Appendix 9-C

Cumulative PM-10 Emissions Inventories (PSD/Major Sources and Local Sources)

Multi-source PSD PM_{10} Modeling Inventory Development

A multi-source modeling emissions inventory was compiled to support the multi-source National Ambient Air Quality Standards (NAAQS) analysis and PSD increment analysis for the proposed CPV Valley Energy Center (CPV Valley), Wawayanda, New York. The inventory was based on information available from the New York Department of Conservation (NYSDEC) Central Albany Office and the Region 3 Office, which covers the Catskills, Lower Hudson Valley, and Long Island Sound. The inventory was compiled for particulate matter with an aerodynamic diameter less than 10 micrometers (PM-10).

As a first step in the inventory development, an inventory of all major sources within 60 kilometers (km) of the proposed CPV Valley site was provided by the NYSDEC from its Air Facility System (AFS). For this modeling inventory, TRC conservatively considered a source to be "major" if the facility potential to emit (PTE) exceeded 95 tons per year (tpy) for any pollutant. However, the multi-source modeling analysis only included the PM_{10} emissions from each source, since this is the only pollutant for which the proposed CPV Valley Energy Center was predicted to have significant air quality impacts. After the significant impact area (SIA) was determined for the CPV Valley Energy Center to be 4.6 km, any sources located beyond the SIA plus 50 km (or approximately 55 km) were removed from the inventory.

In addition, any major PM_{10} sources within 60 km of the proposed site location and located in Pennsylvania or New Jersey were requested from the Pennsylvania Department of Environmental Protection (PaDEP) and New Jersey Department of Environmental Protection (NJDEP), respectively. Both agencies indicated that there were no major PM_{10} sources in their respective states located within 60 km of the proposed site.

The data from the AFS system was processed, and any missing data values were identified. TRC then worked with the NYSDEC Region 3 office to fill many of the missing data values, and a permitting file review was conducted by TRC at the Region 3 office in an attempt to fill the remaining missing data. After these attempts to fill in the missing data, some PM-10 emission rates and exhaust characteristics were still not available. Therefore, TRC used any permit limits and/or the United States Environmental Protection Agency's (U.S. EPA's) AP-42 emission factors to estimate PM-10 emission rates from each of the source for which data were missing. To estimate missing exhaust characteristics, TRC used data from similar type/sized equipment or engineering estimates to develop these values.

Table 1 presents the PM-10 inventory developed following this process. It should be noted that Table 1 provides all of the PM_{10} emission sources at each facility. However, for inclusion in the AERMOD modeling analysis, TRC consolidated some of the emission sources to minimize the number of separate point sources in the model runs.

In order to simplify the modeling analyses, reduce modeling run time, and add conservatism to the analyses, TRC combined sources to form one to several "representative" emission sources, in accordance with the methodology provided in Section 2.2 of Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised (U.S. EPA, 1992). Using the recommended methodology, a value for M is computed for each emission point at the facility, where:

$M = (h_s V T_s)/Q$

and: M = merged stack parameter which accounts for the relative influence of stack height, plume rise, and emission rate on concentrations

h_s = stack height (m)

$V = (\pi/4)d_s^2 v_s$ = stack gas volumetric flow rate (m^3/s)

d_s = inside stack diameter (m)

v_s = stack gas exit velocity (m/s)

T_s = stack gas exit temperature (K)

Q = pollutant emission rate (g/s)

The emission source that has the lowest calculated value for M was used as a "representative" emission source, with the total of the emissions from all the emission sources assumed to be emitted from one stack having the emission parameters of the "representative" emission source. Sources located at a facility within the SIA (i.e., 4.6 km) due to the proposed CPV Valley Energy Center were not merged.

The merged sources used in the multi-source NAAQS and PSD increment modeling analyses are presented in Table 2. As indicated in Table 2, the short-term (lb/hr) potential PM-10 emission rates were modeled to determine both the 24-hour and annual PM-10 concentrations.

Local PM10 Modeling Inventory Development

TRC also compiled a separate local source modeling emissions inventory to support a requested cumulative PM-10 modeling analysis for the CPV Valley Energy Center. Specifically, the inventory was based on information available from the New York Department of Conservation (NYSDEC) Central Albany Office and the Region 3 Office for any permitted sources within 10 kilometers (km) {approximately 6 miles} of the proposed Project site. Because the proposed Project will only have significant air quality impacts for PM-10 for the 24-hour averaging period, the inventory was compiled for PM-10 and results of the cumulative modeling analysis were compared to the 24-hour PM-10 National Ambient Air Quality Standards (NAAQS).

TRC processed the emissions inventory data provided by the NYSDEC and identified any missing data values. TRC worked with the NYSDEC Region 3 office to fill many of the missing data values, and a permitting file review was conducted by TRC at the Region 3 office in an attempt to fill the remaining missing data. After these attempts to fill in the missing data, some PM-10 emission rates and exhaust characteristics were still missing. Therefore, TRC used any permit limits and/or the United States Environmental Protection Agency's (U.S. EPA's) AP-42 emission factors to estimate PM-10 emission

rates from each of the sources. To estimate missing exhaust characteristics, TRC used data from similar type/sized equipment or engineering estimates to develop these values.

