Table C-1
Monroe Energy, LLC - Trainer, PA Refinery
PSD Baseline Actual Emission Rates

Emission Unit		Emission Rate (tpy)														
		PM	PM_{10}	$PM_{2.5}$	SO_2	NO_2	VOC	CO	Lead	H_2S	TRS	CO_2	N_2O	CH_4	Total GHG	$CO_2e^{(a)}$
101	FCC Unit	43.06	63.93	41.79	28.86	233.46	3.15	15.63	2.47E-04	-	-	499,375.51	2.93	14.67	499,393.10	500,614.22
733	FCCU Feed Heater	0.10	0.42	0.58	0.62	2.56	0.42	0.93	3.73E-05	0.01	0.01	16,695.75	0.17	0.85	16,696.77	16,767.57
735	Kerosene/HCN HTU Feed Heater	0.22	0.36	0.30	0.33	5.36	0.22	3.23	1.82E-05	2.74E-03	2.77E-03	4,319.92	0.04	0.22	4320.18	4,338.50
736	Diesel HTU Heater	0.24	0.42	0.48	0.55	11.74	0.20	3.49	3.35E-05	0.01	0.01	13,802.45	0.14	0.70	13,803.30	13,861.83
741	D2/VGO Hydrotreater Feed Heater	0.43	0.33	0.20	0.72	9.04	0.50	7.44	4.78E-05	0.01	0.01	23,209.06	0.24	1.18	23,210.47	23,308.90
737	Naphtha HDS Heater	1.19	1.87	1.92	2.01	25.95	1.39	20.86	1.22E-04	0.02	0.02	33,037.72	0.34	1.68	33039.73	33,179.83
738	Platformer Feed Heater	8.45	13.44	13.90	14.58	148.25	10.06	1.57	9.42E-04	0.19	0.19	284,157.46	2.89	14.45	284,174.80	285,379.82
739	Isocracker 1st Stage Heater	0.55	0.96	1.01	1.06	15.96	0.73	11.21	6.49E-05	0.01	0.01	14,711.55	0.15	0.75	14712.45	14,774.84
740	Isocracker Splitter Reboiler	0.69	1.19	1.21	1.27	15.94	0.88	13.38	7.83E-05	0.01	0.01	18,382.52	0.19	0.93	18383.64	18,461.59
742	VCD 541 VAC Heater	0.18	0.71	0.70	0.76	12.75	0.50	7.34	4.31E-05	0.01	0.01	13,793.59	0.14	0.70	13794.44	13,852.93
743	VCD 542 VAC Heater	0.44	0.78	0.70	0.41	4.02	0.02	0.01	2.38E-05	0.01	0.01	17,771.31	0.18	0.90	17772.39	17,847.75
746	VCD 544 VAC Heater	1.35	2.88	2.77	2.34	12.49	2.11	1.34	1.40E-04	0.02	0.02	35,464.65	0.36	1.80	35466.81	35,617.21
744	ACD 543 Crude Heater	4.32	7.22	7.36	8.04	39.50	5.33	81.32	4.82E-04	0.09	0.09	143,860.54	1.46	7.31	143869.31	144,479.38
745	ACD 544 Crude Heater	4.68	7.59	7.60	8.30	44.94	5.50	83.63	4.91E-04	0.09	0.09	145,398.35	1.48	7.39	145407.22	146,023.81
34	Boiler 9	0.53	1.69	0.55	1.66	4.16	0.04	1.17	4.51E-04	0.06	0.06	72,880.82	0.14	1.37	72,882.33	72,956.09
35	Boiler 10	0.38	1.06	0.46	1.58	3.90	0.03	8.72	4.32E-04	0.06	0.06	83,481.92	0.16	1.57	83,483.65	83,568.14
102	SRU	0.10	0.38	0.32	18.24	4.33	0.23	3.56	2.04E-05	0.00	-	2,852.70	0.06	5.88E-03	2,852.76	2,870.38
103	Main Flare	4.05	5.04	5.04	11.13	9.99	20.56	58.11	1.14E-04	14.23	-	51,382.53	0.96	8.75	51,392.24	51,887.23
165	Tank 93	-	-	-	-	-	4.59	-	-	-	-	-	-	-	-	-
166	Tank 94	-	-	-	-	-	1.96	-	-	-	-	-	-	-	-	-
126	Tank 95	-	-	-	-	-	2.44	-	-	-	-	-	-	-	-	-
127	Tank 96	-	-	-	-	-	3.37	-	-	-	-	-	-	-	-	-
137	Tank 152	-	-	-	-	-	2.34	-	-	-	-	-	-	-	-	-
138	Tank 153	-	-	-	-	-	0.16	-	-	-	-	-	-	-	-	-
140	Tank 155	-	-	-	-	-	0.13	-	-	-	-	-	-	-	-	-
142	Tank 157	-	-	-	-	-	0.15	-	-	-	-	-	-	-	-	-
300	Tank 158 (Source ID 193)	-	-	-	-	-	1.06	-	-	-	-	-	-	-	-	-
143	Tank 159	-	-	-	-	-	4.08	-	-	-	-	-	-	-	-	-
194	Tank 160	-	-	-	-	-	4.69	-	-	-	-	-	-	-	-	-
144	Tank 161	-	-	-	-	-	2.68	-	-	-	-	-	-	-	-	-
145	Tank 162	-	-	-	-	-	0.64	-	-	-	-	-	-	-	-	-
146	Tank 163	-	-	-	-	-	1.82	-	-	-	-	-	-	-	-	-
147	Tank 164	-	-	-	-	-	1.88	-	-	-	-	-	-	-	-	-
148	Tank 165	-	-	-	-	-	2.23	-	-	-	-	-	-	-	-	-
149	Tank 166	-	-	-	-	-	2.89	-	-	-	-	-	-	-	-	-
150	Tank 168	-	-	-	-	-	1.69	-	-	-	-	-	-	-	-	-
152	Tank 170	-	-	-	-	-	4.21	-	-	-	-	-	-	-	-	-
155	Tank 174	-	-	-	-	-	3.99	-	-	-	-	-	-	-	-	-
156	Tank 175	-	-	-	-	-	6.36	-	-	-	-	-	-	-	-	-
157	Tank 178	-	-	-	-	-	3.53	-	-	-	-	-	-	-	-	-
160	Tank 181	-	-	-	-	-	2.24	-	-	-	-	-	-	-	-	-
161	Tank 182	-	-	-	-	-	4.38	-	-	-	-	-	-	-	-	-
163	Tank 185	-	-	-	-	-	8.82	-	-	-	-	-	-	-	-	-
164	Tank 186	-	-	-	-	-	5.54	-	-	-	-	-	-	-	-	-
Total Baseline Emissions (tons/24 months)		**141.92**	**220.54**	**173.78**	**204.95**	**1,208.71**	**259.48**	**645.90**	**7.58E-03**	**29.70**	**1.25**	**2,949,157**	**23.95**	**129.63**	**2,949,310.23**	**2,959,534.50**
Total Baseline Actual Emissions		**70.96**	**110.27**	**86.89**	**102.47**	**604.35**	**129.74**	**322.95**	**3.79E-03**	**14.85**	**0.62**	**1,474,578**	**11.98**	**64.81**	**1,474,655.12**	**1,479,767.25**
Baseline Period		**Aug-13**	**Aug-13**	**Feb-13**	**Feb-13**	**Feb-13**	**Feb-13**	**Jan-13**	**Nov-12**	**Jan-09**	**Apr-09**	**Jun-09**	**Jun-09**	**Jun-09**	**Jun-09**	**Jun-09**
		Jul-15	**Jul-15**	**Jan-15**	**Jan-15**	**Jan-15**	**Jan-15**	**Dec-14**	**Oct-14**	**Dec-10**	**Mar-11**	**May-11**	**May-11**	**May-11**	**May-11**	**May-11**

[a] CO_2e is carbon dioxide equivalent, calculated according to 40 CFR 98 Equation A-1:

$$CO_2e = \sum_{i=1}^{n} GHG_i \times GWP_i$$

where GHGi = annual mass emissions of greenhouse gas i (short tons/year)
GWPi = global warming potential of greenhouse gas i from the table below

Pollutant	GWP (100 year)
CO_2	1
N_2O	298
CH_4	25

Table C-2
Monroe Energy, LLC - Trainer, PA Refinery
NNSR Baseline Actual Emission Rates

