



Electric Generating Utility Mercury Speciation Profiles for the Clean Air Mercury Rule

EPA-454/R-11-010
November 2011

Electric Generating Utility Mercury Speciation Profiles for
the Clear Air Mercury Rule

By:
David Bullock and Shelly
Johnson Research Triangle
Institute
Research Triangle Park, North Carolina

Prepared for:
Alison Eyth
Work Assignment Contracting Officer
Representative Air Quality Assessment Division

Contract No. EP-D-11-
084 Work Order No. 0-04

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Air Quality Assessment Division
Emissions Inventory and Analysis
Group Research Triangle Park, North
Carolina

Date: November 14, 2011

Subject: EGU Mercury Speciation Profiles for the Clean Air Mercury Rule (CAMR)

From: David Bullock
Shelly
Johnson

To: Alison Eyth
OAQPS/AQAD/EIAG (C339-02)
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

I. Background

The U.S. Environmental Protection Agency (EPA) is preparing for finalizing the National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units (EGUs) under Clean Air Act (CAA or the Act) section 112(d) (referred to as the Mercury and Air Toxics Standards [MATS]). A key piece to several aspects of the rule documentation includes emission inventory estimates for this sector at the facility and national resolutions. Associated with the emission inventory estimates is the application of mercury speciation profiles that were developed from the 1999 information collection request (ICR) data used to support development of the Clean Air Mercury Rule (CAMR).

This memorandum describes the general process followed in the development of the mercury speciation profiles.

II. Discussion

The development of the mercury speciation profiles can generally be divided into three major elements: (1) collecting the speciated mercury data, (2) grouping the data into “bins,” and (3) developing the average mercury speciation profiles for each bin.

These three major elements are discussed in detail in the sections which follow.

Attachment 1 provides a glossary of terms used during development of the mercury speciation profiles. These terms appear throughout the supporting spreadsheets which are included as Attachments 2 through 4.

A. Speciated Mercury Data

Eighty mercury emissions tests were collected from 69 facilities. These data include inlet and outlet speciated mercury concentration measurements ($\mu\text{ g/dscm}$) for particle-bound

(Hg_p), oxidized (Hg²⁺), and elemental (Hg⁰) mercury. All emissions tests were conducted using the Ontario hydro method and included three sampling runs. Only the outlet data (measurements after the last control device) were used to develop the mercury speciation profiles.

In addition to the speciated mercury measurements, measurements of inlet and outlet exhaust gas flow rate (dscm/hr), temperature (deg C), moisture content (%), and oxygen content (%) were reported.

Fuel flow rate measurements (kg/hr) and fuel sampling were conducted concurrently with each emissions sampling run. Fuel samples were analyzed for heat content (HHV, Btu/lb), percent sulfur (%), percent moisture (%), percent ash (%), chlorine content (ppm), and mercury content (ppm).

Where emissions sampling results were noted as below the method detection limit (MDL), one-half of the MDL was substituted. These ½-MDL values were included and averaged with the other run-by-run values in calculating the average speciation fractions for each bin.

In a number of instances, an excessive reagent blank caused the emissions sampling data to be unreliable. In other instances, one or more components of the speciation were not provided in the emission test report. In each of these instances, zero was substituted for the suspect or missing values (i.e., zero is used as the speciation fraction for all of these instances). These “zero” values were included and averaged with the other run-by-run values in calculating the average speciation fractions for each bin. Of the 80 emissions tests (240 test runs), 6 tests (13 test runs) were missing one of the speciation components; 1 test run was missing two of the speciation components.

In one case, a test sample was broken, damaged, or lost during testing or in transport, such that no mercury speciation values were available for one test run of this sampling program. In this case, the speciation fractions for the two remaining valid test runs were used in the development of mercury speciation profiles (Bin 24).

A summary of the run-by-run data collected (including notes for non-detect values [ND], excessive blanks [XB], missing values [NA], or lost samples [LS]) is provided as Attachment 2.

B. Mercury Emission Reduction Bins

The bins for which mercury speciation profiles were developed were not originally developed as mercury “speciation bins.” The mercury emissions data collection effort was geared toward characterizing the mercury emission reduction potentials of existing EGU emission control schemes and developing mercury “emission modification factors” (EMFs) for these control schemes. The resulting EMFs were used, in conjunction with fuel mercury

content data, to facilitate the estimation of nationwide mercury emissions from coal-fired EGUs. With this purpose in mind, the boilers selected for emissions testing represented a range of boiler types, fuel types, and emission control configurations. These three parameters were then used as the criteria for grouping the emissions data into mercury emission reduction bins.

As a result, the bins were developed to represent distinct boiler type/fuel type/emission control scenarios with differing mercury emission reduction potentials. These same bins were used to create average mercury speciation profiles.

Boiler Types

Boiler types represented in the data set

include: Conventional pulverized coal
Cyclone-
fired Stoker-
fired
Fluidized-bed combustor (FBC)
Integrated gasification combined cycle (IGCC)

One boiler was reported to have a boiler type of “conventional pulverized coal, turbo-fired.” This boiler was included with conventional pulverized coal boilers (Bin 10).

Fuel Types

Fuel types represented in the data set include:

Bituminous coal
Subbituminous coal
Lignite coal
Waste anthracite
Waste bituminous

Data were also collected for boilers firing blends of fuels (primary/secondary), including:

Bituminous coal/petroleum coke
Subbituminous coal/petroleum
coke Bituminous
coal/subbituminous coal
Subbituminous coal/bituminous
coal

Emission Controls

The data set used to develop the speciation data includes a cross-section of particulate matter (PM), sulfur dioxide (SO₂), and nitrogen oxides (NOx) emission control technologies. At the time these emissions data were collected, none of the tested units reported the use of any emission control technology designed specifically for mercury emission reduction (e.g., activated carbon, etc.).

Particulate matter control technologies represented in the data set include:

- Baghouse (fabric filter)
- Electrostatic precipitator (cold-side)
- Electrostatic precipitator (hot-side)
- Particulate scrubber
- Mechanical collector (cyclone, multicyclone)

SO₂ control technologies represented in the data set

- include: Dry sorbent injection
- Spray dryer adsorber (dry scrubber)
- Wet scrubber (wet flue gas desulfurization [FGD])

All fluidized bed combustor (FBC) units in the data set were reported to use limestone injection into the fluidized bed for SO₂ control. Because all of the FBC's in the data set used limestone injection, this was not a criterion used in developing emission reduction bins for FBC units.

NOx control technologies represented in the data set include:

- Selective non-catalytic reduction (SNCR)
- Selective catalytic reduction (SCR)

Combustion NOx controls (e.g., low-NOx burners, overfire air, etc.) were considered to have no effect on mercury emission reduction, and thus were not considered in the development of mercury emission reduction bins.

