

APPENDIX F

OTC NO_x EMISSION REDUCTION MOU AND CALCULATION OF NO_x EMISSION REDUCTIONS FROM STATIONARY SOURCES

NOx Reductions in Tons/Day

State	1996	1999	2005
RACT	65.862	67.579	69.781
RACT + OTC Phase II	****	243.912	253.228
RACT + OTC Phase II + OTC Phase III	****	****	299.259
RACT	65.862	67.579	69.781
OTC Phase II	****	176.333	183.446
OTC Phase III	****	****	46.032

Baltimore NAA	1996	1999	2005
RACT	4.686	4.827	5.005
RACT + OTC Phase II	****	92.072	96.859
RACT + OTC Phase II + OTC Phase III	****	****	113.450
RACT	4.686	4.827	5.005
OTC Phase II	****	87.244	91.854
OTC Phase III	****	****	16.591

MD - Washington NAA	1996	1999	2005
RACT	61.175	62.752	64.777
RACT + OTC Phase II	****	151.840	156.369
RACT + OTC Phase II + OTC Phase III	****	****	185.809
RACT	61.175	62.752	64.777
OTC Phase II	****	89.088	91.592
OTC Phase III	****	****	29.440

NOx Reductions in Tons/Day

NOx RACT	Plant	Point	Emis. Rate	Emis. Limit	% Redn.	1996 Emis.	1996 Redn.	1996 Cntrl.	Notes
003-0014	BGE Wagner	1	1.180			34.489	0.000	34.489	No RACT Reductions
003-0014	BGE Wagner	2				0.122	0.000	0.122	Not included in OTC 1990 Baseline Inventory
003-0014	BGE Wagner	3	0.550		0.000	12.389	0.000	12.389	No RACT Reductions
003-0014	BGE Wagner	4	0.310		0.000	4.794	0.000	4.794	No RACT Reductions
003-0014	BGE Wagner	5	0.820	0.600	0.268	10.739	2.881	7.858	Emission Limit Estimate
003-0468	BGE Brandon Shores	1	0.419		0.000	34.647	0.000	34.647	No RACT Reductions
003-0468	BGE Brandon Shores	2	0.080			0.000		0.080	Not included in OTC 1990 Baseline Inventory
003-0468	BGE Brandon Shores	3	0.080			0.000		0.080	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	1	0.390		0.000	0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	2	0.390		0.000	0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	3	0.390		0.000	0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	4	0.390		0.000	0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	5	0.390		0.000	0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	6	0.390		0.000	0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	7	0.390		0.000	0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	8	0.390		0.000	0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	9	0.140			0.004	0.000	0.004	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	10	0.140			0.004	0.000	0.004	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	11	0.140			0.003	0.000	0.003	Not included in OTC 1990 Baseline Inventory
005-0078	BGE Riverside	1	0.490			0.224	0.000	0.224	Baseline - Unaffected
005-0078	BGE Riverside	2	0.630			0.224	0.000	0.224	Baseline - Unaffected
005-0078	BGE Riverside	3	0.450	0.400	0.111	1.814	0.202	1.612	Emission Limit Estimate
005-0078	BGE Riverside	4	0.530			1.654	0.000	1.654	Retired
005-0078	BGE Riverside	5	0.452			1.962	0.000	1.962	Retired
005-0078	BGE Riverside	6	0.451			2.887	0.000	2.887	Retired
005-0078	BGE Riverside	7	0.451			2.267	0.000	2.267	Retired
005-0078	BGE Riverside	8	0.400			0.660	0.000	0.660	Baseline - Unaffected
005-0079	BGE Crane	1				0.298	0.000	0.298	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	2				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	3				0.008	0.000	0.008	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	4				0.009	0.000	0.009	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	5	1.200		0.000	21.908	0.000	21.908	No RACT Reductions
005-0079	BGE Crane	6	1.340		0.000	21.833	0.000	21.833	No RACT Reductions
005-0079	BGE Crane	7				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	8				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	9				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	1	0.947	0.700	0.261	51.988	13.560	38.428	Measured CEM Data
017-0014	PEPCO Morgantown	2	0.947	0.700	0.261	51.688	13.481	38.207	Measured CEM Data
017-0014	PEPCO Morgantown	3				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	4				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	5				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	6				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	7	0.790			0.405	0.000	0.405	Baseline - Unaffected
017-0014	PEPCO Morgantown	8	0.710			0.401	0.000	0.401	Baseline - Unaffected
017-0014	PEPCO Morgantown	9	0.710			2.011	0.000	2.011	Baseline - Unaffected
017-0014	PEPCO Morgantown	10	0.710			1.924	0.000	1.924	Baseline - Unaffected
017-0014	PEPCO Morgantown	11	0.710			1.986	0.000	1.986	Baseline - Unaffected
017-0014	PEPCO Morgantown	12	0.710			1.994	0.000	1.994	Baseline - Unaffected
025-0024	BGE Perryman	1	0.490			0.701	0.000	0.701	Baseline - Unaffected
025-0024	BGE Perryman	2	0.490			0.701	0.000	0.701	Baseline - Unaffected
025-0024	BGE Perryman	3	0.490			0.932	0.000	0.932	Baseline - Unaffected
025-0024	BGE Perryman	4	0.490			0.932	0.000	0.932	Baseline - Unaffected
031-0019	PEPCO Dickerson	1	0.649	0.605	0.068	12.218	0.828	11.389	Measured CEM Data
031-0019	PEPCO Dickerson	2	0.699	0.655	0.063	12.662	0.797	11.865	Measured CEM Data
031-0019	PEPCO Dickerson	3	0.698	0.650	0.069	13.375	0.920	12.456	Measured CEM Data
031-0019	PEPCO Dickerson	4				0.305	0.000	0.305	Not included in OTC 1990 Baseline Inventory
031-0019	PEPCO Dickerson	5				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	1	1.240	0.744	0.400	39.029	15.612	23.417	Measured CEM Data
033-0014	PEPCO Chalk Point	2	1.230	0.744	0.395	40.437	15.978	24.459	Measured CEM Data
033-0014	PEPCO Chalk Point	5				0.066	0.000	0.066	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	6	0.910			0.486	0.000	0.486	Baseline - Unaffected
033-0014	PEPCO Chalk Point	7	0.255			11.325	0.000	11.325	No RACT Reductions
033-0014	PEPCO Chalk Point	8	0.245			10.409	0.000	10.409	No RACT Reductions
033-0014	PEPCO Chalk Point	9	1.120			0.359	0.000	0.359	Baseline - Unaffected
033-0014	PEPCO Chalk Point	10				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	11				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	12				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	13				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
510-0006	BGE Westport	1	0.270			0.049	0.000	0.049	Not included in OTC 1990 Baseline Inventory
510-0006	BGE Westport	2	0.550			0.000	0.000	0.000	Retired
510-0006	BGE Westport	3	0.550			0.000	0.000	0.000	Retired
510-0006	BGE Westport	4	0.397			0.000	0.000	0.000	Retired
510-0007	BGE Gould Street	2	0.300	0.300	0.000	2.699	0.000	2.699	No RACT Reductions
510-0265	BGE Philadelphia Road	1	0.490			0.321	0.000	0.321	Baseline - Unaffected
510-0265	BGE Philadelphia Road	2	0.490			0.321	0.000	0.321	Baseline - Unaffected
510-0265	BGE Philadelphia Road	3	0.490			0.294	0.000	0.294	Baseline - Unaffected
510-0265	BGE Philadelphia Road	4	0.490			0.294	0.000	0.294	Baseline - Unaffected
027-0223	Transcontinental Pipeline				0.230	6.973	1.604	5.369	MDE Enforcement Estimate
						1996 Emis.	1996 Redns.	1996 Cntrl.	Total
						422.472	65.862	356.610	
						168.939	4.686	164.253	Total Baltimore NAA
						253.533	61.175	192.357	Total MD portion of the Washington NAA