Emission Unit		Emission Rate (tpy)				
		$PM_{2.5}$ NNSR			Ozone NNSR	
		$PM_{2.5}$	SO_2	NO_X	NO_X	VOC
101	FCC Unit	41.79	28.86	233.46	233.46	3.15
733	FCCU Feed Heater	0.58	0.62	2.56	2.56	0.42
735	Kerosene/HCN HTU Feed Heater	0.30	0.33	5.36	5.36	0.22
736	Diesel HTU Heater	0.48	0.55	11.74	11.74	0.20
741	D2/VGO Hydrotreater Feed Heater	0.20	0.72	9.04	9.04	0.50
737	Naphtha HDS Heater	1.92	2.01	25.95	25.95	1.39
738	Platformer Feed Heater	13.90	14.58	148.25	148.25	10.06
739	Isocracker 1st Stage Heater	1.01	1.06	15.96	15.96	0.73
740	Isocracker Splitter Reboiler	1.21	1.27	15.94	15.94	0.88
742	VCD 541 VAC Heater	0.70	0.76	12.75	12.75	0.50
743	VCD 542 VAC Heater	0.70	0.41	4.02	4.02	0.02
746	VCD 544 VAC Heater	2.77	2.34	12.49	12.49	2.11
744	ACD 543 Crude Heater	7.36	8.04	39.50	39.50	5.33
745	ACD 544 Crude Heater	7.60	8.30	44.94	44.94	5.50
34	Boiler 9	0.55	1.66	4.16	4.16	0.04
35	Boiler 10	0.46	1.58	3.90	3.90	0.03
102	SRU	0.32	18.24	4.33	4.33	0.23
103	Main Flare	5.04	11.13	9.99	9.99	20.56
165	Tank 93	-	-	-	-	4.59
166	Tank 94	-	-	-	-	1.96
126	Tank 95	-	-	-	-	2.44
127	Tank 96	-	-	-	-	3.37
137	Tank 152	-	-	-	-	2.34
138	Tank 153	-	-	-	-	0.16
140	Tank 155	-	-	-	-	0.13
142	Tank 157	-	-	-	-	0.15
300	Tank 158 (Source ID 193)	-	-	-	-	1.06
143	Tank 159	-	-	-	-	4.08
194	Tank 160	-	-	-	-	4.69
144	Tank 161	-	-	-	-	2.68
145	Tank 162	-	-	-	-	0.64
146	Tank 163	-	-	-	-	1.82
147	Tank 164	-	-	-	-	1.88
148	Tank 165	-	-	-	-	2.23
149	Tank 166	-	-	-	-	2.89
150	Tank 168	-	-	-	-	1.69
152	Tank 170	-	-	-	-	4.21
155	Tank 174	-	-	-	-	3.99
156	Tank 175	-	-	-	-	6.36
157	Tank 178	-	-	-	-	3.53
160	Tank 181	-	-	-	-	2.24
161	Tank 182	-	-	-	-	4.38
163	Tank 185	-	-	-	-	8.82
164	Tank 186	-	-	-	-	5.54
Total Baseline Emissions (tons/24 months)		**173.78**	**204.95**	**1,208.71**	**1,208.71**	**259.48**
Total Baseline Actual Emissions		**86.89**	**102.47**	**604.35**	**604.35**	**129.74**
Baseline Period		**Feb-13**	**Feb-13**	**Feb-13**	**Feb-13**	**Feb-13**
		Jan-15	**Jan-15**	**Jan-15**	**Jan-15**	**Jan-15**

Table C-31
Monroe Energy, LLC - Trainer, PA Facility
Projected Future Actual Emissions

Emission Unit		Emission Rate (tpy)										
		PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO	Lead	H_2S	TRS	$CO_2e^{(a)}$
101	FCC Unit	84.62	110.60	96.21	88.82	432.52	3.20	16.35	-	-	-	756,643.87
733	FCCU Feed Heater	0.18	0.72	0.72	0.78	3.02	0.52	7.93	4.72E-05	8.56E-03	8.56E-03	13,159.88
735	Kerosene/HCN HTU Feed Heater	0.06	0.25	0.25	0.28	4.51	0.18	2.81	1.67E-05	3.09E-03	3.09E-03	4,749.00
736	Diesel HTU Heater	0.11	0.62	0.62	0.67	13.84	0.39	0.18	4.05E-05	7.45E-03	7.45E-03	11,443.37
741	D2/VGO Hydrotreater Feed Heater	0.15	0.59	0.59	0.61	7.71	0.42	6.48	3.86E-05	6.70E-03	6.70E-03	10,299.04
737	Naphtha HDS Heater	0.61	2.43	2.43	2.55	33.29	1.76	26.88	1.60E-04	0.03	0.03	43,484.82
738	Platformer Feed Heater	4.06	16.23	16.23	17.03	185.70	11.75	0.15	1.07E-03	0.18	0.18	282,079.15
739	Isocracker 1st Stage Heater	0.26	1.03	1.03	1.08	16.77	0.75	11.43	6.80E-05	0.01	0.01	18,881.57
740	Isocracker Splitter Reboiler	0.34	1.37	1.37	1.44	18.05	0.99	15.17	9.03E-05	0.02	0.02	25,175.42
742	VCD 541 VAC Heater	0.27	1.06	1.06	1.16	20.50	0.77	11.76	7.00E-05	0.01	0.01	20,598.07
743	VCD 542 VAC Heater	0.15	0.62	0.62	0.67	6.75	0.03	0.02	4.06E-05	7.45E-03	7.45E-03	11,443.37
746	VCD 544 VAC Heater	0.55	2.19	2.19	2.39	12.44	2.18	5.29	1.44E-04	0.03	0.03	40,623.97
744	ACD 543 Crude Heater	2.01	8.02	8.02	8.77	45.55	5.81	88.66	5.28E-04	0.10	0.10	148,763.85
745	ACD 544 Crude Heater	2.00	8.01	8.01	8.75	50.11	5.80	88.55	5.27E-04	0.10	0.10	148,763.85
34	Boiler 9	0.72	5.69	5.07	1.04	4.41	0.31	1.34	4.80E-04	0.09	0.09	115,912.86
35	Boiler 10	0.40	3.07	2.97	2.97	3.93	0.27	4.93	4.60E-04	0.08	0.08	110,997.52
102	SRU	0.11	0.44	0.44	40.33	5.83	0.32	4.90	2.92E-05	0.00	-	31,828.54
103	Main Flare	1.25	1.74	1.74	4.15	3.15	6.48	17.13	2.14E-04	2.47	-	6,365.71
165	Tank 93	-	-	-	-	-	1.92	-	-	-	-	-
166	Tank 94	-	-	-	-	-	2.76	-	-	-	-	-
126	Tank 95	-	-	-	-	-	3.46	-	-	-	-	-
127	Tank 96	-	-	-	-	-	4.45	-	-	-	-	-
137	Tank 152	-	-	-	-	-	5.06	-	-	-	-	-
138	Tank 153	-	-	-	-	-	0.19	-	-	-	-	-
140	Tank 155	-	-	-	-	-	0.18	-	-	-	-	-
142	Tank 157	-	-	-	-	-	0.21	-	-	-	-	-
300	Tank 158 (Source ID 193)	-	-	-	-	-	13.15	-	-	-	-	-
143	Tank 159	-	-	-	-	-	3.97	-	-	-	-	-
194	Tank 160	-	-	-	-	-	0.22	-	-	-	-	-
144	Tank 161	-	-	-	-	-	6.04	-	-	-	-	-
145	Tank 162	-	-	-	-	-	3.25	-	-	-	-	-
146	Tank 163	-	-	-	-	-	4.25	-	-	-	-	-
147	Tank 164	-	-	-	-	-	3.79	-	-	-	-	-
148	Tank 165	-	-	-	-	-	8.26	-	-	-	-	-
149	Tank 166	-	-	-	-	-	3.55	-	-	-	-	-
150	Tank 168	-	-	-	-	-	2.89	-	-	-	-	-
152	Tank 170	-	-	-	-	-	6.13	-	-	-	-	-
155	Tank 174	-	-	-	-	-	12.01	-	-	-	-	-
156	Tank 175	-	-	-	-	-	7.43	-	-	-	-	-
157	Tank 178	-	-	-	-	-	3.23	-	-	-	-	-
160	Tank 181	-	-	-	-	-	8.75	-	-	-	-	-
161	Tank 182	-	-	-	-	-	20.53	-	-	-	-	-
163	Tank 185	-	-	-	-	-	11.26	-	-	-	-	-
164	Tank 186	-	-	-	-	-	5.47	-	-	-	-	-
N/A	New Feed Heaters	3.15	3.15	3.15	4.42	22.04	3.15	17.08	2.66E-04	-	-	-
N/A	New Cooling Tower	0.16	0.16	0.16	-	-	6.02	-	-	-	-	-
N/A	Additional Fugitive Emissions	-	-	-	-	-	5.13	-	-	-	-	-
Total Projected Future Actual Emissions		***101.14***	***168.00***	***152.89***	***187.93***	***890.12***	***198.63***	***327.01***	***4.29E-03***	***3.15***	***0.68***	***1,801,213.86***