Data Grouping

The collected mercury emission data were grouped (or “binned”) based on primary and secondary fuel type, boiler type, PM control, SO₂ control, and NOx control. This grouping resulted in 45 bins, numbered 0 (zero) through 44. Note that bin numbers 26 and 32 were not used (i.e., no bin type, EMF, or speciation profile was assigned to either of these numbers); as a result, mercury EMFs and speciation profiles were developed for only 43 bins.

Attachment 3 provides a summary of the individual runs of data used to develop the mercury EMFs and speciation profiles for each bin.

C. Average mercury speciation profiles

After the individual runs of speciated mercury data were grouped into mercury emission reduction bins, the speciated mercury concentration values for each emission test run were converted to fractional values.

For example:

$$\text{Hg}_p \text{ fraction} = \text{Hg}_p \text{ conc} / (\text{Hg}_p \text{ conc} + \text{Hg}^{2+} \text{ conc} + \text{Hg}^0 \text{ conc})$$

where: Hg_p fraction = unitless fraction of mercury in the particle-bound form

Hg_p conc = particle-bound mercury concentration ($\mu \text{ g/dscm}$)

Hg^{2+} conc = oxidized mercury concentration ($\mu \text{ g/dscm}$)

Hg^0 conc = elemental mercury concentration ($\mu \text{ g/dscm}$)

To determine the average speciation profile for each bin, all of the individual run values for each speciation fraction (Hg_p , Hg^{2+} , and Hg^0) in each bin were averaged. This yielded an average fraction for particle-bound, oxidized, and elemental mercury for each bin. The sum of these three fractions equals one (some profiles may not add exactly to one due to rounding).

Forty-three EMFs and mercury speciation profiles were developed from the eighty mercury emissions tests. The majority of the speciation profiles are based on very limited data sets. Of the 43 bins for which EMFs and mercury speciation profiles were developed, 22 (51%) were based on a single emission test; 11 (26%) were based on only two emission tests; 7 (16%) were based on only three emission tests. Only 3 (7%) of the 43 bins are based on more than three emission tests. Nevertheless, these data represent the best available information on mercury speciation from EGUs.

A summary of the mercury emission reduction bins and the final mercury speciation profiles is provided as Attachment 4.

III. Conclusion

Forty-three mercury emission reduction bins and their associated mercury speciation profiles were developed from the eighty mercury emissions tests collected to support the development of the CAMR. These speciation profiles may be applied to measurements of total mercury emissions from electric utility boilers (taking into account boiler type, fuel

type, and emission control schemes) to estimate the speciation of mercury (Hg_p , Hg^{2+} , and Hg^0) where no speciated mercury sampling data are available.

Follow-on work to the mercury speciation profile development conducted under CAMR might include augmenting the small data sets for many of the speciation profiles, and collecting additional data to develop mercury speciation profiles for units equipped with mercury control technologies (e.g., activated carbon injection, etc.). Additional analyses might be conducted specifically with the goal of developing mercury speciation profiles, rather than emission reduction bins.

ATTACHMENTS

ATTACHMENT 1

Glossary of Terms

Glossary

General Terms

EMISSION MODIFICATION FACTOR (EMF) = An EMF is a fraction obtained from the amount of Hg exiting an air pollution control device (APCD) divided by the amount of the Hg entering that device. The total EMF can also be defined as one minus the total Hg removal fraction. For example, a total EMF of 0.68 is equal to a mercury removal efficiency of 0.32 (or 32 %).

EIA PLANT CODE = A ten digit plant code assigned to all non-cogeneration electric utility plants by the Department of Energy's, Energy Information Administration (DOE/EIA). An example of an EIA Plant Code is 0154660000. Note: On DOE's EIA Form 767 a combination of the EIA plant code and the ORIS plant code (defined below) is used. An example would be 0154660000-00477.

ORIS PLANT CODE = This 5-digit plant code was originally developed for utility plants by the Office of the Regulatory Information System (ORIS), which was a part of the Federal Power Commission. It is now used as a unique plant identification code assigned by EIA. An example of an ORIS code is 00477.

Fuel Type

ANTHRACITE = Anthracite coal is a combustible rock composed of organic and mineral materials that has formed over time by vegetative decay and mineral deposition. The properties of coal vary depending on the type of vegetative matter and the formation conditions (reference ASTM D 388-82). In general, anthracite coal has a higher heating content (Btu/lb) than bituminous coal.

BITUMINOUS = Bituminous coal is a combustible rock composed of organic and mineral materials that has formed over time by vegetative decay and mineral deposition. The properties of coal vary depending on the type of vegetative matter and the formation conditions (reference ASTM D 388-82). Bituminous coal has a higher heating content (Btu/lb) than subbituminous coal.

SUBBITUMINOUS = Subbituminous coal is a combustible rock composed of organic and mineral materials that has formed over time by vegetative decay and mineral deposition. The properties of coal vary depending on the type of vegetative matter and the formation conditions (reference ASTM D 388-82). Subbituminous coal has a higher heating content (Btu/lb) than lignite coal.

LIGNITE = Lignite coal is a combustible rock composed of organic and mineral materials that has formed over time by vegetative decay and mineral deposition. The properties of coal vary depending on the type of vegetative matter and the formation conditions (reference ASTM D 388-82). Lignite coal has the lowest higher heating content (Btu/lb) of the four major coal rankings.

PET COKE = Petroleum coke is a by-product of the petroleum refining process and is burned as a supplemental fuel with coal.

WASTE BITUMINOUS = Waste bituminous coal reclaimed from mine waste piles. **WASTE ANTHRACITE** = Waste anthracite coal reclaimed from mine waste piles. **Furnace Type**

CONV/PC = Conventional, pulverized coal-firing furnace. In pulverized-coal-fired boiler systems, coal is pulverized in a mill to the consistency of talcum powder (i.e., at least 70 percent of the particles will pass through a 200-mesh sieve). The pulverized coal is generally entrained in primary air before being fed through the burners to the combustion chamber, where it is fired in suspension.

FBC = Fluidized-bed combustor. In an FBC, combustion occurs when coal, together with inert material (e.g., sand, silica, alumina, or ash) and/or a sorbent such as limestone, are suspended through the action of primary combustion air distributed below the combustor floor.

"Fluidized" refers to the state of the bed of material (fuel or fuel and inert material [or sorbent]) as gas passes through the bed.

COAL GAS = Integrated Coal Gasification Combined Cycle Units. At a coal gasification power plant the coal-fired boiler unit is replaced with a coal gasification unit coupled with a gas turbine combustor and heat recovery boiler. The solid coal is gasified by a process in which a coal/water slurry is reacted at high temperature and pressure with oxygen (or air) and steam in a vessel (the gasifier) to produce a combustible gas. This combustible gas is composed of a mixture of carbon dioxide and hydrogen and is often referred to as a synthetic gas or "syngas".

CYCLONE = Cyclone firing uses several water-cooled horizontal burners that produce high-temperature flames that circulate in a cyclonic pattern. The burner design and placement cause the ash to become a molten slag that is collected below the furnace.

