Control Device Description	Control Device Ranking Assignment
Wellman-Lord/Sodium Sulfite Scrubber	Wet Scrubbers
Magnesium Oxide Scrubbing	Wet Scrubbers
Dual Alkali Scrubbing	Wet Scrubbers
Wet Lime Slurry Scrubbing	Wet Scrubbers
Sodium Carbonate Scrubbing	Wet Scrubbers
Sodium-Alkali Scrubbing System	Wet Scrubbers
Alkaline Fly Ash Scrubbing	Wet Scrubbers
Packed-Gas Absorption Column	Packed scrubbers
Tray-Type Gas Absorption Column	Wet Scrubbers
Impingement Plate Scrubber	Wet Scrubbers
Venturi Scrubber	Wet Scrubbers (venturi if combined w/cyclone/ESP)
Wet Scrubber High Efficiency	Wet Scrubbers
Wet Scrubber Medium Efficiency	Wet Scrubbers
Wet Scrubber Low Efficiency	Wet Scrubbers
Wet Scrubber, General	Wet Scrubbers
Gas Scrubber, General	Wet Scrubbers
Flue Gas Desulfurization, General	Flue Gas Desulfurization
Activated Carbon Adsorption	Carbon Injection/Adsorption
Furnace Sorbent Injection (Dry)	Furnace Sorbent Injection
Duct Sorbent Injection	Duct Sorbent Injection
Dry Limestone Injection	Duct Sorbent Injection
Limestone Injection, General	Duct Sorbent Injection
Wet Limestone Injection	Spray Dryer
Spray Tower	Spray Dryer
Spray Dryer, General	Spray Dryer
Dry Scrubbing, General	Spray Dryer
Fluid Bed Dry Scrubber	Spray Dryer
Electrostatic Precipitator High Efficiency	ESP's
Electrostatic Precipitator Medium Efficiency	ESP's
Electrostatic Precipitator Low Efficiency	ESP's
Dry Electrostatic Granular Filter	ESP's
Esp, General	ESP's
Fabric Filter High Temperature	Fabric Filter
Fabric Filter MediumTemperature	Fabric Filter
Fabric Filter Low Temperature	Fabric Filter
Fabric Filter, General	Fabric Filter
Multiple Cyclone w/o Fly	Cyclones
Multiple Cyclone w/ Fly Part. Air Filter Ash Reinj.	Cyclones
Multiple Cyclone, General	Cyclones
Centrifuge Collection High Efficiency	Cyclones
Centrifuge Collection Medium Efficiency	Cyclones
Centrifuge Collection Low Efficiency	Cyclones
Wet Cyclonic Separator[3]	Cyclones
Single Cyclone Devices	Cyclones
Gravity Collection High Efficiency	Cyclones (mech.collect if combined w/ESP)
Gravity Collection Medium Efficiency	Cyclones (mech.collect if combined w/ESP)
Gravity Collection Low Efficiency	Cyclones (mech.collect if combined w/ESP)
Dynamic Separator (Dry)	Cyclones (mech.collect if combined w/ESP)
Dynamic Separator (Wet)	Cyclones (mech.collect if combined w/ESP)
Collectors, Settling Chambers, Sep.-General	Cyclones (mech.collect if combined w/ESP)

Control Device Description	Control Device Ranking Assignment
Low-Excess - Air Firing	Not Included
Control Of % O2 In Combustion Air	Not Included
Air To Fuel Ratio	Not Included
Over - Fire Air (OFA), General	Not Included
Mist Eliminator High Velocity	Not Included
Mist Eliminator Low Velocity	Not Included
Baffle	Not Included
Catalytic Afterburner	Not Included
Catalytic Afterburner-Heat Exchanger	Not Included
Direct Flame Afterburner	Not Included
Direct Flame Afterburner-Heata Exchanger	Not Included
Flaring	Not Included
Modified Furnace/Burner Design	Not Included
Staged combustion	Not Included
Flue Gas Recirculation	Not Included
Reduced Combustion- Air Preheat	Not Included
Steam Or Water Injection	Not Included
Fuel - Low Nitrogen Content	Not Included
Air Injection	Not Included
Ammonia Injection	Not Included
Sulfur Plant	Not Included
Process Change	Not Included
Vapor Recovery System	Not Included
Liquid Filtration System	Not Included
Process Enclosed	Not Included
Process Gas Recovery	Not Included
Dust Suppression-Water Spray	Not Included
Dust Suppression- Chem Stabilization	Not Included
Gravel Bed Filter Roof Tank	Not Included
Catalytic Reduction Tank	Not Included
Tube And Shell Condenser	Not Included
Refrigerated Condenser	Not Included
Barometric Condenser	Not Included
Chemical Oxidation	Not Included
Chemical Reduction	Not Included
Chemical Neutralization	Not Included
Water Curtain	Not Included
Conservation Vent	Not Included
Bottom Filling	Not Included
Conversion To Variable	Not Included
Moving Bed Dry Scrubber for EFR Tank	Not Included
Miscellaneous Control Devices	Not Included
Catalytic Oxidizer (For CO & VOC)	Not Included
Evaporative Cooler	Not Included
Low NOx Burners	Not Included
Pre-Stratified Charge With Spark Angle Adj.	Not Included
Selective Non-Catalytic Red. (NH3 Or Urea Inj)	Not Included
Ingnition Timing	Not Included
Alkalized Alumina	Not Included

Appendix A-2 - MACT Floor Analysis for Large Solid Fuel Boiler Subcategory

Particulate Matter/Metals					Inorganics				
Control Ranking Category	Rank [1]	# of Units	% of Units [2]	Total %	Control Ranking Category	Rank	# of Units	% of Units	Total %
Cyclone/ESP/FF	1	5	0.15%	0.15%	Cyclone/ESP/Packed Scrubber	2	3	0.09%	0.09%
Cyclone/FF	1	127	3.74%	3.88%	Cyclone/Packed Scrubber	2	12	0.35%	0.44%
Cyclone/FF/Wet Scrubber	1	2	0.06%	3.94%	ESP/Packed Scrubber	2	1	0.03%	0.47%
Cyclone/FF/DSI	1	7	0.21%	4.15%	Cyclone/SD/ESP	3	2	0.06%	0.53%
Cyclone/SD/FF	1	2	0.06%	4.21%	Cyclone/FF/DSI	3	7	0.21%	0.74%
DSI/FF	1	37	1.09%	5.30%	Cyclone/SD/FF	3	2	0.06%	0.79%
ESP/FF	1	6	0.18%	5.47%	DSI/FF	3	37	1.09%	1.88%
Fabric Filter	1	245	7.21%	12.68%	SD/ESP	3	8	0.24%	2.12%
Fabric Filter/FGD	1	3	0.09%	12.77%	SD/FF	3	10	0.29%	2.41%
Fabric Filter/Wet Scrubber	1	10	0.29%	13.06%	Cyclone/ESP/Wet Scrubber	4	5	0.15%	2.56%
Fabric Filter/FSI	1	14	0.41%	13.47%	Cyclone/FF/Wet Scrubber	4	2	0.06%	2.62%
SD/FF	1	10	0.29%	13.77%	Cyclone/Wet Scrubber	4	184	5.41%	8.03%
Cyclone/ESP	2	247	7.27%	21.04%	Cyclone/FGD	4	1	0.03%	8.06%
Cyclone/ESP/Packed Scrubber	2	3	0.09%	21.12%	DSI/ESP	4	5	0.15%	8.21%
Cyclone/ESP/Wet Scrubber	2	5	0.15%	21.27%	ESP/Venturi/FGD	4	7	0.21%	8.41%
Cyclone/SD/ESP	2	2	0.06%	21.33%	ESP/Wet Scrubber	4	11	0.32%	8.74%
DSI/ESP	2	5	0.15%	21.48%	Fabric Filter/FGD	4	3	0.09%	8.83%
ESP	2	359	10.56%	32.04%	Fabric Filter/Wet Scrubber	4	10	0.29%	9.12%
ESP/Venturi/FGD	2	7	0.21%	32.24%	Flue Gas Desulfurization	4	5	0.15%	9.27%
ESP/Wet Scrubber	2	11	0.32%	32.57%	Wet Scrubber	4	122	3.59%	12.86%
ESP/FSI	2	1	0.03%	32.60%	Wet Scrubber/FGD	4	4	0.12%	12.97%
ESP/Packed Scrubber	2	1	0.03%	32.63%	Cyclone/ESP/FF	8	5	0.15%	13.12%
Mechanical Collector/ESP	2	6	0.18%	32.80%	Cyclone/FF	8	127	3.74%	16.86%
SD/ESP	2	8	0.24%	33.04%	ESP/FF	8	6	0.18%	17.03%
Cyclone [3]	4	1054	31.01%	64.05%	Fabric Filter	8	245	7.21%	24.24%
Cyclone/Packed Scrubber	4	12	0.35%	64.40%	Fabric Filter/FSI	8	14	0.41%	24.65%
Cyclone/Wet Scrubber	4	184	5.41%	69.81%	Cyclone/ESP	8	247	7.27%	31.92%
Cyclone/FGD	4	1	0.03%	69.84%	ESP	8	359	10.56%	42.48%
Flue Gas Desulfurization	5	5	0.15%	69.99%	ESP/FSI	8	1	0.03%	42.51%
Wet Scrubber	5	122	3.59%	73.58%	Mechanical Collector/ESP	8	6	0.18%	42.69%
Wet Scrubber/FGD	5	4	0.12%	73.70%	Cyclone	8	1054	31.01%	73.70%
No Control	9	894	26.30%	100.00%	No Control	9	894	26.30%	100.00%
No Information	10	458			No Information	10	458		

Total Number of Units in the Solid Boiler Subcategory = 3851

Total Number of Units in the Solid Subcategory with Control Information = 3399

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis only includes boilers in the Inventory v4.0 and Survey v3.0 databases that were determined to be located at major sources.