Table 3 presents the local PM-10 inventory developed following this process. It should be noted that no stacks were merged for modeling purposes and the short-term potential PM-10 emission rates were modeled to determine both the 24-hour and annual PM-10 impacts. In the case of the Al Turi Landfill, there are seven internal combustion (IC) engines, ranging in size from 3.4 to 8.4 mmBtu/hr, and two enclosed flares (62.5 and 68.3 mmBtu/hr) currently permitted at the facility. However, according to information provided by the NYSDEC only one IC engine and one flare are currently operating and stack and exhaust parameters were only provided for these two sources. Thus, the total potential PM-10 emissions from the seven IC engines were modeled as from a single IC engine stack and the total potential PM-10 emissions from the two enclosed flares were modeled as from a single flare stack.

Table 1: PM_{10} Source Inventory (PSD/Large Source Analysis)

DEC	Facility Name	Major Pollutants	Distance from CPV (km)	Emission Unit ID	Emission Point ID	UTM E (m)	UTM N (m)	Base Elevation (m)	Potential PM_{10} Emissions (lb/hr)	Stack Height (m)	Exhaust Temperature (K)	Exhaust Velocity (m/s)	Stack Diameter (m)	M-Value
3130200017	CHEMPRENE INC	SO_2	39.6	CINSIG	1	585,532	4,593,624	61.57	2.32	3.66	294.3	15.54	0.46	9,407
				CINSIG	2	585,532	4,593,624	61.57	2.32	3.66	294.3	15.54	0.46	9,407
				CINSIG	5	585,532	4,593,724	61.57	3.40	1.83	294.3	16.76	0.53	4,703
				B07A08	7	585,532	4,593,624	61.57	1.20	10.67	422.0	15.54	0.61	135,104
				B07A08	8	585,532	4,593,624	61.57	1.20	0.91	422.0	15.54	0.61	11,580
				C00113	113	585,532	4,593,624	61.57	4.44	4.27	294.3	16.76	0.61	10,975
3134600019	DUTCHESS CO RESOURCE RECOVERY FACILITY	CO, SO_2, HCL, NO_X	49.0	1MBMWC	FLUE1	588,032	4,611,524	20.42	5	60.96	477.6	24.38	1.22	1,315,616
				1MBMWC	FLUE2	588,032	4,611,524	20.42		60.96	477.6	24.38	1.22	1,315,616
3134600035	IBM CORP SOUTH RD FACILITY	NO_X	50.0	C00001	242KM	588,532	4,611,924	27.43	1.90	18.59	294.3	6.10	0.66	47,819
				C00001	242NI	588,532	4,611,924	27.43	0.91	16.76	294.3	6.10	0.46	114,974
				C00001	342BG	588,532	4,611,924	27.43	1.53	14.94	294.3	3.05	0.75	30,475
				C00001	342BL	588,532	4,611,924	27.43	0.13	14.02	294.3	7.92	0.15	36,060
				C00001	342CD	588,532	4,611,924	27.43	0.61	16.15	294.3	5.18	0.41	41,547
				C00001	342CK	588,532	4,611,924	27.43	0.73	16.46	294.3	2.74	0.61	42,331
				C00001	342CP	588,532	4,611,924	27.43	1.65	14.33	294.3	4.57	0.62	28,197
				C00001	342FA	588,532	4,611,924	27.43	0.62	16.76	294.3	3.05	0.53	43,115
				C00001	342KC	588,532	4,611,924	27.43	0.53	5.49	294.3	7.92	0.30	14,110
				C00001	342LB	588,532	4,611,924	27.43	0.28	5.49	294.3	6.10	0.25	14,110
				C00001	342MA	588,532	4,611,924	27.43	4.00	15.85	294.3	6.71	0.91	40,764
				C00001	342MB	588,532	4,611,924	27.43	0.23	15.85	294.3	1.52	0.46	40,764
				C00001	342MC	588,532	4,611,924	27.43	0.27	16.15	294.3	1.83	0.46	41,547
				C00001	342SC	588,532	4,611,924	27.43	0.01	5.49	294.3	1.83	0.10	14,110
				C00001	342TB	588,532	4,611,924	27.13	1.18	15.54	294.3	6.40	0.51	39,980
				C00001	342TL	588,532	4,611,924	27.43	1.13	15.24	294.3	4.27	0.61	39,196
				C00001	342WE	588,532	4,611,924	27.43	1.32	15.24	294.3	7.92	0.48	39,196
				C00001	342WF	588,532	4,611,924	27.43	0.07	16.76	294.3	0.91	0.29	32,655
				C00001	342WG	588,532	4,611,924	27.43	1.94	16.76	294.3	7.32	0.61	43,115
				C00001	342WH	588,532	4,611,924	27.43	4.99	16.76	294.3	7.92	0.94	43,115
				C00001	342WL	588,532	4,611,924	27.43	0.32	17.07	294.3	2.74	0.41	43,899
				C00001	342WM	588,532	4,611,924	27.43	0.79	14.02	294.3	4.27	0.51	36,060
				C00001	343PF	588,532	4,611,924	27.43	0.79	16.15	294.3	6.71	0.41	41,547
				E00001	643AA	588,532	4,611,924	28.96	4.13	9.14	294.3	10.67	0.64	17,841
				E00001	643AB	588,532	4,611,924	30.48	0.54	8.53	294.3	4.57	0.35	16,291
				B00001	D42TA	588,532	4,611,924	27.43	6.18	20.73	294.3	10.36	0.91	53,306
				B00001	D42TG	588,532	4,611,924	27.43	7.45	20.73	294.3	12.50	0.91	53,306
				B00001	442XF	588,532	4,611,924	27.43	0.41	2.44	294.3	1.22	0.61	4,955
				B00001	W42CA	588,532	4,611,924	27.43	2.97	12.19	294.3	3.66	1.07	31,357
				A00001	SR001	588,532	4,611,924	4.57	6.75	23.17	427.6	10.06	1.14	120,204
				A00001	SR002	588,532	4,611,924	4.57	6.75	23.17	487.6	11.28	1.14	153,685
				A00001	SR003	588,532	4,611,924	4.57	6.75	23.17	495.9	10.06	1.14	139,413
				A00001	SR006	588,532	4,611,924	3.66	6.75	15.24	469.3	15.24	0.91	84,158
				A00001	SR007	588,532	4,611,924	3.66	6.75	15.24	505.4	17.07	0.91	101,510
				H00001	W42AK	588,532	4,611,924	29.26	0.16	4.88	294.3	2.44	0.30	12,543
				H00001	W42AM	588,532	4,611,924	29.26	0.12	30.18	294.3	3.96	0.20	77,607
				D00001	W42GD	588,532	4,611,924	27.43	0.16	7.92	294.3	1.83	0.36	20,382
				D00001	W42SL	588,532	4,611,924	6.10	0.39	3.05	294.3	2.13	0.45	6,271
				D00001	W42ST	588,532	4,611,924	6.10	1.65	9.14	294.3	2.13	0.91	18,131
				D00001	W42WG	588,532	4,611,924	17.68	2.58	10.67	294.3	11.58	0.56	27,437
				D00001	W42WH	588,532	4,611,924	17.68	2.65	10.67	294.3	11.89	0.56	27,437
3134600067	VASSAR COLLEGE	SO_2, NO_X	54.5	U00005	BLR01	592,000	4,615,400	45.11	2.30	15.24	505.4	14.94	0.61	115,854
				U00005	BLR02	592,000	4,615,400	45.11	2.30	15.24	505.4	14.94	0.61	115,854
				U00002	BLR03	592,000	4,615,600	45.11	2.40	15.24	505.4	6.71	0.91	112,159
				U00002	BLR04	592,000	4,615,600	45.11	2.40	15.24	505.4	6.71	0.91	112,159
				U00001	BLR05	592,000	4,615,600	45.11	3.80	18.29	505.4	6.10	1.22	137,382
				U00004	CHL01	592,000	4,615,600	45.72	0.47	6.10	505.4	8.53	0.51	89,991