[a] CO_2e is carbon dioxide equivalent, calculated according to 40 CFR 98 Equation A-1:

$$CO_2e = \sum_{i=1}^{n} GHG_i \times GWP_i$$

where GHGi = annual mass emissions of greenhouse gas i (short tons/year)
GWPi = global warming potential of greenhouse gas i from the table below

Pollutant	GWP (100 year)
CO_2	1
N_2O	298
CH_4	25

Table C-32
Monroe Energy, LLC - Trainer, PA Refinery
Emissions Which Could Have Been Accomodated (CHA)

Emission Unit			Emission Rate (tpy)												
			PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO	Lead	H_2S	TRS	CO_2	N_2O	CH_4
101	FCC Unit	Highest Emitting Month	Mar-15	Mar-15	Jan-15	Dec-14	Dec-14	Mar-13	May-13	Jan-14	-	-	Jul-10	Jul-10	Jul-10
		Monthly Emissions	9.79	11.73	9.39	7.94	37.87	0.27	2.95	3.48E-05	0.00	0.00	46,689.55	0.27	1.37
		Annualized Emissions (CHA)	93.30	140.78	112.69	95.25	454.41	3.26	35.45	4.18E-04	0.00	0.00	560,274.64	3.28	16.46
733	FCCU Feed Heater	Highest Emitting Month	Jun-14	Jun-14	Jun-14	Jun-14	Mar-13	Jun-14	Mar-13	Jun-14	Jul-09	Jul-09	Jul-09	Jul-09	Jul-09
		Monthly Emissions	0.03	0.13	0.13	0.14	0.56	0.09	0.94	8.32E-06	1.85E-03	1.85E-03	2,833.44	0.03	0.14
		Annualized Emissions (CHA)	0.38	1.52	1.52	1.66	6.67	1.10	11.29	9.99E-05	0.02	0.02	34,001.33	0.35	1.73
735	Kerosene/HCN HTU Feed Heater	Highest Emitting Month	Dec-14	Jul-15	Jan-15	Jan-15	Jan-15	Jan-15	Dec-14	Aug-14	Jan-09	Jan-11	Jan-11	Jan-11	Jan-11
		Monthly Emissions	0.04	0.04	0.04	0.04	0.74	0.03	0.44	2.38E-06	3.12E-04	3.63E-04	555.94	5.65E-03	0.03
		Annualized Emissions (CHA)	0.47	0.50	0.48	0.53	8.84	0.35	5.23	2.85E-05	3.74E-03	4.36E-03	6,671.34	0.07	0.34
736	Diesel HTU Heater	Highest Emitting Month	Apr-14	Jul-15	May-13	May-13	May-13	May-13	Jan-13	Jan-13	Mar-10	Mar-10	Mar-10	Mar-10	Mar-10
		Monthly Emissions	0.05	0.06	0.08	0.08	1.90	0.06	0.91	5.39E-06	1.00E-03	1.00E-03	1,529.58	0.02	0.08
		Annualized Emissions (CHA)	0.63	0.68	0.93	1.01	22.76	0.67	10.87	6.47E-05	0.01	0.01	18,354.99	0.19	0.93
741	D2/VGO Hydrotreater Feed Heater	Highest Emitting Month	Jul-14	Jun-15	Jan-15	May-13	May-13	May-13	May-13	May-13	Jan-09	Mar-11	May-11	May-11	May-11
		Monthly Emissions	0.07	0.10	0.06	0.12	1.53	0.08	1.28	7.64E-06	1.46E-03	1.85E-03	2,879.96	0.03	0.15
		Annualized Emissions (CHA)	0.79	1.14	0.75	1.46	18.34	1.01	15.41	9.17E-05	0.02	0.02	34,559.53	0.35	1.76
737	Naphtha HDS Heater	Highest Emitting Month	Oct-14	Oct-14	Oct-14	Oct-14	Oct-14	Oct-14	Oct-14	Oct-14	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10
		Monthly Emissions	0.20	0.20	0.20	0.21	3.09	0.14	2.19	1.30E-05	2.43E-03	2.43E-03	3,714.73	0.04	0.19
		Annualized Emissions (CHA)	2.37	2.37	2.37	2.49	37.04	1.72	26.25	1.56E-04	0.03	0.03	44,576.75	0.45	2.27
738	Platformer Feed Heater	Highest Emitting Month	Mar-14	Jul-15	Mar-13	Mar-13	Mar-13	Mar-13	Mar-13	Mar-13	Mar-10	Mar-10	Mar-10	Mar-10	Mar-10
		Monthly Emissions	1.26	1.29	1.40	1.47	16.00	1.01	0.59	9.20E-05	0.02	0.02	26,617.95	0.27	1.35
		Annualized Emissions (CHA)	15.12	15.46	16.78	17.60	191.96	12.14	7.11	1.10E-03	0.21	0.21	319,415.38	3.25	16.24
739	Isocracker 1st Stage Heater	Highest Emitting Month	Dec-14	Aug-13	May-13	May-13	May-13	May-13	May-13	May-13	Jan-10	Jan-10	Jan-10	Jan-10	Jan-10
		Monthly Emissions	0.09	0.12	0.12	0.13	1.93	0.09	1.37	8.13E-06	1.27E-03	1.27E-03	1,937.43	0.02	0.10
		Annualized Emissions (CHA)	1.07	1.39	1.49	1.56	23.20	1.08	16.45	9.76E-05	0.02	0.02	23,249.17	0.24	1.18
740	Isocracker Splitter Reboiler	Highest Emitting Month	May-14	May-14	Jul-13	Jul-13	Jul-13	Jul-13	Jul-13	Jul-13	May-10	Mar-11	Mar-11	Mar-11	Mar-11
		Monthly Emissions	0.13	0.13	0.13	0.14	1.74	0.10	1.46	8.72E-06	1.26E-03	1.30E-03	1,986.38	0.02	0.10
		Annualized Emissions (CHA)	1.50	1.50	1.59	1.67	20.92	1.15	17.58	1.05E-04	0.02	0.02	23,836.53	0.24	1.21
742	VCD 541 VAC Heater	Highest Emitting Month	Jul-15	Jul-15	Aug-14	Aug-14	Aug-14	Aug-14	Aug-14	Aug-14	Jan-09	Apr-10	Apr-10	Apr-10	Apr-10
		Monthly Emissions	0.02	0.10	0.09	0.09	1.61	0.06	0.95	5.63E-06	1.03E-03	9.72E-04	1,487.03	0.02	0.08
		Annualized Emissions (CHA)	0.29	1.17	1.03	1.12	19.27	0.74	11.34	6.75E-05	0.01	0.01	17,844.39	0.18	0.91
743	VCD 542 VAC Heater	Highest Emitting Month	Apr-14	Apr-14	Apr-14	Apr-14	Apr-14	Apr-14	Apr-14	Apr-14	Jan-09	Jul-10	Jul-10	Jul-10	Jul-10
		Monthly Emissions	0.11	0.11	0.11	0.06	0.63	2.57E-03	1.95E-03	3.83E-06	1.20E-03	1.12E-03	1,719.25	0.02	0.09
		Annualized Emissions (CHA)	1.32	1.32	1.32	0.76	7.52	0.03	0.02	4.60E-05	0.01	0.01	20,631.05	0.21	1.05
746	VCD 544 VAC Heater	Highest Emitting Month	Mar-14	Aug-13	Aug-13	Aug-13	Mar-13	Aug-13	Jan-13	Aug-13	Jan-10	Jan-10	Jan-10	Jan-10	Jan-10
		Monthly Emissions	0.27	0.28	0.28	0.24	1.31	0.21	0.45	1.45E-05	2.50E-03	2.50E-03	3,819.02	0.04	0.19
		Annualized Emissions (CHA)	3.20	3.36	3.36	2.88	15.71	2.56	5.41	1.74E-04	0.03	0.03	45,828.20	0.47	2.33
744	ACD 543 Crude Heater	Highest Emitting Month	Apr-14	Sep-13	Sep-13	Sep-13	Oct-13	Sep-13	Sep-13	Sep-13	Mar-10	Mar-10	May-11	May-11	May-11
		Monthly Emissions	0.72	0.73	0.73	0.80	4.14	0.53	8.07	4.80E-05	8.80E-03	8.80E-03	13,850.21	0.14	0.70
		Annualized Emissions (CHA)	8.66	8.76	8.76	9.57	49.71	6.34	96.84	5.76E-04	0.11	0.11	166,202.49	1.69	8.45
745	ACD 544 Crude Heater	Highest Emitting Month	Jan-14	Jan-14	Jan-14	Jan-14	Jan-14	Jan-14	Jan-14	Jan-14	Mar-10	Mar-10	Mar-10	Mar-10	Mar-10
		Monthly Emissions	0.77	0.77	0.77	0.84	4.68	0.56	8.50	5.06E-05	8.58E-03	8.58E-03	13,123.53	0.13	0.67
		Annualized Emissions (CHA)	9.23	9.23	9.23	10.08	56.20	6.68	102.01	6.07E-04	0.10	0.10	157,482.30	1.60	8.01
34	Boiler 9	Highest Emitting Month	Jan-15	Jan-15	Jan-15	Jan-14	Mar-13	Jan-15	Jan-14	Mar-13	-	-	Aug-10	Aug-10	Aug-10
		Monthly Emissions	0.07	0.47	0.44	0.17	0.41	0.03	0.12	4.66E-05	7.19E-03	7.19E-03	9,097.35	0.02	0.17
		Annualized Emissions (CHA)	0.89	5.62	5.29	2.03	4.94	0.35	1.41	5.60E-04	0.09	0.09	109,168.22	0.21	2.06
35	Boiler 10	Highest Emitting Month	Dec-13	Jan-15	Jan-15	Mar-14	Dec-13	Jan-15	Dec-13	Dec-13	-	-	Aug-10	Aug-10	Aug-10
		Monthly Emissions	0.05	0.26	0.26	0.17	0.42	0.03	1.39	4.54E-05	7.48E-03	7.48E-03	9,469.05	0.02	0.18
		Annualized Emissions (CHA)	0.58	3.14	3.07	2.07	5.09	0.31	16.67	5.45E-04	0.09	0.09	113,628.58	0.21	2.14
102	SRU	Highest Emitting Month	Mar-15	Mar-15	Jan-14	Nov-14	Jan-15	Jan-14	Jan-14	Jan-14	-	-	May-11	May-11	May-11
		Monthly Emissions	0.01	0.05	0.04	2.33	0.57	0.03	0.47	2.79E-06	0.00	0.00	295.23	6.09E-03	6.09E-04
		Annualized Emissions (CHA)	0.14	0.58	0.51	27.98	6.81	0.37	5.62	3.34E-05	0.00	0.00	3,542.78	0.07	7.31E-03
103	Main Flare	Highest Emitting Month	Feb-15	Feb-15	Jul-13	Jul-13	Jul-13	Jul-13	Jan-13	Jan-13	Jan-10	-	Jan-10	Jan-10	Jan-10
		Monthly Emissions	0.57	0.68	0.78	2.28	1.52	3.13	13.23	3.41E-05	1.52	0.00	6,024.93	0.11	1.14
		Annualized Emissions (CHA)	6.83	8.11	9.33	25.00	18.23	37.52	158.82	4.09E-04	18.26	0.00	72,299.13	1.30	13.62
165	Tank 93	Highest Emitting Month	-	-	-	-	-	Jun-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.17	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	2.03	-	-	-	-	-	-	-
166	Tank 94	Highest Emitting Month	-	-	-	-	-	Mar-13	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.24	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	2.91	-	-	-	-	-	-	-
126	Tank 95	Highest Emitting Month	-	-	-	-	-	Jul-13	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.30	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	3.56	-	-	-	-	-	-	-
127	Tank 96	Highest Emitting Month	-	-	-	-	-	Mar-13	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.38	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	4.61	-	-	-	-	-	-	-
137	Tank 152	Highest Emitting Month	-	-	-	-	-	Feb-13	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.72	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	8.64	-	-	-	-	-	-	-
138	Tank 153	Highest Emitting Month	-	-	-	-	-	Feb-13	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.02	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	0.20	-	-	-	-	-	-	-
140	Tank 155	Highest Emitting Month	-	-	-	-	-	Apr-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.02	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	0.18	-	-	-	-	-	-	-
142	Tank 157	Highest Emitting Month	-	-	-	-	-	Mar-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.02	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	0.24	-	-	-	-	-	-	-
300	Tank 158 (Source ID 193)	Highest Emitting Month	-	-	-	-	-	May-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	1.43	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	17.18	-	-	-	-	-	-	-
143	Tank 159	Highest Emitting Month	-	-	-	-	-	Mar-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.34	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	4.06	-	-	-	-	-	-	-