NOx Phase II Reductions in Tons/Day

NOx Phase II		Point	Emis. Rate	Emis. Limit	% Redn.	1999 Emis.	1999 Redn.	1999 Cntrld.	Notes
003-0014	BGE Wagner	1	1.180	0.413	0.650	36.047	23.431	12.617	Emission limit estimate
003-0014	BGE Wagner	2				0.122	0.000	0.122	Not included in OTC 1990 Baseline Inventory
003-0014	BGE Wagner	3	0.550	0.200	0.636	13.030	8.292	4.738	Emission limit estimate
003-0014	BGE Wagner	4	0.310	0.200	0.355	4.794	1.701	3.093	BGE's Correction 8/8/96
003-0014	BGE Wagner	5	0.806	0.282	0.650	11.224	7.297	3.927	Emission limit estimate
003-0468	BGE Brandon Shores	1	0.420	0.200	0.524	36.213	18.969	17.244	No Phase II Reductions
003-0468	BGE Brandon Shores	2				0.080	0.000	0.080	Not included in OTC 1990 Baseline Inventory
003-0468	BGE Brandon Shores	3				0.080	0.000	0.080	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	1	0.390			0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	2	0.390			0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	3	0.390			0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	4	0.390			0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	5	0.390			0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	6	0.390			0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	7	0.390			0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	8	0.390			0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	9	0.140			0.004	0.000	0.004	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	10	0.140			0.004	0.000	0.004	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	11	0.140			0.003	0.000	0.003	Not included in OTC 1990 Baseline Inventory
005-0078	BGE Riverside	1	0.490			0.236	0.000	0.236	Baseline - Unaffected
005-0078	BGE Riverside	2	0.630			0.236	0.000	0.236	Baseline - Unaffected
005-0078	BGE Riverside	3	0.450	0.200	0.556	1.908	1.060	0.848	Emission limit estimate
005-0078	BGE Riverside	4	0.530			1.739	0.000	1.739	Retired
005-0078	BGE Riverside	5	0.452			2.063	0.000	2.063	Retired
005-0078	BGE Riverside	6	0.451			3.036	0.000	3.036	Retired
005-0078	BGE Riverside	7	0.451			2.384	0.000	2.384	Retired
005-0078	BGE Riverside	8	0.400			0.695	0.000	0.695	Baseline - Unaffected
005-0079	BGE Crane	1				0.298	0.000	0.298	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	2				0.000	0.000	0.000	Retired
005-0079	BGE Crane	3				0.008	0.000	0.008	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	4				0.009	0.000	0.009	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	5	1.194	0.418	0.650	22.899	14.882	8.016	Emission limit estimate
005-0079	BGE Crane	6	1.332	0.466	0.650	22.820	14.836	7.984	Emission limit estimate
005-0079	BGE Crane	7				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	8				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	9				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	1	0.947	0.331	0.650	51.988	33.817	18.171	Emission limit estimate
017-0014	PEPCO Morgantown	2	0.947	0.331	0.650	51.688	33.622	18.066	Emission limit estimate
017-0014	PEPCO Morgantown	3				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	4				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	5				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	6				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	7	0.790			0.405	0.000	0.405	Baseline - Unaffected
017-0014	PEPCO Morgantown	8	0.710			0.401	0.000	0.401	Baseline - Unaffected
017-0014	PEPCO Morgantown	9	0.710			2.011	0.000	2.011	Baseline - Unaffected
017-0014	PEPCO Morgantown	10	0.710			1.924	0.000	1.924	Baseline - Unaffected
017-0014	PEPCO Morgantown	11	0.710			1.986	0.000	1.986	Baseline - Unaffected
017-0014	PEPCO Morgantown	12	0.710			1.994	0.000	1.994	Baseline - Unaffected
025-0024	BGE Perryman	1	0.490			0.737	0.000	0.737	Baseline - Unaffected
025-0024	BGE Perryman	2	0.490			0.737	0.000	0.737	Baseline - Unaffected
025-0024	BGE Perryman	3	0.490			0.980	0.000	0.980	Baseline - Unaffected
025-0024	BGE Perryman	4	0.490			0.980	0.000	0.980	Baseline - Unaffected
031-0019	PEPCO Dickerson	1	0.649	0.227	0.650	12.782	8.311	4.471	Emission limit estimate
031-0019	PEPCO Dickerson	2	0.699	0.245	0.650	13.247	8.613	4.634	Emission limit estimate
031-0019	PEPCO Dickerson	3	0.698	0.244	0.650	13.993	9.101	4.892	Emission limit estimate
031-0019	PEPCO Dickerson	4				0.305	0.000	0.305	Not included in OTC 1990 Baseline Inventory
031-0019	PEPCO Dickerson	5				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	1	1.240	0.434	0.650	40.832	26.540	14.291	Target Level OTC Phase II from OTC Baseline
033-0014	PEPCO Chalk Point	2	1.230	0.431	0.650	42.304	27.481	14.824	Target Level OTC Phase II from OTC Baseline
033-0014	PEPCO Chalk Point	5				0.066	0.000	0.066	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	6	0.910			0.486	0.000	0.486	Baseline - Unaffected
033-0014	PEPCO Chalk Point	7	0.255	0.200	0.216	11.325	2.443	8.882	Emission limit estimate
033-0014	PEPCO Chalk Point	8	0.245	0.200	0.184	10.409	1.912	8.497	Emission limit estimate
033-0014	PEPCO Chalk Point	9	1.120			0.359	0.000	0.359	Baseline - Unaffected
033-0014	PEPCO Chalk Point	10				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	11				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	12				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	13				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
510-0006	BGE Westport	1	0.270	0.270		0.049	0.000	0.049	No Phase II Reductions
510-0006	BGE Westport	2	0.550			0.000	0.000	0.000	Retired
510-0006	BGE Westport	3	0.550			0.000	0.000	0.000	Retired
510-0006	BGE Westport	4	0.397			0.000	0.000	0.000	Retired
510-0007	BGE Gould Street	2	0.300	0.300	0.000	2.839	0.000	2.839	No Phase II Reductions
510-0265	BGE Philadelphia Road	1	0.490			0.338	0.000	0.338	Baseline - Unaffected
510-0265	BGE Philadelphia Road	2	0.490			0.338	0.000	0.338	Baseline - Unaffected
510-0265	BGE Philadelphia Road	3	0.490			0.309	0.000	0.309	Baseline - Unaffected
510-0265	BGE Philadelphia Road	4	0.490			0.309	0.000	0.309	Baseline - Unaffected
027-0223	Transcontinental Pipeline				0.230	6.973	1.604	5.369	MDE Enforcement Estimate
						1999 Emis.	1999 Redns.	1999 Cntrld.	
						435.113	243.912	191.201	Total
						176.143	92.072	84.072	Total Baltimore NAA
						258.969	151.840	107.129	Total MD portion of the Washington NAA