Table 1: PM_{10} Source Inventory (PSD/Large Source Analysis)

DEC	Facility Name	Major Pollutants	Distance from CPV (km)	Emission Unit ID	Emission Point ID	UTM E (m)	UTM N (m)	Base Elevation (m)	Potential PM_{10} Emissions (lb/hr)	Stack Height (m)	Exhaust Temperature (K)	Exhaust Velocity (m/s)	Stack Diameter (m)	M-Value
3330900101	ORANGE RECYCLING & ETHANOL PROD FAC	SO_2, NO_X	2.0	UGASBR	1	548,115	4,586,340	153.32	27.04	30.48	408.7	12.80	2.64	256,541
				UTOWER	4	548,115	4,586,340	150.27	5.22	11.58	302.6	13.72	3.35	645,315
				UTOWER	5	548,115	4,586,340	150.27		11.58	302.6	13.72	3.35	645,315
				UTOWER	6	548,115	4,586,340	150.27		11.58	302.6	13.72	3.35	645,315
				UTOWER	7	548,115	4,586,340	150.27		11.58	302.6	13.72	3.35	645,315
				UTOWER	8	548,115	4,586,340	150.27		11.58	302.6	13.72	3.35	645,315
				UTOWER	9	548,115	4,586,340	150.27		11.58	302.6	13.72	3.35	645,315
				UTOWER	10	548,115	4,586,340	150.27		11.58	302.6	13.72	3.35	645,315
				UTOWER	11	548,115	4,586,340	150.27		11.58	302.6	13.72	3.35	645,315
3331100114	PRISMATIC DYEING & FINISHING INC	SO_2	34.7	B00001	36	580,200	4,594,700	30.48	1.90	6.10	533.2	10.36	0.61	41,064
3334800084	METAL CONTAINER CORP	VOC	29.6	U10000	EP030	575,339	4,593,229	149.35	14.77	12.50	294.3	3.96	2.29	32,140
				U10000	EP066	575,339	4,593,229	149.35	0.15	12.80	294.3	0.30	0.75	26,122
				U10000	EP067	575,339	4,593,229	149.35	0.15	12.80	294.3	0.30	0.75	26,122
				U10000	EP102	575,339	4,593,229	149.35	0.15	12.80	294.3	0.30	0.75	26,122
				U20000	EP037	575,339	4,593,229	149.35	3.88	12.19	294.3	14.63	0.61	31,357
				U20000	EP049	575,339	4,593,229	149.35	3.88	12.50	294.3	14.63	0.61	32,140
				U20000	EP059	575,339	4,593,229	149.35	1.64	12.19	294.3	10.97	0.46	31,357
				U20000	EP062	575,339	4,593,229	149.35	2.42	12.19	294.3	9.14	0.61	31,357
				U20000	EP069	575,339	4,593,229	149.35	2.42	11.89	294.3	9.14	0.61	30,573
				U20000	EP070	575,339	4,593,229	149.35	2.42	11.89	294.3	9.14	0.61	30,573
				U20000	EP071	575,339	4,593,229	149.35	2.42	11.89	294.3	9.14	0.61	30,573
				U20000	EP106	575,339	4,593,229	149.35	3.88	12.19	294.3	14.63	0.61	31,357
				U20000	EP117	575,339	4,593,229	149.35	3.88	12.19	294.3	14.63	0.61	31,357
3335200039	BALL METAL BEVERAGE CONTAINER CORP	VOC	8.1	U-20200	40EP1	553,111	4,589,798	158.50	4.74	14.33	294.3	15.24	0.58	28,123
				U-20200	40EP2	553,190	4,590,008	158.50	4.74	14.33	294.3	15.24	0.58	28,123
				U-20200	40EP3	553,097	4,589,779	158.50	13.58	12.80	294.3	15.24	1.12	32,924
				U-20200	41EP1	553,190	4,590,008	158.50	5.14	14.33	294.3	15.33	0.69	36,844
				U-20200	42EP1	553,162	4,589,840	158.50	0.51	14.33	294.3	1.52	0.69	36,844
3392200003	BOWLINE POINT GENERATING STATION	SO_2, PM, NO_X	46.0	100001	1	587,032	4,562,023	3.05	554.60	87.17	417.6	34.75	5.72	464,353
				100002	2	587,032	4,562,023	3.05	554.60	87.17	404.3	25.60	5.72	331,230
				100004	4	0	0	13.72	4.53	35.36	596.5	16.15	1.37	881,980
3392600013	NOVARTIS - SUFFERN PLANT	SO_2	41.3		B0001	572,591	4,552,328	94.49	0.38	12.80	499.8	9.99	0.91	874,287
					B0002	572,591	4,552,328	94.49	0.52	11.28	483.2	12.39	0.91	679,293
					B0003	572,591	4,552,328	94.49	1.45	11.89	430.4	13.81	0.76	176,571
					B0004	572,591	4,552,328	94.49	0.15	11.89	441.5	7.75	0.46	353,220
					B0005	572,591	4,552,328	94.49	0.15	11.89	441.5	7.75	0.46	353,220
					B0006	572,591	4,552,328	94.49	0.15	11.89	441.5	7.75	0.46	353,220
3392600041	GOOD SAMARITAN HOSPITAL	SO_2	42.1	U00001	1	572,600	4,551,200	118.26	4.85	30.48	505.4	10.36	1.52	476,528
3392800030	STONY POINT FACILITY	PM, NO_X	44.9	UOOORD	4	586,432	4,563,223	3.96	11.02	13.41	394.3	20.73	0.97	57,767
				UBD1KN	8	586,432	4,563,223	3.96	32.43	9.14	366.5	15.24	1.52	22,803
				UBD2KN	11	586,432	4,563,223	3.96	34.88	6.10	588.7	42.98	1.07	31,366
				UOOOCB	19	586,432	4,563,223	3.96	3.37	26.52	308.7	18.29	0.46	57,954
				UOOOCB	21	586,432	4,563,223	3.96	2.38	17.07	322.0	14.33	0.48	48,043
				UOO3RM	30	586,432	4,563,223	3.96	0.00	34.44	394.3	22.56	0.30	253,393,814
				UOO3RM	32	586,432	4,563,223	17.98	0.00	20.42	294.3	13.11	0.29	58,824,588
				UOO1RM	34	586,432	4,563,223	3.96	0.00	31.39	366.5	15.24	0.30	2,030,913,366
				UOO2RM	35	586,432	4,563,223	3.96	0.00	31.39	366.5	15.24	0.30	2,030,913,366

