto Refinishing			1.05	1.05	1.08	0.00	0.00	0.00	0.00	0.00	0.00	
Traffic Markings			1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
OTHER SOLVENT USE												
Degreasing			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Petroleum Dry Cleaning			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Graphic Arts	21.94		1.07	1.08	1.12	23.51	0.00	23.78	0.00	24.56	0.00	
Adhesives			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Cutback Asphalt Paving			1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Emulsified Asphalt Paving			1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Solvent Extraction Processes			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Consumer/Commercial Solvent Use			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Other			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	21.94	0.00				23.51	0.00	23.78	0.00	24.56	0.00	

DRAFT GrCT NOx Summer Day Emission Projections

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	12,971.32		1.00	1.00	1.00	12,971.32	0.00	12,971.32	0.00	12,971.32	0.00	CT MWC Rule-Phase 2 (2003) reductions included below
Municipal Waste Landfills			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
TSDFs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
POTWs			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
ITWs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	12,971.32	0.00				12,971.32	0.00	12,971.32	0.00	12,971.32	0.00	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	6,743.56		1.03	1.00	1.00	6,912.84	0.00	6,743.56	0.00	6,743.56	0.00	See Post-2002 Control section below for 2009/2012 reductions
Industrial Fuel Combustion	5,748.19	2,532.95	0.97	0.96	0.95	5,565.24	2,452.33	5,534.75	2,438.90	5,443.28	2,398.59	Check on CAIR budgets; ICI ??? Wendy???
Commercial Fuel Combustion	688.31	5,469.24	1.06	1.07	1.10	730.74	5,806.40	737.81	5,862.59	759.03	6,031.17	ICI controls???
Residential Fuel Combustion		4,489.10	1.03	1.03	1.05	0.00	4,625.69	0.00	4,643.90	0.00	4,693.10	
Wood Stoves		177.21	1.03	1.03	1.05	0.00	182.60	0.00	183.32	0.00	185.26	
Forest Fires		6.22	1.00	1.00	1.00	0.00	6.22	0.00	6.22	0.00	6.22	
Structural Fires		22.94	1.03	1.03	1.05	0.00	23.64	0.00	23.73	0.00	23.98	
Open Burning		2.76	1.03	1.03	1.05	0.00	2.84	0.00	2.86	0.00	2.89	
Slash Burning			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Asphalt Roofing			1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	11,363.26		1.05	1.06	1.09	11,944.81	0.00	12,041.73	0.00	12,332.50	0.00	Sec 22 controls??
Sub-Total: Other Stationary Sources	24,543.32	12,700.42				25,153.62	13,099.72	25,057.85	13,161.51	25,278.37	13,341.21	
COMMERCIAL PROCESSES												
Bakeries	10.20		0.97	0.96	0.94	9.84	0.00	9.78	0.00	9.61	0.00	
Breweries			1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Commercial Processes	10.20	0.00				9.84	0.00	9.78	0.00	9.61	0.00	

DRAFT GrCT NOx Summer Day Emission Projections

MOBILE SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002	
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)	
Light Duty Gas Vehicles		47,966.47					21,006.30		18,424.82		12,381.01	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Gas Truck 1 & 2		33,027.47					22,494.12		20,518.32		15,485.92	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Gas Truck 3 & 4		13,560.06					11,075.25		10,366.05		8,369.75	Federal Tier 2; CT OBD2/ASM2525 I&M	
Heavy Duty Gas Vehicles		8,437.28					5,565.66		5,001.54		3,403.63	Federal HDT & Fuel Standarda	
Light Duty Diesel Vehicle		83.63					24.16		16.08		7.31	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Diesel Truck		261.44					156.26		139.12		95.41	Federal Tier 2; CT OBD2/ASM2525 I&M	
Heavy Duty Diesel Vehicle		75,081.25					45,954.28		41,732.70		28,310.15	Federal HDT & Fuel Standarda	
Motorcycles		213.91					235.53		238.31		244.88		
Sub-Total: On-Road Mobile Sources	0.00	178,631.50				0.00	106,511.57	0.00	96,436.93	0.00	68,298.08	w/o 2% contingency for conformity budgets	
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)	
Airport Equipment		300.00				0.00	280.00	0.00	280.00	0.00	240.00	Federal Engine & Fuel Standards	
Commercial Equipment		3,640.00				0.00	3,500.00	0.00	3,440.00	0.00	3,300.00	Federal Engine & Fuel Standards	
Construction Equipment		21,780.00				0.00	18,900.00	0.00	18,260.00	0.00	15,780.00	Federal Engine & Fuel Standards	
Farm Equipment		1,960.00				0.00	1,740.00	0.00	1,700.00	0.00	1,540.00	Federal Engine & Fuel Standards	
Industrial Equipment		17,680.00				0.00	12,440.00	0.00	11,080.00	0.00	7,220.00	Federal Engine & Fuel Standards	
Lawn & Garden		4,920.00				0.00	4,720.00	0.00	4,580.00	0.00	4,460.00	Federal Engine & Fuel Standards	
Logging Equipment		180.00				0.00	120.00	0.00	100.00	0.00	80.00	Federal Engine & Fuel Standards	
Recreational Equipment		520.00				0.00	660.00	0.00	660.00	0.00	700.00	Federal Engine & Fuel Standards	
Recreational Vessels		2,380.00				0.00	3,500.00	0.00	3,640.00	0.00	4,020.00	Federal Engine & Fuel Standards	
Rail (equipment + engines)		3,993.76	0.98	0.97	0.96	fix	3,898.89	fix	3,883.08	fix	3,815.65	Federal Rules(2000+ phase-in)	2007 Rule Controls??
Aircraft		3,818.11	1.18	1.21	1.30	0.00	4,499.18	0.00	4,612.69	0.00	4,953.22		
Commercial Vessels		456.57	1.05	1.05	1.08	0.00	477.93	0.00	481.49	0.00	492.16		2007 Rule Controls??
Sub-Total: Non-Road Mobile Sources	0.00	61,628.44				0.00	54,736.00	0.00	52,717.26	0.00	46,601.04		(see http://www.epa.gov/otaq/marine.htm

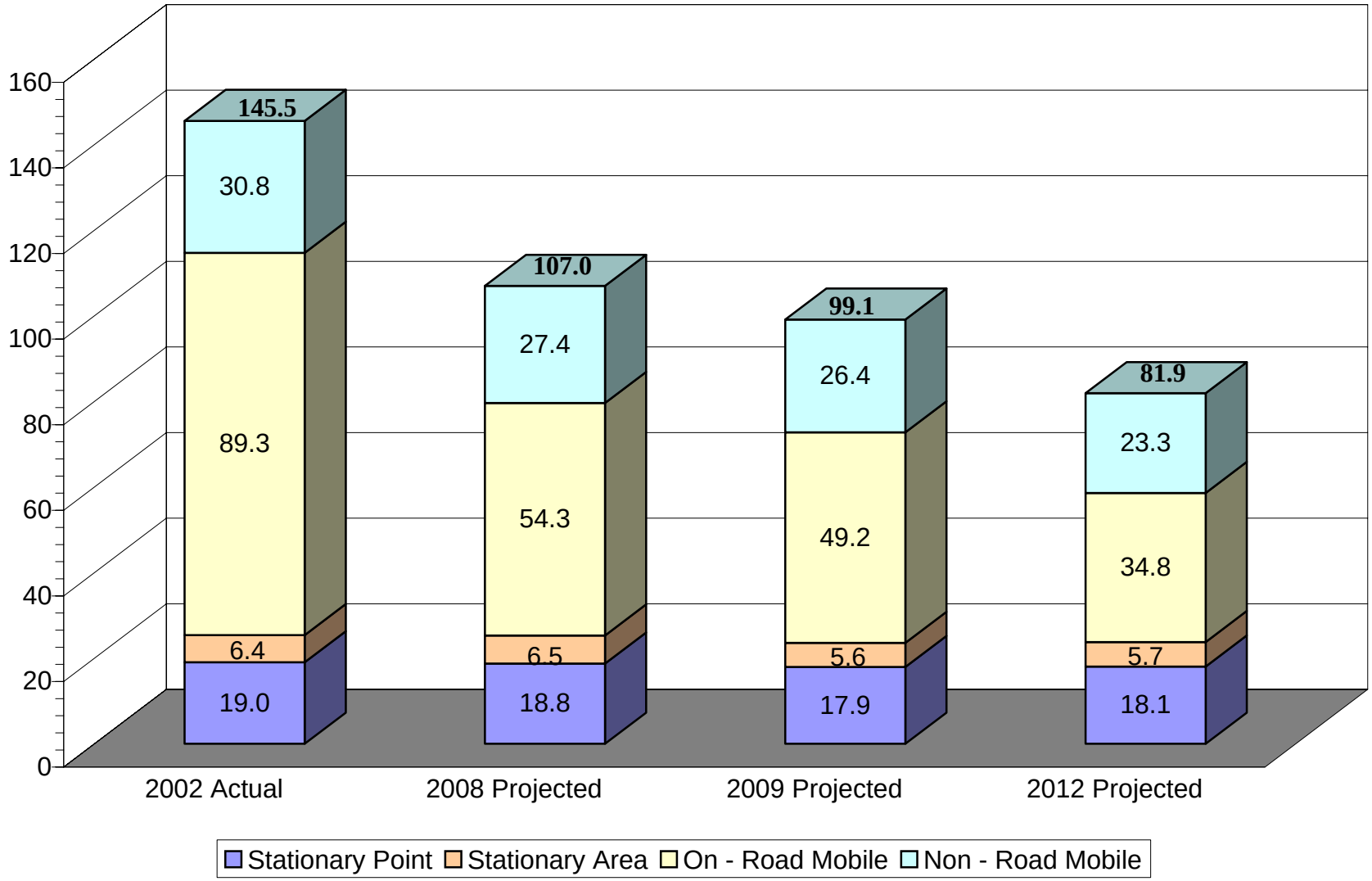
DRAFT GrCT NOx Summer Day Emission Projections

NOx EMISSION TOTALS	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	14.74	0.00				16.41	0.00	16.69	0.00	17.53	0.00	
Sub-Total: Industrial Processes	420.97	0.00				406.51	0.00	404.10	0.00	396.87	0.00	
Sub-Total: Ind Surface Coating	109.46	0.00				105.98	0.00	105.40	0.00	103.65	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	21.94	0.00				23.51	0.00	23.78	0.00	24.56	0.00	
Sub-Total: Waste Disposal	12,971.32	0.00				12,971.32	0.00	12,971.32	0.00	12,971.32	0.00	
Sub-Total: Other Stationary Srcs	24,543.32	12,700.42				25,153.62	13,099.72	25,057.85	13,161.51	25,278.37	13,341.21	
Sub-Total: Commercial Processes	10.20	0.00				9.84	0.00	9.78	0.00	9.61	0.00	
Sub-Total: Stationary Sources	38,091.95	12,700.42				38,687.20	13,099.72	38,588.92	13,161.51	38,801.91	13,341.21	
NOx Reductions due to OTC/MOU & NBP						0.00		0.00		0.00		Modify for whatever controls apply now
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	178,631.50				0.00	108,641.80	0.00	98,365.67	0.00	69,664.04	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	61,628.44				0.00	54,736.00	0.00	52,717.26	0.00	46,601.04	
Sub-Total: Mobile Sources	0.00	240,259.94				0.00	163,377.80	0.00	151,082.93	0.00	116,265.07	
Sub-Total: Biogenic NOx Emissions	0.00	2,508.43	1.00	1.00	1.00	0.00	2,508.43	0.00	2,508.43	0.00	2,508.43	
GRAND TOTAL NOx	38,091.95	255,468.79				38,687.20	178,985.95	38,588.92	166,752.87	38,801.91	132,114.71	

SUMMARY BY SOURCE CATEGORY

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	38,091.95	19.0	38,687.20	19.3	38,588.92	19.3	38,801.91	19.4	
Stationary Area	12,700.42	6.4	13,099.72	6.5	13,161.51	6.6	13,341.21	6.7	
On - Road Mobile	178,631.50	89.3	108,641.80	54.3	98,365.67	49.2	69,664.04	34.8	**Conformity Budgets for 2008 and 2009 (2012?)**
Non - Road Mobile	61,628.44	30.8	54,736.00	27.4	52,717.26	26.4	46,601.04	23.3	
TOTAL ANTHROPOGENIC NOx	291,052.31	145.5	215,164.72	107.6	202,833.36	101.4	168,408.19	84.2	
			vs 2002	-26.1%	vs 2002	-30.3%	vs 2002	-42.1%	