NOx Phase III Reductions in Tons/Day

NOx Phase III		Point	Emis. Rate	Emis. Limit	% Redcn.	2005 Emis.	2005 Redcn.	2005 Cntrld.	Notes
003-0014	BGE Wagner	1	1.180	0.295	0.750	38.101	28.576	9.525	Emission limit estimate
003-0014	BGE Wagner	2				0.122	0.000	0.122	Not included in OTC 1990 Baseline Inventory
003-0014	BGE Wagner	3	0.550	0.150	0.727	13.397	9.743	3.654	Emission limit estimate
003-0014	BGE Wagner	4	0.310	0.150	0.516	4.794	2.474	2.320	Emission limit estimate
003-0014	BGE Wagner	5	0.820	0.205	0.750	11.864	8.898	2.966	Emission limit estimate
003-0468	BGE Brandon Shores	1	0.420	0.150	0.643	38.276	24.606	13.670	Emission limit estimate
003-0468	BGE Brandon Shores	2				0.080	0.000	0.080	Not included in OTC 1990 Baseline Inventory
003-0468	BGE Brandon Shores	3				0.080	0.000	0.080	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	1	0.390			0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	2	0.390			0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	3	0.390			0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	4	0.390			0.201	0.000	0.201	Baseline - Unaffected
005-0076	BGE Notchcliff	5	0.390			0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	6	0.390			0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	7	0.390			0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	8	0.390			0.204	0.000	0.204	Baseline - Unaffected
005-0076	BGE Notchcliff	9	0.140			0.003	0.000	0.003	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	10	0.140			0.003	0.000	0.003	Not included in OTC 1990 Baseline Inventory
005-0076	BGE Notchcliff	11	0.140			0.003	0.000	0.003	Not included in OTC 1990 Baseline Inventory
005-0078	BGE Riverside	1	0.490			0.242	0.000	0.242	Baseline - Unaffected
005-0078	BGE Riverside	2	0.630			0.242	0.000	0.242	Baseline - Unaffected
005-0078	BGE Riverside	3	0.450	0.150	0.667	1.961	1.307	0.654	Emission limit estimate
005-0078	BGE Riverside	4	0.530			1.788	0.000	1.788	Retired
005-0078	BGE Riverside	5	0.452			2.121	0.000	2.121	Retired
005-0078	BGE Riverside	6	0.451			3.122	0.000	3.122	Retired
005-0078	BGE Riverside	7	0.451			2.451	0.000	2.451	Retired
005-0078	BGE Riverside	8	0.400	0.400	0.000	0.714	0.000	0.714	Baseline - Unaffected
005-0079	BGE Crane	1				0.298	0.000	0.298	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	2				0.000	0.000	0.000	Retired
005-0079	BGE Crane	3				0.008	0.000	0.008	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	4				0.009	0.000	0.009	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	5	1.200	0.300	0.750	24.203	18.152	6.051	Emission limit estimate
005-0079	BGE Crane	6	1.340	0.335	0.750	24.120	18.090	6.030	Emission limit estimate
005-0079	BGE Crane	7				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	8				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
005-0079	BGE Crane	9				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	1	0.947	0.237	0.750	51.988	38.977	13.011	Emission limit estimate
017-0014	PEPCO Morgantown	2	0.947	0.237	0.750	51.688	38.752	12.936	Emission limit estimate
017-0014	PEPCO Morgantown	3				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	4				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	5				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	6				0.028	0.000	0.028	Not included in OTC 1990 Baseline Inventory
017-0014	PEPCO Morgantown	7	0.790			0.405	0.000	0.405	Baseline - Unaffected
017-0014	PEPCO Morgantown	8	0.710			0.401	0.000	0.401	Baseline - Unaffected
017-0014	PEPCO Morgantown	9	0.710			2.011	0.000	2.011	Baseline - Unaffected
017-0014	PEPCO Morgantown	10	0.710			1.924	0.000	1.924	Baseline - Unaffected
017-0014	PEPCO Morgantown	11	0.710			1.986	0.000	1.986	Baseline - Unaffected
017-0014	PEPCO Morgantown	12	0.710			1.994	0.000	1.994	Baseline - Unaffected
025-0024	BGE Perryman	1	0.490			0.758	0.000	0.758	Baseline - Unaffected
025-0024	BGE Perryman	2	0.490			0.758	0.000	0.758	Baseline - Unaffected
025-0024	BGE Perryman	3	0.490			1.008	0.000	1.008	Baseline - Unaffected
025-0024	BGE Perryman	4	0.490			1.008	0.000	1.008	Baseline - Unaffected
031-0019	PEPCO Dickerson	1	0.649	0.162	0.750	13.506	10.135	3.371	Emission limit estimate
031-0019	PEPCO Dickerson	2	0.699	0.175	0.750	13.998	10.494	3.505	Emission limit estimate
031-0019	PEPCO Dickerson	3	0.698	0.175	0.750	14.786	11.090	3.697	Emission limit estimate
031-0019	PEPCO Dickerson	4				0.305	0.000	0.305	Not included in OTC 1990 Baseline Inventory
031-0019	PEPCO Dickerson	5				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	1	1.240	0.310	0.750	43.147	32.360	10.787	Emission limit estimate
033-0014	PEPCO Chalk Point	2	1.230	0.308	0.750	44.703	33.509	11.194	Emission limit estimate
033-0014	PEPCO Chalk Point	5				0.066	0.000	0.066	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	6	0.910			0.486	0.000	0.486	Baseline - Unaffected
033-0014	PEPCO Chalk Point	7	0.290	0.150	0.483	11.325	5.467	5.857	Emission limit estimate
033-0014	PEPCO Chalk Point	8	0.290	0.150	0.483	10.409	5.025	5.384	Emission limit estimate
033-0014	PEPCO Chalk Point	9	1.120			0.359	0.000	0.359	Baseline - Unaffected
033-0014	PEPCO Chalk Point	10				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	11				0.000	0.000	0.000	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	12				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
033-0014	PEPCO Chalk Point	13				0.117	0.000	0.117	Not included in OTC 1990 Baseline Inventory
510-0006	BGE Westport	1	0.270	0.270	0.000	0.049	0.000	0.049	Not included in OTC 1990 Baseline Inventory
510-0006	BGE Westport	2	0.140			0.000	0.000	0.000	Retired
510-0006	BGE Westport	3	0.400			0.000	0.000	0.000	Retired
510-0006	BGE Westport	4	0.620			0.000	0.000	0.000	Retired
510-0007	BGE Gould Street	2	0.300	0.300	0.000	2.919	0.000	2.919	BGE's Corrections - 8/8/96
510-0265	BGE Philadelphia Road	1	0.490			0.347	0.000	0.347	Baseline - Unaffected
510-0265	BGE Philadelphia Road	2	0.490			0.347	0.000	0.347	Baseline - Unaffected
510-0265	BGE Philadelphia Road	3	0.490			0.318	0.000	0.318	Baseline - Unaffected
510-0265	BGE Philadelphia Road	4	0.490			0.318	0.000	0.318	Baseline - Unaffected
027-0223	Transcontinental Pipeline				0.230	6.973	1.604	5.369	MDE Enforcement Estimate
						2005 Emis.	2005 Redcn.	2005 Cntrld.	
						450.381	299.259	151.121	Total
						184.380	113.450	70.930	Total Baltimore NAA
						265.953	185.809	80.143	Total MD portion of the Washington NAA

OZONE TRANSPORT COMMISSION

Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, District of Columbia

Bruce S. Carhart, Executive Director
444 N. Capitol Street, N.W., Suite 604 • Washington, D.C. 20001

Phone: (202) 508-3840
Fax: (202) 508-3841

FOR IMMEDIATE RELEASE
TUESDAY, SEPTEMBER 27, 1994

For further information, contact:
Bruce S. Carhart, Executive Director
(202) 508-3840

OTC AGREES TO MAKE MAJOR CUTS IN EMISSIONS FROM POWER PLANTS AND OTHER SOURCES TO IMPROVE REGIONAL AIR QUALITY

(Newport, Rhode Island) The Ozone Transport Commission (OTC) today initiated a major agreement to cut the emissions of power plants and other major stationary sources of pollution throughout the Northeast and Mid-Atlantic States.

The agreement, in the form of a Memorandum of Understanding (MOU), recognizes that further reductions in nitrogen oxides (NOx) emissions are needed to enable the entire Ozone Transport Region (OTR) to meet health-based ozone ambient standards. According to this agreement, the regional program will reduce NOx emissions from power plants and other sources, and would be implemented in conjunction with other measures States have taken to control ozone pollution.