Table 1: PM_{10} Source Inventory (PSD/Large Source Analysis)

DEC	Facility Name	Major Pollutants	Distance from CPV (km)	Emission Unit ID	Emission Point ID	UTM E (m)	UTM N (m)	Base Elevation (m)	Potential PM_{10} Emissions (lb/hr)	Stack Height (m)	Exhaust Temperature (K)	Exhaust Velocity (m/s)	Stack Diameter (m)	M-Value
				UORECL	39	586,432	4,563,223	4.27	6.38	15.24	338.7	17.68	0.71	45,116
				UORECL	65	586,432	4,563,223	4.27	1.11	16.15	366.5	37.80	0.20	51,745
				UOOOK4	31	586,432	4,563,223	3.96	5.15	23.17	477.6	19.20	0.69	120,870
				UOOOK4	40	586,432	4,563,223	4.27	0.10	30.48	588.7	14.43	0.69	7,592,470
				U123LP	50	586,432	4,563,223	3.96	2.94	25.60	355.4	17.68	0.43	63,663
				URDAIR	51	586,432	4,563,223	3.96	0.51	26.21	355.4	17.37	0.20	81,417
				UOCRSR	52	586,432	4,563,223	3.96	0.01	6.71	294.3	16.46	0.29	3,087,219
				UOOOK3	38	586,432	4,563,223	3.96	2.40	35.05	422.0	22.56	0.43	161,620
				UOOOK3	53	586,432	4,563,223	4.27	0.30	1.52	588.7	8.21	1.02	158,075
				UOOOK2	54	586,432	4,563,223	4.27	0.25	9.14	588.7	11.98	1.02	1,659,699
				UOOOK1	36	586,432	4,563,223	4.27	2.40	20.12	422.0	22.56	0.43	92,756
				UOOOK1	55	586,432	4,563,223	4.27	0.30	35.05	588.7	8.21	1.02	3,635,724
				USTDST	33	586,432	4,563,223	3.96	0.08	21.03	355.4	6.71	0.13	65,323
				USTDST	59	586,432	4,563,223	4.88	1.07	21.95	355.4	16.15	0.30	68,163
				UBDSTC	60	586,432	4,563,223	3.96	0.65	4.57	322.0	17.37	0.20	10,009
				UBDSTC	61	586,432	4,563,223	10.97	0.40	7.01	322.0	35.05	0.13	19,732
				U0BSNV	62	586,432	4,563,223	3.96	0.22	12.19	294.3	19.51	0.13	31,357
				U0BSNV	63	586,432	4,563,223	3.96	0.47	0.61	310.9	3.96	0.41	1,657
				U0BSNV	64	586,432	4,563,223	3.96	0.22	12.19	294.3	19.51	0.13	31,357
				U2BDDY	70	586,432	4,563,223	5.18	0.15	10.06	294.3	13.11	0.13	25,869
				U2BDDY	71	586,432	4,563,223	5.18	0.35	11.28	294.3	30.18	0.13	29,005
				U2BDDY	72	586,432	4,563,223	5.18	0.18	8.84	310.9	24.69	0.10	24,021
				U2BDDY	73	586,432	4,563,223	5.18	0.25	5.49	310.9	33.53	0.10	14,910
				U2BDDY	74	586,432	4,563,223	5.18	0.13	6.10	310.9	7.62	0.15	16,566
				U2BDDY	75	586,432	4,563,223	5.18	3.46	6.71	294.3	17.07	0.47	13,296
				U2BDDY	76	586,432	4,563,223	5.18	0.32	6.10	310.9	43.59	0.10	16,566
				U2BDDY	77	586,432	4,563,223	5.18	0.13	3.05	310.9	17.37	0.10	8,283
				U1BDDY	85	586,432	4,563,223	5.18	0.70	15.24	294.3	15.24	0.22	28,221
				U1BDDY	86	586,432	4,563,223	5.18	1.29	14.33	355.4	57.00	0.18	44,496
				U1BDDY	87	586,432	4,563,223	5.18	0.34	15.85	310.9	46.63	0.10	43,072
				U1BDDY	88	586,432	4,563,223	5.18	0.15	10.36	294.3	13.11	0.13	26,653
				U1BDDY	89	586,432	4,563,223	5.18	0.34	10.36	294.3	29.87	0.13	26,653
				U1BDDY	92	586,432	4,563,223	5.18	0.20	7.01	294.3	17.07	0.13	18,030
				U00DUN	93	586,432	4,563,223	5.18	3.46	6.71	294.3	17.07	0.47	13,296
				U2STUC	94	586,432	4,563,223	5.18	0.51	10.67	355.4	44.50	0.13	33,135
				U2STUC	95	586,432	4,563,223	5.18	1.21	11.28	355.4	15.54	0.30	29,018
3551200041	BASF CORP	PM	44.6	EU001A	EP001	589,500	4,571,200	9.14	0.20	12.50	477.6	18.29	0.76	1,975,351
				EU0028	EP008	589,500	4,571,200	9.14	1.35	8.23	333.2	42.67	0.51	139,410
				EU0029	EP012	589,500	4,571,200	9.14	1.76	9.14	291.5	26.82	0.25	16,336
				EU0029	EP013	589,500	4,571,200	9.14		9.14	291.5	10.06	0.15	2,205
				EU0011	EP021	589,500	4,571,200	9.14	1.07	10.97	338.7	12.19	0.36	33,381
				EU0011	EP022	589,500	4,571,200	9.14		10.06	294.3	17.37	0.20	12,370
				EU0011	EP023	589,500	4,571,200	9.14		10.06	291.5	19.51	0.20	13,758
				EU0011	EP109	589,500	4,571,200	9.14		9.75	463.7	18.29	0.61	179,069
				EU0021	EP025	589,500	4,571,200	9.14	2.14	14.02	294.3	14.33	0.46	36,060
				EU0003	EP034	589,500	4,571,200	9.14	1.44	10.97	294.3	17.37	0.20	10,027
				EU0006	EP038	589,500	4,571,200	9.14	1.49	15.85	333.2	11.28	0.51	64,292
				EU0022	EP039	589,500	4,571,200	9.14	2.05	10.97	316.5	11.28	0.76	69,148
				EU0012	EP040	589,500	4,571,200	9.14	1.00	10.97	338.7	16.15	0.30	34,770
				EU0012	EP041	589,500	4,571,200	9.14		10.97	294.3	11.28	0.25	14,644
				EU0012	EP042	589,500	4,571,200	9.14		10.97	294.3	11.28	0.25	14,644
				EU0035	EP043	589,500	4,571,200	9.14	2.05	12.19	294.3	11.28	0.51	31,750
				EU0013	EP044	589,500	4,571,200	9.14	1.00	11.58	338.7	16.15	0.30	36,701
				EU0013	EP045	589,500	4,571,200	9.14		10.97	294.3	7.62	0.30	14,249
				EU0013	EP046	589,500	4,571,200	9.14		10.97	294.3	7.62	0.30	14,249

Table 1: PM_{10} Source Inventory (PSD/Large Source Analysis)