[3] Cyclone efficiency is specific here only to particulate matter control because cyclones are not efficient in controlling metals.

Appendix A-3 - MACT Floor Analysis for Small Solid Fuel Boiler Subcategory

Particulate Matter/Metals					Inorganics				
Control Ranking Category	Rank [1]	# of Units	% of Units [2]	Total %	Control Ranking Category	Rank	# of Units	% of Units	Total %
Fabric Filter	1	6	2.60%	2.60%	Wet Scrubber	4	6	2.60%	2.60%
ESP	2	1	0.43%	3.03%	Fabric Filter	8	6	2.60%	5.19%
Wet Scrubber	5	6	2.60%	5.63%	ESP	8	1	0.43%	5.63%
Cyclone [3]	8	104	45.02%	50.65%	Cyclone	8	104	45.02%	50.65%
No Control	9	114	49.35%	100.00%	No Control	9	114	49.35%	100.00%
No Information	10	41			No Information	10	41		

Total Number of Units in the Solid Boiler Subcategory = 272
Total Number of Units in the Solid Subcategory with Control Information = 231

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis only includes boilers in the Inventory v4.0 and Survey v3.0 databases that were determined to be located at major sources.

[3] Cyclone does not represent a MACT floor for the particulate matter/metals because cyclones are not efficient in controlling metals.

Appendix A-4 - MACT Floor Analysis for Limited Use Solid Boiler Subcategory

Particulate Matter/Metals					Inorganics				
Control Ranking Category	Rank [1]	# of Units	% of Units [2]	Total %	Control Ranking Category	Rank	# of Units	% of Units	Total %
Cyclone/FF	1	1	0.83%	0.83%	DSI/FF	3	1	0.83%	0.83%
DSI/FF	1	1	0.83%	1.67%	Cyclone/Wet Scrubber	4	1	0.83%	1.67%
ESP/FF	1	1	0.83%	2.50%	ESP/Wet Scrubber	4	1	0.83%	2.50%
Fabric Filter	1	4	3.33%	5.83%	Wet Scrubber	4	3	2.50%	5.00%
Cyclone/ESP	2	3	2.50%	8.33%	Cyclone/FF	8	1	0.83%	5.83%
ESP	2	12	10.00%	18.33%	ESP/FF	8	1	0.83%	6.67%
ESP/Wet Scrubber	2	1	0.83%	19.17%	Fabric Filter	8	4	3.33%	10.00%
Cyclone [3]	4	58	48.33%	67.50%	Cyclone/ESP	8	3	2.50%	12.50%
Cyclone/Wet Scrubber	4	1	0.83%	68.33%	ESP	8	12	10.00%	22.50%
Wet Scrubber	5	3	2.50%	70.83%	Cyclone	8	58	48.33%	70.83%
No Control	9	35	29.17%	100.00%	No Control	9	35	29.17%	100.00%
No Information	10	137			No Information	10	137		

Total Number of Units in the Solid Boiler Subcategory = 257
Total Number of Units in the Solid Subcategory with Control Information = 120

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis only includes boilers in the Inventory v4.0 and Survey v3.0 databases that were determined to be located at major sources.

[3] Cyclone efficiency is specific here only to particulate matter control because cyclones are not efficient in controlling metals.

Appendix A-5 - MACT Floor Analysis for Large Liquid Fuel Boiler Subcategory

Particulate Matter/Metals					Inorganics				
Control Device	Rank [1]	# of Units	% of Units [2]	Total %	Control Device	Rank	# of Units	% of Units	Total %
Cyclone/FF	1	2	0.07%	0.07%	Cyclone/Venturi	2	1	0.03%	0.03%
Fabric Filter	1	44	1.50%	1.57%	Packed Scrubber	2	1	0.03%	0.07%
ESP/Wet Scrubber	2	1	0.03%	1.60%	Cyclone/FGD	4	1	0.03%	0.10%
Cyclone/ESP	2	2	0.07%	1.67%	Cyclone/Wet Scrubber	4	16	0.55%	0.65%
ESP	2	17	0.58%	2.25%	ESP/Wet Scrubber	4	1	0.03%	0.68%
Cyclone/FGD	4	1	0.03%	2.28%	FGD	4	4	0.14%	0.82%
Cyclone/Venturi	4	1	0.03%	2.32%	Wet Scrubber	4	70	2.39%	3.20%
Cyclone/Wet Scrubber	4	16	0.55%	2.86%	Cyclone/FF	8	2	0.07%	3.27%
FGD	5	4	0.14%	3.00%	Fabric Filter	8	44	1.50%	4.77%
Packed Scrubber	5	1	0.03%	3.03%	Cyclone/ESP	8	2	0.07%	4.84%
Wet Scrubber	5	70	2.39%	5.42%	ESP	8	17	0.58%	5.42%
No Control	8	2774	94.58%	100%	No Control	8	2774	94.58%	100.00%
No Information	9	2366			No Information	9	2366		

Total Number of Liquid Boilers = 5299
Total Number of Liquid Boilers (with control information) = 2933

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis includes only boilers in the Inventory v4.0 and Survey v3.0 databases that were determined to be located at major sources.

Appendix A-6 - MACT Floor Analysis for Limited Use Liquid Boiler Subcategory

Particulate Matter/Metals					Inorganics				
Control Device	Rank [1]	# of Units	% of Units[2]	Total %	Control Device	Rank	# of Units	% of Units	Total %
Cyclone/FF	1	2	0.41%	0.41%	Cyclone/Wet Scrubber	4	1	0.21%	0.21%
Fabric Filter	1	7	1.44%	1.86%	Wet Scrubber	4	7	1.44%	1.65%
ESP	2	4	0.82%	2.68%	Cyclone/FF	8	2	0.41%	2.06%
Cyclone/Wet Scrubber	4	1	0.21%	2.89%	Fabric Filter	8	7	1.44%	3.51%
Wet Scrubber	5	7	1.44%	4.33%	ESP	8	4	0.82%	4.33%
No Control	8	464	95.67%	100%	No Control	8	464	95.67%	100%
No Information	9	780			No Information	9	780		

Total Number of Liquid Boilers = 1265
Total Number of Liquid Boilers (with control information) = 485

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis includes only boilers in the Inventory v4.0 and Survey v3.0 databases that were determined to be located at major sources.

Appendix A-7 - MACT Floor Analysis for Small Liquid Fuel Boiler Subcategory

Particulate Matter/Metals					Inorganics				
Control Device	Rank [1]	# of Units	% of Units [2]	Total %	Control Device	Rank	# of Units	% of Units	Total %
Cyclone/FF	1	6	0.73%	0.73%	Wet Scrubber	4	3	0.37%	0.37%
Fabric Filter	1	17	2.08%	2.81%	Cyclone/FF	8	6	0.73%	1.10%
ESP	2	1	0.12%	2.93%	Fabric Filter	8	17	2.08%	3.17%
Wet Scrubber	5	3	0.37%	3.30%	ESP	8	1	0.12%	3.30%
No Control	8	792	96.70%	100.00%	No Control	8	792	96.70%	100.00%
No Information	9	751			No Information	9	751		

Total Number of Liquid Boilers = 1570
Total Number of Liquid Boilers (with control information) = 819

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis includes only boilers in the Inventory v4.0 and Survey v3.0 databases that were determined to be located at major sources.

Appendix A-8 - MACT Floor Analysis for Large Gaseous Fuel Subcategory

Particulate Matter/Metals (not expected to be present in gas)					Inorganics				
Control Combination	Rank [1]	# of Units	% of Units [2]	Total %	Control Combination	Rank	# of Units	% of Units	Total %
No Control		13575	100.00%	100.00%	No Control		13575	100.00%	100.00%
No Information		14651			No Information		14651		

Number of Gas Boilers = 28226
Number of Gas Boilers with Control Information = 13575

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis only includes boilers in the Inventory v4.0 and Survey v2.0 databases that were determined to be located at major sources.

Appendix A-9 - MACT Floor Analysis for Small Gaseous Fuel Subcategory

Particulate Matter/Metals (not expected to be present in gas)					Inorganics				
Control Combination	Rank [1]	# of Units	% of Units [2]	Total %	Control Combination	Rank	# of Units	% of Units	Total %
No Control		9652	100.00%	100.00%	No Control		9652	100.00%	100.00%
No Information		11715			No Information		11715		

Number of Gas Boilers = 21367
Number of Gas Boilers with Control Information = 9652

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis only includes boilers in the Inventory v4.0 and Survey v2.0 databases that were determined to be located at major sources.