Table C-32
Monroe Energy, LLC - Trainer, PA Refinery
Emissions Which Could Have Been Accomodated (CHA)

Emission Unit			Emission Rate (tpy)												
			PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO	Lead	H_2S	TRS	CO_2	N_2O	CH_4
194	Tank 160	Highest Emitting Month	-	-	-	-	-	Jan-15	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.02	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	0.26	-	-	-	-	-	-	-
144	Tank 161	Highest Emitting Month	-	-	-	-	-	Mar-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.52	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	6.21	-	-	-	-	-	-	-
145	Tank 162	Highest Emitting Month	-	-	-	-	-	Feb-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.53	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	6.36	-	-	-	-	-	-	-
146	Tank 163	Highest Emitting Month	-	-	-	-	-	Jul-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.37	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	4.41	-	-	-	-	-	-	-
147	Tank 164	Highest Emitting Month	-	-	-	-	-	Feb-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.65	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	7.79	-	-	-	-	-	-	-
148	Tank 165	Highest Emitting Month	-	-	-	-	-	Feb-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	1.69	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	20.33	-	-	-	-	-	-	-
149	Tank 166	Highest Emitting Month	-	-	-	-	-	Aug-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.34	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	4.06	-	-	-	-	-	-	-
150	Tank 168	Highest Emitting Month	-	-	-	-	-	Jun-13	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.28	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	3.42	-	-	-	-	-	-	-
152	Tank 170	Highest Emitting Month	-	-	-	-	-	Mar-13	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.52	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	6.24	-	-	-	-	-	-	-
155	Tank 174	Highest Emitting Month	-	-	-	-	-	Jul-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	1.15	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	13.79	-	-	-	-	-	-	-
156	Tank 175	Highest Emitting Month	-	-	-	-	-	Feb-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.66	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	7.94	-	-	-	-	-	-	-
157	Tank 178	Highest Emitting Month	-	-	-	-	-	Feb-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.49	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	5.85	-	-	-	-	-	-	-
160	Tank 181	Highest Emitting Month	-	-	-	-	-	Feb-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	1.85	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	22.24	-	-	-	-	-	-	-
161	Tank 182	Highest Emitting Month	-	-	-	-	-	Feb-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	3.29	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	39.43	-	-	-	-	-	-	-
163	Tank 185	Highest Emitting Month	-	-	-	-	-	Jun-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.98	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	11.81	-	-	-	-	-	-	-
164	Tank 186	Highest Emitting Month	-	-	-	-	-	Sep-14	-	-	-	-	-	-	-
		Monthly Emissions	-	-	-	-	-	0.55	-	-	-	-	-	-	-
		Annualized Emissions (CHA)	-	-	-	-	-	6.60	-	-	-	-	-	-	-
Total Capable of Accommodating Emissions			**146.78**	**206.63**	**180.49**	**204.72**	**967.62**	**287.74**	**543.77**	**0.01**	**19.03**	**0.77**	**1,771,567**	**14.36**	**80.69**
Baseline Period			**Aug-13**	**Aug-13**	**Feb-13**	**Feb-13**	**Feb-13**	**Feb-13**	**Jan-13**	**Nov-12**	**Jan-09**	**Apr-09**	**Jun-09**	**Jun-09**	**Jun-09**
			Jul-15	**Jul-15**	**Jan-15**	**Jan-15**	**Jan-15**	**Jan-15**	**Dec-14**	**Oct-14**	**Dec-10**	**Mar-11**	**May-11**	**May-11**	**May-11**