STOKER = Stoker-fired furnace. In stoker furnaces, coal is burned on a bed at the bottom of the furnace. The bed of coal burns on a grate. Heated air passes upward through openings in the grate.

TURBO = Turbo-fired. This furnace is a specialized form of a conventional, pulverized coal-fired furnace.

WET or DRY = Furnaces are classified as either dry or wet bottom, depending on the ash removal technique. Dry bottom furnaces fire coals with high ash fusion temperatures, and dry ash removal techniques are used. In wet bottom (slag tap) furnaces, coal with a low ash fusion temperature is used, and molten ash is drained from the bottom of the furnace.

Nitrogen Oxides control technology

NOX = Combustion NO_x controls. A variety of combustion control practices can be used including low NO_x burners, overfire air, off-stoichiometric firing, selective or biased burner firing, reburning, and burners-out-of-service. Control of NO_x can also be achieved through staged combustion (also called air staging).

NONOX = No combustion NO_x controls on furnace.

SCR = Selective Catalytic Reduction (a post combustion, add-on, NO_x control device). The selective catalytic reduction (SCR) process uses a catalyst with ammonia gas (NH₃) to reduce the NO and NO₂ in the flue gas to molecular nitrogen and water.

SNCR = Selective Noncatalytic Reduction (a post combustion, add-on, NO_x control device). The selective noncatalytic reduction (SNCR) process is based on the same basic chemistry of reducing the NO and NO₂ in the flue gas to molecular nitrogen and water as the SCR but does not require the use of a catalyst to prompt these reactions.

Sulfur Dioxide control technology

WETSCRUB = A flue gas desulfurization wet scrubber (FGD, [lime or limestone]), in which flue gas containing SO₂ is brought into contact with a limestone-water slurry. The SO₂ is absorbed into the slurry and reacts with limestone to form an insoluble sludge.

COMP COAL = Compliance coal has a specifically desired low sulfur content to bring emissions into compliance with SO₂ regulations. Compliance coal may be obtained through the mining of low-sulfur coals, coal washing, and/or coal blending.

SDA = Dry lime/spray dryer adsorber followed by a baghouse. In an SDA, flue gas is contacted with fine spray droplets of hydrated lime slurry in a spray dryer vessel. The SO₂ is absorbed in the slurry and reacts with the hydrated lime reagent to form solid calcium sulfite and calcium sulfate as in a wet lime scrubber. The water is evaporated by the heat of the flue gas. The dried solids are entrained in the flue gas, along with fly ash, and are collected in a baghouse.

FBC = In an SO₂ control context, FBC refers to the use of a sorbent such as limestone in the furnace's fluidized bed for SO₂ control.

SORBENT INJ = Dry injection process, dry powdered lime (or another suitable sorbent) is directly injected into the ductwork upstream of a PM control device.

Particulate matter control technology

ESP- CS = Electrostatic precipitator, cold-side (meaning this ESP is installed at a location downstream of the air preheater). ESPs operate by imparting an electrical charge to incoming particles, then attracting the particles to oppositely charged plates for collection. The collected particles are periodically dislodged in sheets or agglomerates by rapping or otherwise vibrating the plates.

BAGHOUSE = Baghouses are fabric filters that collect PM by placing a fabric barrier in the flue gas path. Gas passes freely through the fabric, but particles are trapped and retained for periodic removal.

ESP- HS = Electrostatic precipitator, hot-side (meaning this ESP is installed at a location upstream of the air preheater). ESPs operate by imparting an electrical charge to incoming particles, then attracting the particles to oppositely charged plates for collection. The collected particles are periodically dislodged in sheets or agglomerates by rapping or otherwise vibrating the plates.

ESP- CS/BAGHOUSE = A cold-side ESP followed by a fabric filter.

MECH = Mechanical collector (assumed to be a cyclone collector in this screening tool). Flue gas entering a cylinder tangentially to the wall is imparted with a circular motion around the cylinder's axis. Particles in the gas stream are forced toward the wall by centrifugal force, then downward through a conical discharge at the bottom of the cylinder.

PARTSCRUB = Particulate scrubber. Particulate scrubbers operate by shattering streams of water into small droplets that collide with and trap solid particles contained in the flue gas or by forcing the gases into intimate contact with water films. The particle-laden droplets or water films coalesce and are collected in a sump at the bottom of the scrubber.

MECH/PARTSCRUB = A mechanical collector followed by a particulate scrubber.

ATTACHMENT 2

Hg_speciation_data_CAMR.xls
(Tab: 02_Raw_Data_Table)