Projected NOx Emission Trends for Greater Connecticut



STATIONARY SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline/Crude Oil Storage Floating Roof	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Volatile Organic Liquid (VOL) Storage	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	14.74	0.00	1.11	1.13	1.19	16.41	0.00	16.69	0.00	17.53	0.00	
Gasoline Bulk Plants	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Vehicle Fuel	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Underground Tank Breathing	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Aircraft Refueling	0.00	0.00	1.18	1.21	1.30	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline Trucks in Transit	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Leaking Underground Storage Tanks	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Spills	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: VOC Stor/Trans/Market	14.74	0.00				16.41	0.00	16.69	0.00	17.53	0.00	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	16.20	0.00	1.03	1.03	1.04	16.62	0.00	16.69	0.00	16.89	0.00	
SOCMI Fugitive	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Inorganic Chemical Manufacture	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes	0.00	0.00	1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Pharmaceutical Manufacture	4.69	0.00	1.03	1.03	1.04	4.81	0.00	4.83	0.00	4.89	0.00	
Plastic Products Manufacture	4.10	0.00	0.97	0.97	0.95	3.99	0.00	3.97	0.00	3.91	0.00	
Rubber Tire Manufacture	0.00	0.00	0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture	0.00	0.00	0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Textile Polymers & Resin Mfg	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	460.40	0.00	0.97	0.97	0.95	447.68	0.00	445.56	0.00	439.20	0.00	
Other	184.91	0.00	0.95	0.94	0.92	175.82	0.00	174.30	0.00	169.76	0.00	
Sub-Total: Industrial Processes	670.30	0.00				648.91	0.00	645.35	0.00	634.65	0.00	

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
INDUSTRIAL SURFACE COATING	144.1	0	0.97	0.96	0.95	139.51	0.00	138.75	0.00	136.46	0.00	check w/ChrisM on subcategories
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	144.10	0.00				139.51	0.00	138.75	0.00	136.46	0.00	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings	0.00	0.00	1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Auto Refinishing	0.00	0.00	1.05	1.05	1.08	0.00	0.00	0.00	0.00	0.00	0.00	
Traffic Markings	0.00	0.00	1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
OTHER SOLVENT USE												
Degreasing	0.00	0.00	0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Petroleum Dry Cleaning	0.00	0.00	1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Graphic Arts	64.26	0.00	1.072	1.084	1.119	68.87	0.00	69.63	0.00	71.94	0.00	
Adhesives	0.00	0.00	0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Cutback Asphalt Paving	0.00	0.00	1.075	1.086	1.118	0.00	0.00	0.00	0.00	0.00	0.00	
Emulsified Asphalt Paving	0.00	0.00	1.075	1.086	1.118	0.00	0.00	0.00	0.00	0.00	0.00	
Solvent Extraction Processes	0.00	0.00	0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Consumer/Commercial Solvent Use	0.00	0.00	1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Other	0.00	0.00	0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	64.26	0.00				68.87	0.00	69.63	0.00	71.94	0.00	

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	22,554.53	0.00	1.00	1.00	1.00	22,554.53	0.00	22,554.53	0.00	22,554.53	0.00	CT MWC Rule-Phase 2 (2003) reductions included below
Municipal Waste Landfills	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
TSDFs	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
POTWs	0.00	0.00	1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
ITWs	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	22,554.53	0.00				22,554.53	0.00	22,554.53	0.00	22,554.53	0.00	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	49,631.06	0.00	1.03	1.00	1.00	50,876.89	0.00	49,631.06	0.00	49,631.06	0.00	See Post-2002 Control section below for 2009/2012 reductions
Industrial Fuel Combustion	8,567.45	5,370.86	0.97	0.96	0.95	8,294.77	5,199.92	8,249.33	5,171.43	8,112.99	5,085.96	Check on CAIR budgets; ICI ??? Wendy???
Commercial Fuel Combustion	1,818.51	11,599.98	1.06	1.07	1.10	1,930.61	12,315.08	1,949.30	12,434.26	2,005.35	12,791.81	ICI controls???
Residential Fuel Combustion	0.00	9,675.78	1.03	1.03	1.05	0.00	9,970.18	0.00	10,009.43	0.00	10,115.48	
Wood Stoves	0.00	283.42	1.03	1.03	1.05	0.00	292.04	0.00	293.19	0.00	296.30	
Forest Fires	0.00	6.76	1.00	1.00	1.00	0.00	6.76	0.00	6.76	0.00	6.76	
Structural Fires	0.00	59.10	1.03	1.03	1.05	0.00	60.90	0.00	61.14	0.00	61.79	
Open Burning	0.00	5.35	1.03	1.03	1.05	0.00	5.51	0.00	5.53	0.00	5.59	
Slash Burning	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Asphalt Roofing	0.00	0.00	1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	30,061.21	0.00	1.05	1.06	1.09	31,599.67	0.00	31,856.08	0.00	32,625.31	0.00	Sec 22 controls??
Sub-Total: Other Stationary Sources	90,078.23	27,001.25				92,701.95	27,850.39	91,685.77	27,981.75	92,374.71	28,363.69	
COMMERCIAL PROCESSES												
Bakeries	62.60	0.00	0.97	0.96	0.94	60.41	0.00	60.04	0.00	58.95	0.00	
Breweries	0.00	0.00	1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Commercial Processes	62.60	0.00				60.41	0.00	60.04	0.00	58.95	0.00	

DRAFT State of CT NOx Projections

MOBILE SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)
Light Duty Gas Vehicles	0.00	100,081.19				0.00	43,148.83	0.00	37,771.33	0.00	25,274.50	Federal Tier 2; CT OBD2/ASM2525 I&M
Light Duty Gas Truck 1 &2	0.00	69,026.22				0.00	46,366.92	0.00	42,220.69	0.00	31,734.49	Federal Tier 2; CT OBD2/ASM2525 I&M
Light Duty Gas Truck 3 & 4	0.00	28,362.90				0.00	22,829.09	0.00	21,326.29	0.00	17,158.16	Federal Tier 2; CT OBD2/ASM2525 I&M
Heavy Duty Gas Vehicles	0.00	18,674.85				0.00	12,097.12	0.00	10,835.57	0.00	7,332.10	Federal HDT & Fuel Standarda
Light Duty Diesel Vehicle	0.00	175.62				0.00	49.97	0.00	32.78	0.00	15.04	Federal Tier 2; CT OBD2/ASM2525 I&M
Light Duty Diesel Truck	0.00	547.64				0.00	321.76	0.00	286.74	0.00	195.48	Federal Tier 2; CT OBD2/ASM2525 I&M
Heavy Duty Diesel Vehicle	0.00	166,693.21				0.00	99,840.23	0.00	90,494.40	0.00	60,924.65	Federal HDT & Fuel Standarda
Motorcycles	0.00	429.36				0.00	468.27	0.00	473.33	0.00	485.37	
Sub-Total: On-Road Mobile Sources	0.00	383,990.99				0.00	225,122.18	0.00	203,441.13	0.00	143,119.78	w/o 2% contingency for conformity budgets
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)
Airport Equipment	0.00	300.00				0.00	280.00	0.00	280.00	0.00	240.00	Federal Engine & Fuel Standards
Commercial Equipment	0.00	9,320.00				0.00	8,960.00	0.00	8,800.00	0.00	8,460.00	Federal Engine & Fuel Standards
Construction Equipment	0.00	49,220.00				0.00	42,720.00	0.00	41,260.00	0.00	35,660.00	Federal Engine & Fuel Standards
Farm Equipment	0.00	2,320.00				0.00	2,060.00	0.00	2,020.00	0.00	1,820.00	Federal Engine & Fuel Standards
Industrial Equipment	0.00	38,020.00				0.00	26,760.00	0.00	23,840.00	0.00	15,560.00	Federal Engine & Fuel Standards
Lawn & Garden	0.00	13,760.00				0.00	13,140.00	0.00	12,760.00	0.00	12,420.00	Federal Engine & Fuel Standards
Logging Equipment	0.00	240.00				0.00	160.00	0.00	140.00	0.00	100.00	Federal Engine & Fuel Standards
Recreational Equipment	0.00	780.00				0.00	960.00	0.00	960.00	0.00	1,000.00	Federal Engine & Fuel Standards
Recreational Vessels	0.00	6,920.00				0.00	9,620.00	0.00	9,960.00	0.00	10,840.00	Federal Engine & Fuel Standards
Rail (equipment + engines)	0.00	12,757.76	0.976	0.97	0.96	0.00	12,451.69	0.00	12,400.68	0.00	12,207.65	Federal Rules(2000+ phase-in)
Aircraft	0.00	4,049.15	1.18	1.21	1.30	0.00	4,771.43	0.00	4,891.81	0.00	5,252.95	
Commercial Vessels	0.00	1,400.02	1.05	1.05	1.08	0.00	1,465.51	0.00	1,476.42	0.00	1,509.17	
Sub-Total: Non-Road Mobile Sources	0.00	139,086.93				0.00	123,348.63	0.00	118,788.91	0.00	105,069.76	

NOx EMISSION TOTALS	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	14.74	0.00				16.41	0.00	16.69	0.00	17.53	0.00	
Sub-Total: Industrial Processes	670.30	0.00				648.91	0.00	645.35	0.00	634.65	0.00	
Sub-Total: Ind Surface Coating	144.10	0.00				139.51	0.00	138.75	0.00	136.46	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	64.26	0.00				68.87	0.00	69.63	0.00	71.94	0.00	
Sub-Total: Waste Disposal	22,554.53	0.00				22,554.53	0.00	22,554.53	0.00	22,554.53	0.00	
Sub-Total: Other Stationary Srcs	90,078.23	27,001.25				92,701.95	27,850.39	91,685.77	27,981.75	92,374.71	28,363.69	
Sub-Total: Commercial Processes	62.60	0.00				60.41	0.00	60.04	0.00	58.95	0.00	
Sub-Total: Stationary Sources	113,588.76	27,001.25				116,190.59	27,850.39	115,170.76	27,981.75	115,848.77	28,363.69	
NOx Reductions due to OTC/MOU & NBP												Modify for whatever controls apply now

MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	383,990.99				0.00	229,624.63	0.00	207,509.95	0.00	145,982.18	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	139,086.93				0.00	123,348.63	0.00	118,788.91	0.00	105,069.76	
Sub-Total: Mobile Sources	0.00	523,077.92				0.00	352,973.26	0.00	326,298.87	0.00	251,051.94	

Sub-Total: Biogenic NOx Emissions	0.00	3,823.53	1.00	1.00	1.00	0.00	3,823.53	0.00	3,823.53	0.00	3,823.53	
GRAND TOTAL NOx	113,588.76	553,902.70				116,190.59	384,647.18	115,170.76	358,104.14	115,848.77	283,239.16	

SUMMARY BY SOURCE CATEGORY (No Post-2002 controls, except on-road & non-road)