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
101	FCC Unit	PM	84.62	43.06	41.56	93.30	50.24	0.00
		PM_{10}	110.60	63.93	46.66	140.78	76.84	0.00
		$PM_{2.5}$	96.21	41.79	54.43	112.69	70.91	0.00
		SO_2	88.82	28.86	59.96	95.25	66.39	0.00
		NO_X	432.52	233.46	199.06	454.41	220.95	0.00
		VOC	3.20	3.15	0.05	3.26	0.11	0.00
		CO	16.35	15.63	0.71	35.45	19.82	0.00
		Lead	-	2.47E-04	-	4.18E-04	1.71E-04	-
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	-	-	-	0.00	-	-
		TRS	-	-	-	0.00	-	-
		CO_2	754,773.34	499,375.51	255,397.83	560,274.64	60,899.13	194,498.70
		N_2O	4.42	2.93	1.50	3.28	0.36	1.14
		CH_4	22.11	14.67	7.44	16.46	1.79	5.65
733	FCCU Feed Heater	PM	0.18	0.10	0.08	0.38	0.28	0.00
		PM_{10}	0.72	0.42	0.30	1.52	1.10	0.00
		$PM_{2.5}$	0.72	0.58	0.13	1.52	0.94	0.00
		SO_2	0.78	0.62	0.16	1.66	1.04	0.00
		NO_X	3.02	2.56	0.46	6.67	4.11	0.00
		VOC	0.52	0.42	0.10	1.10	0.68	0.00
		CO	7.93	0.93	7.00	11.29	10.36	0.00
		Lead	4.72E-05	3.73E-05	9.89E-06	9.99E-05	6.26E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	8.56E-03	0.01	0.00	0.02	8.85E-03	0.00
		TRS	8.56E-03	0.01	0.00	0.02	0.01	0.00
		CO_2	13,103.51	16,695.75	0.00	34,001.33	17,305.58	0.00
		N_2O	0.13	0.17	0.00	0.35	0.18	0.00
		CH_4	0.67	0.85	0.00	1.73	0.88	0.00
735	Kerosene/HCN HTU Feed Heater	PM	0.06	0.22	0.00	0.47	0.25	0.00
		PM_{10}	0.25	0.36	0.00	0.50	0.15	0.00
		$PM_{2.5}$	0.25	0.30	0.00	0.48	0.18	0.00
		SO_2	0.28	0.33	0.00	0.53	0.20	0.00
		NO_X	4.51	5.36	0.00	8.84	3.48	0.00
		VOC	0.18	0.22	0.00	0.35	0.13	0.00
		CO	2.81	3.23	0.00	5.23	2.00	0.00
		Lead	1.67E-05	1.82E-05	0.00	2.85E-05	1.03E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	3.09E-03	2.74E-03	3.54E-04	3.74E-03	1.00E-03	0.00
		TRS	3.09E-03	2.77E-03	3.22E-04	4.36E-03	1.59E-03	0.00
		CO_2	4,728.66	4,319.92	408.74	6,671.34	2,351.42	0.00
		N_2O	0.05	0.04	4.16E-03	0.07	0.02	0.00
		CH_4	0.24	0.22	0.02	0.34	0.12	0.00
736	Diesel HTU Heater	PM	0.11	0.24	0.00	0.63	0.39	0.00
		PM_{10}	0.62	0.42	0.19	0.68	0.26	0.00
		$PM_{2.5}$	0.62	0.48	0.13	0.93	0.44	0.00
		SO_2	0.67	0.55	0.12	1.01	0.47	0.00
		NO_X	13.84	11.74	2.10	22.76	11.03	0.00
		VOC	0.39	0.20	0.19	0.67	0.47	0.00
		CO	0.18	3.49	0.00	10.87	7.38	0.00
		Lead	4.05E-05	3.35E-05	6.98E-06	6.47E-05	3.12E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	7.45E-03	9.06E-03	0.00	0.01	2.93E-03	0.00
		TRS	7.45E-03	9.24E-03	0.00	0.01	2.75E-03	0.00
		CO_2	11,394.36	13,802.45	0.00	18,354.99	4,552.54	0.00
		N_2O	0.12	0.14	0.00	0.19	0.05	0.00
		CH_4	0.58	0.70	0.00	0.93	0.23	0.00
741	D2/VGO Hydrotreater Feed Heater	PM	0.15	0.43	0.00	0.79	0.36	0.00
		PM_{10}	0.59	0.33	0.26	1.14	0.81	0.00
		$PM_{2.5}$	0.59	0.20	0.39	0.75	0.55	0.00
		SO_2	0.61	0.72	0.00	1.46	0.74	0.00
		NO_X	7.71	9.04	0.00	18.34	9.30	0.00
		VOC	0.42	0.50	0.00	1.01	0.51	0.00
		CO	6.48	7.44	0.00	15.41	7.97	0.00
		Lead	3.86E-05	4.78E-05	0.00	9.17E-05	4.39E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	6.70E-03	0.01	0.00	0.02	4.27E-03	0.00
		TRS	6.70E-03	0.01	0.00	0.02	7.79E-03	0.00
		CO_2	10,254.92	23,209.06	0.00	34,559.53	11,350.47	0.00
		N_2O	0.10	0.24	0.00	0.35	0.12	0.00
		CH_4	0.52	1.18	0.00	1.76	0.58	0.00

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
737	Naphtha HDS Heater	PM	0.61	1.19	0.00	2.37	1.18	0.00
		PM_{10}	2.43	1.87	0.56	2.37	0.50	0.06
		$PM_{2.5}$	2.43	1.92	0.51	2.37	0.45	0.06
		SO_2	2.55	2.01	0.54	2.49	0.48	0.06
		NO_X	33.29	25.95	7.34	37.04	11.09	0.00
		VOC	1.76	1.39	0.37	1.72	0.33	0.04
		CO	26.88	20.86	6.01	26.25	5.38	0.63
		Lead	1.60E-04	1.22E-04	3.83E-05	1.56E-04	3.45E-05	3.75E-06
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.03	0.02	6.14E-03	0.03	6.98E-03	0.00
		TRS	0.03	0.02	6.68E-03	0.03	7.52E-03	0.00
		CO_2	43,298.56	33,037.72	10,260.84	44,576.75	11,539.03	0.00
		N_2O	0.44	0.34	0.10	0.45	0.12	0.00
		CH_4	2.20	1.68	0.52	2.27	0.59	0.00
738	Platformer Feed Heater	PM	4.06	8.45	0.00	15.12	6.67	0.00
		PM_{10}	16.23	13.44	2.79	15.46	2.01	0.78
		$PM_{2.5}$	16.23	13.90	2.33	16.78	2.88	0.00
		SO_2	17.03	14.58	2.45	17.60	3.02	0.00
		NO_X	185.70	148.25	37.45	191.96	43.71	0.00
		VOC	11.75	10.06	1.69	12.14	2.08	0.00
		CO	0.15	1.57	0.00	7.11	5.54	0.00
		Lead	1.07E-03	9.42E-04	1.26E-04	1.10E-03	1.61E-04	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.18	0.19	0.00	0.21	0.02	0.00
		TRS	0.18	0.19	0.00	0.21	0.02	0.00
		CO_2	280,870.92	284,157.46	0.00	319,415.38	35,257.92	0.00
		N_2O	2.86	2.89	0.00	3.25	0.36	0.00
		CH_4	14.28	14.45	0.00	16.24	1.79	0.00
739	Isocracker 1st Stage Heater	PM	0.26	0.55	0.00	1.07	0.52	0.00
		PM_{10}	1.03	0.96	0.07	1.39	0.43	0.00
		$PM_{2.5}$	1.03	1.01	0.02	1.49	0.47	0.00
		SO_2	1.08	1.06	0.02	1.56	0.49	0.00
		NO_X	16.77	15.96	0.81	23.20	7.24	0.00
		VOC	0.75	0.73	0.01	1.08	0.34	0.00
		CO	11.43	11.21	0.22	16.45	5.24	0.00
		Lead	6.80E-05	6.49E-05	3.08E-06	9.76E-05	3.27E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.01	9.24E-03	3.04E-03	0.02	5.95E-03	0.00
		TRS	0.01	9.38E-03	2.90E-03	0.02	5.81E-03	0.00
		CO_2	18,800.69	14,711.55	4,089.14	23,249.17	8,537.61	0.00
		N_2O	0.19	0.15	0.04	0.24	0.09	0.00
		CH_4	0.96	0.75	0.21	1.18	0.43	0.00
740	Isocracker Splitter Reboiler	PM	0.34	0.69	0.00	1.50	0.81	0.00
		PM_{10}	1.37	1.19	0.18	1.50	0.31	0.00
		$PM_{2.5}$	1.37	1.21	0.16	1.59	0.38	0.00
		SO_2	1.44	1.27	0.17	1.67	0.40	0.00
		NO_X	18.05	15.94	2.11	20.92	4.98	0.00
		VOC	0.99	0.88	0.12	1.15	0.27	0.00
		CO	15.17	13.38	1.78	17.58	4.19	0.00
		Lead	9.03E-05	7.83E-05	1.20E-05	1.05E-04	2.64E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.02	0.01	5.29E-03	0.02	4.02E-03	1.27E-03
		TRS	0.02	0.01	4.70E-03	0.02	3.90E-03	8.04E-04
		CO_2	25,067.59	18,382.52	6,685.07	23,836.53	5,454.01	1,231.06
		N_2O	0.25	0.19	0.07	0.24	0.06	0.01
		CH_4	1.27	0.93	0.34	1.21	0.28	0.06
742	VCD 541 VAC Heater	PM	0.27	0.18	0.09	0.29	0.12	0.00
		PM_{10}	1.06	0.71	0.36	1.17	0.46	0.00
		$PM_{2.5}$	1.06	0.70	0.37	1.03	0.33	0.04
		SO_2	1.16	0.76	0.40	1.12	0.36	0.04
		NO_X	20.50	12.75	7.74	19.27	6.51	1.23
		VOC	0.77	0.50	0.27	0.74	0.24	0.03
		CO	11.76	7.34	4.41	11.34	4.00	0.41
		Lead	7.00E-05	4.31E-05	2.69E-05	6.75E-05	2.45E-05	2.46E-06
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.01	9.43E-03	3.97E-03	0.01	2.88E-03	1.10E-03
		TRS	0.01	9.09E-03	4.31E-03	0.01	2.57E-03	1.74E-03
		CO_2	20,509.84	13,793.59	6,716.25	17,844.39	4,050.79	2,665.46
		N_2O	0.21	0.14	0.07	0.18	0.04	0.03
		CH_4	1.04	0.70	0.34	0.91	0.21	0.14