"The OTC has today produced a balanced agreement that will produce major benefits for air quality, while at the same time allowing for fine tuning of control requirements as new scientific studies are completed," said Arthur A. Davis, OTC Chair and Secretary of the Pennsylvania Department of Environmental Resources.

The agreement is a phased approach to controlling emissions of nitrogen oxides (NOx) from power plants and other large fuel combustion sources. The first phase (known as Phase II because one phase of emission reductions, known as Reasonably Available Control Technology (RACT) has already been initiated), to be implemented in May 1999, would include three control zones in the region: an inner zone ranging from the Washington, DC, metropolitan area northeast to southeastern New Hampshire; an outer zone ranging out from the inner zone to western Pennsylvania; and a northern zone which includes much of northern New York and northern New England, including most of New Hampshire.

Control requirements vary with the zone in which sources are located, but the most stringent requirements are in the inner zone. The next phase (known as Phase III) includes additional pollution reductions and the equalization of control requirements in the inner and outer zones. New scientific data and modeling studies however could provide the basis for a modified plan. These pollution reductions would be initiated in May 2003.

This agreement is particularly noteworthy because of the upcoming Clean Air Act deadline for States to submit plans by November 15, 1994, which demonstrate how they are to achieve compliance with health-based air quality standards for ozone. The OTC has worked

OTC Agrees to Make Major Cuts in Emissions
September 27, 1994
Add one

together over the last several years to develop a regional strategy for ozone reduction, covering both stationary sources, such as power plants, and mobile sources, such highway motor vehicles.

In February, the OTC recommended to the Environmental Protection Agency (EPA) that a regional Low Emission Vehicle (LEV) program be implemented to reduce motor vehicle emissions. EPA recently proposed approval of this recommendation, and must complete final action by November 10, 1994, in time for the States to submit their ozone control plans.

The Ozone Transport Commission was created by the Clean Air Act Amendments of 1990 to coordinate the regional development of control plans for ground level ozone (the primary constituent in smog) in the Northeast and Mid-Atlantic States. Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia are represented on the OTC.

**MEMORANDUM OF UNDERSTANDING
AMONG THE STATES OF THE OZONE TRANSPORT COMMISSION
ON DEVELOPMENT OF A REGIONAL STRATEGY CONCERNING THE CONTROL OF
STATIONARY SOURCE NITROGEN OXIDE EMISSIONS**

WHEREAS, the States of the Ozone Transport Commission (OTC) face a pervasive problem in their efforts to attain the National Ambient Air Quality Standard (NAAQS) for ozone; and

WHEREAS, a 1991 National Academy of Sciences study on ground-level ozone indicates that a combination of reductions in emissions of volatile organic compounds (VOCs) and nitrogen oxides (NOx) will be necessary to bring the entire Ozone Transport Region (OTR) into attainment by the statutory attainment dates; and

WHEREAS, modeling and other studies confirm that NOx emission reductions are effective in reducing ozone formation and help to reduce ozone transport; and

WHEREAS, the States of the OTC are requiring major stationary sources of NOx to implement reasonably available control technology (RACT); and

WHEREAS, by November 15, 1994, the States must submit attainment demonstrations to EPA as State Implementation Plan (SIP) revisions; and

WHEREAS, the implementation of RACT for the control of NOx emissions will not be sufficient to enable all States in the OTR to reach attainment; and

WHEREAS, the undersigned States seek to develop an effective regional program to reduce NOx emissions, which would be implemented in conjunction with other measures to control ozone precursors (including state-specific measures, regional measures and Federal measures required under the Clean Air Act); and

WHEREAS, these measures together may enable EPA to approve the States' SIPs and refrain from imposing sanctions that could restrict economic growth throughout the OTR; and

WHEREAS, information that the States have collected in their emissions inventories shows that large boilers and other large indirect heat exchangers are the source of a substantial portion of the NOx emissions in the States, and will continue to be so after they implement RACT;

WHEREAS, the States intend to complete a reevaluation of stationary source controls for 2003 and beyond in 1997, based on results of EPA-approved models and other relevant technical data;

THEREFORE, the undersigned member States hereby agree to propose regulations and/or legislation for the control of NOx emission from boilers and other indirect heat exchangers with a maximum gross heat input rate of at least 250 million BTU per hour; and

FURTHERMORE, that the States agree to propose regulations that reflect the difference in conditions in (i) the OTR's "Northern Zone" consisting of the northern portion of the OTR; (ii) the OTR's "Inner Zone" consisting of the central eastern portion of the OTR; and (iii) the OTR's "Outer Zone" consisting of the remainder of the OTR; and

FURTHERMORE, that to establish a credible emissions budget, the States agree to propose regulations that require enforceable specific reductions in NOx emissions from the actual 1990 emissions set forth in each State's 1990 inventory submitted to EPA in compliance with § 182(a) (1) of the Clean Air Act or in a similar emissions inventory prepared for each attainment area (provided that for exceptional circumstances that a more representative base year may be applied to individual sources in a manner acceptable to EPA) subject to public notice; and

FURTHERMORE, that the States agree to develop a budget in a manner acceptable to EPA based on the principles above no later than March 1, 1995; and

FURTHERMORE, if such a budget is not developed by March 1, 1995, that the 1990 interim inventory used by EPA in its Regional Oxidant Model simulations for the 1994 OTC Fall Meeting will be used for the budget; and

FURTHERMORE, that the States agree to propose regulations that require subject sources in the Inner Zone to reduce their rate of NOx emissions by 65 percent from base year levels by May 1, 1999, or to emit NOx at a rate no greater than 0.2 pounds per million BTU; and

FURTHERMORE, that the States agree to propose regulations that require subject sources in the Outer Zone to reduce their rate of NOx emissions by 55 percent from base year levels by May 1, 1999, or to emit NOx at a rate no greater than 0.2 pounds per million BTU; and