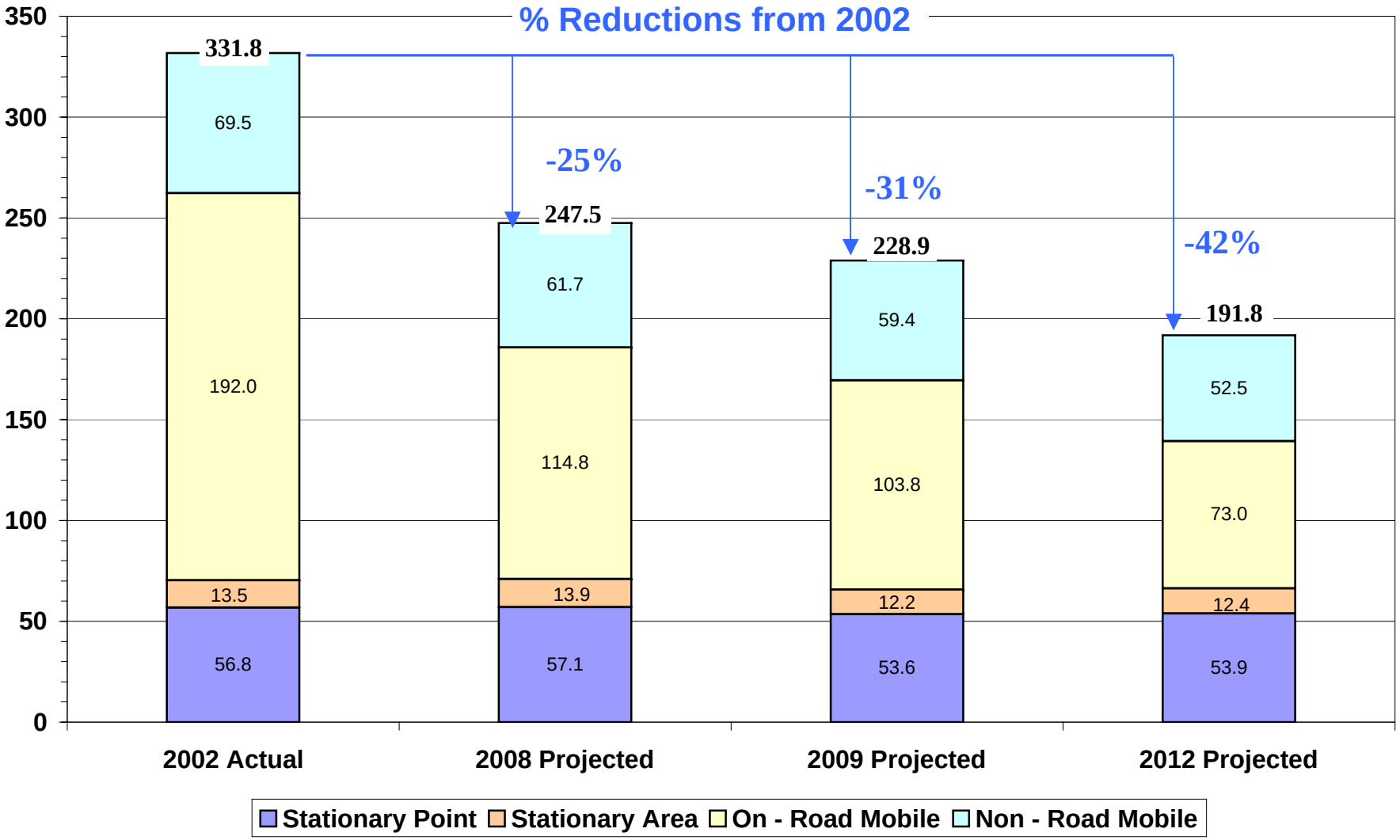
	2002 Actual		2008 Projected		2009 Projected		2012 Projected		
	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	
Stationary Point	113,588.76	56.8	116,190.59	58.1	115,170.76	57.6	115,848.77	57.9	
Stationary Area	27,001.25	13.5	27,850.39	13.9	27,981.75	14.0	28,363.69	14.2	
On - Road Mobile	383,990.99	192.0	229,624.63	114.8	207,509.95	103.8	145,982.18	73.0	Sum of Conformity Budgets for 2008, 2009 and (?) 2012
Non - Road Mobile	139,086.93	69.5	123,348.63	61.7	118,788.91	59.4	105,069.76	52.5	
TOTAL ANTHROPOGENIC NOx	663,667.93	331.8	497,014.24	248.5	469,451.38	234.7	395,264.40	197.6	
			vs 2002	-25.1%	vs 2002	-29.3%	vs 2002	-40.4%	
POST-2002 CONTROL REDUCTIONS									
CT 1-Hour Ozone Shortfall Measures									
MWC Phase 2 (2003)			-1,999.02		-1,999.02		-1,999.02		
CT 8-Hour Ozone Measures									
2009 CAIR Budget					-3,359.48		-3,359.48		Reductions based on difference of seasonal 2002 actual & 2009 CAIR budget, divided by 153 to get typical summer day. Result allocated to GrCT & SWCT based on relative proportion of utility emissions in 2002 PEI (i.e., 86.4% in SWCT; 13.6% in GrCT).
ICI Boilers					-2,656.39	-3,613.97	-2,656.39	-3,613.97	Based on OTC calculations, with 80% RP & 80% RE. Assumes new limits start 2009. Cobines point/area reductions.

SUMMARY BY SOURCE CATEGORY (Including listed Post-2002 controls)

	2002 Actual		2008 Projected		2009 Projected		2012 Projected		
	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	
Stationary Point	113,588.76	56.8	114,191.57	57.1	107,155.87	53.6	107,833.87	53.9	
Stationary Area	27,001.25	13.5	27,850.39	13.9	24,367.78	12.2	24,749.72	12.4	
On - Road Mobile	383,990.99	192.0	229,624.63	114.8	207,509.95	103.8	145,982.18	73.0	Sum of Conformity Budgets for 2008, 2009 and (?) 2012
Non - Road Mobile	139,086.93	69.5	123,348.63	61.7	118,788.91	59.4	105,069.76	52.5	
TOTAL ANTHROPOGENIC VOC	663,667.93	331.8	495,015.22	247.5	457,822.52	228.9	383,635.53	191.8	
			vs 2002	-25%	vs 2002	-31%	vs 2002	-42%	
		333.7							

Projected Anthropogenic NOx Emission Trends for Connecticut

(Draft May 14, 2007)



PV-Valves

2002 PEI Calculations of Underground Tank Breathing VOC emissions:

E = ((Q x EF x POT)/DAYS) x (1 - (CE x RE x RP))

E = Breathing emissions (lbs/day)
EF = 1.0 lbs/1,000 gallons
Q = thousands of gallons sold during 2002 = 1548165.50 thousand gallons
POT = fraction of gasoline sold during June-Aug of 2002 = .2642
CE = fraction controlled by PV vent caps = 0.90
RE = fractional rule effectiveness = 0.80 (presumed)
RP = fractional rule penetration = .5454 (in 2002, representing fraction of stations with vacuum assist Stage II)

E2002 = 2700.064 lbs/day = 1.35 tons/day (which represents emissions in 2002, with 55% of gasoline controlled by PV vent valves at vacuum assist stations)
(this value is in the 2002 PEI) (uncontrolled emissions in 2002 would be E = 4445.926298 lbs/day = 2.22 tons/day)

Applying 2002 PEI Procedures and Projecting Growth to 2008, 2009, and 2012:

	2008	2009	2012	
Use same growth factors (relative to 2002) as used for gasoline marketing:	1.1135	1.1324	1.1892	for 2008, 2009, & 2012 respective

CT shortfall PV-Vent rule requires vents on all Stage II operations (not just vacuum assist).
2002 PEI indicates (conservatively) that 58,200,000 gallons, out of 1,548,165,500 total gallons sold in CT, were at non-Stage II stations.
This means that at least 96.24% of gasoline sold in 2002 was from Stage II stations that are now required to have PV-vents.

(Statewide) First, calculate emissions in 2008, 2009, 2012 assuming PV_vents only at vacuum assist stations (as in 2002):

E2008= 3006.5595 lbs/day = 1.50327975 tons/day
E2009= 3057.64202 lbs/day = 1.52882101 tons/day
E2012= 3210.88957 lbs/day = 1.60544479 tons/day (each of these are essentially equal to those calculated in "StateVOC" worksheet)

Then, calculate emissions in 2008, 2009, 2012 assuming PV-vents at all Stage II stations and no PV vents at other stations.
Use the fraction of 2002 gasoline sales at Stage II and non-Stage II stations (see above) for the calculation (equivalent to rule penetration).
Continue to use a conrol efficiency of 90% and a conservative rule effectiveness value of 80%.

E2008= 1528.74564 lbs/day = 0.76437282 tons/day **2008 Reduction for "State VOC" worksheet = 1477.81386 lbs/day = 0.74 tons/day**
E2009= 1554.71958 lbs/day = 0.77735979 tons/day **2009 Reduction for "State VOC" worksheet = 1502.92244 lbs/day = 0.75 tons/day**
E2012= 1632.64138 lbs/day = 0.81632069 tons/day **2012 Reduction for "State VOC" worksheet = 1578.2482 lbs/day = 0.79 tons/day**

Apportion emissions to each nonattainment area based on 2002 PEI gasoline sales by counties in each area:

Statewide sales =	1,548,165,500		
SWCT sales =	792,612,330	or	51.2%
GrCT sales =	755,553,160	or	48.8%

(SWCT) First, calculate emissions in 2008, 2009, 2012 assuming PV_vents only at vacuum assist stations (as in 2002):

E2008=	1539.26446	lbs/day =	0.76963223	tons/day	
E2009=	1565.41711	lbs/day =	0.78270856	tons/day	
E2012=	1643.87507	lbs/day =	0.82193753	tons/day	(each of these are essentially equal to those calculated in "StateVOC" worksheet)

Then, calculate emissions in 2008, 2009, 2012 assuming PV-vents at all Stage II stations and no PV vents at other stations.
Use the fraction of 2002 gasoline sales at Stage II and non-Stage II stations (see above) for the calculation (equivalent to rule penetration).
Continue to use a conrol efficiency of 90% and a conservative rule effectiveness value of 80%.

E2008=	782.6700	lbs/day =	0.39133499	tons/day	**2008 Reduction for "SWCT VOC" worksheet =**	**756.594489**	**lbs/day =**	**0.38**	**tons/day**
E2009=	795.9678	lbs/day =	0.39798391	tons/day	**2009 Reduction for "SWCT VOC" worksheet =**	**769.449299**	**lbs/day =**	**0.38**	**tons/day**
E2012=	835.8613	lbs/day =	0.41793067	tons/day	**2012 Reduction for "SWCT VOC" worksheet =**	**808.01373**	**lbs/day =**	**0.40**	**tons/day**

(GrCT) First, calculate emissions in 2008, 2009, 2012 assuming PV_vents only at vacuum assist stations (as in 2002):

E2008=	1467.29502	lbs/day =	0.73364751	tons/day	
E2009=	1492.22489	lbs/day =	0.74611244	tons/day	
E2012=	1567.01449	lbs/day =	0.78350724	tons/day	(each of these are essentially equal to those calculated in "StateVOC" worksheet)

Then, calculate emissions in 2008, 2009, 2012 assuming PV-vents at all Stage II stations and no PV vents at other stations.
Use the fraction of 2002 gasoline sales at Stage II and non-Stage II stations (see above) for the calculation (equivalent to rule penetration).
Continue to use a conrol efficiency of 90% and a conservative rule effectiveness value of 80%.

E2008=	746.0757	lbs/day =	0.37303783	tons/day	**2008 Reduction for "GrCT VOC" worksheet =**	**721.21936**	**lbs/day =**	**0.36**	**tons/day**
E2009=	758.7518	lbs/day =	0.37937588	tons/day	**2009 Reduction for "GrCT VOC" worksheet =**	**733.473134**	**lbs/day =**	**0.37**	**tons/day**
E2012=	796.7800	lbs/day =	0.39839001	tons/day	**2012 Reduction for "GrCT VOC" worksheet =**	**770.234456**	**lbs/day =**	**0.39**	**tons/day**

Auto Refinishing

Based on a comparison to 1990 emission estimates used for 1-hour attainment modeling base year, it appears that the 2002 PEI accounts for significant use of HVLP spray equipment. Therefore, to be conservative, no further reductions will be assumed as a result of RCSA 22a-174-3b HVLP requirements.

1990 PEI

Used a per employee emission factor of 3519 lbs VOC/year, or (where employment info was confidential) 2.3 lbs Voc/capita.
Resulted in statewide summer day emission estimate of 39723.5 lbs/day = 19.9 tons/day

2002 PEI

Used a per employee emission factor of 0.216 tons VOC/year (432 lbs/year). Didn't use a per capita factor; instead apportioned state employment to counties by population.
Resulted in a statewide summer day emission estimate of 4303.4 lbs/day = 2.2 tons/day

2008, 2009, & 2012 Projected Emissions

Will assume 2002 PEI included affects of HVLP & EPA 1998 VOC national rule on VOC content limits. No further reductions incorporated for 2002, 2009, & 2012. Only growth is included, as depicted in VOC worksheets elsewhere in this spreadsheet.