Appenidx A-10. MACT Floor Analysis for Limited Use Gaseous Fuel Subcategory

Particulate Matter/Metals (not expected to be present in gas)					Inorganics				
Control Combination	Rank [1]	# of Units	% of Units [2]	Total %	Control Combination	Rank	# of Units	% of Units	Total %
No Control		1246	100.00%	100.00%	No Control		1246	100.00%	100.00%
No Information		1693			No Information		1693		

Number of Gas Boilers = 2939
Number of Gas Boilers with Control Information = 1246

[1] Rankings are based on information in emissions database, previous EPA projects, and engineering judgement. Controls are assumed to consistently achieve a removal efficiency. The rankings are as follows:

1 = >99% control
2 = >98% control
3 = >90% control
4 = >75% control
5 = >50% control
6 = >30% control
7 = <30% control
8 = no control

[2] The percent of units with a control combination is based on the population for which "control" or "no control" is specified.

* This analysis only includes boilers in the Inventory v4.0 and Survey v2.0 databases that were determined to be located at major sources.

Appendix B-1 - State CO Monitoring Requirements and Applicability to Gas Boiler Subcategory
(based on State Regulations as applied to Inventory v4 and Survey v2 databases)

GCP Requirement	State	# Units Affected	% of Subcategory Affected*
Gas fired units	California	449	
	Massachusetts	13	
	Texas	0	
	Total	462	1.72%
Liquid fired units	California	83	
	Massachusetts	175	
	Texas	0	
	Total	258	2.08%
Solid fired units	California	35	
	Massachusetts	21	
	Texas	1	
	Total	57	1.36%

* The percent of boilers affected in the subcategory is based on the population of boilers in the subcategory for which the applicability of the GCP requirement could be assessed.

Appendix C-1. Calculation of PM Emission Limits for Existing Large Solid Fired Units

Test ID	Facility Name	Fuel Type	Control Level	Avg Emissi	Lowest	Highest	Variability Factor (Highes/lowest)	Comment
E604.001	J.M. Huber Corporation	Wood	Fabric Filter	**0.065**	**6.50E-02**	**6.50E-02**		a
New Data	Michigan State University - Unit 1	Coal	Fabric Filter	**0.0211**				
New Data	Michigan State University - Unit 2	Coal	Fabric Filter	**0.0191**				
New Data	Michigan State University - Unit 4	Coal	Fabric Filter	**0.0054**				f
E605.001	Hoechst Celanese Chemical Group	Coal	Fabric Filter	0.0433				
E605.002	Hoechst Celanese Chemical Group	Coal	Fabric Filter	0.0338				
				0.03855	**3.38E-02**	**4.33E-02**	**1.28E+00**	a
E642.001	Georgia Pacific Corporation	Wood	Fabric Filter	0.0130				
E642.002	Georgia Pacific Corporation	Wood	Fabric Filter	0.1480				b
E643.001	Georgia Pacific Corporation	Wood/Other Biomass/NF	Fabric Filter	0.0073				
E643.002	Georgia Pacific Corporation	Wood/Other Biomass/NF	Fabric Filter	0.0139				
E645.001	Georgia Pacific Corporation	Wood/Other Biomass/NF	Fabric Filter	0.0042				
E645.002	Georgia Pacific Corporation	Wood/Other Biomass/NF	Fabric Filter	0.0028				
				0.0083	**2.82E-03**	**1.30E-02**	**4.61E+00**	
E697.006c	James River Paper Company	Wood/Other Biomass/NF	Fabric Filter/Limestone Injection (DSI)	0.0156				
E697.010c	James River Paper Company	NFF Liquid/NFF Solid or (	Fabric Filter/Limestone Injection (DSI)	0.00607				
				0.010835	**6.07E-03**	**1.56E-02**	**2.57E+00**	
E738.002	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0274				
E738.003	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0702				
E739.001	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0146				
E739.002	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0104				
E739.003	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0283				
				0.0302	**1.04E-02**	**7.02E-02**	**6.75E+00**	
E795.006	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NF	Fabric Filter/Spray Dryer	0.0032				
E795.023	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NF	Fabric Filter/Spray Dryer	0.0020				
E797.011	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NF	Fabric Filter/Spray Dryer	0.00528				
E797.020	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NF	Fabric Filter/Spray Dryer	0.0284				
E798a.011	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NF	Fabric Filter/Spray Dryer	0.0030				
E798a.025	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood	Fabric Filter/Spray Dryer	0.0011				
E798b.001	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NF	Fabric Filter/Spray Dryer	0.0018				
				0.0064	**1.10E-03**	**5.28E-03**	**4.80E+00**	
E834b.001	Yellowstone Energy Limited Partnership	Coal	Fabric Filter	0.0405				
E834b.002	Yellowstone Energy Limited Partnership	Coal	Fabric Filter	0.0152				
E834b.003	Yellowstone Energy Limited Partnership	Coal	Fabric Filter	0.0040				
				0.0199	**4.00E-03**	**4.05E-02**	**1.01E+01**	
E883.003	Weyerhaeuser Paper Company	Coal/Wood/NFF Liquid/N	FF/Wet Scrubber	0.0096				
E883.004	Weyerhaeuser Paper Company	Coal/Wood/NFF Liquid/N	FF/Wet Scrubber	0.0164				
E884.002	Weyerhaeuser Paper Company	Coal/Wood/NFF Liquid/N	FF/Wet Scrubber	0.0109				
				0.0123	**9.63E-03**	**1.64E-02**	**1.70E+00**	
			Average of average emission levels[c]	0.0148				
			Average variability factor[d]	4.5484				
			Emission Limit with variability[e]	0.07				

a Average emission level not included in top 12 percent.
b Emission point is an outlier and not used in analysis.
c Calculated by averaging all the average emission factors except ones that are not in the top 12 percent.
d Calculated by averaging all the variability factors.
e Calculated by multiplying variability factor and average emission level.
f Best controlled source for new source analysis.

Appendix C-2. Total Selected Metals MACT Floor Emission Level Analysis for Solid Fuel Subcategories

ID	Material	Control Level	Total Selected Metals EF (lb/MMMBtu) - Sorted from Highest to Lowest	**Corresponding PM EF (lb/MMBtu)**
E232.001c	Coal	ESP	0.00041566**	2.320E-02
E692.003	Coal/Wood/NFF Liquid/NFF Solid	ESP	3.787E-04	1.440E-02
E208a.001c	Coal	ESP	3.376E-04	2.030E-01
E208b.001c	Coal	ESP	3.089E-04	1.120E-01
E204.005c	Coal	ESP	2.873E-04	9.230E-02
E740.001	Wood	ESP	2.842E-04	6.750E-02
E692.001	Coal/Wood/NFF Liquid/NFF Solid	ESP	2.810E-04	1.380E-02
E692.002	Coal/Wood/NFF Liquid/NFF Solid	ESP	2.579E-04	1.080E-02
E232.002c	Coal	ESP	2.390E-04	1.310E-02
E204.004c	Coal	ESP	2.321E-04	1.940E-08
E209b.002c	Coal	ESP	2.220E-04	3.860E-02
E735.019	Coal	ESP	1.998E-04	8.180E-02
E209a.002c	Coal	ESP	1.674E-04	1.960E-02
E202.001c1	Coal	ESP	1.545E-04	1.080E-01
E236.001c	Coal	ESP	1.531E-04	1.870E-02
E735.022	Coal	ESP	1.331E-04	3.330E-02
E200.001C	Coal	ESP	1.170E-04	2.010E-02
E735.015	Coal	ESP	9.677E-05	1.220E-01
E229.002c1	Coal	ESP	7.136E-05	8.240E-02
E740.003	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	7.102E-05	1.130E-01
E206.001c1	Coal	Fabric Filter	0.000063425***	2.480E-03
E221.001c2	Coal	ESP/Flue Gas Desulfurization	6.135E-05	3.920E-02
E739.001	Wood	Fabric Filter	5.598E-05	1.460E-02
E203.001c	Coal	Fabric Filter	5.562E-05	7.380E-03
E202.001c2	Coal	ESP/Flue Gas Desulfurization	5.293E-05	1.110E-02
E268.002	Wood	ESP	4.089E-05	2.240E-03
E221.001c1	Coal	ESP	3.375E-05	8.000E-02
E222.002cdup	Coal	ESP/SD	3.230E-05	1.210E-02
E523.003	Wood	ESP	2.888E-05	1.000E-02
E404.001	Wood	ESP	2.888E-05	1.440E-03
E222.002c	Coal	ESP/SD	2.796E-05	7.950E-03
E206.001c3	Coal	Fabric Filter	2.666E-05	2.810E-02
E229.002c2	Coal	ESP/Flue Gas Desulfurization	2.658E-05	1.000E-02
E738.002	Wood	Fabric Filter	2.036E-05	2.740E-02
E230.001c	Coal	ESP	1.657E-05	2.380E-02
E224.016	Coal	Fabric Filter	9.027E-06	1.660E-03
E11	Coal	ESP/Venturi Scrubber	3.956E-06	1.440E-03
E224.022	Coal	Fabric Filter	3.586E-06	1.200E-03
E218.003	Coal	ESP	2.649E-06	1.320E-03

*** This test is the basis for the new source floor emission limit for total selected metals with a corresponding PM emission level of 0.00248 lb/MMBtu.

** This test is the basis for the existing source floor emission limit for total selected metals with a corresponding PM emission level of 0.0232 lb/MMBtu.