	A	B	C	D	E	F	G	H	I	J
1	Plant Name	EIA Plant Code & ORIS Code	Unit No.	RunNumber	CoalFlowRate (kg/hr), dry	HHV Btu/lb	pctSulphur %	pctMoisture %	pctAsh %	Chlorine mg/kg or ppm
2	AES Cayuga (NY) (formerly NYSEG Milliken)	0135110000-02535	2	1	50040.96	13731	2.51	4.81	9.41	840
3	AES Cayuga (NY) (formerly NYSEG Milliken)	0135110000-02535	2	2	51915.19	13791	2.55	5.77	9.01	955
5	AES Cayuga (NY) (formerly NYSEG Milliken)	0135110000-02535	2	3	52215.01	13661	2.33	5.93	9.69	850
6	AES Hawaii, Inc.	10673	AB	1	32884	12742	0.67	12.72	8.17	60
7	AES Hawaii, Inc.	10673	AB	2	33360	12743	0.65	12.79	8.04	ND(50)
8	AES Hawaii, Inc.	10673	AB	3	33485	12625	0.66	13	8.85	52
9	Antelope Valley Station	0013070000-06469	B1	1	433349	10180	1.09	37.64	15.3	140
10	Antelope Valley Station	0013070000-06469	B1	2	419526	10280	1.24	35.95	15.93	84
11	Antelope Valley Station	0013070000-06469	B1	3	413661	10400	1.05	36.67	14.39	97
12	Bailly	0137560000-00995	7 and 8	1	177627	12725	3.16	14.25	8.87	713
13	Bailly	0137560000-00995	7 and 8	2	179853	12735	3.12	14.78	8.88	459
14	Bailly	0137560000-00995	7 and 8	3	175369	12813	2.5	15.0	9.86	766
15	Bay Front Plant Generating	0137810000-03982	5	1	3911	12790	0.65	13.77	7.57	110
16	Bay Front Plant Generating	0137810000-03982	5	2	3913	12635	0.65	13.73	7.51	119
17	Bay Front Plant Generating	0137810000-03982	5	3	3934	12597	0.66	13.26	7.56	152
18	Big Bend	0184540000-00645	BB03	1	133914	12730	3.15	9.55	11	1800
19	Big Bend	0184540000-00645	BB03	2	132229	12790	3.22	9.58	10.6	1800
20	Big Bend	0184540000-00645	BB03	3	132805	12980	3.08	9.69	10.2	1700
21	Big Brown	0443720000-03497	1	1	310664	8690	1.01	25	23.7	100
22	Big Brown	0443720000-03497	1	2	312513	8720	1.03	25.5	23	100
23	Big Brown	0443720000-03497	1	3	298538	9050	1	26.1	21	200
24	Brayton Point	0134330000-01619	1	1	76292	13684	0.83	6.56	7.6	300
25	Brayton Point	0134330000-01619	1	2	75446	13756	0.73	6.03	7.6	700
26	Brayton Point	0134330000-01619	1	3	76493	13754	0.76	6	7.43	700
27	Brayton Point	0134330000-01619	3	1	163357	13521	0.82	5.97	10.56	900
28	Brayton Point	0134330000-01619	3	2	157296	13583	0.76	6.48	10	1100
29	Brayton Point	0134330000-01619	3	3	178153	13875	0.77	6.04	8.14	900
30	Bruce Mansfield	0147160000-06094	1	1	277790	13163	4.29	5.49	12.1	800
31	Bruce Mansfield	0147160000-06094	1	2	279761	13678	4.54	5.98	8.57	700
32	Bruce Mansfield	0147160000-06094	1	3	270273	13237	4.6	5.42	11.2	800
33	Charles R. Lowman	0001890000-00056	2	1	77844	13352	0.53	12	4.65	400
34	Charles R. Lowman	0001890000-00056	2	2	76370	13356	0.52	12.1	5.29	400
35	Charles R. Lowman	0001890000-00056	2	3	77844	13352	0.53	12	4.93	300
36	Cholla	0008030000-00113	2	1	125445.6	11222	0.495	5.68	18.8	ND(100)
37	Cholla	0008030000-00113	2	2	123908.4	10955	0.51	6.13	20.49	ND(100)
38	Cholla	0008030000-00113	2	3	127224	11134	0.525	5.76	19.44	ND(100)
39	Cholla	0008030000-00113	3	1	116562.6	11863	0.43	7.49	11.94	ND(100)
40	Cholla	0008030000-00113	3	2	120860.6	12172	0.42	7.74	9.06	ND(100)
41	Cholla	0008030000-00113	3	3	121240.5	12135	0.42	7.46	9.91	ND(100)
42	Clay Boswell	0126470000-01893	2	1	21481	12158	0.62	26.6	7.31	ND(100)
43	Clay Boswell	0126470000-01893	2	2	21590	12087	0.62	26.5	7.97	ND(100)
44	Clay Boswell	0126470000-01893	2	3	21620	12100	0.68	26.4	8.12	ND(100)
45	Clay Boswell	0126470000-01893	3	1	125453	12072	0.61	26.1	7.67	ND(100)
46	Clay Boswell	0126470000-01893	3	2	119812	12052	0.75	28.3	7.13	ND(100)
47	Clay Boswell	0126470000-01893	3	3	120910	11972	0.68	27.8	8.54	ND(100)
48	Clay Boswell	0126470000-01893	4	1	195911	12075	0.54	26.7	7.27	ND(100)
49	Clay Boswell	0126470000-01893	4	2	197038	12197	0.57	26.3	7.44	ND(100)
50	Clay Boswell	0126470000-01893	4	3	200509	11888	0.6	25	8.62	ND(100)
51	Cliffside	0054160000-02721	1	1	15852	13803	0.85	7.34	9.16	1400
52	Cliffside	0054160000-02721	1	2	15818	13181	0.77	7.83	8.31	1400
53	Cliffside	0054160000-02721	1	3	15838	13804	0.85	7.26	8.44	1400
54	Clifty Creek	0092690000-00983	6	1	71060	12494	0.86	22.69	8.08	430
55	Clifty Creek	0092690000-00983	6	2	69626	12578	0.86	22.74	8.66	374
56	Clifty Creek	0092690000-00983	6	3	74180	12632	0.99	21.52	8.98	519
57	Clover Power Station	0198760000-07213	2	1	143480	13089.39	NA	4.35	NA	418.19
58	Clover Power Station	0198760000-07213	2	2	143553	13605.30	NA	3.42	NA	517.71
59	Clover Power Station	0198760000-07213	2	3	142146	13568.31	NA	3.82	NA	623.83
60	Colstrip	0128250000-06076	3	1	370938	10779	0.72	11.4	16.8	ND(100)