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
743	VCD 542 VAC Heater	PM	0.15	0.44	0.00	1.32	0.88	0.00
		PM_{10}	0.62	0.78	0.00	1.32	0.53	0.00
		$PM_{2.5}$	0.62	0.70	0.00	1.32	0.61	0.00
		SO_2	0.67	0.41	0.27	0.76	0.36	0.00
		NO_X	6.75	4.02	2.73	7.52	3.51	0.00
		VOC	0.03	0.02	0.01	0.03	0.01	0.00
		CO	0.02	0.01	8.67E-03	0.02	0.01	0.00
		Lead	4.06E-05	2.38E-05	1.68E-05	4.60E-05	2.22E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	7.45E-03	0.01	0.00	0.01	2.44E-03	0.00
		TRS	7.45E-03	0.01	0.00	0.01	1.78E-03	0.00
		CO_2	11,394.36	17,771.31	0.00	20,631.05	2,859.74	0.00
		N_2O	0.12	0.18	0.00	0.21	0.03	0.00
		CH_4	0.58	0.90	0.00	1.05	0.15	0.00
746	VCD 544 VAC Heater	PM	0.55	1.35	0.00	3.20	1.85	0.00
		PM_{10}	2.19	2.88	0.00	3.36	0.48	0.00
		$PM_{2.5}$	2.19	2.77	0.00	3.36	0.59	0.00
		SO_2	2.39	2.34	0.05	2.88	0.55	0.00
		NO_X	12.44	12.49	0.00	15.71	3.21	0.00
		VOC	2.18	2.11	0.07	2.56	0.45	0.00
		CO	5.29	1.34	3.95	5.41	4.07	0.00
		Lead	1.44E-04	1.40E-04	4.35E-06	1.74E-04	3.41E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.03	0.02	2.82E-03	0.03	6.33E-03	0.00
		TRS	0.03	0.02	3.19E-03	0.03	6.71E-03	0.00
		CO_2	40,449.97	35,464.65	4,985.32	45,828.20	10,363.55	0.00
		N_2O	0.41	0.36	0.05	0.47	0.11	0.00
		CH_4	2.06	1.80	0.25	2.33	0.53	0.00
744	ACD 543 Crude Heater	PM	2.01	4.32	0.00	8.66	4.35	0.00
		PM_{10}	8.02	7.22	0.80	8.76	1.54	0.00
		$PM_{2.5}$	8.02	7.36	0.66	8.76	1.40	0.00
		SO_2	8.77	8.04	0.72	9.57	1.53	0.00
		NO_X	45.55	39.50	6.05	49.71	10.20	0.00
		VOC	5.81	5.33	0.48	6.34	1.01	0.00
		CO	88.66	81.32	7.34	96.84	15.52	0.00
		Lead	5.28E-04	4.82E-04	4.59E-05	5.76E-04	9.45E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.10	0.09	3.83E-03	0.11	0.01	0.00
		TRS	0.10	0.09	3.21E-03	0.11	0.01	0.00
		CO_2	148,126.65	143,860.54	4,266.12	166,202.49	22,341.96	0.00
		N_2O	1.51	1.46	0.04	1.69	0.23	0.00
		CH_4	7.53	7.31	0.22	8.45	1.14	0.00
745	ACD 544 Crude Heater	PM	2.00	4.68	0.00	9.23	4.55	0.00
		PM_{10}	8.01	7.59	0.43	9.23	1.64	0.00
		$PM_{2.5}$	8.01	7.60	0.41	9.23	1.63	0.00
		SO_2	8.75	8.30	0.45	10.08	1.78	0.00
		NO_X	50.11	44.94	5.16	56.20	11.25	0.00
		VOC	5.80	5.50	0.30	6.68	1.18	0.00
		CO	88.55	83.63	4.93	102.01	18.38	0.00
		Lead	5.27E-04	4.91E-04	3.59E-05	6.07E-04	1.16E-04	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.10	0.09	3.40E-03	0.10	9.51E-03	0.00
		TRS	0.10	0.09	1.93E-03	0.10	8.04E-03	0.00
		CO_2	148,126.65	145,398.35	2,728.31	157,482.30	12,083.95	0.00
		N_2O	1.51	1.48	0.03	1.60	0.12	0.00
		CH_4	7.53	7.39	0.14	8.01	0.61	0.00
34	Boiler 9	PM	0.72	0.53	0.20	0.89	0.36	0.00
		PM_{10}	5.69	1.69	4.01	5.62	3.93	0.07
		$PM_{2.5}$	5.07	0.55	4.52	5.29	4.74	0.00
		SO_2	1.04	1.66	0.00	2.03	0.37	0.00
		NO_X	4.41	4.16	0.24	4.94	0.77	0.00
		VOC	0.31	0.04	0.27	0.35	0.32	0.00
		CO	1.34	1.17	0.17	1.41	0.25	0.00
		Lead	4.80E-04	4.51E-04	2.91E-05	5.60E-04	1.09E-04	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.09	0.06	0.03	0.09	0.03	1.70E-03
		TRS	0.09	0.06	0.03	0.09	0.03	1.70E-03
		CO_2	115,228.12	72,880.82	42,347.30	109,168.22	36,287.41	6,059.89
		N_2O	2.11	0.14	1.98	0.21	0.07	1.91
		CH_4	2.21	1.37	0.83	2.06	0.68	0.15