Appendix C-3. Calculation of HCl Emission Limts for Large Solid Fired Units

Test ID	Facility Name	Fuel Type	Control Level	Avg Emission Factor (lb/MMBtu)	Lowest	Highest	Variability Factor (Highes/lowest)	Comments
E27.003	Delano Energy Company, Inc.	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	0.00952				
E27.010	Delano Energy Company, Inc.	Wood	Fabric Filter/Limestone Injection (DSI)	0.0102				
				0.00986	**9.52E-03**	**1.02E-02**	**1.07E+00**	
E607.001	Georgia Pacific	Wood/Other Biomass/NFF Liquid/NFF Solid	Cyclone/Spray Dryer	0.0211				
E607.002	Georgia Pacific	Wood/Other Biomass/NFF Liquid/NFF Solid	Cyclone/Spray Dryer	0.0018				
E608.003	Georgia Pacific	Wood/Other Biomass/NFF Liquid/NFF Solid	Cyclone/Spray Dryer	0.0258				
				0.016233333	**1.80E-03**	**2.58E-02**	**1.43E+01**	
E614.004	American Ref-Fuel Company	Wood	ESP/Limestone Injection (DSI)	**0.0476**				a
E697.004c	James River Paper Company	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	0.00389				
E697.012c	James River Paper Company	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	0.0156				
E697.012u	James River Paper Company	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	Limestone Injection (DSI)	0.108				
				0.042496667	**3.89E-03**	**1.56E-02**	**4.01E+00**	
E794.004	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood	Fabric Filter/Spray Dryer	0.00289				
E795.006	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.000349				
E795.023	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.000236				
E797.008	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.00251				
E797.017	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.00534				
E798a.008	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.000463				
E798a.022	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood	Fabric Filter/Spray Dryer	0.000373				
E798b.001	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.00116				
				0.001665125	**2.36E-04**	**5.34E-03**	**2.26E+01**	
E735.005	Champion International Corp.	Coal/Wood/NFF Liquid/NFF Solid	Venturi Scrubber	**0.00242**				
E784.004	Inland Paperboard and Packaging, Inc.	Gas/Wood/Other Biomass/Liquid FF	Venturi Scrubber	**0.000434**				
E958.003	Champion International Corporation	Gas/Wood/Other Biomass/Liquid FF	Venturi Scrubber	**0.00382**				
E986.001	International Paper Company	Wood/Other Biomass/NFF Liquid/NFF Solid	Venturi Scrubber	0.0000996				b
E986.007	International Paper Company	Gas/Wood/Other Biomass/Liquid FF	Venturi Scrubber	0.0000296				
				0.0000646	**2.96E-05**	**9.96E-05**	**3.36E+00**	
			Average of average emission levels[c]	0.0096				
			Average variability factor[d]	9.08				
			Emission Limit with variability[e]	0.09				

a Average emision level not included in top 12 percent.
b Best controlled source for new source analysis.
c Calculated by averaging all the average emission factors except ones that are not in the top 12 percent.
d Calculated by averaging all the variability factors.
e Calculated by multiplying variability factor and average emission level.

Appendix C-4. Calculation of Mercury Emission Limts for Existing Large Solid Fired Units

Test ID	Facility Name	Fuel Type	Control Level	Avg Emission Factor (lb/MMBtu)	Lowest	Highest	Variability Factor (Highes/Lowest)	Comment
E27.001	Delano Energy Company, Inc.	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	6.22E-07				
E27.008	Delano Energy Company, Inc.	Wood	Fabric Filter/Limestone Injection (DSI)	4.28E-07				
E833.005	Delano Energy Company, Inc.	Wood	Fabric Filter/Limestone Injection (DSI)	7.52E-09				
E833.006	Delano Energy Company, Inc.	Wood	Fabric Filter/Limestone Injection (DSI)	7.56E-09				
				2.66E-07	**7.52E-09**	**6.22E-07**	**8.27E+01**	f
E15.002	GWF Power Systems Co.: Hanford Site	Coal	Fabric Filter/Limestone Injection (DSI)	5.26E-07				
E20.004	GWF Power Systems Co.: Hanford Site	Coal	Fabric Filter/Limestone Injection (DSI)	5.04E-07				
				5.15E-07	**5.04E-07**	**5.26E-07**	**1.04E+00**	f
E697.007	James River Paper Company	Wood/Other Biomass/NFF Liquid/NFF Solid NFF Liquid/NFF Solid or Gas/NFF	Fabric Filter/Limestone Injection (DSI)	6.06E-06				
E697.011	James River Paper Company	Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	9.80E-06				
				7.93E-06	**6.06E-06**	**9.80E-06**	**1.62E+00**	
E738.002	Kimberly-Clark Corporation	Wood	Fabric Filter	1.08E-06				
E739.001	Kimberly-Clark Corporation	Wood	Fabric Filter	2.81E-07				
				6.81E-07	**2.81E-07**	**1.08E-06**	**3.84E+00**	
E1.006	National Cogeneration Plant	Coal	Fabric Filter	**5.15E-06**				
E794.001	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood	Fabric Filter/Spray Dryer	1.85E-06				
E795.005	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	1.51E-06				
E795.013	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood	Fabric Filter/Spray Dryer	1.37E-06				
E795.021	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	1.26E-06				
E797.010	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	3.59E-06				
E797.019	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	2.73E-06				
E798a.010	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	2.80E-06				
E798a.024	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood	Fabric Filter/Spray Dryer	4.37E-06				
E798b.006	Wheelabrator Ridge Energy Inc. - Ridge Generating	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	1.40E-06				Revised to DL
				2.24E-06	**1.26E-06**	**4.37E-06**	**3.47E+00**	
New Data	Michigan State University-Unit 1	Coal	Fabric Filter	**4.97E-06**				
New Data	Michigan State University-Unit 2	Coal	Fabric Filter	**5.20E-06**				
New Data	Michigan State University-Unit 4	Coal	Fabric Filter	**2.30E-07**				a
E1021.001	CAPCO Co-generation Plant	Coal	Fabric Filter	**1.08E-05**				b
			Average of average emission levels[c]	3.02E-06				
			Average variability factor[d]	2.98E+00				
			Emission Limit with variability[e]	9.00E-06				

a Best controlled source for new source analysis.
b average emission level not included in top 12 percent.
c Calculated by averaging all the average emission factors except ones that are not in top 12 percent
d Calculated by averaging all the variability factors
e Calculated by multiplying variability factor and average emission level.
f Variability factor not included in average variability , all test results were detection limit.

Test ID[f]	Facility Name	Fuel Type	Control Level	Avg Emission Factor (lb/MMBtu)	Lowest	Highest	Highes/lowest	Comment	
E735.015	Champion International Corp.	Coal	ESP	**0.1220**					
E735.019	Champion International Corp.	Coal	ESP	**0.0818**					
E627.007	Champion International	Coal	ESP	**0.0391**	**0.029**	**0.048**	**1.630**		
E735.022	Champion International Corp.	Coal	ESP	**0.0333**					
E925.001	Southeast Paper Manufacturing Company	Coal	ESP	**0.0048**				Coal-ESP	
E683.004	Consolidated Papers, Inc - Wisconsin River Plant	Coal/Wood/NFF Liquid/NFF Solid	ESP	**0.0849**	**0.049**	**0.121**	**2.480**		
E684.001	Niagara of Wisconsin Paper Co.	Coal/Wood/NFF Liquid/NFF Solid	ESP	**0.0836**					
E722.001	Blandin Paper Co.	Coal/Wood/NFF Liquid/NFF Solid	ESP	**0.0259**	**0.005**	**0.047**	**9.611**		
E692.003	Packaging Corporation of America	Coal/Wood/NFF Liquid/NFF Solid	ESP	**0.0096**	**0.004**	**0.014**	**3.710**		
E688.001	Temple-Inland Forest Products Corporation	Wood	ESP	**0.2720**					a
E930.001	Georgia Pacific Corporation - Hardboard Plant	Wood	ESP	**0.1170**					a
E740.003	Grays Harbor Paper	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0903**	**0.068**	**0.113**	**1.674**		a
E610.002c	Georgia Pacific	Wood	ESP	**0.0789**	**0.019**	**0.196**	**10.208**		a
E265.003	Pacific Oroville Power Company	Wood	ESP	**0.0524**	**0.020**	**0.091**	**4.653**		a
E906.001	International Paper - Ticonderoga Mill	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	ESP	**0.0509**					a
E536.001	Northern State Power Bay Front Steam Plant	Wood	ESP	**0.0478**					a
E724.010	Craven County Wood Energy Plant	Wood	ESP	**0.0402**	**0.029**	**0.051**	**1.759**		a
E767.006	Alaska Pulp Corporation	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	ESP/Flue Gas Desulfurization	**0.0390**					a
E706.018	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0302**	**0.005**	**0.145**	**27.103**		a
E935.002	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0222**	**0.016**	**0.029**	**1.858**		a
E675.001	Boise Cascade Paper	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0203**	**0.005**	**0.044**	**8.277**		a
E767.001	Alaska Pulp Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0178**					a
E628.001	Willamette Industries	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0165**					a
E614.001	American Ref-Fuel Company	Wood	ESP/Limestone Injection (DSI)	**0.0162**				Biomass-ESP	a
E1026.051	NR - site 2	Wood	ESP	**0.0161**	**0.001**	**0.080**	**70.973**		a
E783a.004	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0159**	**0.006**	**0.032**	**4.915**		a
E266.002	Pacific Gas & Electric Company	Wood	ESP	**0.0126**					a
E529.001	NR	Wood	ESP	**0.0125**					
E779.017	Wheelabrator Shasta Energy Company	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0107**	**0.001**	**0.025**	**17.431**		
E522.001	Viking Energy of McBain	Wood	ESP	**0.0101**	**0.005**	**0.018**	**4.049**		
E710.001	Koppers Industries, Inc.	Wood	ESP	**0.0094**					
E734.004	LFC Power Systems Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0089**	**0.004**	**0.016**	**4.201**		
E679.008	Consolidated Papers, Inc.	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	ESP	**0.0076**					
E527.001	BVTBC Genesee Power Station	Wood	ESP	**0.0044**	**0.000**	**0.021**	**7033.333**		
E613.001	American Ref-Fuel Company	Wood	ESP	**0.0044**					
E268.003	Sierra Pacific	Wood	ESP	**0.0039**	**0.002**	**0.006**	**2.518**		
E765.002	Smurfit Newsprint	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0032**	**0.003**	**0.003**	**1.048**		
E600.012	Washington Water Power Co.	Gas/Wood/Other Biomass/Liquid FF	ESP	**0.0017**	**0.001**	**0.003**	**2.259**		
E604.001	J.M. Huber Corporation	Wood	Fabric Filter	**0.065**					
E605.002	Hoechst Celanese Chemical Group	Coal	Fabric Filter	**0.039**	**0.034**	**0.043**	**1.281**		
E739.003	Kimberly-Clark Corporation	Wood	Fabric Filter	**0.030**	**0.010**	**0.070**	**6.750**		
E834b.003	Yellowstone Energy Limited Partnership	Coal	Fabric Filter	**0.020**	**0.004**	**0.041**	**10.125**		
E884.002	Weyerhaeuser Paper Company	Coal/Wood/NFF Liquid/NFF Solid	FF/Wet Scrubber	**0.012**	**0.010**	**0.016**	**1.703**	**Fabric Filters**	
E697.010c	James River Paper Company	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	**0.011**	**0.006**	**0.016**	**2.570**		
E645.002	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter	**0.008**	**0.003**	**0.013**	**4.610**		
E798b.001	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	**0.006**	**0.001**	**0.005**	**4.800**		
E1020.002	Energy Products of Idaho, Inc.	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	Fabric Filter	**0.002**	**0.002**	**0.002**	**1.234**		
			Average Emission Limit[b]	0.0273					
			Variability Factor[c]	8.11E+00					
			Average incorporating variability[d]	**0.221718**					