Calculation of 2002, 2008, 2009, & 2012 Portable Fuel Container Emissions
Based on CARB Method Included in CTDEP's Draft 2005 PEI

Step 1: The following three tables are from the 3/28/2007 version of CT's Draft 2005 PEI

(Note that these tables do not include emissions from spillage or vapor displacement that occur when filling non-road equipment. Those emissions are already included in emission estimates developed with the NONROAD model and included in the PEI.)

Table 4.6.14-2
Summary of Daily Uncontrolled VOC Emissions From Residential Gas-Cans

County	Permeation Emissions From Plastic Gas-Cans (lbs/day)	Permeation Emissions From Metal Gas-Cans (lbs/day)	Diurnal Emissions From Closed Plastic Gas-Cans (lbs/day)	Diurnal Emissions From Closed Metal Gas-Cans (lbs/day)	Diurnal Emissions From Open Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Gas-Cans (lbs/day)
Fairfield	396	4	348	27	3,076	110	80
Hartford	412	4	362	28	3,199	114	83
Litchfield	90	1	79	6	699	25	18
Middlesex	78	1	69	5	609	22	16
New Haven	396	4	348	27	3,074	110	80
New	128	1	113	9	995	35	26
Tolland	63	1	55	4	486	17	13
Windham	52	0	45	4	402	14	10
State Total:	**1,615**	**16**	**1,419**	**110**	**12,540**	**447**	**326**

	2005 Uncontrolled Residential Grand Total
CT	16,473
SWCT	8880
GrCT	7593

Table 4.6.14-3
Summary of Daily Uncontrolled VOC Emissions From Commercial Gas-Cans

County	Permeation Emissions From Plastic Gas-Cans (lbs/day)	Permeation Emissions From Metal Gas-Cans (lbs/day)	Diurnal Emissions From Closed Plastic Gas-Cans (lbs/day)	Diurnal Emissions From Closed Metal Gas-Cans (lbs/day)	Diurnal Emissions From Open Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Non-Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Non-Lawn Gas-Cans (lbs/day)
Fairfield	29	1	25	4	352	5	6	46	62
Hartford	25	1	22	4	306	1	2	40	55
Litchfield	8	0	7	1	101	1	1	13	18
Middlesex	6	0	5	1	70	0	1	9	12
New Haven	23	0	21	4	287	1	1	38	51
New	8	0	7	1	99	0	1	13	18
Tolland	4	0	4	1	53	0	0	7	10
Windham	3	0	3	1	41	0	0	5	7
State Total:	**106**	**2**	**94**	**17**	**1,309**	**8**	**12**	**171**	**233**

	2005 Uncontrolled Commercial Grand Total
CT	1,952
SWCT	1060
GrCT	892

2005 CT Overall Uncontrolled Total (lbs/day)

CT:	18,425
SWCT	9,940
GrCT	8,485

Table 4.6.14-4
Summary of Daily and Annual Controlled VOC Emissions From Residential and Commercial Gas-Cans

County	Total Daily Gas-Can Emissions (lbs/day)	Total Annual Gas-Can Emissions (tons/year)
Fairfield	4,259	510
Hartford	4,340	520
Litchfield	995	119
Middlesex	842	101
New Haven	4,160	498
New London	1,355	162
Tolland	669	80
Windham	547	65
State Total:	**17,167**	**2,055**

Table 4.6.14-4 incorporates a 6.82% reduction in 2005 due to CT's phase 1 PFC rule, as estimated by OTC.

Step 2: Using the Uncontrolled 2005 draft PEI estimates, apply the gasoline growth factor for the 2002 to 2008 period to project back to 2002 uncontrolled.

	2005 Uncontrolled (lbs/day)	2002 to 2008 Growth Factor	2005 to 2002 Growth Factor	2002 Uncontrolled (lbs/day)	2002 Uncontrolled (tons/day)
State Total	**18,425**	1.114	1.057	**17,435**	**8.72**
SWCT	**9,940**	1.114	1.057	**9,406**	**4.70**
GrCT	**8,485**	1.114	1.057	**8,029**	**4.01**

Step 3: The estimated 2002 emissions need to be added to CT's 2002 PEI, which did not include them. They will be added as a line item with the other gasoline categories. See VOC workheets for each area & all of CT.

Step 4: Account for reductions from OTC 2001 Model Rule and OTC 2006 Model Rule.

Page 3-15 of the Feb 2007 OTC Control Measure TSD (MACTEC) indicates that OTC Model Rule #1 would achieve 65% reduction from uncontrolled after the 10-year fleet turnover period. OTC Model Rule #2 would achieve an additional 58% reduction beyond OTC MR#1 after the 10-year fleet turnover period. CT implemented OTC MR#1 in the summer of 2004, with a one-year pass through. CT will implement the OTC MR#2 in the summer of 2008. The following table summarizes the combined effects in 2008, 2009, & 2012. Note that reductions associated with fueling of non-road engines are not included.

Year	Years after MR#1 (2005*)	Years after MR#2 (2008)	Total %Reduction From #1 & #2	SWCT Total Reduction (lbs/day)	GrCT Total Reduction (lbs/day)	State of CT Total Reduction (lbs/day)
2008	**3**	**0**	**19.5%**	**2042.4**	**1743.4**	**3785.8**
2009	**4**	**1**	**30.3%**	**3226.6**	**2754.3**	**5981.0**
2012	**7**	**4**	**58.1%**	**6503.8**	**5551.8**	**12055.6**
2018	**10**	**10**	**85.3%**			

* Assumes no sales of compliant cans during the one-year pass-through period.

Note: These calcs were provided by Chris Nelson for use in Post-1999 ROP Plan & 1-hr shortfall analysis.
For Post-2002 8-hr ROP, the incremental reduction between "Phase I" and "Phase II" is used (Col L - Col M).

MUNICIPAL WASTE COMBUSTORS

FACILITY	PROJECTED ANNUAL HEAT INPUT (MMBtu) - FACILITY TOTAL (90% of MRC)	Lower of RACT / PERMIT / Trading Limit (lb/MMBtu)	CURRENT EMISSION RATE w/o SNCR (or pre-SNCR rate)	MWC Rule Phase I Limits (ppmv)	MWC Rule Phase I Limits (lb/MMBtu)	MWC Rule Phase II Limits (ppmv)	MWC Rule Phase II Limits (lb/MMBtu)	Actual 1996 Emissions (tpd) from BIG96	Ozone Season (May-Sept) Emissions (tons)					SOURCE SPECIFIC F-FACTOR
									EMISSIONS AT LOWER OF RACT OR CURRENT RATES	EMISSIONS AT LOWER OF PHASE I OR CURRENT RATES	EMISSIONS AT LOWER OF PHASE II OR CURRENT RATES	ADDITIONAL REDUCTIONS PHASE II VS PHASE I LIMITS@	ADDITIONAL REDUCTIONS PHASE II VS RACT LIMITS@	
Bridgeport RESCO Co., L.P.	7,686,900	0.38	0.42	205	0.356	177	0.308		1,461	1,370	1,183	187	278	9685
								SWCT	*4.00*	*3.75*	*3.24*	*0.51*	*0.76*	
Resource Recovery Systems (Mid-CT)	7,710,552	0.31	0.31	220	0.386	147	0.258		1,195	1,195	995	200	200	9780
American Ref-Fuel Co. of SE CT	2,270,592	0.38	0.42	205	0.362	177	0.312		431	411	355	56	77	1774
Ogden Martin Systems of Bristol	1,923,696	0.38	0.51	205	0.355	200	0.346		366	342	333	8	32	1741
Ogden Projects of Wallingford	1,371,816	0.38	0.23	185	0.313	177	0.299		158	158	158	0	0	1700
Riley Energy Systems of Lisbon	1,702,944	0.31	n/a	180	0.309	177	0.304		264	263	259	4	5	9570
								GrCT	*6.61*	*6.49*	*5.75*	*0.74*	*0.86*	
	22,666,500					ANNUAL (tons)			3,874	3,739	3,283	456	592	
						OZONE SEASON (tons)			1,624	1,567	1,376	191	248	
								(TPD) *State*	10.61	10.24	8.99	1.25	1.62	

@ Or "current" rate, whichever is lower.

Note: Bridgeport RESCO facility is the only MWC facility located in Southwest Connecticut.

Phase II Incremental Reduction

		80% RE
SWCT	0.51	0.41
GrCT	0.74	0.59
STATE	1.25	1.00

1999 - 2006 OZONE SEASON ACTUAL EMISSIONS AND PROJECTION METHODS TO 2012 FOR CT NBP UNITS (tons per season)

PLANT NAME	ARD ORIS CODE	BOILER / UNIT ID	PLANT POINT #	1999 EMISSIONS	2000 EMISSIONS	2001 EMISSIONS	2002 EMISSIONS	2003 EMISSIONS	2004 EMISSIONS	2005 EMISSIONS	2006 EMISSIONS prelim
CJP - BRANFORD	540	10	008	9.86	0.26	2.24	3.30	1.70	1.20	2.30	1.65
CJP - COS COB	542	10	052	9.03	0.33	3.13	6.75	4.10	1.20	7.00	7.50
CJP - COS COB	542	11	053	9.63	0.35	1.41	6.00	4.40	1.00	6.00	4.95
CJP - COS COB	542	12	054	11.73	0.26	4.07	4.35	3.80	1.10	7.10	7.50
NRG - DEVON	544	3	042								
NRG - DEVON	544	6	052								
NRG - DEVON	544	7	055	194.95	130.18	144.87	55.04	44.05	6.45	0.00	0.00
NRG - DEVON	544	8	058	194.83	162.18	113.75	50.86	44.05	6.45	0.00	0.00
NRG - DEVON	544	10	P26	3.35	0.57	0.89	4.28	2.10	0.00	0.00	1.52
NRG - DEVON	544	4A	044								
NRG - DEVON	544	4B	045								
NRG - DEVON	544	5A	048								
NRG - DEVON	544	5B	049								
NRG - MONTVILLE	546	5	017	127.48	106.46	118.94	40.56	8.30	10.00	68.60	18.47
NRG - MONTVILLE	546	6	020	495.34	331.84	151.82	224.23	63.90	22.50	227.50	50.04
NRG - NORWALK HARBOR	548	1	028	317.89	289.37	205.78	90.75	50.45	75.60	95.76	127.61
NRG - NORWALK HARBOR	548	2	030	331.22	260.08	170.62	102.63	50.45	75.60	136.34	156.81
NRG - NORWALK HARBOR	548	10		1.51	1.22	0.85	0.00	2.80	1.90	2.10	2.09
NGS - TUNNEL	557	10	001	9.24	1.78	2.87	1.38	0.00	1.20	4.60	4.56
CJP - FRANKLIN DR	561	10	067	9.04	0.59	0.53	3.00	3.30	2.60	1.40	2.25
NRG - MIDDLETOWN	562	1	096								
NRG - MIDDLETOWN	562	2	098	211.32	117.50	145.48	66.94	48.30	133.80	119.60	72.72
NRG - MIDDLETOWN	562	3	100	642.54	452.02	699.73	264.56	146.10	131.70	422.20	206.27
NRG - MIDDLETOWN	562	4	P03	495.57	384.08	221.77	122.48	24.70	13.00	143.90	85.36
NRG - MIDDLETOWN	562	10	102	8.96	0.29	2.32	1.95	3.10	1.40	1.80	4.65
CRRA - SOUTH MEADOW	563	11A	260	8.00	3.15	5.00	3.95	4.70	1.00	1.30	2.37
CRRA - SOUTH MEADOW	563	11B	261	9.63	1.28	5.04	3.98	4.70	0.90	1.30	2.09
CRRA - SOUTH MEADOW	563	12A	262	9.73	1.27	5.99	3.73	5.20	1.20	2.20	2.29
CRRA - SOUTH MEADOW	563	12B	263	9.74	1.15	6.24	3.89	5.40	1.20	2.00	3.14
CRRA - SOUTH MEADOW	563	13A	264	12.08	1.13	4.76	2.94	4.50	1.40	2.30	4.66
CRRA - SOUTH MEADOW	563	13B	265	11.44	1.07	4.68	2.89	4.40	1.30	2.20	4.47
CRRA - SOUTH MEADOW	563	14A	266	6.86	0.92	4.68	3.14	2.00	1.10	3.70	3.22
CRRA - SOUTH MEADOW	563	14B	267	6.87	0.92	4.61	3.10	5.00	1.00	3.10	2.74
CJP - TORRINGTON TERMINAL	565	10	068	11.39	0.45	2.05	2.70	1.20	1.20	0.80	1.05
BRIDGEPORT HARBOR	568	BHB1	160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRIDGEPORT HARBOR	568	BHB2	162	133.97	15.07	71.49	45.54	30.60	5.00	23.50	30.91
BRIDGEPORT HARBOR	568	BHB3	P89	747.55	1,147.96	1,320.12	610.78	790.70	936.60	862.80	947.67
BRIDGEPORT HARBOR	568	BHB4	166	1.41	0.31	0.69	0.67	2.90	0.40	1.20	0.38
ENGLISH STATION	569	EB13	142								
ENGLISH STATION	569	EB14	144								
NEW HAVEN HARBOR	6156	NHB1	P31	883.61	757.28	715.68	506.21	183.60	122.60	275.80	130.93
PRATT & WHITNEY COGEN	54605	001	P49	10.57	9.74	5.13	10.05	7.40	3.50	4.90	8.84
SPRAGUE PAPERBOARD - SPRAGUE MIL	54657	1	003	186.20	96.12	92.41	136.85	98.00	156.30	140.50	97.84
NORWICH PUBLIC UTILITIES	880022	TRBINE	001	8.92	0.73	1.58	1.34	1.30	0.50	1.30	3.16
NRG - DEVON	544	11	P40	19.52	0.91	9.68	8.54	2.20	1.00	1.40	3.05
NRG - DEVON	544	12	P41	18.08	1.46	8.03	7.97	1.70	0.90	1.30	3.66
NRG - DEVON	544	13	P42	19.54	1.08	7.54	8.91	2.00	1.10	1.10	4.93
NRG - DEVON	544	14	P43	19.85	1.40	9.07	7.74	2.20	0.90	1.50	4.89