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
35	Boiler 10	PM	0.40	0.38	0.02	0.58	0.20	0.00
		PM_{10}	3.07	1.06	2.01	3.14	2.08	0.00
		$PM_{2.5}$	2.97	0.46	2.52	3.07	2.61	0.00
		SO_2	2.97	1.58	1.40	2.07	0.49	0.91
		NO_X	3.93	3.90	0.03	5.09	1.19	0.00
		VOC	0.27	0.03	0.24	0.31	0.28	0.00
		CO	4.93	8.72	0.00	16.67	7.94	0.00
		Lead	4.60E-04	4.32E-04	2.76E-05	5.45E-04	1.13E-04	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.08	0.06	0.02	0.09	0.03	0.00
		TRS	0.08	0.06	0.02	0.09	0.02	0.00
		CO_2	110,341.81	83,481.92	26,859.89	113,628.58	30,146.66	0.00
		N_2O	2.02	0.16	1.87	0.21	0.06	1.81
		CH_4	2.11	1.57	0.54	2.14	0.57	0.00
102	SRU	PM	0.11	0.10	0.01	0.14	0.05	0.00
		PM_{10}	0.44	0.38	0.07	0.58	0.20	0.00
		$PM_{2.5}$	0.44	0.32	0.13	0.51	0.19	0.00
		SO_2	40.33	18.24	22.09	27.98	9.73	12.36
		NO_X	5.83	4.33	1.50	6.81	2.48	0.00
		VOC	0.32	0.23	0.09	0.37	0.14	0.00
		CO	4.90	3.56	1.34	5.62	2.05	0.00
		Lead	2.92E-05	2.04E-05	8.78E-06	3.34E-05	1.30E-05	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	0.00	0.00	0.00	0.00	0.00	0.00
		TRS	-	-	-	0.00	-	-
		CO_2	29,513.46	2,852.70	26,660.76	3,542.78	690.08	25,970.68
		N_2O	0.30	0.06	0.24	0.07	0.01	0.22
		CH_4	89.09	5.88E-03	89.08	7.31E-03	1.42E-03	89.08
103	Main Flare	PM	1.25	4.05	0.00	6.83	2.78	0.00
		PM_{10}	1.74	5.04	0.00	8.11	3.07	0.00
		$PM_{2.5}$	1.74	5.04	0.00	9.33	4.29	0.00
		SO_2	4.15	11.13	0.00	25.00	13.87	0.00
		NO_X	3.15	9.99	0.00	18.23	8.24	0.00
		VOC	6.48	20.56	0.00	37.52	16.96	0.00
		CO	17.13	58.11	0.00	158.82	100.71	0.00
		Lead	2.14E-04	1.14E-04	9.96E-05	4.09E-04	2.95E-04	0.00
		Fluorides	0.00	0.00	0.00	0.00	0.00	0.00
		H_2SO_4	0.00	0.00	0.00	0.00	0.00	0.00
		H_2S	2.47	14.23	0.00	18.26	4.03	0.00
		TRS	-	-	-	0.00	-	-
		CO_2	5,902.69	51,382.53	0.00	72,299.13	20,916.60	0.00
		N_2O	0.06	0.96	0.00	1.30	0.34	0.00
		CH_4	17.82	8.75	9.07	13.62	4.87	4.19
165	Tank 93	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	1.92	4.59	0.00	2.03	-2.56E+00	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
166	Tank 94	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	2.76	1.96	0.81	2.91	0.96	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
126	Tank 95	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	3.46	2.44	1.02	3.56	1.13	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
127	Tank 96	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	4.45	3.37	1.09	4.61	1.25	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
137	Tank 152	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	5.06	2.34	2.71	8.64	6.30	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
138	Tank 153	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	0.19	0.16	0.03	0.20	0.04	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
140	Tank 155	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	0.18	0.13	0.05	0.18	0.06	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
142	Tank 157	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	0.21	0.15	0.06	0.24	0.09	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
300	Tank 158 (Source ID 193)	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	13.15	1.06	12.09	17.18	16.12	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
143	Tank 159	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	3.97	4.08	0.00	4.06	-2.30E-02	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
194	Tank 160	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	0.22	4.69	0.00	0.26	-4.43E+00	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
144	Tank 161	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	6.04	2.68	3.36	6.21	3.53	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
145	Tank 162	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	3.25	0.64	2.61	6.36	5.71	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
146	Tank 163	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	4.25	1.82	2.43	4.41	2.58	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
147	Tank 164	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	3.79	1.88	1.91	7.79	5.91	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
148	Tank 165	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	8.26	2.23	6.03	20.33	18.10	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
149	Tank 166	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	3.55	2.89	0.66	4.06	1.17	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
150	Tank 168	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	2.89	1.69	1.20	3.42	1.73	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
152	Tank 170	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	6.13	4.21	1.92	6.24	2.03	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
155	Tank 174	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	12.01	3.99	8.02	13.79	9.80	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
156	Tank 175	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	7.43	6.36	1.06	7.94	1.58	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
157	Tank 178	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	3.23	3.53	0.00	5.85	2.32	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-

Table C-33
Monroe Energy, LLC - Trainer, PA Refinery
Project Emission Increases Summary

Source		Pollutant	Projected Actual Emissions (PAE)	Baseline Actual Emissions (BAE)	Emission Increases (PAE - BAE)	Emissions Which Could Have Been Accomodated (CHA)	Excludable Emissions (CHA - BAE)	Total Project Emission Increases (PAE - Excludable - BAE)
			tons/yr					
160	Tank 181	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	8.75	2.24	6.51	22.24	20.00	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
161	Tank 182	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	20.53	4.38	16.15	39.43	35.05	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
163	Tank 185	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	11.26	8.82	2.44	11.81	2.99	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-
164	Tank 186	PM	-	-	-	-	-	-
		PM_{10}	-	-	-	-	-	-
		$PM_{2.5}$	-	-	-	-	-	-
		SO_2	-	-	-	-	-	-
		NO_X	-	-	-	-	-	-
		VOC	5.47	5.54	0.00	6.60	1.05	0.00
		CO	-	-	-	-	-	-
		Lead	-	-	-	-	-	-
		Fluorides	-	-	-	-	-	-
		H_2SO_4	-	-	-	-	-	-
		H_2S	-	-	-	-	-	-
		TRS	-	-	-	-	-	-
		CO_2	-	-	-	-	-	-
		N_2O	-	-	-	-	-	-
		CH_4	-	-	-	-	-	-

Table C-34
Monroe Energy, LLC - Trainer, PA Refinery
PSD Applicability Assessment Summary

Emission Unit		Project Related Emissions Increase (tpy)										
		PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO	Lead	H_2S	TRS	CO_2e[a],[b]
101	FCC Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	194,979.46
733	FCCU Feed Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
735	Kerosene/HCN HTU Feed Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
736	Diesel HTU Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
741	D2/VGO Hydrotreater Feed Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
737	Naphtha HDS Heater	0.00	0.06	0.06	0.06	0.00	0.04	0.63	3.75E-06	0.00	0.00	0.00
738	Platformer Feed Heater	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
739	Isocracker 1st Stage Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
740	Isocracker Splitter Reboiler	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27E-03	8.04E-04	1,236.35
742	VCD 541 VAC Heater	0.00	0.00	0.04	0.04	1.23	0.03	0.41	2.46E-06	1.10E-03	1.74E-03	2,676.92
743	VCD 542 VAC Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
746	VCD 544 VAC Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
744	ACD 543 Crude Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
745	ACD 544 Crude Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	Boiler 9	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	1.70E-03	1.70E-03	6,631.89
35	Boiler 10	0.00	0.00	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00	539.02
102	SRU	0.00	0.00	0.00	12.36	0.00	0.00	0.00	0.00	0.00	-	28,263.81
103	Main Flare	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	104.87
165	Tank 93	-	-	-	-	-	0.00	-	-	-	-	-
166	Tank 94	-	-	-	-	-	0.00	-	-	-	-	-
126	Tank 95	-	-	-	-	-	0.00	-	-	-	-	-
127	Tank 96	-	-	-	-	-	0.00	-	-	-	-	-
137	Tank 152	-	-	-	-	-	0.00	-	-	-	-	-
138	Tank 153	-	-	-	-	-	0.00	-	-	-	-	-
140	Tank 155	-	-	-	-	-	0.00	-	-	-	-	-
142	Tank 157	-	-	-	-	-	0.00	-	-	-	-	-
300	Tank 158 (Source ID 193)	-	-	-	-	-	0.00	-	-	-	-	-
143	Tank 159	-	-	-	-	-	0.00	-	-	-	-	-
194	Tank 160	-	-	-	-	-	0.00	-	-	-	-	-
144	Tank 161	-	-	-	-	-	0.00	-	-	-	-	-
145	Tank 162	-	-	-	-	-	0.00	-	-	-	-	-
146	Tank 163	-	-	-	-	-	0.00	-	-	-	-	-
147	Tank 164	-	-	-	-	-	0.00	-	-	-	-	-
148	Tank 165	-	-	-	-	-	0.00	-	-	-	-	-
149	Tank 166	-	-	-	-	-	0.00	-	-	-	-	-
150	Tank 168	-	-	-	-	-	0.00	-	-	-	-	-
152	Tank 170	-	-	-	-	-	0.00	-	-	-	-	-
155	Tank 174	-	-	-	-	-	0.00	-	-	-	-	-
156	Tank 175	-	-	-	-	-	0.00	-	-	-	-	-
157	Tank 178	-	-	-	-	-	0.00	-	-	-	-	-
160	Tank 181	-	-	-	-	-	0.00	-	-	-	-	-
161	Tank 182	-	-	-	-	-	0.00	-	-	-	-	-
163	Tank 185	-	-	-	-	-	0.00	-	-	-	-	-
164	Tank 186	-	-	-	-	-	0.00	-	-	-	-	-
N/A	New Feed Heaters	3.15	3.15	3.15	4.42	22.04	3.15	17.08	2.66E-04	-	-	81,935.43
N/A	New Cooling Tower	0.16	0.16	0.16	-	-	6.02	-	-	-	-	-
N/A	Additional Fugitive Emissions	-	-	-	-	-	5.13	-	-	-	-	-
Total Project Emissions Increases		***3.31***	***4.21***	***3.40***	***17.79***	***23.28***	***14.37***	***18.12***	***2.73E-04***	***4.06E-03***	***4.25E-03***	***316,367.75***
PSD Significance Threshold		**25**	**15**	**10**	**40**	**40**	**40**	**100**	**0.6**	**10**	**10**	**75,000**
PSD Significant?		*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*

[a] CO_2e is carbon dioxide equivalent, calculated according to 40 CFR 98 Equation A-1:

$$CO_2e = \sum_{i=1}^{n} GHG_i \times GWP_i$$

where GHGi = annual mass emissions of greenhouse gas i (short tons/year)
GWPi = global warming potential of greenhouse gas i from the table below

Pollutant	GWP (100 year)
CO_2	1
N_2O	298
CH_4	25

[b] A June 23, 2014 decision by the U.S. Supreme Court, in *Utility Air Regulatory Group v. EPA*, rules that PSD for greenhouse gas (GHG) emissions need only be considered when permitting already triggers PSD permitting for one of the convention PSD pollutants.