a average emission level not included in top 12 percent.
b Calculated by averaging all the average emission factors except ones that are not in top 12 percent
c Calculated by averaging all the variability factors
d Calculated by multiplying variability factor and average emission level.
f Faciltiy/test have more than one test ID associated with it. Only one test ID from the test reports was included as an identifier for the facility. See Appendix C-6 for detailed emissions information for each test.

Test ID	Facility Name	Fuel Type	Control Level	Avg Emission Factor (lb/MMBtu)	Lowest	Highest	Highes/lowest	Comment
E767.001	Alaska Pulp Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0178**				
E767.006	Alaska Pulp Corporation	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	ESP/Flue Gas Desulfurization	**0.039**				
E613.001	American Ref-Fuel Company	Wood	ESP	**0.00443**				
E614.001	American Ref-Fuel Company	Wood	ESP/Limestone Injection (DSI)	**0.0162**				
E721.001	Blandin Paper Co.	Coal/Wood/NFF Liquid/NFF Solid	ESP	0.047				
E722.001	Blandin Paper Co.	Coal/Wood/NFF Liquid/NFF Solid	ESP	0.00489				
				0.025945	**4.89E-03**	**4.70E-02**	**9.61E+00**	
E676.004	Boise Cascade - White Paper Division Facility	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.016				
E676.005	Boise Cascade - White Paper Division Facility	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0119				
E674.001	Boise Cascade Paper	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0442				
E674.002	Boise Cascade Paper	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.024				
E675.001	Boise Cascade Paper	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.00534				
				0.020288	**5.34E-03**	**4.42E-02**	**8.28E+00**	
E617.001	BVTBC Genesee Power Station	Wood	ESP	0.0211				
E618.003	BVTBC Genesee Power Station	Wood	ESP	0.00195				
E619.001	BVTBC Genesee Power Station	Wood	ESP	0.0026				
E620.002	BVTBC Genesee Power Station	Wood	ESP	0.003				
E525.001	BVTBC Genesee Power Station	Wood	ESP	0.000262				
E526.001	BVTBC Genesee Power Station	Wood	ESP	0.00211				
E527.001	BVTBC Genesee Power Station	Wood	ESP	0.000003				
				0.0044321	**3.00E-06**	**2.11E-02**	**7.03E+03**	
E627.001	Champion International	Coal	ESP	4.59E-08				a
E627.003	Champion International	Coal	ESP	0.0402				
E627.005	Champion International	Coal	ESP	0.0478				
E627.007	Champion International	Coal	ESP	0.0293333				
				0.0391111	**2.93E-02**	**4.78E-02**	**1.63E+00**	
E735.015	Champion International Corp.	Coal	ESP	**0.122**				
E735.019	Champion International Corp.	Coal	ESP	**0.0818**				
E735.022	Champion International Corp.	Coal	ESP	**0.0333**				
E683.001	Consolidated Papers, Inc - Wisconsin River Plant	Coal	ESP	0.0488				
E683.004	Consolidated Papers, Inc - Wisconsin River Plant	Coal/Wood/NFF Liquid/NFF Solid	ESP	0.121				
				0.0849	**4.88E-02**	**1.21E-01**	**2.48E+00**	
E679.008	Consolidated Papers, Inc.	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	ESP	**0.00761**				
E724.001	Craven County Wood Energy Plant	Wood	ESP	0.0512				
E724.010	Craven County Wood Energy Plant	Wood	ESP	0.0291				
				0.04015	**2.91E-02**	**5.12E-02**	**1.76E+00**	
E610.001cn	Georgia Pacific	Wood	ESP	0.0192				
E610.001cs	Georgia Pacific	Wood	ESP	0.0216				
E610.002c	Georgia Pacific	Wood	ESP	0.196				
				0.0789333	**1.92E-02**	**1.96E-01**	**1.02E+01**	
E706.001	Georgia Pacific - Brunswick	Wood	ESP	0.0323				
E706.002	Georgia Pacific - Brunswick	Wood	ESP	0.0273				
E706.004	Georgia Pacific - Brunswick	Wood	ESP	0.0104				
E706.005	Georgia Pacific - Brunswick	Wood	ESP	0.0112				
E706.006	Georgia Pacific - Brunswick	Wood	ESP	0.027				
E706.008	Georgia Pacific - Brunswick	Wood	ESP	0.0192				
E706.009	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.00535				
E706.010	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.00936				
E706.011	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0329				

Test ID	Facility Name	Fuel Type	Control Level	Avg Emission Factor (lb/MMBtu)	Lowest	Highest	Highes/lowest	Comment
E706.012	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.145				
E706.013	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0157				
E706.014	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0586				
E706.015	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0289				
E706.016	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0226				
E706.017	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0116				
E706.018	Georgia Pacific - Brunswick	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0258				
				0.0302006	**5.35E-03**	**1.45E-01**	**2.71E+01**	
E935.001	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0155				
E935.002	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0288				
				0.02215	**1.55E-02**	**2.88E-02**	**1.86E+00**	
E783a.001	Georgia Pacific Corporation	Wood	ESP	0.00645				
E783a.002	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0105				
E783a.003	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0149				
E783a.004	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0317				
				0.0158875	**6.45E-03**	**3.17E-02**	**4.91E+00**	
E930.001	Georgia Pacific Corporation - Hardboard Plant	Wood	ESP	**0.117**				
E740.001	Grays Harbor Paper	Wood	ESP	0.0675				
E740.003	Grays Harbor Paper	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.113				
				0.09025	**6.75E-02**	**1.13E-01**	**1.67E+00**	
E906.001	International Paper - Ticonderoga Mill	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	ESP	**0.0509**				
E710.001	Koppers Industries, Inc.	Wood	ESP	**0.00942**				
E734.001	LFC Power Systems Corporation	Wood	ESP	0.0069				
E734.002	LFC Power Systems Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.00947				
E734.003	LFC Power Systems Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.00369				
E734.004	LFC Power Systems Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0155				
				0.00889	**3.69E-03**	**1.55E-02**	**4.20E+00**	
E684.001	Niagara of Wisconsin Paper Co.	Coal/Wood/NFF Liquid/NFF Solid	ESP	**0.0836**				
E536.001	Northern State Power Bay Front Steam Plant	Wood	ESP	**0.0478**				
E529.001	NR	Wood	ESP	**0.0125**				
E1026.001	NR - site 2	Wood	ESP	0.00628				
E1026.002	NR - site 2	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0802				
E1026.003	NR - site 2	Wood	ESP	0.00113				
E1026.005	NR - site 2	Wood	ESP	0.0123				
E1026.006	NR - site 2	Wood	ESP	0.00717				
E1026.011	NR - site 2	Wood	ESP	0.00356				
E1026.021	NR - site 2	Wood	ESP	0.0117				
E1026.031	NR - site 2	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0159				
E1026.051	NR - site 2	Wood	ESP	0.00655				
				0.0160878	**1.13E-03**	**8.02E-02**	**7.10E+01**	
E266.002	Pacific Gas & Electric Company	Wood	ESP	**0.0126**				
E530.001	Pacific Oroville Power	Wood	ESP	0.0912				
E530.004	Pacific Oroville Power	Wood	ESP	0.0196				
E265.001	Pacific Oroville Power Company	Wood	ESP	0.0196				
E265.003	Pacific Oroville Power Company	Wood	ESP	0.0792				
				0.0524	**1.96E-02**	**9.12E-02**	**4.65E+00**	
E693.001	Packaging Corporation of America	Coal/Wood/NFF Liquid/NFF Solid	ESP	0.00372				
E693.002	Packaging Corporation of America	Coal/Wood/NFF Liquid/NFF Solid	ESP	0.00527				