1999 - 2006 OZONE SEASON ACTUAL EMISSIONS AND PROJECTION METHODS TO 2012 FOR CT NBP UNITS (tons per season)

PLANT NAME	ARD ORIS CODE	BOILER / UNIT ID	PLANT POINT #	1999 EMISSIONS	2000 EMISSIONS	2001 EMISSIONS	2002 EMISSIONS	2003 EMISSIONS	2004 EMISSIONS	2005 EMISSIONS	2006 EMISSIONS prelim
SOUTH NORWALK ELECTRIC & WATER	6598	U7						10.30			
BRIDGEPORT ENERGY	55042	BE1		93.31	22.60	35.89	46.44	41.10	41.90	43.30	39.31
BRIDGEPORT ENERGY	55042	BE2		86.83	23.56	22.70	43.97	33.00	35.90	40.40	36.87
MILFORD POWER PROJECT	55126	CT01					5.90	0.00	24.90	20.00	21.21
MILFORD POWER PROJECT	55126	CT02					4.56	0.00	24.80	19.10	18.56
LAKE ROAD GENERATING COMPANY	55149	LRG1				3.40	13.85	6.50	14.70	0.70	12.78
LAKE ROAD GENERATING COMPANY	55149	LRG2					14.47	11.40	14.10	17.70	12.61
LAKE ROAD GENERATING COMPANY	55149	LRG3					17.80	12.90	14.10	16.30	9.58
WALLINGFORD ENERGY	55517	CT01					3.18	1.00	0.90	1.70	0.90
WALLINGFORD ENERGY	55517	CT02				0.33	1.52	0.80	0.60	1.20	1.58
WALLINGFORD ENERGY	55517	CT03				1.24	1.45	0.60	0.50	1.40	2.82
WALLINGFORD ENERGY	55517	CT04				2.05	1.69	1.00	0.30	0.70	1.15
WALLINGFORD ENERGY	55517	CT05				4.15	1.52	0.60	0.50	1.30	1.49
WATERSIDE POWER	56189	4							4.40	1.10	1.32
WATERSIDE POWER	56189	5							3.60	2.20	1.30
WATERSIDE POWER	56189	6							2.70	0.70	
WATERSIDE POWER	880069	1					2.51	0.00			
WATERSIDE POWER	880069	2					2.30	1.30			
WATERSIDE POWER	880069	3					2.15	2.00			
ALGONQUIN POWER WINDSOR LOCKS	10567	GT1	P29	103.48	104.51	110.53	110.25	116.30	105.20	107.10	102.68
AES THAMES	10675	UNITA	P10	66.00	53.03	110.42	74.76	72.80	76.85	62.56	100.74
AES THAMES	10675	UNITB	P11	78.13	53.26	107.44	71.87	72.80	76.85	62.74	90.81
COASTAL TECHNOLOGY, INC. (CDEC)	50498	GT	P64	84.25	79.05	88.09	51.83	4.80	0.60	0.90	6.60
PFIZER	54236	5	012	0.42	38.77	23.38	27.14	16.90	17.80	35.50	23.85
PFIZER	54236	8	P01	28.96	7.88	18.85	21.23	8.30	7.60	5.10	7.29
PRATT & WHITNEY WILLGOOS LAB	880021	B1	163	0.00	0.00	0.00	0.00				
PRATT & WHITNEY WILLGOOS LAB	880021	B2	164	9.62	10.94	0.92	1.11				
PRATT & WHITNEY WILLGOOS LAB	880021	B4	166	11.30	9.62	11.42	1.27				
PRATT & WHITNEY WILLGOOS LAB	880021	B5	167	13.32	6.60	7.23	1.08	0.00			
PRATT & WHITNEY WILLGOOS LAB	880021	B6	168	15.53	5.09	7.31	0.66	0.00			
			TOTAL	**5,810**	**4,698**	**4,831**	**2,948**	**2,080**	**2,195**	**3,022**	**2,510**

Method for determining future emissions:

2008 (still under NBP): Assume emissions growth rate to 2008 equals ratio of highest post-2002 seasonal NOx under NBP (3022 tons in 2005) to 2002 actual seasonal (2948 tons), (

2009 (first year under CAIR budget): Reductions based on difference of seasonal 2002 actual (2948 tons) & 2009 CAIR budget (2691 tons), divided by 153 to get typical summer day reduction of
Result allocated to GrCT & SWCT based on relative proportion of utility emissions in 2002 PEI (i.e., 86.4% or 1.45 tons/day in GrCT; 13.6% or 0.23 tons/day

2012 (still under CAIR budget): Same as for 2009 since operating under same CAIR budget.

See Emission Projection tables for projected emissions in 2008, 2009 and 2012 developed with these methods.

1999 - 2006 HEAT INPUT FOR CT NBP UNITS

PLANT NAME	RECEIVING ACCOUNT	ARD ORIS CODE	BOILER / UNIT ID	PLANT POINT #	1999 HEAT INPUT	2000 HEAT INPUT	2001 HEAT INPUT	2002 HEAT INPUT	2003 HEAT INPUT	2004 HEAT INPUT	2005 HEAT INPUT	2006 HEAT INPUT prelim
CJP - BRANFORD	0000010	540	10	008	26,658	705	6,056	5,500	2,750	2,000	3,750	2,750
CJP - COS COB	2000010	542	10	052	26,366	953	9,447	11,250	6,750	2,000	11,500	12,500
CJP - COS COB	2000011	542	11	053	30,627	1,109	4,801	10,000	7,250	1,500	10,000	8,250
CJP - COS COB	2000012	542	12	054	30,917	689	11,128	7,250	6,250	1,750	11,750	12,500
NRG - DEVON	4000003	544	3	042								
NRG - DEVON	4000006	544	6	052								
NRG - DEVON	4000007	544	7	055	2,821,974	1,386,163	1,623,883	1,345,761	454,775	65,618	0	
NRG - DEVON	4000008	544	8	058	2,729,566	1,654,419	1,414,338	1,281,675	454,775	65,618	0	
NRG - DEVON	4000010	544	10	P26	9,471	1,622	2,435	7,130	3,450	0	0	2,530
NRG - DEVON	4000011	544	11	P40	481,259	22,984	215,409	190,159	49,355	23,185	22,209	72,283
NRG - DEVON	4000012	544	12	P41	452,787	37,220	202,884	200,858	44,237	22,805	19,400	77,842
NRG - DEVON	4000013	544	13	P42	482,244	27,548	178,629	210,664	49,383	26,087	18,121	95,403
NRG - DEVON	4000014	544	14	P43	487,680	35,546	210,627	180,469	49,157	21,156	22,932	113,966
NRG - DEVON	400004A	544	4A	044								
NRG - DEVON	400004B	544	4B	045								
NRG - DEVON	400005A	544	5A	048								
NRG - DEVON	400005B	544	5B	049								
NRG - MONTVILLE	6000005	546	5	017	1,584,627	1,143,878	1,225,998	587,502	88,964	107,106	759,357	383,894
NRG - MONTVILLE	6000006	546	6	020	5,159,469	3,605,787	1,433,049	2,220,534	958,238	233,712	2,098,472	675,517
NRG - NORWALK HARBOR	8000001	548	1	028	3,134,104	2,756,058	2,101,078	920,585	709,893	1,026,567	1,315,368	1,560,250
NRG - NORWALK HARBOR	8000002	548	2	030	3,315,196	2,512,625	1,803,687	1,040,847	709,893	1,026,567	1,872,810	1,889,890
NRG - NORWALK HARBOR	8000010	548	10		6,496	2,958	3,647		4,640	3,248	3,480	3,480
NGS - TUNNEL	7000010	557	10	001	28,001	5,346	10,352	5,091	109	4,340	16,432	12,765
CJP - FRANKLIN DR	1000010	561	10	067	29,032	1,882	1,485	5,000	5,500	4,250	2,250	3,750
NRG - MIDDLETOWN	2000001	562	1	096								
NRG - MIDDLETOWN	2000002	562	2	098	2,802,926	1,380,068	1,646,391	1,040,197	529,561	1,360,394	1,442,435	1,141,793
NRG - MIDDLETOWN	2000003	562	3	100	4,671,692	3,799,143	4,285,937	2,063,952	982,246	911,272	2,772,351	1,785,320
NRG - MIDDLETOWN	2000004	562	4	P03	5,436,069	3,651,238	1,971,259	1,207,505	256,007	96,966	1,235,853	993,935
NRG - MIDDLETOWN	2000010	562	10	102	28,662	940	7,607	3,250	5,000	2,250	3,000	7,750
CRRA - SOUTH MEADOW	300011A	563	11A	260	21,947	8,636	12,991	10,247	11,994	2,571	2,875	5,892
CRRA - SOUTH MEADOW	300011B	563	11B	261	26,445	3,521	12,991	10,247	11,994	2,264	3,642	5,892
CRRA - SOUTH MEADOW	300012A	563	12A	262	28,071	3,669	15,404	9,608	13,285	2,906	5,360	5,734
CRRA - SOUTH MEADOW	300012B	563	12B	263	31,060	3,669	15,404	9,608	13,285	2,906	5,360	8,742
CRRA - SOUTH MEADOW	300013A	563	13A	264	30,199	2,823	13,160	8,124	12,422	3,572	5,460	11,333
CRRA - SOUTH MEADOW	300013B	563	13B	265	30,199	2,823	13,160	8,124	12,422	3,572	5,460	11,333
CRRA - SOUTH MEADOW	300014A	563	14A	266	19,360	2,595	12,684	8,525	5,153	2,755	8,580	7,927
CRRA - SOUTH MEADOW	300014B	563	14B	267	19,360	2,595	12,685	8,525	13,361	2,755	8,580	7,927
CJP - TORRINGTON TERMINAL	5000010	565	10	068	30,241	1,188	5,456	4,500	2,000	2,000	1,250	1,750
BRIDGEPORT HARBOR	300BHB1	568	BHB1	160						0	0	
BRIDGEPORT HARBOR	300BHB2	568	BHB2	162	850,765	92,808	410,835	287,674	165,007	31,432	151,611	183,090
BRIDGEPORT HARBOR	300BHB3	568	BHB3	P89	8,555,180	9,668,283	10,571,657	5,997,472	11,726,660	13,101,413	13,390,605	14,058,489
BRIDGEPORT HARBOR	300BHB4	568	BHB4	166	4,264	925	2,085	2,003	8,771	1,108	3,464	1,129
ENGLISH STATION	900EB13	569	EB13	142							0	
ENGLISH STATION	900EB14	569	EB14	144							0	
NEW HAVEN HARBOR	500NHB1	6156	NHB1	P31	9,687,481	8,311,317	7,584,506	7,184,444	2,365,305	1,607,800	3,964,781	1,878,167
SOUTH NORWALK ELECTRIC & WATER	80000U7	6598	U7						19,275			