	A	B	C	D	E	F	G	H	I	J
1	Plant Name	EIA Plant Code & ORIS Code	Unit No.	RunNumber	CoalFlowRate (kg/hr), dry	HHV Btu/lb	pctSulphur %	pctMoisture %	pctAsh %	Chlorine mg/kg or ppm
61	Colstrip	0128250000-06076	3	2	373615	10568	0.74	12	18	ND(100)
62	Colstrip	0128250000-06076	3	3	366517	10688	0.76	11.4	17.3	100
63	Columbia	0208560000-08023	1	1	205968	12261	0.43	30.43	6.49	292
64	Columbia	0208560000-08023	1	2	210060	12120	0.43	29.09	6.2	347
65	Columbia	0208560000-08023	1	3	208610	12182	0.42	29.77	5.38	303
66	Comanche	0154660000-00470	2	1	133163	11891.63	0.43	27.1	6.45	ND(100)
67	Comanche	0154660000-00470	2	2	130385	11891.63	0.43	27.1	6.45	ND(100)
68	Comanche	0154660000-00470	2	3	135158	11891.63	0.43	27.1	6.45	ND(100)
69	Coronado	0615720000-06177	U1B	1	159600	11187	0.53	13.26	17.76	100
70	Coronado	0615720000-06177	U1B	2	158800	11439	0.49	13.62	17.08	ND(100)
71	Coronado	0615720000-06177	U1B	3	162900	11262	0.51	13.53	18.25	200
72	Coyote	0128190000-08222	1	1	180563	11080	1.33	35.23	11.1	ND(200)
73	Coyote	0128190000-08222	1	2	184283	106.73	2.07	35.12	13.26	ND(200)
74	Coyote	0128190000-08222	1	3	179437	10904	1.76	35.11	12.68	ND(200)
75	Craig	0301510000-06021	C1	1	155754	12322	0.52	15.84	8.02	400
76	Craig	0301510000-06021	C1	2	159979	12447	0.52	14.81	8.17	200
77	Craig	0301510000-06021	C1	3	155324	12451	0.58	18.08	6.37	200
78	Craig	0301510000-06021	C3	1	157201	12549	0.47	17.09	6.63	100
79	Craig	0301510000-06021	C3	2	156035	12624	0.44	17.11	5.96	ND(100)
80	Craig	0301510000-06021	C3	3	153356	12562	0.49	17.94	6.4	200
81	Dunkirk	0135730000-02554	2	1	32714	13907	2.31	5.76	7.4	811
82	Dunkirk	0135730000-02554	2	2	32650	14022	2.23	5.1	7.8	925
83	Dunkirk	0135730000-02554	2	3	31910	13819	2.25	6.6	8.92	880
84	Dwayne Collier Battle Cogeneration Facility	10384	2B	1	12432	13820	0.73	4.5	7.16	1500
85	Dwayne Collier Battle Cogeneration Facility	10384	2B	2	12391	13900	0.76	4.37	6.94	1800
86	Dwayne Collier Battle Cogeneration Facility	10384	2B	3	11888	13930	0.77	4.43	6.42	1800
87	Gaston	0001950000-00026	1	1	82264	13560	0.8	6.97	13.2	300
88	Gaston	0001950000-00026	1	2	78015	13300	1.03	6.58	13.8	300
89	Gaston	0001950000-00026	1	3	72147	13640	0.83	7.33	12.1	400
90	George Neal south	0123410000-07343	4	1	312422	12003	0.42	27.89	7.6	200
91	George Neal south	0123410000-07343	4	2	305364	12014	0.44	28.31	7.61	100
92	George Neal south	0123410000-07343	4	3	312314	11901	0.44	30.03	8.64	273
93	Gibson Generating Station (10/99 testing)	0154700000-06113	3	1	209510	12530	1.71	13.6	13.1	1900
94	Gibson Generating Station (10/99 testing)	0154700000-06113	3	2	216693	12570	1.74	12.6	12.9	2200
95	Gibson Generating Station (10/99 testing)	0154700000-06113	3	3	215173	12570	1.71	12.8	13.1	2200
96	Gibson Generating Station (03/00 testing)	0154700000-06113	3	1	248127	11640	1.45	7.38	12.2	1700
97	Gibson Generating Station (03/00 testing)	0154700000-06113	3	2	240702	11630	1.45	7.81	12.9	1700
98	Gibson Generating Station (03/00 testing)	0154700000-06113	3	3	230739	11550	1.57	8.19	13.9	2200
99	GRDA	0074900000-00165	2	1	192022	12091	0.71	24.16	8.11	379
100	GRDA	0074900000-00165	2	2	184341	12186	0.73	24.9	8.04	386
101	GRDA	0074900000-00165	2	3	211706	12096	0.88	24.25	8.46	431
102	Intermountain	0112080000-06481	2SGA	1	281058	12986	0.68	7.52	9.16	300
103	Intermountain	0112080000-06481	2SGA	2	279461	13022	0.67	7.77	9.36	200
104	Intermountain	0112080000-06481	2SGA	3	284219	12949	0.63	7.31	9.36	100
105	Jack Watson	0126860000-02049	4	1	80122	13080	1.02	4	6.84	833
106	Jack Watson	0126860000-02049	4	2	80893	13080	1.06	3.4	6.97	725
107	Jack Watson	0126860000-02049	4	3	81111	13070	1.03	3.34	7.12	724
108	Jim Bridger	0143540000-08066	BW 74	1	NA	11821	0.71	19.03	11.83	ND(100)
109	Jim Bridger	0143540000-08066	BW 74	2	NA	11963	0.64	19.51	11.45	ND(100)
110	Jim Bridger	0143540000-08066	BW 74	3	NA	11973	0.69	19.55	10.85	ND(100)
111	Kline Township Cogen Facility	50039	GEN1	1	165225.69	5110	0.43	9.51	58.3	300
112	Kline Township Cogen Facility	50039	GEN1	2	171535.06	5050	0.44	8.54	58.7	200
113	Kline Township Cogen Facility	50039	GEN1	3	176051.86	4930	0.38	7.94	61	300
114	La Cygne	0100000000-01241	1	1	290481	11800	1.22	25.5	11.4	300
115	La Cygne	0100000000-01241	1	2	277548	11740	1.31	24.7	11.7	300
116	La Cygne	0100000000-01241	1	3	284632	11800	1.2	23.4	10.8	300
117	Laramie River Station	0013070000-06204	1	1	207045	11860	0.52	31.05	7.84	87
118	Laramie River Station	0013070000-06204	1	2	197203	11940	0.52	31.21	7.63	78