DEC	Facility Name	Major Pollutants	Distance from CPV (km)	Emission Unit ID	Emission Point ID	UTM E (m)	UTM N (m)	Base Elevation (m)	Potential PM_{10} Emissions (lb/hr)	Stack Height (m)	Exhaust Temperature (K)	Exhaust Velocity (m/s)	Stack Diameter (m)	M-Value
				EU0013	EP110	589,500	4,571,200	9.14		12.80	463.7	18.29	0.71	342,292
				EU0007	EP047	589,500	4,571,200	9.14	1.75	17.98	316.5	9.75	0.46	41,333
				EU0007	EP048	589,500	4,571,200	9.14		16.76	294.3	11.28	0.25	12,785
				EU0002	EP052	589,500	4,571,200	9.14	1.73	17.98	316.5	11.58	0.51	61,297
				EU0002	EP020	589,500	4,571,200	9.14		10.97	293.2	15.54	0.23	9,415
				EU0002	EP100	589,500	4,571,200	9.14		10.97	505.4	13.72	0.20	11,316
				EU0002	EP101	589,500	4,571,200	9.14		10.97	330.4	14.02	0.25	11,816
				EU0008	EP053	589,500	4,571,200	9.14	1.11	10.67	316.5	11.58	0.30	20,402
				EU0008	EP054	589,500	4,571,200	9.14		10.06	330.4	17.37	0.20	13,387
				EU0014	EP055	589,500	4,571,200	9.14	1.00	12.50	294.3	11.28	0.25	16,678
				EU0014	EP056	589,500	4,571,200	9.14		12.50	294.3	11.28	0.25	16,678
				EU0014	EP057	589,500	4,571,200	9.14		12.19	338.7	16.15	0.30	38,633
				EU0014	EP104	589,500	4,571,200	9.14	0.40	13.72	435.9	10.85	0.95	918,453
				EU0033	EP060	589,500	4,571,200	9.14	0.71	6.10	294.3	24.69	0.20	16,055
				EU0015	EP062	589,500	4,571,200	9.14	0.50	12.19	338.7	16.15	0.30	77,266
				EU0015	EP063	589,500	4,571,200	9.14		12.19	294.3	11.28	0.25	32,543
				EU0009	EP064	589,500	4,571,200	9.14	1.11	9.75	330.4	17.37	0.20	12,981
				EU0009	EP065	589,500	4,571,200	9.14		10.06	316.5	26.21	0.20	19,349
				EU0010	EP067	589,500	4,571,200	9.14	1.11	3.66	316.5	11.58	0.30	6,995
				EU0010	EP068	589,500	4,571,200	9.14		9.75	330.4	17.37	0.20	12,981
				EU0010	EP119	589,500	4,571,200	9.14		16.46	402.6	21.34	0.25	51,224
				EU0016	EP069	589,500	4,571,200	9.14	1.00	12.19	294.3	11.28	0.25	16,272
				EU0016	EP070	589,500	4,571,200	9.14		11.58	560.9	6.10	0.30	22,936
				EU0016	EP105	589,500	4,571,200	9.14		12.50	435.9	16.19	0.75	306,369
				EU0017	EP072	589,500	4,571,200	9.14	1.00	12.80	294.3	11.28	0.25	17,085
				EU0017	EP073	589,500	4,571,200	9.14		11.58	566.5	2.74	0.30	10,423
				EU0017	EP106	589,500	4,571,200	9.14		12.50	435.9	16.19	0.75	306,369
				EU0019	EP074	589,500	4,571,200	9.14	1.11	11.58	330.4	17.37	0.20	15,415
				EU0019	EP075	589,500	4,571,200	9.14		7.92	316.5	11.58	0.30	15,156
				EU001B	EP076	589,500	4,571,200	9.14	0.84	12.80	477.6	18.29	0.76	481,793
				EU0036	EP108	589,500	4,571,200	9.14	0.21	3.05	699.8	36.58	0.36	304,799
				EU0034	EP111	589,500	4,571,200	9.14	0.21	12.80	293.2	0.30	0.15	789
				EU0034	EP107	589,500	4,571,200	9.14		17.37	293.2	0.00	0.36	
				EU0037	EP113	589,500	4,571,200	9.14	0.52	9.75	477.6	14.33	0.30	74,607
				EU0038	EP114	589,500	4,571,200	9.14	0.67	12.80	293.2	24.69	0.20	35,646
				EU0039	EP115	589,500	4,571,200	9.14	0.28	12.50	810.9	21.95	0.23	255,997
3552200087	LAFARGE NORTH AMERICA INC - BUCHANAN	PM_{10}	46.1	0.00E+00	0PT17	590,500	4,569,500	18.29	0.30	31.70	338.7	22.43	0.61	1,859,825
				0.00E+00	0PT30	590,500	4,569,500	19.51	17.53	30.48	394.3	7.62	1.98	127,802
				0.00E+00	0PT31	590,500	4,569,500	19.51	0.00	30.48	338.7	16.46	1.78	1,717,176,755
				0.00E+00	0PT38	590,500	4,569,500	19.51	5.23	23.77	255.4	18.90	1.68	384,312
334600267	NEW ENGLAND LAMINATES	VOC, HAP	29.0	00001	1	573,787	4,595,694	150.88	0.09	10.36	422.0	18.29	0.61	2,058,733
				00001	2	573,787	4,595,694	150.88	0.09	10.36	422.0	18.29	0.61	2,058,733
				00001	3	573,787	4,595,694	150.88	0.15	10.36	422.0	18.29	0.61	1,235,240

Table 2: Multisource PM_{10} Modeling Inventory (PSD/Large Source Analysis)[1]