ALGONQUIN POWER WINDSOR LOCKS	7000GT1	10567	GT1	P29	1,493,002	1,431,046	1,494,058	1,505,664	1,548,596	1,556,616	1,575,224	1,529,913
AES THAMES	50UNITA	10675	UNITA	P10	3,586,701	3,124,310	3,547,783	3,306,692	3,347,572	3,213,647	2,744,394	3,586,958
AES THAMES	50UNITB	10675	UNITB	P11	3,811,899	3,131,107	3,483,920	3,221,479	3,347,572	3,213,647	2,751,946	3,300,745
COASTAL TECHNOLOGY, INC. (CDEC)	30000GT	50498	GT	P64	1,502,356	1,384,671	1,460,709	969,264	80,484	8,927	23,826	141,244
PFIZER	6000005	54236	5	012	10,887	484,336	183,090	396,421	318,659	323,509	543,722	374,936
PFIZER	6000008	54236	8	P01	570,982	160,321	375,519	404,857	191,177	173,986	114,357	135,858
PRATT & WHITNEY COGEN	5000001	54605	001	P49	727,143	820,863	438,278	778,675	579,154	298,230	394,593	770,404
Cascades Boxboard Group-Connecticut LLC	7000001	54657	1	003	787,854	763,504	754,229	827,460	745,222	755,125	721,291	907,868
BRIDGEPORT ENERGY	2000BE1	55042	BE1		2,700,034	3,319,994	4,459,865	5,154,615	4,533,870	4,723,147	4,430,782	4,139,001
BRIDGEPORT ENERGY	2000BE2	55042	BE2		2,777,370	2,985,912	2,761,472	5,460,144	4,515,426	4,763,273	4,438,470	4,055,181
MILFORD POWER PROJECT	600CT01	55126	CT01					60,792	0	4,325,039	4,877,081	4,504,931
MILFORD POWER PROJECT	600CT02	55126	CT02					275,078	0	4,606,221	5,728,150	4,863,892
LAKE ROAD GENERATING COMPANY	900LRG1	55149	LRG1				278,952	4,665,259	1,125,781	5,559,968	265,926	4,700,560
LAKE ROAD GENERATING COMPANY	900LRG2	55149	LRG2					5,230,760	3,376,133	2,486,804	4,494,821	4,262,242
LAKE ROAD GENERATING COMPANY	900LRG3	55149	LRG3					4,800,244	2,903,841	3,522,670	4,448,487	4,151,030
WALLINGFORD ENERGY	700CT01	55517	CT01					245,615	108,295	87,012	212,489	134,215
WALLINGFORD ENERGY	700CT02	55517	CT02				1,617	201,197	80,076	41,090	159,339	282,373
WALLINGFORD ENERGY	700CT03	55517	CT03				13,496	166,560	57,882	53,216	110,726	315,092
WALLINGFORD ENERGY	700CT04	55517	CT04				17,804	133,983	39,209	47,995	73,966	233,495
WALLINGFORD ENERGY	700CT05	55517	CT05				30,371	85,227	30,992	39,704	128,162	241,790
WATERSIDE POWER	9000004	56189	4							10,018	5,991	6,052
WATERSIDE POWER	9000005	56189	5							8,151	6,904	6,879
WATERSIDE POWER	9000006	56189	6							7,224	4,169	
PRATT & WHITNEY WILLGOOS LAB	10000B1	880021	B1	163								
PRATT & WHITNEY WILLGOOS LAB	10000B2	880021	B2	164	78,163	87,897	7,402	9,321				
PRATT & WHITNEY WILLGOOS LAB	10000B4	880021	B4	166	80,666	68,312	82,506	9,265				
PRATT & WHITNEY WILLGOOS LAB	10000B5	880021	B5	167	107,987	52,564	57,984	12,265	0			
PRATT & WHITNEY WILLGOOS LAB	10000B6	880021	B6	168	113,900	36,759	53,021	7,504	0			
NORWICH PUBLIC UTILITIES	2TRBINE	880022	TRBINE	001					5,167	1,868	4,744	11,056
WATERSIDE POWER	9000001	880069	1					7,670	0			
WATERSIDE POWER	9000002	880069	2					6,538	6,365			
WATERSIDE POWER	9000003	880069	3					7,230	6,377			

71,459,339	**57,985,329**	**56,555,221**	**64,044,059**	**46,706,966**	**59,602,530**	**67,458,058**	**67,699,488**

Growth Method for VOC Emissions for NBP Sources

Since no budget cap, assume growth in heat input 2002-2006 continues through 2012

Growth Factor 2002 to 2006: 1.06

Growth per Year (2002 to 2006) 1.43%

Assume Same Annual Growth Rate Through 2012

Growth Factor (2002 to 2008): 1.086
Growth Factor (2002 to 2009): 1.100
Growth Factor (2002 to 2012): 1.143

= industrial boilers

= cogeneration facilities

Determination of Emission Reductions from Solvent Cleaning Operations

As of May 10, 2007, CTDEP is in the final phase of pursuing approval from the State Legislature to modify RCSA 22-174-20(l) to implement the OTC2001 Model Rule for solvent cleaning operations. The rule will require specific workplace standards & limit the vapor pressure of cold cleaning solvents to 1.0 mmHG, with limited exemptions for "special and extreme solvent metal cleaning", as defined in the rule. The rule is expected to be finalized during Summer 2007, with implementation in May 2008.

Reductions resulting from the rule are based on the calculations contained in the OTC report: "Control Measure Development Support Analysis of Ozone Trasnport Commission Model Rules"; prepared for OTC by E.H. Pechan & Associates; March 31, 2001.

Using the same formulas as Pechan, but updating CT population data with more recent Census Bureau estimates, and using more conservative values of rule penetration (80%) and rule effectiveness (80%):

Post-control emission factor = Pre-control emission factor [1-CE(RP)(RE)]

where: CE = control efficiency = 66%, per Pechan estimates
RP = rule penetration = 80% (conservative compared to OTC's 100%)
RE = rule effectiveness = 80% (conservative compared to OTC's 100%)

Post-control emission factor = 3.6 lbs/capita/yr [1-(0.66)(0.80)(0.80)] (applies to 2002)
= 2.1 lbs/capita/yr (applies to 2008, 2009 & 2012)

	2002	2008	2009	2012	
Connecticut Population (Census Bureau):	**3,457,927**	**3,550,416**	**3,564,393**	**3,602,158**	
Metal Solvent Cleaning Emissions (tons/day):	**23.9**	**14.3**	**14.4**	**14.5**	**(assumes 5 day/week operation)**
Statewide VOC Emission Reduction from 2002 (tons/day):		**9.6**	**9.5**	**9.4**	
SW CT Portion (tons/day):		**5.2**	**5.2**	**5.1**	(apportioned based on Fairfield/New Haven/Middlesex 2006
Gr CT Portion (tons/day):		**4.4**	**4.3**	**4.3**	population of 1,909,458 out of CT total population of 3,504,809)

Determination of VOC Emission Reductions from CTDEP's Consumer Products Regulation

Step 1: The following excerpt is from the OTC/MACTEC Control Measures report of Feb 28, 2007.

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS) VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
G	
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-60-xxx-xxx, 24-65-xxx-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3.1 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3.1 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental OTB Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental BOTW Control Factor (percent reduction due to OTC 2006 Control Measure)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

CONSUMER PRODUCTS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2465000000	3,759.86	10.3010	10.301	25.0	25.1	3,324.25	9.1075	9.108	1.03	14.20	2.00	3,257.76	8.925	66.48	0.182	All Products/Processes
CT	Hartford	09003	2465000000	2,485.81	6.8104	6.810	25.0	25.1	2,197.81	6.0214	6.021	1.03	14.20	2.00	2,153.85	5.901	43.96	0.120	All Products/Processes
CT	Litchfield	09005	2465000000	465.45	1.2752	1.275	25.0	25.1	411.52	1.1275	1.127	1.03	14.20	2.00	403.29	1.105	8.23	0.023	All Products/Processes
CT	Middlesex	09007	2465000000	564.22	1.5458	1.546	25.0	25.1	498.85	1.3667	1.367	1.03	14.20	2.00	488.87	1.339	9.98	0.027	All Products/Processes
CT	New Haven	09009	2465000000	4,362.35	11.9516	11.952	25.0	25.1	3,856.93	10.5669	10.567	1.03	14.20	2.00	3,779.79	10.356	77.14	0.211	All Products/Processes
CT	New London	09011	2465000000	2,319.84	6.3557	6.356	25.0	25.1	2,051.06	5.6194	5.619	1.03	14.20	2.00	2,010.04	5.507	41.02	0.112	All Products/Processes
CT	Tolland	09013	2465000000	383.36	1.0503	1.050	25.0	25.1	338.94	0.9286	0.929	1.03	14.20	2.00	332.17	0.910	6.78	0.019	All Products/Processes
CT	Windham	09015	2465000000	284.06	0.7783	0.778	25.0	25.1	251.15	0.6881	0.688	1.03	14.20	2.00	246.13	0.674	5.02	0.014	All Products/Processes
State Totals				**14624.95**	**40.07**	**40.07**			**12930.51**	**35.43**	**35.43**				**12671.90**		**258.61**	**0.71**	
SWCT				**8686.43**	**23.80**	**23.80**			**7680.03**	**21.04**	**21.04**				**7526.43**		**153.60**	**0.42**	
GrCT				**5938.52**	**16.27**	**16.27**			**5250.49**	**14.38**	**14.38**				**5145.48**		**105.01**	**0.29**	

Step 2: Since implementation of the 2009 OTB/OTW & 2009 BOTW reductions both occur after 2002 & by 2008 in CT, reductions can be combined.

	2002	Growth Factors vs 2002			Uncontrolled Emissions			Controlled Emissions				Reductions from Uncontrolled			
County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	OTC2001 & OTC2006 Combined Control Factor	2008 (CT not until 2009)	2009	2012	2008	2009	2012	County
Fairfield	10.3010	1.03	1.03	1.05	10.61	10.66	10.77	15.916%	10.61	8.96	9.06	0.00	1.70	1.71	Fairfield
Hartford	6.8104	1.03	1.03	1.05	7.02	7.05	7.12	15.916%	7.02	5.92	5.99	0.00	1.12	1.13	Hartford
Litchfield	1.2752	1.03	1.03	1.05	1.31	1.32	1.33	15.916%	1.31	1.11	1.12	0.00	0.21	0.21	Litchfield
Middlesex	1.5458	1.03	1.03	1.05	1.59	1.60	1.62	15.916%	1.59	1.34	1.36	0.00	0.25	0.26	Middlesex
New Haven	11.9516	1.03	1.03	1.05	12.32	12.36	12.49	15.916%	12.32	10.40	10.51	0.00	1.97	1.99	New Haven
New London	6.3557	1.03	1.03	1.05	6.55	6.57	6.64	15.916%	6.55	5.53	5.59	0.00	1.05	1.06	New London
Tolland	1.0503	1.03	1.03	1.05	1.08	1.09	1.10	15.916%	1.08	0.91	0.92	0.00	0.17	0.17	Tolland
Windham	0.7783	1.03	1.03	1.05	0.80	0.81	0.81	15.916%	0.80	0.68	0.68	0.00	0.13	0.13	Windham
State Totals	**40.07**				**41.29**	**41.45**	**41.89**		**41.29**	**34.85**	**35.22**	**0.00**	**6.60**	**6.67**	**State Totals**
SWCT	**23.80**				**24.52**	**24.62**	**24.88**		**24.52**	**20.70**	**20.92**	**0.00**	**3.92**	**3.96**	**SWCT**
GrCT	**16.27**				**16.76**	**16.83**	**17.01**		**16.76**	**14.15**	**14.30**	**0.00**	**2.68**	**2.71**	**GrCT**

Determination of Emission Reductions from AIM Coatings Regulation

As of May 10, 2007, CTDEP is in the final phase of pursuing approval from the State Legislature to modify RCSA 22-174-41 to implement the OTC2001 Model Rule for Architectural & Industrial Maintenance (AIM) coatings. The rule will limit VOC content limits and is expected to be finalized during Summer 2007, with implementation in May 2008.