FURTHERMORE, that the States agree to propose regulations that require sources in the Inner Zone and the Outer Zone to reduce their rate of NOx emissions by 75 percent from base year levels by May 1, 2003, or to emit NOx at a rate no greater than 0.15 pounds per million BTU; and

FURTHERMORE, that the States agree to propose regulations that require subject sources in the Northern Zone to reduce their rate of NOx emissions by 55 percent from base year levels by May 1, 2003, or to emit NOx at a rate no greater than 0.2 pounds per million BTU; and

FURTHERMORE, that the States agree to develop a regionwide trading mechanism in consultation with EPA; and

FURTHERMORE, that in lieu of proposing the regulations described above, a State may propose regulations that achieve an equivalent reduction in stationary source NOx emissions in an equitable manner; and

FURTHERMORE, that the regulations for May 1, 2003 described above may be modified if (i) additional modeling and other scientific analysis shows that the regulations as modified, together with regulations governing VOC emissions, will achieve attainment of the ozone NAAQS across the OTR, and (ii) this Memorandum of Understanding is modified to reflect those modeling results and other analysis no later than December 31, 1998; and

FURTHERMORE, that the States agree to propose regulations that are otherwise consistent with the attached recommendations of the OTC's Stationary/Area Source Committee; and

FURTHERMORE, that the undersigned States agree to request that the EPA Administrator determine whether the SIPs of States outside the OTR contain adequate provisions to prohibit the emission of air pollutants in amounts that will contribute significantly to nonattainment of a National Ambient Air Quality Standard (NAAQS) within the OTR, as required under 42 U.S.C. Section 110(a)(2)(D).

Signed this 27th day of September, 1994 by the following:

CONNECTICUT: Timothy R. Gunning

DELAWARE: Richard H. Colson

DISTRICT OF COLUMBIA: Fernal D. Bishop

MAINE: Harold H. Gault

MARYLAND: Samuel Q

MASSACHUSETTS: Ray Cox

NEW HAMPSHIRE: Robert W. V

NEW JERSEY: Robert S. L.

NEW YORK: Harold M. West

PENNSYLVANIA: Arthur A. Fani

RHODE ISLAND: M. J.