Test ID	Facility Name	Fuel Type	Control Level	Avg Emission Factor (lb/MMBtu)	Lowest	Highest	Highes/lowest	Comment
E692.001	Packaging Corporation of America	Coal/Wood/NFF Liquid/NFF Solid	ESP	0.0138				
E692.002	Packaging Corporation of America	Coal/Wood/NFF Liquid/NFF Solid	ESP	0.0108				
E692.003	Packaging Corporation of America	Coal/Wood/NFF Liquid/NFF Solid	ESP	0.0144				
				0.009598	**3.72E-03**	**1.38E-02**	**3.71E+00**	
E268.002	Sierra Pacific	Wood	ESP	0.00224				
E268.003	Sierra Pacific	Wood	ESP	0.00564				
				0.00394	**2.24E-03**	**5.64E-03**	**2.52E+00**	
E765.001	Smurfit Newsprint	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.00314				
E765.002	Smurfit Newsprint	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.00329				
				0.003215	**3.14E-03**	**3.29E-03**	**1.05E+00**	
E925.001	Southeast Paper Manufacturing Company	Coal	ESP	**0.00484**				
E688.001	Temple-Inland Forest Products Corporation	Wood	ESP	**0.272**				
E518.001	Viking Energy of McBain	Wood	ESP	0.0118				
E519.001	Viking Energy of McBain	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0183				
E520.001	Viking Energy of McBain	Wood	ESP	0.00452				
E521.001	Viking Energy of McBain	Wood	ESP	0.00882				
E522.001	Viking Energy of McBain	Wood	ESP	0.00705				
				0.010098	**4.52E-03**	**1.83E-02**	**4.05E+00**	
E600.001	Washington Water Power Co.	Wood	ESP	0.00143				
E600.003	Washington Water Power Co.	Wood	ESP	0.00253				
E600.006	Washington Water Power Co.	Wood	ESP	0.0024				
E600.008	Washington Water Power Co.	Wood	ESP	0.00112				
E600.012	Washington Water Power Co.	Gas/Wood/Other Biomass/Liquid FF	ESP	0.00114				
				0.001724	**1.12E-03**	**2.53E-03**	**2.26E+00**	
E404.001	Wheelabrator Shasta energy Company	Wood	ESP	0.00144				
E404.004	Wheelabrator Shasta energy Company	Wood	ESP	0.00148				
E523.003	Wheelabrator Shasta Energy Company	Wood	ESP	0.01				
E779.006	Wheelabrator Shasta Energy Company	Wood	ESP	0.0081				
E779.007	Wheelabrator Shasta Energy Company	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0228				
E779.008	Wheelabrator Shasta Energy Company	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0251				
E779.013	Wheelabrator Shasta Energy Company	Wood	ESP	0.00552				
E779.015	Wheelabrator Shasta Energy Company	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0112				
E779.017	Wheelabrator Shasta Energy Company	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	0.0105				
				0.0106822	**1.44E-03**	**2.51E-02**	**1.74E+01**	
E628.001	Willamette Industries	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	**0.0165**				

Test ID	Facility Name	Fuel Type	Control Level	Avg Emission Factor (lb/MMBtu)	Lowest	Highest	Highes/lowest	Comment
E604.001	J.M. Huber Corporation	Wood	Fabric Filter	**0.065**	**6.50E-02**	**6.50E-02**		
E1020.001	Energy Products of Idaho, Inc.	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter	0.0019				
E1020.002	Energy Products of Idaho, Inc.	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	Fabric Filter	0.00154				
				0.00172	**1.54E-03**	**1.90E-03**	**1.23E+00**	
E605.001	Hoechst Celanese Chemical Group	Coal	Fabric Filter	0.0433				
E605.002	Hoechst Celanese Chemical Group	Coal	Fabric Filter	0.0338				
				0.03855	**3.38E-02**	**4.33E-02**	**1.28E+00**	
E642.001	Georgia Pacific Corporation	Wood	Fabric Filter	0.0130				
E642.002	Georgia Pacific Corporation	Wood	Fabric Filter	0.1480				a
E643.001	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter	0.0073				
E643.002	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter	0.0139				
E645.001	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter	0.0042				
E645.002	Georgia Pacific Corporation	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter	0.0028				
				0.0083	**2.82E-03**	**1.30E-02**	**4.61E+00**	
E697.006c	James River Paper Company	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	0.0156				
E697.010c	James River Paper Company	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	0.00607				
				0.010835	**6.07E-03**	**1.56E-02**	**2.57E+00**	
E738.002	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0274				
E738.003	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0702				
E739.001	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0146				
E739.002	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0104				
E739.003	Kimberly-Clark Corporation	Wood	Fabric Filter	0.0283				
				0.0302	**1.04E-02**	**7.02E-02**	**6.75E+00**	
E795.006	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.0032				
E795.023	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.0020				
E797.011	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.00528				
E797.020	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.0284				
E798a.011	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.0030				
E798a.025	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood	Fabric Filter/Spray Dryer	0.0011				
E798b.001	Wheelabrator Ridge Energy Inc. - Ridge Generating Station	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Spray Dryer	0.0018				
				0.0064	**1.10E-03**	**5.28E-03**	**4.80E+00**	
E834b.001	Yellowstone Energy Limited Partnership	Coal	Fabric Filter	0.0405				
E834b.002	Yellowstone Energy Limited Partnership	Coal	Fabric Filter	0.0152				
E834b.003	Yellowstone Energy Limited Partnership	Coal	Fabric Filter	0.0040				
				0.0199	**4.00E-03**	**4.05E-02**	**1.01E+01**	
E883.003	Weyerhaeuser Paper Company	Coal/Wood/NFF Liquid/NFF Solid	FF/Wet Scrubber	0.0096				
E883.004	Weyerhaeuser Paper Company	Coal/Wood/NFF Liquid/NFF Solid	FF/Wet Scrubber	0.0164				
E884.002	Weyerhaeuser Paper Company	Coal/Wood/NFF Liquid/NFF Solid	FF/Wet Scrubber	0.0109				
				0.0123	**9.63E-03**	**1.64E-02**	**1.70E+00**	

a Point is an outlier and not used in analyses.

Appendix C-7. Mercury and Chlorine Fuel Data From Utility Boilers[a]