DEC	Facility Name	Merged Emission Point IDs	UTM E (m)	UTM N (m)	Base Elevation (m)	Potential PM_{10} Emissions[2] (g/s)	Stack Height (m)	Exhaust Temperature (K)	Exhaust Velocity (m/s)	Stack Diameter (m)
3130200017	CHEMPRENE INC	5	585,532	4,593,724	61.57	0.43	1.83	294.3	16.76	0.53
		1, 2	585,532	4,593,624	61.57	0.58	3.66	294.3	15.54	0.46
		113, 8	585,532	4,593,624	61.57	0.71	4.27	294.3	16.76	0.61
		7	585,532	4,593,624	61.57	0.15	10.67	422.0	15.54	0.61
3134600019	DUTCHESS CO RESOURCE RECOVERY FACILITY	FLUE1, FLUE2	588,032	4,611,524	20.42	0.63	60.96	477.6	24.38	1.22
3134600035	IBM CORP SOUTH RD FACILITY	442XF, W42SL	588,532	4,611,924	27.43	0.10	2.44	294.3	1.22	0.61
		W42AK, 342KC, 342SC, 342LB, 643AB, 643AA, W42ST	588,532	4,611,924	27.43	0.92	4.88	294.3	2.44	0.30
		W42GD, W42WH, W42WG, 342CP	588,532	4,611,924	27.43	0.89	7.92	294.3	1.83	0.36
		342BG, W42CA, 342WF, 342BL, 342WM, 342WE,	588,532	4,611,924	27.43	1.15	14.94	294.3	3.05	0.75
		342MA, 342MB, 343PF, 342CD, 342MC, 342CK, 342FA, 342WG, 342WH, 342WL,	588,532	4,611,924	27.43	2.07	15.85	294.3	6.71	0.91
		D42TA, D42TG	588,532	4,611,924	27.43	1.72	20.73	294.3	10.36	0.91
		W42AM, SR006	588,532	4,611,924	27.43	0.87	30.18	294.3	3.96	0.20
		SR007, 242NI, SR001, SR003, SR002	588,532	4,611,924	27.43	3.52	15.24	505.4	17.07	0.91
3134600067	VASSAR COLLEGE	CHL01	592,000	4,615,600	45.11	0.06	6.10	505.4	8.53	0.51
		BLR03, BLR04, BLR01, BLR02, BLR05	592,000	4,615,600	45.11	1.66	15.24	505.4	6.71	0.91
3330900101	ORANGE RECYCLING & ETHANOL PROD FAC	1	548,115	4,586,340	153.32	3.41	30.48	408.7	12.80	2.64
		4, 5, 6, 7, 8, 9, 10, 11	548,115	4,586,340	150.27	0.66	11.58	302.6	13.72	3.35
3331100114	PRISMATIC DYEING & FINISHING INC	36	580,200	4,594,700	30.48	0.24	6.10	533.2	10.36	0.61
3334800084	METAL CONTAINER CORP	EP066, EP067, EP102	575,339	4,593,229	149.35	0.06	12.80	294.3	0.30	0.75
		EP069, EP070, EP071, EP062, EP037, EP106, EP117, EP059, EP030, EP049	575,339	4,593,229	149.35	5.24	11.89	294.3	9.14	0.61
3335200039	BALL METAL BEVERAGE CONTAINER CORP	40EP1, 40EP2	553,111	4,589,798	158.50	1.19	14.33	294.3	15.24	0.58
		40EP3	553,097	4,589,779	158.50	1.71	12.80	294.3	15.24	1.12
		41EP1, 42EP1	553,190	4,590,008	158.50	0.71	14.33	294.3	15.33	0.69
3392200003	BOWLINE POINT GENERATING STATION	2, 1	587,032	4,562,023	3.05	139.76	87.17	404.3	25.60	5.72
		4	587,032	4,562,023	3.05	0.57	35.36	596.5	16.15	1.37
3392600013	NOVARTIS - SUFFERN PLANT	B0001	572591	4552328	94.49	0.05	12.80	499.8	9.99	0.33
		B0002	572591	4552328	94.49	0.07	11.28	483.2	12.39	0.29