VERMONT: Jack King

VIRGINIA: _____

Figure 1
Northeast Ozone Transport Region
Ozone Nonattainment Areas

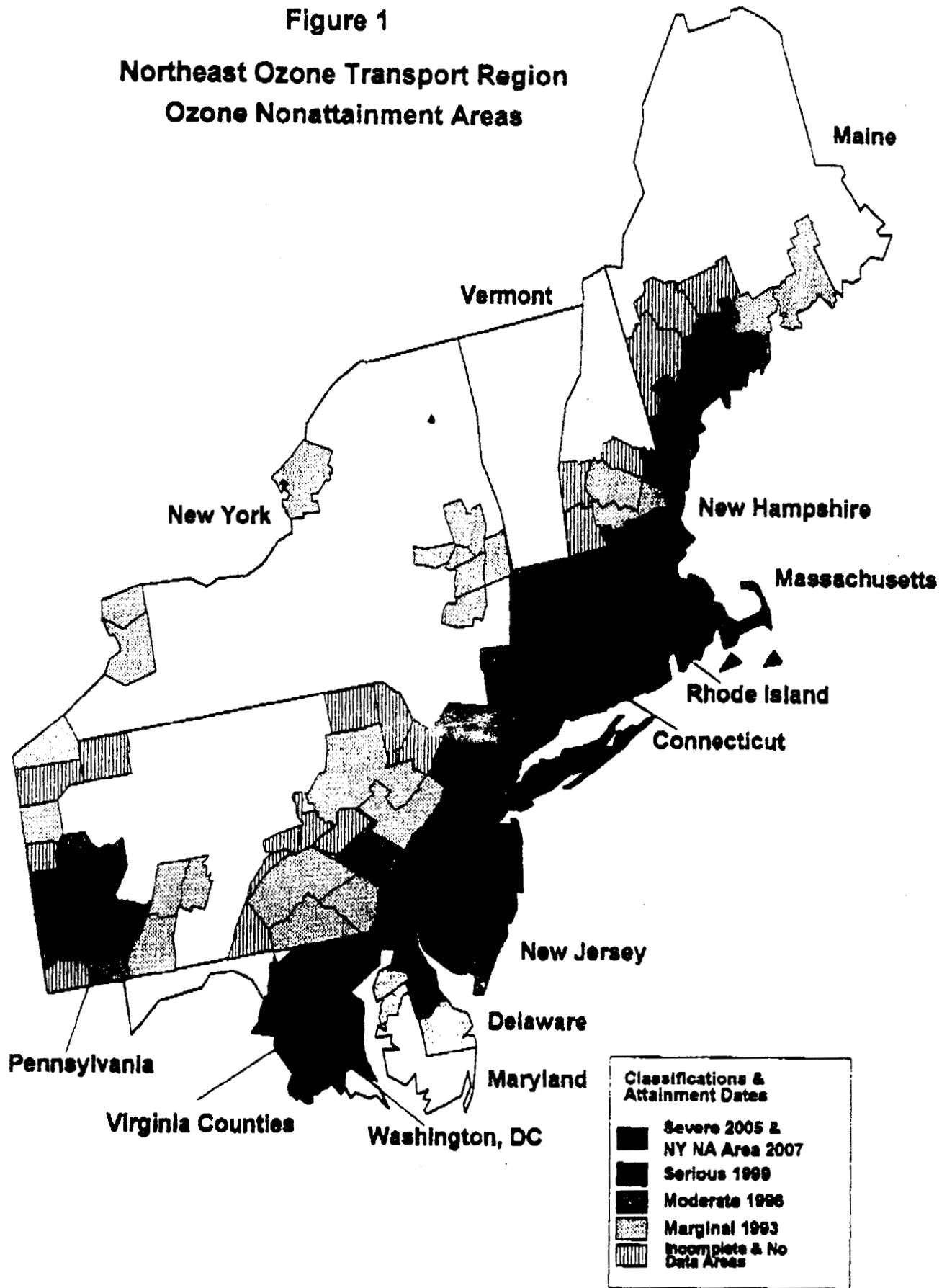
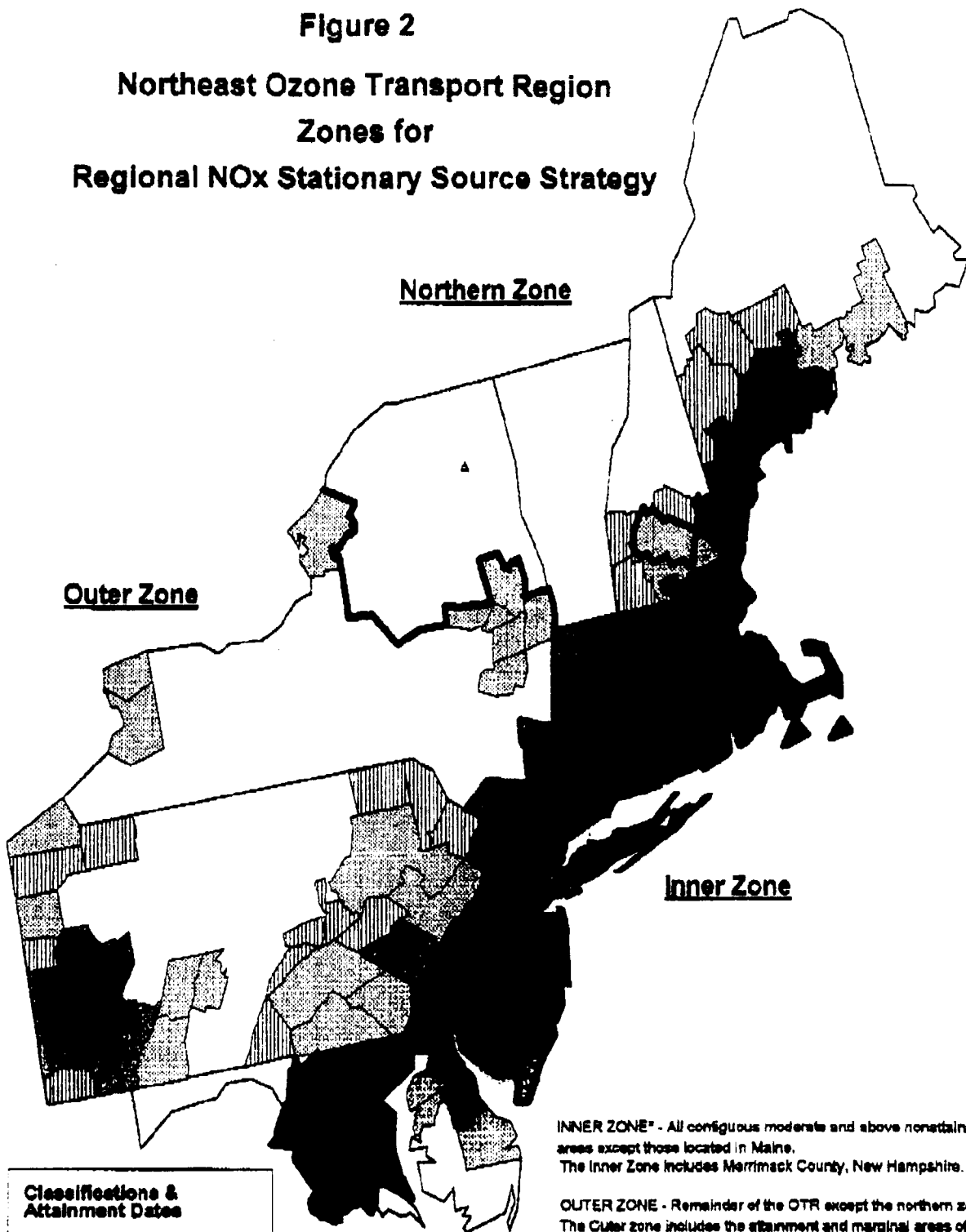


Figure 2
Northeast Ozone Transport Region
Zones for
Regional NOx Stationary Source Strategy



Classifications & Attainment Dates	
	Severe 2005 & NY NA Area 2007
	Serious 1999
	Moderate 1996
	Marginal 1993
	Incomplete & No Data Areas

INNER ZONE* - All contiguous moderate and above nonattainment areas except those located in Maine. The Inner Zone includes Merrimack County, New Hampshire.

OUTER ZONE - Remainder of the OTR except the northern zone. The Outer zone includes the attainment and marginal areas of southern Delaware and southern Maryland.

NORTHERN ZONE - Maine, Vermont and New Hampshire (except for its moderate and above nonattainment areas), and the northeastern attainment portion of New York

* The Inner zone is based on existing attainment designations. If an area is redesignated attainment, it remains in the Inner zone. However, if contiguous marginal areas are "bumped up" to moderate status, they become a part of the Inner zone.

**OTC STATIONARY/AREA SOURCE COMMITTEE
PROPOSED REGIONAL NO_x STRATEGY FOR STATIONARY
SOURCES
IN SUPPORT OF
1994 STATE IMPLEMENTATION PLANS**

I. Summary of the Regional Strategy

A. General Description of the Strategy

On March 10, 1992, the Ozone Transport Commission (OTC) adopted a Memorandum of Understanding (MOU) committing to Reasonably Available Control Technology (RACT) on major stationary sources of nitrogen oxides (NO_x). As a part of that MOU, the OTC anticipated "additional controls capable of meeting a performance standard based on advanced control technology (to) be incorporated in 1994 SIP revisions for implementation by May 1999."

In its 1994 Annual Meeting on May 10, 1994, the OTC reiterated its commitment to develop a strategy for additional controls on NO_x for major stationary sources for the 1994 SIP revisions. At that time the OTC focused on its full meeting scheduled for September 27, 1994, as the time to make a decision on this strategy. An additional MOU documenting this plan was then developed and approved.