Plant name	Unit name	Boiler/NOx type	PM control	SOx control	name of fuel 1	average Hg in fuel (ppmw)	Name of Fuel 2	Cl in test coal (ppm)
Bruce Mansfield	1	CONV/PC/NOX/DRY	PARTSCRUB	NONE	PETROLEUM COKE[b]	0.0100	BITUMINOUS	767
Craig	C3	CONV/PC/NOX/DRY	BAGHOUSE	SDA	SUBBITUMINOUS	0.0254	SUBBITUMINOUS	117
Craig	C1	CONV/PC/NOX/DRY	ESP- HS	WETSCRUB	SUBBITUMINOUS	0.0254	SUBBITUMINOUS	267
Bailly	7	CYCLONE/NONOX/WET	ESP- CS	WETSCRUB	BITUMINOUS - LOW SULFUR	0.0254	BITUMINOUS	646
AES Hawaii, Inc.	A	FBC/SNCR	BAGHOUSE	FBC	SUBBITUMINOUS	0.0279	SUBBITUMINOUS	46
Bay Front Plant Generating	5	CYCLONE/NONOX/WET	MECH	COMP COAL	BITUMINOUS	0.0289	BITUMINOUS	127
Presque Isle	6	CONV/PC/NONOX/WET	ESP- CS	COMP COAL	BITUMINOUS/PETROLEUM COKE	0.0300	BITUMINOUS/PETCOKE	197
Presque Isle	5	CONV/PC/NONOX/WET	ESP- CS	COMP COAL	BITUMINOUS/PETROLEUM COKE	0.0300	BITUMINOUS/PETCOKE	190
Presque Isle	9	CONV/PC/NOX/WET	ESP- HS	COMP COAL	BITUMINOUS/PETROLEUM COKE	0.0300	SUBBITUMINOUS	223
TNP-One	U2	FBC/NONOX	BAGHOUSE	FBC	LIGNITE	0.0310	LIGNITE	133
St Clair Power Plant	4	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL	SUBBITUMINOUS	0.0344	SUBBITUMINOUS/BITUMINOUS	333
Big Bend	BB03	CONV/TURBO/NOX/WET	ESP- CS	WETSCRUB	SUBBITUMINOUS	0.0348	BITUMINOUS	1767
Navajo	3	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB	BITUMINOUS	0.0374	BITUMINOUS	150
Valmont	5	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	BITUMINOUS	0.0388	BITUMINOUS	39
Intermountain	2SGA	CONV/PC/NOX/DRY	BAGHOUSE	WETSCRUB	BITUMINOUS	0.0391	BITUMINOUS	200
Stockton Cogen Company	GEN1	FBC/SNCR	BAGHOUSE	FBC	BITUMINOUS	0.0404	BITUMINOUS/PETCOKE	583
Montrose	1	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	SUBBITUMINOUS	0.0422	SUBBITUMINOUS	133
Rawhide	101	CONV/PC/NOX/DRY	BAGHOUSE	SDA	SUBBITUMINOUS	0.0469	SUBBITUMINOUS	127
Valley	2	CONV/PC/NOX/DRY	BAGHOUSE	NONE	BITUMINOUS/PETROLEUM COKE	0.0475	BITUMINOUS/PETCOKE	128
Shawnee Fossil Plant	3	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	BITUMINOUS	0.0482	BITUMINOUS/SUBBITUMINOUS	167
Jim Bridger	BW 74	CONV/PC/NOX/DRY	ESP- CS	WETSCRUB	SUBBITUMINOUS	0.0501	SUBBITUMINOUS	50
Laramie River Station	1	CONV/PC/NOX/DRY	ESP- CS	WETSCRUB	SUBBITUMINOUS	0.0521	SUBBITUMINOUS	77
Laramie River Station	3	CONV/PC/NOX/DRY	ESP- CS	SDA	SUBBITUMINOUS	0.0521	SUBBITUMINOUS	74
La Cygne	1	CYCLONE/NOX/WET	PARTSCRUB	WETSCRUB	SUBBITUMINOUS	0.0523	SUBBITUMINOUS	300
Cliffside	1	CONV/PC/NONOX/DRY	ESP- HS	NONE	BITUMINOUS	0.0523	BITUMINOUS	1400
Sherburne County Generating Plant	#3	CONV/PC/NOX/DRY	BAGHOUSE	SDA	SUBBITUMINOUS	0.0528	SUBBITUMINOUS	102
Meramec	4	CONV/PC/NOX/DRY	ESP- CS	NONE	SUBBITUMINOUS	0.0539	SUBBITUMINOUS/BITUMINOUS	3620
Colstrip	3	CONV/PC/NOX/DRY	PARTSCRUB	WETSCRUB	SUBBITUMINOUS	0.0555	SUBBITUMINOUS	67
GRDA	2	CONV/PC/NOX/DRY	ESP- CS	SDA	SUBBITUMINOUS	0.0557	SUBBITUMINOUS/BITUMINOUS	399
Coronado	U1B	CONV/PC/NOX/WET	ESP- HS	WETSCRUB	SUBBITUMINOUS	0.0569	SUBBITUMINOUS	117
Newton	2	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	BITUMINOUS	0.0570	SUBBITUMINOUS	178
Salem Harbor	3	CONV/PC/NOX/SNCR/DRY	ESP- CS	COMP COAL	BITUMINOUS	0.0571	BITUMINOUS	100
Columbia	1	CONV/PC/NOX/DRY	ESP- HS	COMP COAL	SUBBITUMINOUS	0.0575	SUBBITUMINOUS	314
Cholla	3	CONV/PC/NONOX/DRY	ESP- HS	NONE	SUBBITUMINOUS	0.0582	SUBBITUMINOUS	50
Cholla	2	CONV/PC/NONOX/DRY	MECH/PARTSCRUB	WETSCRUB	SUBBITUMINOUS	0.0582	SUBBITUMINOUS	50
Platte	1	CONV/PC/NOX/WET	ESP- HS	COMP COAL	SUBBITUMINOUS	0.0608	SUBBITUMINOUS	181
Wyodak	BW 91	CONV/PC/NOX/DRY	ESP- CS	SDA	SUBBITUMINOUS	0.0633	SUBBITUMINOUS	25
Brayton Point	1	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	BITUMINOUS	0.0654	BITUMINOUS	567
Brayton Point	3	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	BITUMINOUS	0.0654	BITUMINOUS	967
Antelope Valley Station	B1	CONV/PC/NOX/DRY	BAGHOUSE	SDA	LIGNITE	0.0658	LIGNITE	107
Lawrence	4	CONV/PC/NONOX/DRY	PARTSCRUB	WETSCRUB	SUBBITUMINOUS	0.0683	SUBBITUMINOUS	267
Clay Boswell	2	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	SUBBITUMINOUS	0.0701	SUBBITUMINOUS	50
Clay Boswell	3	CONV/PC/NOX/DRY	PARTSCRUB	WETSCRUB/COMP COAL	SUBBITUMINOUS	0.0701	SUBBITUMINOUS	50
Clay Boswell	4	CONV/PC/NOX/DRY	PARTSCRUB	WETSCRUB	SUBBITUMINOUS	0.0701	SUBBITUMINOUS	50
Clifty Creek	6	CONV/PC/NOX/WET	ESP- HS	COMP COAL	SUBBITUMINOUS	0.0711	SUBBITUMINOUS/BITUMINOUS	441
Leland Olds Station	2	CYCLONE/NONOX/WET	ESP- CS	NONE	LIGNITE	0.0717	LIGNITE	91
Dwayne Collier Battle Cogeneration Facility	2B	STOKER/NOX/DRY	BAGHOUSE	SDA	BITUMINOUS	0.0767	BITUMINOUS	1700
Comanche	2	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	SUBBITUMINOUS	0.0767	SUBBITUMINOUS	50
Gibson Generating Station (0300)	3	CONV/PC/NOX/DRY	ESP- CS	NONE	BITUMINOUS	0.0772	BITUMINOUS	1867
Gibson Generating Station (1099)	3	CONV/PC/NOX/DRY	ESP- CS	NONE	BITUMINOUS	0.0772	BITUMINOUS	2100
Wabash River Generating Station	1 + 1A	COAL GAS	COAL GAS	COAL GAS	BITUMINOUS	0.0786	BITUMINOUS	600
George Neal South	4	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	SUBBITUMINOUS	0.0800	SUBBITUMINOUS	191
Nelson Dewey	1	CYCLONE/NONOX/WET	ESP- HS	COMP COAL	SUBBITUMINOUS	0.0805	SUBBITUMINOUS/PETCOKE	129
Widows Creek Fossil Plant	6	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL	BITUMINOUS	0.0846	BITUMINOUS	333
Sam Seymour	3	CONV/PC/NONOX/DRY	ESP- CS	WETSCRUB	SUBBITUMINOUS	0.0852	SUBBITUMINOUS	20
Polk Power	1	COAL GAS	COAL GAS	COAL GAS	BITUMINOUS	0.0858	BITUMINOUS	1067
R.M. Heskett Station	B2	FBC/NONOX	ESP- CS	FBC	LIGNITE	0.0881	LIGNITE	100

Appendix C-7. Mercury and Chlorine Fuel Data From Utility Boilers[a]

Plant name	Unit name	Boiler/NOx type	PM control	SOx control	name of fuel 1	average Hg in fuel (ppmw)	Name of Fuel 2	Cl in test coal (ppm)
Stanton Station	1	CONV/PC/NOX/DRY	ESP- CS	NONE	LIGNITE	0.0883	LIGNITE	50
Stanton Station	10	CONV/PC/NOX/DRY	BAGHOUSE	SDA	LIGNITE	0.0883	LIGNITE	28
Charles R. Lowman	2	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB	BITUMINOUS	0.0900	BITUMINOUS	367
Dunkirk	2	CONV/PC/NOX/DRY	ESP- HS	COMP COAL	BITUMINOUS	0.0902	BITUMINOUS	872
Jack Watson	4	CONV/PC/NOX/DRY	ESP- CS	NONE	BITUMINOUS	0.0918	BITUMINOUS	761
San Juan	2	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB	SUBBITUMINOUS	0.0918	SUBBITUMINOUS	167
Mecklenburg Cogeneration Facility	GEN 1	CONV/PC/NOX/DRY	BAGHOUSE	SDA	BITUMINOUS	0.0932	BITUMINOUS	1893
Port Washington	4	CONV/PC/NONOX/DRY	ESP- CS	SORBENT INJ	BITUMINOUS	0.0954	BITUMINOUS	1215
Lewis & Clark	B1	CONV/PC/NOX/DRY	PARTSCRUB	NONE	LIGNITE	0.0967	LIGNITE	100
Clover Power Station	2	CONV/PC/NOX/DRY	BAGHOUSE	WETSCRUB	BITUMINOUS	0.0978	BITUMINOUS	520
W. H. Sammis	1	CONV/PC/NONOX/DRY	BAGHOUSE	NONE	BITUMINOUS	0.1009	BITUMINOUS	1233
Big Brown	1	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	NONE	LIGNITE	0.1319	LIGNITE	133
Gaston	1	CONV/PC/NOX/DRY	ESP- HS	NONE	BITUMINOUS	0.1342	BITUMINOUS	333
Coyote	1	CYCLONE/NONOX/WET	BAGHOUSE	SDA	LIGNITE	0.1348	LIGNITE	100
Limestone	LIM1	CONV/PC/NOX/WET	ESP- CS	WETSCRUB	LIGNITE	0.1460	LIGNITE	50
SEI - Birchwood Power Facility	1	CONV/PC/NOX/SCR/DRY	BAGHOUSE	SDA	BITUMINOUS	0.1470	BITUMINOUS	917
Logan Generating Plant	GEN 1	CONV/PC/NOX/SCR/DRY	BAGHOUSE	SDA	BITUMINOUS	0.1727	BITUMINOUS	1500
Kline Township Cogen Facility	GEN1	FBC/NONOX	BAGHOUSE	FBC	WASTE ANTHRACITE	0.1733	WASTE BITUMINOUS	267
Monticello	1	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	NONE	LIGNITE	0.1754	LIGNITE	167
Monticello	3	CONV/PC/NONOX/DRY	ESP- CS	WETSCRUB	LIGNITE	0.1754	LIGNITE	133
R. D. Morrow Sr. Generating plant	2	CONV/PC/NOX/DRY	ESP- HS	WETSCRUB	BITUMINOUS	0.1958	BITUMINOUS	833
AES Cayuga (NY) (formerly NYSEG Milliken)	2	CONV/PC/NOX/DRY	ESP- CS	WETSCRUB	BITUMINOUS	0.3186	BITUMINOUS	882
Scrubgrass Generating Company L. P.	GEN1	FBC/NONOX	BAGHOUSE	FBC	WASTE BITUMINOUS[b]	0.7029	WASTE BITUMINOUS	600

a From Working Group distribution materials on EPA website for the Utility MACT: "www.epa.gov/ttn/atw/combust/utiltox/utoxpg.html#DA2". January 2002.

b Information for the fuel was not used in the mercury analyses because it was not considered to be representative of coal burned in industrial boilers.