		B0003	572591	4552328	94.49	0.18	11.89	430.4	13.81	0.30
		B0004, B0005, B0006	572591	4552328	94.49	0.06	11.89	441.5	7.75	0.30

Table 2: Multisource PM_{10} Modeling Inventory (PSD/Large Source Analysis)[1]

DEC	Facility Name	Merged Emission Point IDs	UTM E (m)	UTM N (m)	Base Elevation (m)	Potential PM_{10} Emissions[2] (g/s)	Stack Height (m)	Exhaust Temperature (K)	Exhaust Velocity (m/s)	Stack Diameter (m)
3392600041	GOOD SAMARITAN HOSPITAL	1	572,600	4,551,200	118.26	0.61	30.48	505.4	10.36	1.52
3392800030	STONY POINT FACILITY	63, 77	586,432	4,563,223	3.96	0.07	0.61	310.9	3.96	0.41
		60, 75, 93, 73, 74, 76, 92, 61	586,432	4,563,223	3.96	1.12	4.57	322.0	17.37	0.20
		8, 72, 70, 88, 89, 85, 71,	586,432	4,563,223	3.96	4.47	9.14	366.5	15.24	1.52
		62, 64, 11, 94	586,432	4,563,223	3.96	4.52	12.19	294.3	19.51	0.13
		87, 86, 39, 21	586,432	4,563,223	3.96	1.31	15.85	310.9	46.63	0.10
		65, 4, 19	586,432	4,563,223	3.96	1.95	16.15	366.5	37.80	0.20
		50, 33, 59	586,432	4,563,223	3.96	0.51	25.60	355.4	17.68	0.43
		51, 36	586,432	4,563,223	3.96	0.37	26.21	355.4	17.37	0.20
		31, 53, 38	586,432	4,563,223	3.96	0.99	23.17	477.6	19.20	0.69
		54, 52, 55, 40, 32, 30, 34, 35	586,432	4,563,223	3.96	0.08	9.14	588.7	11.98	1.02
3551200041	BASF CORP	EP034, EP060	589,500	4,571,200	9.14	0.27	10.97	294.3	17.37	0.20
		EP043, EP114, EP025	589,500	4,571,200	9.14	0.61	12.19	294.3	11.28	0.51
		EP038, EP039, EP113	589,500	4,571,200	9.14	0.45	15.85	333.2	11.28	0.51
		EP008, EP108, EP115, EP076, EP104, EP001, EP012	589,500	4,571,200	9.14	0.48	8.23	333.2	42.67	0.51
		EP013, EP021	589,500	4,571,200	9.14	0.22	9.14	291.5	10.06	0.15
		EP022, EP023, EP109, EP040	589,500	4,571,200	9.14	0.13	10.06	294.3	17.37	0.20
		EP041, EP042, EP044	589,500	4,571,200	9.14	0.13	10.97	294.3	11.28	0.25
		EP045, EP046, EP110, EP047	589,500	4,571,200	9.14	0.13	10.97	294.3	7.62	0.30
		EP048, EP052	589,500	4,571,200	9.14	0.22	16.76	294.3	11.28	0.25
		EP020, EP100, EP101, EP053	589,500	4,571,200	9.14	0.22	10.97	293.2	15.54	0.23
		EP054, EP055, RP056, EP057, EP062	589,500	4,571,200	9.14	0.14	10.06	330.4	17.37	0.20
		EP063	589,500	4,571,200	9.14	0.06	12.19	294.3	11.28	0.25
		EP064, EP065	589,500	4,571,200	9.14	0.14	9.75	330.4	17.37	0.20
		EP067, EP068, EP119	589,500	4,571,200	9.14	0.14	3.66	316.5	11.58	0.30
		EP069, EP070, EP105, EP072	589,500	4,571,200	9.14	0.13	12.19	294.3	11.28	0.25
		EP073, EP106, EP074	589,500	4,571,200	9.14	0.13	11.58	566.5	2.74	0.30
		EP075	589,500	4,571,200	9.14	0.14	7.92	316.5	11.58	0.30
		EP111, EP107	589,500	4,571,200	9.14	0.03	12.80	293.2	0.30	0.15