This paper represents the strategy proposed by the OTC Stationary/Area Source Committee for adoption by the OTC as a part of its regional strategy for the 1994 SIP revisions. The strategy presented here would require further reductions in NO_x emissions from large fossil fuel fired boilers and indirect heat exchangers and may limit emissions from smaller sources within the Ozone Transport Region in a two step process. Phase II (i.e. initial reductions beyond RACT) will require reductions by May 1, 1999 and a specific phase III reduction by May 1, 2003. Phase III would require further reductions as a default value unless determined by modeling and scientific evaluations that an alternative program is preferable to achieve attainment goals. The default will ensure that a reduction strategy is implemented in the event that the scientific efforts are inconclusive or that there is no consensus in the future on an alternative strategy.

A regional emissions target will be set by calculating, on a unit by unit basis, either a pre-determined uniform emission limit or a pre-determined percentage emission decrease as a rate whichever is less stringent for every affected unit. A State may implement this program in an alternate manner as long as the emission reduction targets for the State are met. A trading program should be included as a necessary component of this strategy. Work is currently proceeding on the development of an implementation mechanism for such a program, which could include a NO_x budget and tradable allowances.

The Committee's report to the Commissioners on October 19, 1993, indicated that the Committee had, in accordance with the Commissioners request, assessed the technological feasibility of implementing additional NO_x reductions from large stationary

4. *Seasonality* - nonattainment ozone season only (5/1 to 9/30)
5. *Averaging* - a seasonal limit with a daily consideration if needed
6. *Trading* - allowed throughout the OTR to the extent consistent with the differences in zonal reduction requirements.

C. Geographic Coverage - Limit (rates in lbs NOx per mmBTU)

Phase II

Inner zone	0.2 rate or 60 to 75 percent range (65 percent recommended)
Outer zone	0.2 rate or 50 to 75 percent range (55 percent recommended)
Northern zone	RACT

Phase III Default

Inner zone	0.1 to .15 rate or 75 percent (.15 rate recommended)
Outer zone	0.1 to .15) rate or 75 percent (.15 rate recommended)
Northern zone	0.2 rate or 50 - 65 percent (55 percent recommended)

II. Discussion

A. General

Attainment will require a significant NOx emission reduction across the OTR to address the ozone problem. Attainment deadlines are rapidly approaching. However, to allow for an opportunity for further evaluation and possible "mid-course correction" in the context of achieving attainment goals and new refinements to scientific evaluation techniques, and also due to other considerations as outlined in the following discussion of elements, it is necessary to take a phased approach to controlling stationary source NOx. Such an approach would need to deliver reductions prior to the 1999 ozone season, the attainment deadline for the OTR's serious nonattainment areas. The approach would allow time for additional developments in scientific information to be completed and used to amend if necessary the phase III strategy to ensure that attainment goals are achieved. However, in order to meet SIP obligations, the strategy must include provisions to ensure a significant reduction program can be implemented in the event that the scientific results are inconclusive, hence the recommendation for the default reduction.

The phase II reduction outlined provides a significant near-term reduction. It requires substantial control efforts resulting in significant emission reductions, but also provides a developmental period necessary for trading programs to become operational, mature, and thereby providing a reasonable opportunity for a larger reduction and trading program to succeed. An evaluation in advance of the phase III portion of the program will assure that the pool of available capital and other assets will be used in the most effective manner in

a uniform fuel blind emission limit and simultaneously addresses concerns about the equity of a percent reduction for units which already have relatively low NOx emissions.

As described earlier the emission reduction level contained in this strategy which takes the form of a pound per million BTU rate limit or a percent reduction (which must be converted to its equivalent pound per million BTU rate limit) will be applied on a unit by unit basis. An appropriate base year related to the 1990 base year as determined by the OTC will be used to determine utilization rates in the calculation of the target reduction in a manner that generally follows the conceptual outline presented by the NESCAUM/MARAMA NOx Budget project. Generally, it establishes an ozone season heat input as the utilization factor to be multiplied with the emission rate limit. The product of these two factors is the reduction level for the unit involved. These unit levels will be summed to determine the total reduction from which states will assign appropriate emission limits to their effected units in order to meet the reduction requirement.

4. *Timing* - Compliance with the phase II reduction is required by 5/99. A decision on the phase III mid-course correction or default provision must occur in the 1997-1998 time frame in order to ensure compliance by 5/03. The timing provides for achieving the reductions in the serious nonattainment areas by the statutory deadline and provides for implementation of further reductions to the extent necessary to achieve the air quality standards in severe nonattainment areas. The 5/03 compliance date would also provide the minimum three years of air quality data to demonstrate attainment by 2005.

5. *Seasonality* - May 1 to September 30. This is the most probable period for violating the ozone air quality standards in the OTR and would provide a common period for states to achieve the emission reductions. Year round reductions, while useful for acid rain mitigation and other environmental issues, are not necessary to achieve the ozone standard, and are beyond the OTC regional NOx strategy.

6. *Averaging* - A cumulative seasonal limit with a daily consideration may be necessary. The form and stringency of a daily consideration may be diminished or eliminated contingent upon demonstrations which indicate that actual daily emissions on the aggregate would not exceed targeted levels. Provided that modeling issues can be resolved (the models rely on daily tons per day limitations) this type of limit would be most conducive to implementing the program, including trading programs, and can be demonstrated to result in daily area reductions equivalent to that which daily limits would provide.

7. *Emission Trading* - Provisions should be made to allow for the broadest possible emission trading within each zone and for appropriate trading between zones. This will permit sources to meet this strategy's emission reduction requirement more cost effectively. Such a trading program should provide a consistent basis for meeting New Source Review offset requirements consistent with the Clean Air Act. A ratio reflective of the different zonal limits could apply for trades from the outer zone into the inner zone and vice versa.