	A	B	C	D	E	F	G	H	I	J
1	Plant Name	EIA Plant Code & ORIS Code	Unit No.	RunNumber	CoalFlowRate (kg/hr), dry	HHV Btu/lb	pctSulphur %	pctMoisture %	pctAsh %	Chlorine mg/kg or ppm
119	Laramie River Station	0013070000-06204	1	3	195728	11890	0.54	31.29	8.1	57
120	Laramie River Station	0013070000-06204	3	1	208000	11820	0.49	30.8	7.4	86
121	Laramie River Station	0013070000-06204	3	2	213000	11990	0.49	30.83	7.51	66
122	Laramie River Station	0013070000-06204	3	3	210000	12070	0.47	30.98	7.06	79
123	Lawrence	0002250000-01250	4	1	36186	12280	0.58	16.9	8.62	400
124	Lawrence	0002250000-01250	4	2	38541	12260	0.45	18.3	7.03	200
125	Lawrence	0002250000-01250	4	3	38095	12340	0.44	17.5	6.68	200
126	Leland Olds Station	0013070000-02817	2	1	229813	10500	0.8	36.03	11.27	91
127	Leland Olds Station	0013070000-02817	2	2	187931	10700	1.07	36.26	10.73	104
128	Leland Olds Station	0013070000-02817	2	3	315756	10890	0.91	36.37	9.46	77
129	Lewis & Clark	0128190000-06089	B1	1	28727	10427	0.89	37.42	15.29	ND(200)
130	Lewis & Clark	0128190000-06089	B1	2	27281	10435	0.7	37.35	15.18	ND(200)
131	Lewis & Clark	0128190000-06089	B1	3	25593	10391	0.87	37.03	15.91	ND(200)
132	Limestone	0089010000-00298	LIM1	1	332740.50	10422	1.37	31.62	18.95	ND(100)
133	Limestone	0089010000-00298	LIM1	2	336256.88	10700	1.52	31.79	17.44	ND(100)
134	Limestone	0089010000-00298	LIM1	3	344827.24	10574	1.54	31.66	18.48	ND(100)
135	Logan Generating Plant	10043	Gen 1	1	75400	13758	1.13	1.08	10.21	1500
136	Logan Generating Plant	10043	Gen 1	2	75526	13767	1.08	1.02	10.06	1500
137	Logan Generating Plant	10043	Gen 1	3	75351	13757	1.08	1.12	9.95	1500
138	Mecklenburg Cogeneration Facility	52007	GEN 1	1	25138	14042	1.25	5.43	6.97	1901
139	Mecklenburg Cogeneration Facility	52007	GEN 1	2	26151	13877	1.55	5.64	7.73	1852
140	Mecklenburg Cogeneration Facility	52007	GEN 1	3	25488	13867	1.38	7.12	7.7	1925
141	Meramec	0194360000-02104	4	1	126826	13254	0.89	14.09	7.75	3200
142	Meramec	0194360000-02104	4	2	112566	13499	1.29	10.55	8.18	3860
143	Meramec	0194360000-02104	4	3	105878	13415	1.27	11.95	7.85	3800
144	Monticello	0443720000-06147	1	1	314734	8220	0.58	22.8	21.2	200
145	Monticello	0443720000-06147	1	2	319432	8340	0.64	22.9	19.5	100
146	Monticello	0443720000-06147	1	3	315757	7740	1.55	23.3	27.5	200
147	Monticello	0443720000-06147	3	1	430100	8680	0.66	22.4	19.8	100
148	Monticello	0443720000-06147	3	2	447000	8250	0.57	25	25.2	200
149	Monticello	0443720000-06147	3	3	434600	8740	0.63	24.8	22.1	100
150	Montrose	0100000000-02080	1	1	69976	10440	0.2	16.6	4.81	200
151	Montrose	0100000000-02080	1	2	70645	10300	0.2	15.7	5.72	100
152	Montrose	0100000000-02080	1	3	68841	10500	0.21	17.4	5	100
153	Navajo	0165720000-04941	3	1	277000	12771	0.53	11.53	7.8	200
154	Navajo	0165720000-04941	3	2	277300	12700	0.57	12.13	7.74	200
155	Navajo	0165720000-04941	3	3	278500	12850	0.56	12.35	7.11	ND(100)
156	Nelson Dewey	0208560000-04054	1	1	39446	13006	1.48	22.4	5.04	141
157	Nelson Dewey	0208560000-04054	1	2	37930	13052	1.37	21.52	4.83	151
158	Nelson Dewey	0208560000-04054	1	3	37886	12984	1.35	23.56	4.93	95
159	Newton	0032530000-06017	2	1	206681	11025	0.44	24.31	9.15	178
160	Newton	0032530000-06017	2	2	204152.16	11105	0.4	27.64	7.36	ND(50)
161	Newton	0032530000-06017	2	3	202528.83	11019	0.38	28.56	7.73	ND(50)
162	Northern States Power - Sherburne County Generating Plant	0137810000-06090	#3	1	331255	11770	0.81	26.67	11.31	85
163	Northern States Power - Sherburne County Generating Plant	0137810000-06090	#3	2	336080	11670	0.68	25.5	10.99	93
164	Northern States Power - Sherburne County Generating Plant	0137810000-06090	#3	3	341562	11541	0.78	25.46	12.23	128
165	Platte	0406060000-00059	1	1	35418	12230	0.45	31.68	7.63	177
166	Platte	0406060000-00059	1	2	37782	12211	0.43	29.14	6.94	174
167	Platte	0406060000-00059	1	3	33011	12284	0.42	31.22	7.11	191
168	Polk Power	0184540000-07242	1	1	91456	11965	3.11	9.99	13.1	1100
169	Polk Power	0184540000-07242	1	2	88709	12934	3.12	10.7	10.1	1000
170	Polk Power	0184540000-07242	1	3	71375	12958	3.36	11.1	9.67	1100
171	Port Washington	0208470000-04040	4	1	29740	14025	1.49	2.43	7.4	1148
172	Port Washington	0208470000-04040	4	2	30173	13947	1.55	2.46	7.42	1241
173	Port Washington	0208470000-04040	4	3	29648	13982	1.5	2.15	7.44	1257
174	Presque Isle	0208470000-01769	5	1	31232	12771.62	1.01	5.29	9.80	180.55
175	Presque Isle	0208470000-01769	5	2	30874	12798.90	1.02	5.07	9.94	220.16
176	Presque Isle	0208470000-01769	5	3	31922	12765.62	1.04	5.41	10.38	170.21

	A	B	C	D	E	F	G	H	I	J
1	Plant Name	EIA Plant Code & ORIS Code	Unit No.	RunNumber	CoalFlowRate (kg/hr), dry	HHV Btu/lb	pctSulphur %	pctMoisture %	pctAsh %	Chlorine mg/kg or ppm
177	Presque Isle	0208470000-01769	6	1	36121	12765.62	0.41	21.39	7.02	209.90
178	Presque Isle	0208470000-01769	6	2	36399	12026.46	0.42	20.55	6.99	250.47
179	Presque Isle	0208470000-01769	6	3	36525	12066.71	0.42	20.51	7.08	210.09
180	Presque Isle	0208470000-01769	9	1	27400	12051.83	1.02	5.17	10.28	200.36
181	Presque Isle	0208470000-01769	9	2	27636	12694.30	1.04	5.1	10.05	209.69
182	Presque Isle	0208470000-01769	9	3	27550	12772.39	1.04	5.1	9.99	180.19
183	R. D. Morrow Sr. Generating plant	0175680000-06061	2	1	71013	13145	1.11	1.41	10.1	900
184	R. D. Morrow Sr. Generating plant	0175680000-06061	2	2	73853	12982	1.11	1.71	11	900
185	R. D. Morrow Sr. Generating plant	0175680000-06061	2	3	68743	12876	1.05	1.83	11.6	700
186	R.M. Heskett Station	0128190000-02790	B2	1	36399	10828	1.63	34.77	11.85	ND(200)
187	R.M. Heskett Station	0128190000-02790	B2	2	35751	10887	1.14	34.96	10.24	ND(200)
188	R.M. Heskett Station	0128190000-02790	B2	3	36658	10666	1.19	34.49	12.03	ND(200)
189	Rawhide	0151430000-06761	101	1	111122	11867	0.31	20.51	7.26	133
190	Rawhide	0151430000-06761	101	2	103104	12003	0.3	25.55	7.31	118
191	Rawhide	0151430000-06761	101	3	105518	11932	0.3	23.44	7.48	129
192	Salem Harbor	0134330000-01626	3	1	49538	13889	0.7	9.59	5.42	100
193	Salem Harbor	0134330000-01626	3	2	48150	13850	0.69	9.64	5.72	100
194	Salem Harbor	0134330000-01626	3	3	48689	13707	0.74	8.63	6.53	100
195	Sam Seymour	0112690000-06179	3	1	136862	11773.31	0.54	23.42	7.25	22
196	Sam Seymour	0112690000-06179	3	2	136755	11897.54	0.47	23.48	6.91	19
197	Sam Seymour	0112690000-06179	3	3	138096	11964.54	0.47	22.73	7.86	19
198	San Juan	0154730000-02451	2	1	157925	9976	0.67	5.71	29.97	200
199	San Juan	0154730000-02451	2	2	142879	10946	0.73	5.35	23.78	100
200	San Juan	0154730000-02451	2	3	148399	10354	0.82	5.17	27.55	200
201	Scrubgrass Generating Company L. P.	50974	GEN1	1	59438	8509	1.49	10.47	39.74	600
202	Scrubgrass Generating Company L. P.	50974	GEN1	2	59438	8520	1.52	11.21	37	600
203	Scrubgrass Generating Company L. P.	50974	GEN1	3	61826	7996	1.4	9.06	43.05	600
204	SEI - Birchwood Power Facility	54304	1	1	76807	12650	0.77	5.77	13.3	846
205	SEI - Birchwood Power Facility	54304	1	2	75641	12570	0.79	6.05	13.8	954
206	SEI - Birchwood Power Facility	54304	1	3	76065	12440	0.83	5.47	14.7	952
207	Shawnee Fossil Plant	0186420000-01379	3	1	46649	12882	0.48	12.2	8.78	200
208	Shawnee Fossil Plant	0186420000-01379	3	2	48001	12714	0.5	13.4	9.69	200
209	Shawnee Fossil Plant	0186420000-01379	3	3	47095	12777	0.49	12.5	9.68	100
210	St Clair Power Plant	0051090000-01743	4	1	65723	12430	0.94	22.6	7.4	400
211	St Clair Power Plant	0051090000-01743	4	2	65129	12670	0.96	23.3	6.36	300
212	St Clair Power Plant	0051090000-01743	4	3	64469	12580	0.96	22.9	6.24	300
213	Stanton Station	0195140000-02824	1	1	91172	10674	1.21	36.3	9.79	ND(70)
214	Stanton Station	0195140000-02824	1	2	91172	10749	1.68	37.5	10.95	ND(70)
215	Stanton Station	0195140000-02824	1	3	91625	10703	1.01	37.3	10.03	81
216	Stanton Station	0195140000-02824	10	1	22582	10621	1.33	36.9	10.49	ND(60)
217	Stanton Station	0195140000-02824	10	2	22877	10448	1.26	36.4	11.49	ND(60)
218	Stanton Station	0195140000-02824	10	3	22762	10529	1.31	36.8	12.37	ND(50)
219	Stockton Cogen Company	10640	GEN1	1	17000	12334	0.64	6.12	13.07	668
220	Stockton Cogen Company	10640	GEN1	2	13746	12935	0.59	3.87	9.71	612
221	Stockton Cogen Company	10640	GEN1	3	14990	12254	0.56	1.16	12.78	470
222	TNP-One	0400510000-07030	U2	1	75449	9520	1.27	29.4	26.1	300
223	TNP-One	0400510000-07030	U2	2	72195	9810	1.26	28.5	23.1	ND(100)
224	TNP-One	0400510000-07030	U2	3	78013	9000	1.43	30.2	30.7	ND(100)
225	Valley	0208470000-04042	2	1	27746	13318	0.85	8.7	7.88	124
226	Valley	0208470000-04042	2	2	27687	13269	0.85	8.35	7.82	134
227	Valley	0208470000-04042	2	3	27022	13456	0.92	8.91	7.14	125
228	Valmont	0154660000-00477	5	1	59355	12299	0.29	16.1	8	ND(50)
229	Valmont	0154660000-00477	5	2	58814	12243	0.3	16.3	8.25	66
230	Valmont	0154660000-00477	5	3	55471	11607	0.49	12.1	8.76	ND(50)
231	W. H. Sammis	0139980000-02866	1	1	50494	12202	0.91	5.34	17.3	1300
232	W. H. Sammis	0139980000-02866	1	2	48308	13594	1.51	4.74	9.3	1200
233	W. H. Sammis	0139980000-02866	1	3	48049	13531	1.43	4.74	9.84	1200
234	Wabash River Generating Station	0154700000-01010	1 + 1A	1	90663	12350	2.72	14.8	13	600