Reductions resulting from the rule are based on the calculations contained in the OTC report: "Control Measure Development Support Analysis of Ozone Trasnport Commission Model Rules"; prepared for OTC by E.H. Pechan & Associates; March 31, 2001.

The Pechan report indicates the 2001 OTC Model Rule will achieve an additional 31 percent reduction in VOC emissions compared to the previous National Rule, which went into effect in the late 1990's &, therefore, is reflected in CTDEP's 2002 PEI.

		Growth Factor from 2002			Projected Emissions		
	2002 PEI	2008	2009	2012	2008	2009	2012
SWCT National Rule Emissions (lbs/day):	22,495.8	1.03	1.03	1.05	23,180.3	23,271.5	23,518.1
GrCT National Rule Emissions (lbs/day):	18,659.5	1.03	1.03	1.05	19,227.2	19,302.9	19,507.4
OTC 2001 Model Rule Control %: **31%**							
SWCT Model Rule Emissions (lbs/day):					15,994.4	16,057.3	16,227.5
GrCT Model Rule Emissions (lbs/day):					13,266.8	13,319.0	13,460.1
SWCT Model Rule Reductions (lbs/day):					7,185.9	7,214.2	7,290.6
GrCT Model Rule Reductions (lbs/day):					5,960.4	5,983.9	6,047.3
State Total Model Rule Reductions (lbs/day):					13,146.3	13,198.1	13,337.9

Determination of Emission Reductions from Asphalt Paving Regulation Update

Step 1: The following excerpt is from the OTC/MACTEC Control Measures report of Feb 28, 2007.

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS) VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
G	
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-61-021-xxx. 24-61-022-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Annual Control Factor
Q	Summer Control Factor (100% for cutback; 90% for emulsified, except 0 in DE and 96.9% in NJ))
R, S	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
T, U	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

ASPHALT PAVING

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
Cutback																				
CT	Fairfield	09001	2461021000	20.18	0.2302	0.230	74.1	25.1	20.18	0.2302	0.230	1.00	0.00	0.00	100.00	20.18	0.000	0.00	0.230	Cutback Asphalt
CT	Hartford	09003	2461021000	4.80	0.0548	0.055	74.3	25.1	4.80	0.0548	0.055	1.00	0.00	0.00	100.00	4.80	0.000	0.00	0.055	Cutback Asphalt
CT	Litchfield	09005	2461021000	97.67	1.1047	1.105	73.5	25.1	97.67	1.1047	1.105	1.00	0.00	0.00	100.00	97.67	0.000	0.00	1.105	Cutback Asphalt
CT	Middlesex	09007	2461021000	0.00	0.0000	0.000	0.0	25.1	0.00	0.0000	0.000	1.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	New Haven	09009	2461021000	15.93	0.1765	0.176	72.0	25.1	15.93	0.1765	0.176	1.00	0.00	0.00	100.00	15.93	0.000	0.00	0.176	Cutback Asphalt
CT	New Londor	09011	2461021000	0.00	0.0000	0.000	0.0	25.1	0.00	0.0000	0.000	1.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	Tolland	09013	2461021000	5.17	0.0597	0.060	75.2	25.1	5.17	0.0597	0.060	1.00	0.00	0.00	100.00	5.17	0.000	0.00	0.060	Cutback Asphalt
CT	Windham	09015	2461021000	33.08	0.3324	0.332	65.3	25.1	33.08	0.3324	0.332	1.00	0.00	0.00	100.00	33.08	0.000	0.00	0.332	Cutback Asphalt
			State Total:			**1.958**					**1.958**						**0.000**		**1.958**	
Emulsified																				
CT	Fairfield	09001	2461022000	25.99	0.2861	0.286	71.5	25.1	25.99	0.2861	0.286	1.00	0.00	90.00	90.00	2.60	0.029	23.39	0.257	Emulsified Asphalt
CT	Hartford	09003	2461022000	25.58	0.2874	0.287	73.0	25.1	25.58	0.2874	0.287	1.00	0.00	90.00	90.00	2.56	0.029	23.02	0.259	Emulsified Asphalt
CT	Litchfield	09005	2461022000	57.98	0.6266	0.627	70.2	25.1	57.98	0.6266	0.627	1.00	0.00	90.00	90.00	5.80	0.063	52.18	0.564	Emulsified Asphalt
CT	Middlesex	09007	2461022000	26.60	0.2854	0.285	69.8	25.1	26.60	0.2854	0.285	1.00	0.00	90.00	90.00	2.66	0.029	23.94	0.257	Emulsified Asphalt
CT	New Haven	09009	2461022000	16.00	0.1824	0.182	74.1	25.1	16.00	0.1824	0.182	1.00	0.00	90.00	90.00	1.60	0.018	14.40	0.164	Emulsified Asphalt
CT	New Londor	09011	2461022000	24.06	0.2584	0.258	69.8	25.1	24.06	0.2584	0.258	1.00	0.00	90.00	90.00	2.41	0.026	21.65	0.233	Emulsified Asphalt
CT	Tolland	09013	2461022000	20.29	0.2341	0.234	75.0	25.1	20.29	0.2341	0.234	1.00	0.00	90.00	90.00	2.03	0.023	18.26	0.211	Emulsified Asphalt
CT	Windham	09015	2461022000	37.35	0.4176	0.418	72.7	25.1	37.35	0.4176	0.418	1.00	0.00	90.00	90.00	3.74	0.042	33.62	0.376	Emulsified Asphalt
			State Total:			**2.578**					**2.578**						**0.258**		**2.320**	

Step 2: Adjust for the following:

a) OTC assumes 100% RE. However, since CT's reg change may not take effect until May 2009, will apply 80% RE to conservatively assume some ramp-up time for towns/suppliers. (Note: per KW, he expects most cutback use will shift to non-VOC diluents such as vegetable oil or synthetics.)

b) OTC assumed no growth. CTDEP will assume growth equivalent to VMT growth through 2012.

Cutback

	2002	Growth Factors vs 2002			Uncontrolled Emissions					Controlled Emissions			Reductions from Uncontrolled			
County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	2009+ OTC Control %	CTDEP Rule Eff %	2008	2009	2012	2008	2009	2012	(tons/day) County
Fairfield	0.2302	1.07	1.09	1.12	0.25	0.25	0.26	100.0%	80.0%	0.25	0.05	0.05	0.00	0.20	0.21	Fairfield
Hartford	0.0548	1.07	1.09	1.12	0.06	0.06	0.06	100.0%	80.0%	0.06	0.01	0.01	0.00	0.05	0.05	Hartford
Litchfield	1.1047	1.07	1.09	1.12	1.19	1.20	1.24	100.0%	80.0%	1.19	0.24	0.25	0.00	0.96	0.99	Litchfield
Middlesex	0.0000	1.07	1.09	1.12	0.00	0.00	0.00	100.0%	80.0%	0.00	0.00	0.00	0.00	0.00	0.00	Middlesex
New Haven	0.1765	1.07	1.09	1.12	0.19	0.19	0.20	100.0%	80.0%	0.19	0.04	0.04	0.00	0.15	0.16	New Haven
New London	0.0000	1.07	1.09	1.12	0.00	0.00	0.00	100.0%	80.0%	0.00	0.00	0.00	0.00	0.00	0.00	New London
Tolland	0.0597	1.07	1.09	1.12	0.06	0.06	0.07	100.0%	80.0%	0.06	0.01	0.01	0.00	0.05	0.05	Tolland
Windham	0.3324	1.07	1.09	1.12	0.36	0.36	0.37	100.0%	80.0%	0.36	0.07	0.07	0.00	0.29	0.30	Windham
State Totals	**1.96**				**2.10**	**2.13**	**2.19**			**2.10**	**0.43**	**0.44**	**0.00**	**1.70**	**1.75**	**State Totals**
SWCT	**0.41**				**0.44**	**0.44**	**0.45**			**0.44**	**0.09**	**0.09**	**0.00**	**0.35**	**0.36**	**SWCT**
GrCT	**1.55**				**1.67**	**1.69**	**1.73**			**1.67**	**0.34**	**0.35**	**0.00**	**1.35**	**1.39**	**GrCT**

Emulsified

	2002	Growth Factors vs 2002			Uncontrolled Emissions					Controlled Emissions			Reductions from Uncontrolled			
County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	2009+ OTC Control %	CTDEP Rule Eff %	2008	2009	2012	2008	2009	2012	(tons/day) County
Fairfield	0.2861	1.07	1.09	1.12	0.31	0.31	0.32	100.0%	80.0%	0.31	0.06	0.06	0.00	0.25	0.26	Fairfield
Hartford	0.2874	1.07	1.09	1.12	0.31	0.31	0.32	100.0%	80.0%	0.31	0.06	0.06	0.00	0.25	0.26	Hartford
Litchfield	0.6266	1.07	1.09	1.12	0.67	0.68	0.70	100.0%	80.0%	0.67	0.14	0.14	0.00	0.54	0.56	Litchfield
Middlesex	0.2854	1.07	1.09	1.12	0.31	0.31	0.32	100.0%	80.0%	0.31	0.06	0.06	0.00	0.25	0.26	Middlesex
New Haven	0.1824	1.07	1.09	1.12	0.20	0.20	0.20	100.0%	80.0%	0.20	0.04	0.04	0.00	0.16	0.16	New Haven
New London	0.2584	1.07	1.09	1.12	0.28	0.28	0.29	100.0%	80.0%	0.28	0.06	0.06	0.00	0.22	0.23	New London
Tolland	0.2341	1.07	1.09	1.12	0.25	0.25	0.26	100.0%	80.0%	0.25	0.05	0.05	0.00	0.20	0.21	Tolland
Windham	0.4176	1.07	1.09	1.12	0.45	0.45	0.47	100.0%	80.0%	0.45	0.09	0.09	0.00	0.36	0.37	Windham
State Totals	**2.58**				**2.77**	**2.80**	**2.88**			**2.77**	**0.56**	**0.58**	**0.00**	**2.24**	**2.31**	**State Totals**
SWCT	**0.75**				**0.81**	**0.82**	**0.84**			**0.81**	**0.16**	**0.17**	**0.00**	**0.66**	**0.67**	**SWCT**
GrCT	**1.82**				**1.96**	**1.98**	**2.04**			**1.96**	**0.40**	**0.41**	**0.00**	**1.59**	**1.63**	**GrCT**

Asphalt Totals

		Reductions from Uncontrolled			
		2008	2009	2012	
State Totals	**4.54**	**4.87**	**4.93**	**5.07**	**4.87**	**0.99**	**1.01**	**0.00**	**3.94**	**4.06**	**State Totals**
SWCT	**1.16**	**1.25**	**1.26**	**1.30**	**1.25**	**0.25**	**0.26**	**0.00**	**1.01**	**1.04**	**SWCT**
GrCT	**3.38**	**3.63**	**3.67**	**3.77**	**3.63**	**0.73**	**0.75**	**0.00**	**2.93**	**3.02**	**GrCT**

Determination of VOC Emission Reductions from CTDEP's Adhesives & Sealants Regulation: Point Sources

Step 1: The following excerpt is from the OTC/MACTEC Control Measures report of Feb 28, 2007.

CTDEP, in consult with stakeholders, has developed a draft regulation to implement the OTC Model Rule for Adhesives & Sealants.
A summer 2007 hearing is anticipated, with regulation adoption by early 2008. The draft regulation calls for implementation in January 2009.