Table 2: Multisource PM_{10} Modeling Inventory (PSD/Large Source Analysis)[1]

DEC	Facility Name	Merged Emission Point IDs	UTM E (m)	UTM N (m)	Base Elevation (m)	Potential PM_{10} Emissions[2] (g/s)	Stack Height (m)	Exhaust Temperature (K)	Exhaust Velocity (m/s)	Stack Diameter (m)
3552200087	LAFARGE NORTH AMERICA INC - BUCHANAN	0PT30	590,500	4,569,500	19.51	2.21	30.48	394.3	7.62	1.98
		0PT38	590,500	4,569,500	19.51	0.66	23.77	255.4	18.90	1.68
		0PT17	590,500	4,569,500	18.29	0.04	31.70	338.7	22.43	0.61
334600267	NEW ENGLAND LAMINATES	3	573,787	4,595,694	150.88	0.02	10.36	422.0	18.29	0.61
		1, 2	573,787	4,595,694	150.88	0.02	10.36	422.0	18.29	0.61

[1] Modeled all PM_{10} sources in the NAAQS and PSD increment analyses.

[2] Modeled the potential short-term PM_{10} emission rates in 24-hour and annual analyses.

Table 1: Local Multisource PM_{10} Modeling Inventory

DEC	Facility Name	Emission Point ID	UTM E (m)	UTM N (m)	Base Elevation (m)	Potential PM_{10} Emissions[1] (g/s)	Stack Height (m)	Exhaust Temperature (K)	Exhaust Velocity (m/s)	Stack Diameter (m)
3335200145	REVERE SMELTING & REFINING CORP	2	553,403	4,589,939	158.50	4.95	30.48	338.7	29.26	1.37
		4	553,487	4,590,145	154.84	2.65	13.11	294.3	22.56	1.02
		5	553,423	4,590,154	156.06	0.26	3.96	738.7	2.13	0.20
		6	553,422	4,590,148	156.06	0.26	3.96	738.7	2.13	0.20
		7	553,434	4,589,990	154.84	2.65	13.11	294.3	22.56	1.02
		8	553,461	4,590,125	158.50	2.65	11.89	294.3	22.56	1.02
		9	553,454	4,590,125	158.50	2.65	11.89	294.3	22.56	1.02
		10	553,451	4,590,126	158.50	2.65	11.89	294.3	22.56	1.02
		11	553,447	4,590,126	158.50	2.65	11.89	294.3	22.56	1.02
		12	553,487	4,590,066	158.50	4.09	13.72	294.3	11.58	1.76
		14	553,512	4,590,190	160.02	0.05	11.58	331.5	8.23	0.25
		15	553,522	4,590,197	160.02	0.05	11.58	422.0	18.29	0.51
		16	553,476	4,590,068	158.50	4.09	13.72	294.3	11.58	1.76
		17	553,457	4,589,992	157.58	1.50	18.29	332.0	25.60	1.22
		24	553,511	4,590,180	160.02	0.19	10.67	383.2	32.00	0.25
			553,486	4,590,049	157.28	0.42	60.96	383.2	10.97	1.42
3330900040	SHOEMAKER GAS TURBINE FACILITY	1	548,249	4,587,034	149.66	0.43	13.72	810.9	39.62	0.45
		2	548,251	4,587,023	149.05	0.04	3.96	699.8	36.58	0.20
3333000184	AL TURI LANDFILL & LFGTE FACILITY	1,2,3,4,5,8,9	551,960	4,583,882	128.02	0.70	4.27	616.5	25.91	0.30
		10, 11	551,960	4,583,882	128.02	0.16	12.50	1,144.3	3.35	2.74

[1] Modeled the potential short-term PM_{10} emission rates in 24-hour and annual analyses.