	A	K	L	M	N	O
1	Plant Name	Hg	CoalAnalysisMethod	FuelType	Inlet Flow Rate	temp_GasIn
2		mg/kg or ppm			dscm/hr	Deg C
3	AES Cayuga (NY) (formerly NYSEG Milliken)	0.11	EPA 7471	Bituminous	549382.00	134.78
4	AES Cayuga (NY) (formerly NYSEG Milliken)	0.11	EPA 7471	Bituminous	563471.90	137
5	AES Cayuga (NY) (formerly NYSEG Milliken)	0.10	EPA 7471	Bituminous	560811.25	140.33
6	AES Hawaii, Inc.	0.03	D3684-94 - FICVAA	Subbituminous	415320	137.2
7	AES Hawaii, Inc.	0.03	D3684-94 - FICVAA	Subbituminous	427620	135.2
8	AES Hawaii, Inc.	0.02	D3684-94 - FICVAA	Subbituminous	423900	137.2
9	Antelope Valley Station	0.06	EPA 7471	Lignite	2166565	154
10	Antelope Valley Station	0.071	EPA 7471	Lignite	2143628	151
11	Antelope Valley Station	0.055	EPA 7471	Lignite	2100474	154
12	Bailly	0.07	ASTM 3684	Bituminous/Petroleum Coke	2404954	176.3
13	Bailly	0.08	ASTM 3684	Bituminous/Petroleum Coke	2433488	167.3
14	Bailly	0.06	ASTM 3684	Bituminous/Petroleum Coke	2396825	175.1
15	Bay Front Plant Generating	0.06	ASTM 3684	Bituminous	232291	136
16	Bay Front Plant Generating	0.06	ASTM 3684	Bituminous	195145	132
17	Bay Front Plant Generating	0.06	ASTM 3684	Bituminous	191081	134
18	Big Bend	0.177	EPA 7471	Bituminous	1440752	155
19	Big Bend	0.113	EPA 7471	Bituminous	1440242	155
20	Big Bend	0.125	EPA 7471	Bituminous	1421383	156
21	Big Brown	0.287	ASTM 6414	Lignite	2049164	183
22	Big Brown	0.29	ASTM 6414	Lignite	2067102	186
23	Big Brown	0.287	ASTM 6414	Lignite	2108492	185
24	Brayton Point	0.08	ASTM 3684	Bituminous	1219061	155
25	Brayton Point	0.05	ASTM 3684	Bituminous	1228778	153
26	Brayton Point	0.06	ASTM 3684	Bituminous	1237069	153
27	Brayton Point	0.1	ASTM 3684	Bituminous	2836137	123
28	Brayton Point	0.07	ASTM 3684	Bituminous	2907989	123
29	Brayton Point	0.07	ASTM 3684	Bituminous	3025158	119
30	Bruce Mansfield	0.096	ASTM 6414	Bituminous	3160872	137
31	Bruce Mansfield	0.079	ASTM 6414	Bituminous	3183792	144
32	Bruce Mansfield	0.103	ASTM 6414	Bituminous	2883648	141
33	Charles R. Lowman	0.084	ASTM 6414	Bituminous	338513	146
34	Charles R. Lowman	0.077	ASTM 6414	Bituminous	344092	146
35	Charles R. Lowman	0.08	ASTM 6414	Bituminous	329689	147
36	Cholla	0.045	EPA 7471	Subbituminous	943921	136
37	Cholla	0.04	EPA 7471	Subbituminous	814490	137
38	Cholla	0.035	EPA 7471	Subbituminous	915890	137
39	Cholla	0.04	ASTM 3684	Subbituminous	938720	362
40	Cholla	0.04	ASTM 3684	Subbituminous	962341	358
41	Cholla	0.03	ASTM 3684	Subbituminous	934887	357
42	Clay Boswell	0.078	ASTM 6414	Subbituminous	240607	179
43	Clay Boswell	0.043	ASTM 6414	Subbituminous	268405	173
44	Clay Boswell	0.049	ASTM 6414	Subbituminous	251138	175
45	Clay Boswell	0.054	ASTM 6414	Subbituminous	1564633	139
46	Clay Boswell	0.072	ASTM 6414	Subbituminous	1560844	148
47	Clay Boswell	0.063	ASTM 6414	Subbituminous	1528607	144
48	Clay Boswell	0.065	ASTM 6414	Subbituminous	2133642	154
49	Clay Boswell	0.063	ASTM 6414	Subbituminous	2104866	141
50	Clay Boswell	0.07	ASTM 6414	Subbituminous	2015790	136
51	Cliffside	0.07	ASTM 3684	Bituminous	220456	343.9
52	Cliffside	0.05	ASTM 3684	Bituminous	221841	342.6
53	Cliffside	0.06	ASTM 3684	Bituminous	214583	340.8
54	Clifty Creek	0.08	ASTM 3684	Subbituminous/Bituminous	746218	382
55	Clifty Creek	0.08	ASTM 3684	Subbituminous/Bituminous	760863	385
56	Clifty Creek	0.08	ASTM 3684	Subbituminous/Bituminous	760318	382
57	Clover Power Station	0.12	EPA 7471	Bituminous	694552	139
58	Clover Power Station	0.17	EPA 7471	Bituminous	705133	139
59	Clover Power Station	0.20	EPA 7471	Bituminous	696696	139
60	Colstrip	0.063	ASTM 6414	Subbituminous	3362880	140