Emission estimates and reductions resulting from the rule are based on the calculations contained in the OTCMACTEC control measures report of February 2007:
"Identification and Evaluation of Candidate Control Measures: Final Technical Support Document"; MACTEC for OTC; February 28, 2007.
The 2002 point source emissions below match those in CTDEP's 2002 PEI.

COLUMN	COLUMN DESCRIPTIONS
A-F	
G	
H	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
I	SCC-Source Classification Code
J	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
K	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
L	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
M	Summer season percentage from NIF Emission Process (EP) file
N	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
	Total capture/control efficiency from NIF 2002 CE file
	Blank

COLUMN	COLUMN DESCRIPTIONS
O	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
P	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
Q	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
R	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
S	Total capture/control efficiency from NIF 2009 CE file
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental Control Factor (64.4% if uncontrolled, 0% if greater than 85% control system requirment)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW incremental control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

8.02600 0.03380

State							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
CT								Summer Day from Inventory	Summer Day Calculated	Summer Season Percent	Summer Season Percent	2002 Control		Summer Day from Inventory	Summer Day Calculated		2009 OTB/OTW Control Factor	2009 BOTW Incremental Control Factor		Summer Day Calculated		Summer Day	
CT	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	(tpd)	(tpd)	NIF EP	SMOKE	Efficiency	Annual (tpy)	(tpd)	(tpd)	Growth Factor 02 to 09	TOTAL_EFF		Annual (tpy)	(tpd)	Annual (tpy)	(tpd)	Plant Name
CT	Hartford	09003	6484	R0131	01	40200701	2.3630	0.0099	0.010	25.0	25.5	0.00	2.2660	0.0090	0.009	0.984	0.00	64.40	0.81	0.003	1.46	0.006	WASLEY PRODUCTS INC
CT	Hartford	09003	6484	R0132	01	40200701	2.3630	0.0099	0.010	25.0	25.5	0.00	2.2660	0.0090	0.009	0.984	0.00	64.40	0.81	0.003	1.46	0.006	WASLEY PRODUCTS INC
	New Have	09009	3371	R0263	01	40200701	3.1100	0.0130	0.013	29.0	25.5	98.00	2.7080	0.0110	0.011	0.984	98.00	0.00	2.71	0.011	0.00	0.000	SAINT-GOBAIN PPL CORP
	Windham	09015	0647	P0085	01	40200701	0.1900	0.0010	0.001	25.0	25.5	0.00	0.1820	0.0010	0.001	0.984	0.00	64.40	0.06	0.000	0.12	0.001	DELTA RUBBER CO SUB OF NN, INC
	State Totals							**0.0338**						**0.0300**						**0.0178**		**0.0122**	

Step 2: CT Rule likely effective in 2009, with above reductions; No further reductions in 2008; Must include growth to determine 2012 reductions

(Use CT growth factors from emission projection spreadsheet)

	2002	Growth Factors vs 2002			Emissions w/o OTC Measure				Emissions w/ OTC Measure			Reductions due to OTC Measure			
	Summer Day from Inventory	2008	2009	2012	2008	2009	2012	OTC2006 Control Factor	2008	2009	2012	2008	2009	2012	
County	(tpd)														County
Hartford	0.0099	0.97	0.96	0.95	0.01	0.01	0.01	64.4%	0.01	0.00	0.00	0.000	0.006	0.006	Fairfield
Hartford	0.0099	0.97	0.96	0.95	0.01	0.01	0.01	64.4%	0.01	0.00	0.00	0.000	0.006	0.006	Hartford
New Have	0.0130	0.97	0.96	0.95	0.01	0.01	0.01	0.0%	0.01	0.01	0.01	0.000	0.000	0.000	Litchfield
Windham	0.0010	0.97	0.96	0.95	0.00	0.00	0.00	64.4%	0.00	0.00	0.00	0.000	0.001	0.001	Middlesex
State Totals	**0.03**				**0.03**	**0.03**	**0.03**		**0.03**	**0.02**	**0.02**	**0.000**	**0.013**	**0.013**	**State Totals**
SWCT	**0.01**				**0.01**	**0.01**	**0.01**		**0.01**	**0.01**	**0.01**	**0.000**	**0.000**	**0.000**	**SWCT**
GrCT	**0.02**				**0.02**	**0.02**	**0.02**		**0.02**	**0.01**	**0.01**	**0.000**	**0.013**	**0.013**	**GrCT**

Determination of VOC Emission Reductions from CTDEP's Adhesives & Sealants Regulation: Area Sources

CTDEP, in consult with stakeholders, has developed a draft regulation to implement the OTC Model Rule for Adhesives & Sealants.
A summer 2007 hearing is anticipated, with regulation adoption by early 2008. The draft regulation calls for implementation in January 2009.

Emission estimates and reductions resulting from the rule are based on the calculations contained in the OTC/MACTEC control measures report of February 2007:
"Identification and Evaluation of Candidate Control Measures: Final Technical Support Document"; MACTEC for OTC; February 28, 2007.

Most States 2002 PEI did not include the area source portion of emissions for this category. Emission estimates for 2002 from the OTC/MACTEC report (as repeated below) have been added to the CT 2002 PEI in the appropriate spreadsheets.

Step 1: The following excerpt is from the OTC/MACTEC Control Measures report of Feb 28, 2007.

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy:
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-40-020-

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy:
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental Control Factor (percent reduction due to OTC 2006 Control Measure)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

Adhesives and Sealants

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2440020000	441.56	Missing	1.232	Missing	25.4	606.23	Missing	1.692	1.37	0.00	64.40	215.82	0.602	390.41	1.090	Adhesive (Industrial) Application
CT	Hartford	09003	2440020000	423.67	Missing	1.183	Missing	25.4	581.66	Missing	1.624	1.37	0.00	64.40	207.07	0.578	374.59	1.046	Adhesive (Industrial) Application
CT	Litchfield	09005	2440020000	146.19	Missing	0.408	Missing	25.4	200.71	Missing	0.560	1.37	0.00	64.40	71.45	0.199	129.26	0.361	Adhesive (Industrial) Application
CT	Middlesex	09007	2440020000	117.52	Missing	0.328	Missing	25.4	161.34	Missing	0.450	1.37	0.00	64.40	57.44	0.160	103.90	0.290	Adhesive (Industrial) Application
CT	New Haven	09009	2440020000	287.40	Missing	0.802	Missing	25.4	394.58	Missing	1.101	1.37	0.00	64.40	140.47	0.392	254.11	0.709	Adhesive (Industrial) Application
CT	New Londor	09011	2440020000	122.62	Missing	0.342	Missing	25.4	168.35	Missing	0.470	1.37	0.00	64.40	59.93	0.167	108.42	0.303	Adhesive (Industrial) Application
CT	Tolland	09013	2440020000	41.49	Missing	0.116	Missing	25.4	56.97	Missing	0.159	1.37	0.00	64.40	20.28	0.057	36.69	0.102	Adhesive (Industrial) Application
CT	Windham	09015	2440020000	133.65	Missing	0.373	Missing	25.4	183.49	Missing	0.512	1.37	0.00	64.40	65.32	0.182	118.17	0.330	Adhesive (Industrial) Application
	State Total					**4.784**					**6.569**					**2.338**		**4.230**	
	SWCT					**2.36**					**3.24**					**1.15**		**2.09**	
	GrCT					**2.42**					**3.32**					**1.18**		**2.14**	

Step 2: CT Rule likely effective in 2009, with above reductions; No further reductions in 2008; Must include growth to determine 2012 reductions

(Must add 2002 area source adhesive & sealant emissions to CT's 2002 PEI. For post-2002 growth, assume MACTEC 2002-2009 37% growth & interpolat/extrpolate for 2008 & 2012.)

	2002	Growth Factors vs 2002			Uncontrolled Emissions			Controlled Emissions				Reductions from Uncontrolled			
County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	OTC2006 Control Factor	2008	2009	2012	2008	2009	2012	County
Fairfield	1.2325	1.32	1.37	1.53	1.63	1.69	1.89	64.4%	1.63	0.60	0.67	0.00	1.09	1.22	Fairfield
Hartford	1.1825	1.32	1.37	1.53	1.56	1.62	1.81	64.4%	1.56	0.58	0.65	0.00	1.05	1.17	Hartford
Litchfield	0.4080	1.32	1.37	1.53	0.54	0.56	0.63	64.4%	0.54	0.20	0.22	0.00	0.36	0.40	Litchfield
Middlesex	0.3280	1.32	1.37	1.53	0.43	0.45	0.50	64.4%	0.43	0.16	0.18	0.00	0.29	0.32	Middlesex
New Haven	0.8022	1.32	1.37	1.53	1.06	1.10	1.23	64.4%	1.06	0.39	0.44	0.00	0.71	0.79	New Haven
New London	0.3423	1.32	1.37	1.53	0.45	0.47	0.52	64.4%	0.45	0.17	0.19	0.00	0.30	0.34	New London
Tolland	0.1158	1.32	1.37	1.53	0.15	0.16	0.18	64.4%	0.15	0.06	0.06	0.00	0.10	0.11	Tolland
Windham	0.3730	1.32	1.37	1.53	0.49	0.51	0.57	64.4%	0.49	0.18	0.20	0.00	0.33	0.37	Windham
State Totals	**4.78**				**6.31**	**6.57**	**7.33**		**6.31**	**2.34**	**2.61**	**0.00**	**4.23**	**4.72**	**State Totals**
SWCT	**2.36**				**3.12**	**3.24**	**3.62**		**3.12**	**1.15**	**1.29**	**0.00**	**2.09**	**2.33**	**SWCT**
GrCT	**2.42**				**3.20**	**3.32**	**3.71**		**3.20**	**1.18**	**1.32**	**0.00**	**2.14**	**2.39**	**GrCT**

Emission Reductions from ICI Boiler Control Strategy

Step 1:

The following table excerpt is from the OTC/MACTEC spreadsheet "OTC TSD Appendix_E NOx_2009.xls", which includes more detailed calculation steps on how state-by-state reductions were determined for the OTC ICI Boiler strategy. Also see the Feb 2007 OTC/MACTEC final TSD "Identification and Evaluation of Candidate Control Measures" (Sec 4.6).

	ICI Boilers (minor/area) NOx Emissions (tpd)				ICI Boilers (major/point) NOx Emissions (tpd)				
State	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2009 Total Benefit
CT	8.9	9.4	6.5	**2.8**	5.8	5.6	3.5	**2.1**	**4.9**

Step 2:

As of this writing (May 14, 2007), there is much uncertainty about the timing and limits that CTDEP will adopt into the Sec 22a-174-22 NOx regulation revision currently under consideration. The goal is to replicate the OTC recommendations as closely as possible. However, given the uncertainty at this point, CTDEP has elected to apply both an 80% rule penetration (RP) and 80% rule effectiveness (RE) adjustment to the above OTC emission reduction estimates (i.e., 64% of the OTC -estimated reduction will be used for both area source and point source ICI boilers. Reductions will be assumed to occur starting in 2009. Although CTDEP's uncontrolled ICI estimates include activity growth through 2012, the level of emission reductions in 2012 will be assumed to be the same as for 2009. Redcutions will be assigned to each nonattainment area based on the proportion of uncontrolled NOx emissions from the ICI sector from the earlier worksheets for each year.

	OTC-Calculated 2009 Benefit (tpd)	CTDEP Assumed Rule Penetration	CTDEP Assumed Rule Effectiveness	CTDEP Assumed 2009 Benefit (tpd)	CTDEP Assumed 2012 Benefit (tpd)		
Area	2.8	80%	80%	**1.8**	**1.8**	Statewide	Area
				0.9	**0.9**	SWCT	Area
				0.9	**0.9**	GrCT	Area

	OTC-Calculated 2009 Benefit (tpd)	CTDEP Assumed Rule Penetration	CTDEP Assumed Rule Effectiveness	CTDEP Assumed 2009 Benefit (tpd)	CTDEP Assumed 2012 Benefit (tpd)		
Point	2.1	80%	80%	**1.3**	**1.3**	Statewide	Point
				0.8	**0.8**	SWCT	Point
				0.5	**0.5**	GrCT	Point