Table C-35
Monroe Energy, LLC - Trainer, PA Refinery
NNSR Applicability Assessment Summary

Emission Unit		Project Related Emissions Increase (tpy)				
		$PM_{2.5}$ NNSR			Ozone NNSR	
		$PM_{2.5}$	SO_2	NO_X	NO_X	VOC
101	FCC Unit	0.00	0.00	0.00	0.00	0.00
733	FCCU Feed Heater	0.00	0.00	0.00	0.00	0.00
735	Kerosene/HCN HTU Feed Heater	0.00	0.00	0.00	0.00	0.00
736	Diesel HTU Heater	0.00	0.00	0.00	0.00	0.00
741	D2/VGO Hydrotreater Feed Heater	0.00	0.00	0.00	0.00	0.00
737	Naphtha HDS Heater	0.06	0.06	0.00	0.00	0.04
738	Platformer Feed Heater	0.00	0.00	0.00	0.00	0.00
739	Isocracker 1st Stage Heater	0.00	0.00	0.00	0.00	0.00
740	Isocracker Splitter Reboiler	0.00	0.00	0.00	0.00	0.00
742	VCD 541 VAC Heater	0.04	0.04	1.23	1.23	0.03
743	VCD 542 VAC Heater	0.00	0.00	0.00	0.00	0.00
746	VCD 544 VAC Heater	0.00	0.00	0.00	0.00	0.00
744	ACD 543 Crude Heater	0.00	0.00	0.00	0.00	0.00
745	ACD 544 Crude Heater	0.00	0.00	0.00	0.00	0.00
34	Boiler 9	0.00	0.00	0.00	0.00	0.00
35	Boiler 10	0.00	0.91	0.00	0.00	0.00
102	SRU	0.00	12.36	0.00	0.00	0.00
103	Main Flare	0.00	0.00	0.00	0.00	0.00
165	Tank 93	-	-	-	-	0.00
166	Tank 94	-	-	-	-	0.00
126	Tank 95	-	-	-	-	0.00
127	Tank 96	-	-	-	-	0.00
137	Tank 152	-	-	-	-	0.00
138	Tank 153	-	-	-	-	0.00
140	Tank 155	-	-	-	-	0.00
142	Tank 157	-	-	-	-	0.00
300	Tank 158 (Source ID 193)	-	-	-	-	0.00
143	Tank 159	-	-	-	-	0.00
194	Tank 160	-	-	-	-	0.00
144	Tank 161	-	-	-	-	0.00
145	Tank 162	-	-	-	-	0.00
146	Tank 163	-	-	-	-	0.00
147	Tank 164	-	-	-	-	0.00
148	Tank 165	-	-	-	-	0.00
149	Tank 166	-	-	-	-	0.00
150	Tank 168	-	-	-	-	0.00
152	Tank 170	-	-	-	-	0.00
155	Tank 174	-	-	-	-	0.00
156	Tank 175	-	-	-	-	0.00
157	Tank 178	-	-	-	-	0.00
160	Tank 181	-	-	-	-	0.00
161	Tank 182	-	-	-	-	0.00
163	Tank 185	-	-	-	-	0.00
164	Tank 186	-	-	-	-	0.00
N/A	New Feed Heaters	3.15	4.42	22.04	22.04	3.15
N/A	New Cooling Tower	0.16	-	-	-	6.02
N/A	Additional Fugitive Emissions	-	-	-	-	5.13
Total Project Emissions Increases		***3.40***	***17.79***	***23.28***	***23.28***	***14.37***
NNSR Significance Threshold		***10***	***40***	***40***	***25***	***25***
NNSR Significant?		***No***	***No***	***No***	***No***	***No***

Table C-36
Monroe Energy, LLC - Trainer, PA Refinery
Contemporaneous Emission Increases/Decreases

Date[a]	Plan Approval/ RFD	Description	Note	Emission Increase/Decrease	
				NO_X	VOC
				(tpy)	
10/03/2006	23-0003I	Two New Boilers		23.70	2.60
05/04/2007	23-0003J	Clean Fuel Project	(b)	39.00	0.00
10/19/2007	23-0003K	Modification to PA 23-0003G		21.89	0.00
10/23/2008	23-0003M	Cooling Tower		0.00	0.74
12/08/2008	23-0003N	FCCU Feed Heater Modification		0.00	(1.10)
02/09/2009	23-0003O	ReVAP	(c)		
04/10/2009	23-0003P	2010 Turnaround		1.59	0.26
09/28/2009	23-0003Q	Boiler MACT Phase II Application		0.00	0.00
12/04/2009	RFD	Light Components Loading		0.07	0.14
12/23/2009	23-0003R	Aromatic Saturation Unit Project	(c)		
10/01/2010	23-0003S	Flare Gas Recovery Project		0.00	3.58
10/01/2010	23-0003T	Amended Alky ReVAP Project	(c)		
11/09/2011	23-0003U	Two New Boilers (Replace Boiler 8)(withdrawn)			
04/12/2012	23-0003V	Diesel Heater Project	(c)		
08/09/2012	RFD	Main Flare - Turnaround		0.00	0.09
01/10/2013	RFD #3418	Propane Loading into Trucks		0.00	0.00
04/04/2013	RFD #3561	Peabody Heater Modifications		0.00	0.00
04/23/2013	RFD #3596	Max Jet		0.00	0.21
05/17/2013	23-0003W	D2 Project	(d)	0.00	3.44
03/13/2014	23-0003X	400 kW Emergency Generator	(e)	1.19	0.01
10/14/2014	23-0003Y	Proposed Boiler 13 (Replace Boiler 8)		11.70	1.98
Total Contemporaneous Emission Increases with Proposed Boiler 13				117.14	0.00
Total Contemporaneous Emission Reduction Credits Required			(f)	152.28	0.00
Total Emission Reduction Credits Previously Provided with PA 23-0003X			(g)	(146.20)	N/A
Net Emission Reduction Credits Required/Provided with PA 23-0003Y			(h)	6.08	0.00
TBD	23-0003Z	Proposed Cooling Tower Project	(i)	1.44	67.38
TBD	TBD	Proposed Flare PAA		1.60	0.09
TBD	TBD	Proposed ULSG PAA		23.28	14.37
			5-year Aggregation	***26.32***	***14.45***
			10-year Aggregation	***26.32***	***14.45***
			Significance Level	***25***	***25***
			Total Emission Reduction Credits Required [j]	***34***	***N/A***

Notes:

[a] Based on net emission increases occurring over a 10-year period.

[b] This application modified an existing Plan Approval No. 23-0003E.

[c] Application/Plan Approval was withdrawn.

[d] Project triggered NNSR for VOC, 40 tons of VOC ERCs were purchased, cumulative contemporaneous emissions increase reset back to zero.

[e] Project triggered NNSR for NO_X, 147.6 tons of NO_X ERCs were purchased, cumulative contemporaneous emissions increase reset back to zero with an additional 1.4 tons available for future use.

[f] At an offset ratio of 1.3:1 per 25 Pa. Code § 127.210.

[g] Application/Plan Approval 23-0003U was withdrawn and desired back-up capacity now being replaced with proposed Boiler 13. Aggregate NO_X ERCs required is reduced accordingly for those already provided under PA 23-0003X, per conversations with Virendra Trivedi (PADEP) on July 10, 2014.

[h] Project triggered NNSR for NO_X, 6.08 tons of NO_X ERCs were purchased, cumulative contemporaneous emission increase reset back to zero.

[i] Project triggered NNSR for VOC, 69.39 tons of VOC ERCs were purchased, cumulative contemporaneous emission increase reset back to zero.