	Mercury		Cl
High	0.3186		3620
Low	0.0254		20
High/Low	12.5433		181

Appendix C-8. Total Selected Metals MACT Floor Emission Level Analysis for Solid Fuel Subcategories (without Manganese)

ID	Material	Control Level	Total Selected Metals EF (lb/MMMBtu) - Sorted from Highest to Lowest	Corresponding PM EF (lb/MMBtu)
E232.001c	Coal	ESP	3.965E-04	2.320E-02
E208a.001c	Coal	ESP	3.124E-04	2.030E-01
E208b.001c	Coal	ESP	2.898E-04	1.120E-01
E204.005c	Coal	ESP	2.597E-04	9.230E-02
E232.002c	Coal	ESP	2.250E-04	1.310E-02
E204.004c	Coal	ESP	2.130E-04	1.940E-08
E209b.002c	Coal	ESP	2.095E-04	3.860E-02
E735.019	Coal	ESP	1.633E-04	8.180E-02
E236.001c	Coal	ESP	1.478E-04	1.870E-02
E202.001c1	Coal	ESP	1.284E-04	1.080E-01
E692.003	Coal/Wood/NFF Liquid/NFF Solid	ESP	1.097E-04	1.440E-02
E209a.002c	Coal	ESP	1.041E-04	1.960E-02
E200.001C	Coal	ESP	1.015E-04	2.010E-02
E692.001	Coal/Wood/NFF Liquid/NFF Solid	ESP	8.898E-05	1.380E-02
E735.022	Coal	ESP	8.512E-05	3.330E-02
E735.015	Coal	ESP	7.707E-05	1.220E-01
E206.001c2	Coal	Fabric Filter	7.262E-05	NA
E692.002	Coal/Wood/NFF Liquid/NFF Solid	ESP	7.189E-05	1.080E-02
E740.003	Wood/Other Biomass/NFF Liquid/NFF Solid	ESP	7.102E-05	1.130E-01
E206.001c1	Coal	Fabric Filter	6.169E-05	2.480E-03
E229.002c1	Coal	ESP	6.168E-05	8.240E-02
E740.001	Wood	ESP	5.616E-05	6.750E-02
E203.001c	Coal	Fabric Filter	5.562E-05	7.380E-03
E775	NFF Liquid/NFF Solid or Gas/NFF Liquid/NFF Solid	Fabric Filter	5.562E-05	NA
E202.001c2	Coal	ESP/Flue Gas Desulfurization	4.851E-05	1.110E-02
E239.001c	Coal	Fabric Filter/Spray Dryer	3.599E-05	NA
E222.002cdup	Coal	ESP/SD	3.001E-05	1.210E-02
E229.002c2	Coal	ESP/Flue Gas Desulfurization	2.502E-05	1.000E-02
E206.001c3	Coal	Fabric Filter	2.459E-05	2.810E-02
E221.001c1	Coal	ESP	2.338E-05	8.000E-02
E738.002	Wood	Fabric Filter	2.036E-05	2.740E-02
E1	Coal	Fabric Filter	2.028E-05	NA
E222.002c	Coal	ESP/SD	1.943E-05	7.950E-03
E221.001c2	Coal	ESP/Flue Gas Desulfurization	1.837E-05	3.920E-02
E27-2	Wood	Fabric Filter/Limestone Injection (DSI)	1.762E-05	NA
E27	Wood/Other Biomass/NFF Liquid/NFF Solid	Fabric Filter/Limestone Injection (DSI)	1.562E-05	NA
E230.001c	Coal	ESP	1.543E-05	2.380E-02
E739.001	Wood	Fabric Filter	1.538E-05	1.460E-02
E268.002	Wood	ESP	1.089E-05	2.240E-03
E231.001u	Coal	Fabric Filter	9.038E-06	NA
E224.016	Coal	Fabric Filter	8.017E-06	1.660E-03
E231.001c	Coal	Fabric Filter/Flue Gas Desulfurization	6.559E-06	NA
E20	Coal	Fabric Filter/Limestone Injection (DSI)	4.222E-06	NA
E1021	Coal	Fabric Filter	3.757E-06	NA
E404.001	Wood	ESP	3.084E-06	1.440E-03
E523.003	Wood	ESP	3.084E-06	1.000E-02
E15	Coal	Fabric Filter/Limestone Injection (DSI)	2.544E-06	NA
E224.022	Coal	Fabric Filter	2.496E-06	1.200E-03
E11	Coal	ESP/Venturi Scrubber	2.396E-06	1.440E-03
E218.003	Coal	ESP	1.676E-06	1.320E-03

Appendix D-1. PM Emission Information for Liquid Fuel Fired Boilers[a]

Test ID	Pollutant	Fuel Type	Control Level	Avg Emission Factor (lb/MMBtu)	Efficiency for ESP Controlled Units (%)
B103.001	PM	Residual Liquid FF	Wet Scrubber	0.0234	
B104.001	PM	Residual Liquid FF	No Control	0.414	
B104.002	PM	Residual Liquid FF	No Control	0.113	
B105.001	PM	Distillate Liquid FF	No Control	0.0513	
B106.001	PM	Residual Liquid FF	No Control	0.047	
B109.001	PM	Residual Liquid FF	No Control	0.174	
B110.001	PM	Distillate Liquid FF	No Control	0.00179	
B110.002	PM	Distillate Liquid FF	No Control	0.001186	
B111.001	PM	Distillate Liquid FF	No Control	0.0146	
B113.001	PM	Residual Liquid FF	No Control	0.114	
B114.001	PM	Residual Liquid FF	No Control	0.0825	
B115.001	PM	Residual Liquid FF	No Control	0.138	
B116.001	PM	Residual Liquid FF	No Control	0.145	
B117.001	PM	Residual Liquid FF	No Control	0.0983	
B118.001	PM	Residual Liquid FF	No Control	0.0496	
E212.001c	PM	Residual Liquid FF	ESP	0.0678	3
E212.001u	PM	Residual Liquid FF	No Control	0.07	
E215.007	PM	Residual Liquid FF	Cyclone/Carbon Injection	0.0386	
E242.001	PM	Residual Liquid FF	Flue Gas Recirculation	0.0384	
E242.005	PM	Residual Liquid FF	Flue Gas Recirculation	0.0000486	
E243.003c	PM	Residual Liquid FF	ESP	0.0152	77
E243.003u	PM	Residual Liquid FF	No Control	0.0665	
E251a.003c	PM	Residual Liquid FF	No Control	0.128	
E251a.003u	PM	Residual Liquid FF	No Control	0.0811	
E251b.001u	PM	Residual Liquid FF	Flue Gas Recirculation	0.0439	
E251b.005c	PM	Residual Liquid FF	ESP/Flue Gas Recirculation	0.00352	92
E251b.005u	PM	Residual Liquid FF	Flue Gas Recirculation	0.044	
E623.003	PM	Residual Liquid FF	No Control	0.0958	

a Working Group distribution materials on EPA website for the Utility MACT: "www.epa.gov/ttn/atw/combust/utiltox/utoxpg.html#DA2". January 2002.

Appendix D-2. Summary of Chlorine Fuel Analysis Data for Residual and Distillate Fuel Oils[a]

FACILITY NAME	CITY	STATE	Material	Compound Name	Content	Non-Detect	Units
Long Beach Generating Station	Long Beach	CA	Distillate Fuel Oil	Chlorine	30	ND	mg/L
Humbolt Bay Power Plant	Humbolt Bay	CA	Residual Fuel Oil	Chlorine	90		mg/L
Morro Bay Power Plant	Morro Bay	CA	Residual Fuel Oil	Chlorine	130		mg/L
EPRI Site 103		CA	Residual Fuel Oil	Chlorine	130		mg/L
El Segundo Generating Station	El Segundo	CA	Residual Fuel Oil	Chlorine	131		mg/L
Alamitos Generating Station	Alamitos	CA	Residual Fuel Oil	Chlorine	150		mg/L
Huntington Beach Generating Station	Huntington Beach	CA	Residual Fuel Oil	Chlorine	160		mg/L

a Data are from fuel analyses database gathered during the ICCR. Database is included in the docket as item II-D-2 on CD-ROM.