	A	K	L	M	N	O
1	Plant Name	Hg	CoalAnalysisMethod	FuelType	Inlet Flow Rate	temp_GasIn
2		mg/kg or ppm			dscm/hr	Deg C
61	Colstrip	0.066	ASTM 6414	Subbituminous	3391696	142
62	Colstrip	0.067	ASTM 6414	Subbituminous	3441304	136
63	Columbia	0.1	ASTM 3684	Subbituminous	2188995	406
64	Columbia	0.1	ASTM 3684	Subbituminous	2159390	403
65	Columbia	0.1	ASTM 3684	Subbituminous	2158955	409
66	Comanche	0.09	EPA 1631	Subbituminous	1246033	142.78
67	Comanche	0.10	EPA 1631	Subbituminous	1252037	150
68	Comanche	0.09	EPA 1631	Subbituminous	1270674	141.67
69	Coronado	0.035	EPA 7371/1631	Subbituminous	1405808	136
70	Coronado	0.039	EPA 7371/1631	Subbituminous	1398779	135
71	Coronado	0.031	EPA 7371/1631	Subbituminous	1392035	143
72	Coyote	0.088	EPA 3050/7471	Lignite	2126971	163
73	Coyote	0.15	EPA 3050/7471	Lignite	2111511	176
74	Coyote	0.094	EPA 3050/7471	Lignite	2083307	177
75	Craig	0.022	EPA 1631/7371	Subbituminous	1842363	121
76	Craig	0.025	EPA 1631/7371	Subbituminous	1875084	124
77	Craig	0.021	EPA 1631/7371	Subbituminous	1919707	118
78	Craig	0.011	EPA 1631/7371	Subbituminous	1650793	138
79	Craig	0.01	EPA 1631/7371	Subbituminous	1651990	146
80	Craig	0.009	EPA 1631/7371	Subbituminous	1654007	133
81	Dunkirk	0.13	ASTM 3684	Bituminous	478725	303.4
82	Dunkirk	0.13	ASTM 3684	Bituminous	460709	304.5
83	Dunkirk	0.13	ASTM 3684	Bituminous	466192	306.4
84	Dwayne Collier Battle Cogeneration Facility	ND(0.06)	EPA 7471	Bituminous	124965	167
85	Dwayne Collier Battle Cogeneration Facility	ND(0.06)	EPA 7471	Bituminous	120578	167
86	Dwayne Collier Battle Cogeneration Facility	ND(0.06)	EPA 7471	Bituminous	122308	169
87	Gaston	0.054	EPA 7471	Bituminous	914665	336
88	Gaston	0.067	EPA 7471	Bituminous	893577	334
89	Gaston	0.057	EPA 7471	Bituminous	931343	339
90	George Neal south	0.09	ASTM 3684	Subbituminous	2633333	149
91	George Neal south	0.08	ASTM 3684	Subbituminous	2709436	153
92	George Neal south	0.1	ASTM 3684	Subbituminous	2688240	154
93	Gibson Generating Station (10/99 testing)	0.134	ASTM 6414	Bituminous	2343261	158
94	Gibson Generating Station (10/99 testing)	0.142	ASTM 6414	Bituminous	2353191	162
95	Gibson Generating Station (10/99 testing)	0.141	ASTM 6414	Bituminous	2371609	163
96	Gibson Generating Station (03/00 testing)	0.117	ASTM 6414	Bituminous	2544538	156
97	Gibson Generating Station (03/00 testing)	0.115	ASTM 6414	Bituminous	2525292	157
98	Gibson Generating Station (03/00 testing)	0.123	ASTM 6414	Bituminous	2551178	155
99	GRDA	0.1	ASTM 3684	Subbituminous/Bituminous	1795109	154.8
100	GRDA	0.1	ASTM 3684	Subbituminous/Bituminous	1814982	156.6
101	GRDA	0.1	ASTM 3684	Subbituminous/Bituminous	1808161	155.8
102	Intermountain	0.02	ASTM 3684	Bituminous	3312000	152
103	Intermountain	0.02	ASTM 3684	Bituminous	3336000	152
104	Intermountain	0.03	ASTM 3684	Bituminous	3372000	149
105	Jack Watson	0.05	EPA 7471	Bituminous	1072801	155
106	Jack Watson	0.052	EPA 7471	Bituminous	934375	148
107	Jack Watson	0.059	EPA 7471	Bituminous	978658	146
108	Jim Bridger	0.08	Other	Subbituminous	2833202	147
109	Jim Bridger	0.08	Other	Subbituminous	2701314	146
110	Jim Bridger	0.06	Other	Subbituminous	2729912	145
111	Kline Township Cogen Facility	0.3	EPA 7471	Waste Anthracite	322630	188
112	Kline Township Cogen Facility	0.4	EPA 7471	Waste Anthracite	311820	186
113	Kline Township Cogen Facility	0.3	EPA 7471	Waste Anthracite	327118	189
114	La Cygne	0.11	ASTM 6414	Subbituminous	NA	144
115	La Cygne	0.102	ASTM 6414	Subbituminous	NA	144
116	La Cygne	0.098	ASTM 6414	Subbituminous	NA	144
117	Laramie River Station	0.103	EPA 3051/3052/7471	Subbituminous	2330443	141.1
118	Laramie River Station	0.111	EPA 3051/3052/7471	Subbituminous	2278573	138.3

	A	K	L	M	N	O
1	Plant Name	Hg	CoalAnalysisMethod	FuelType	Inlet Flow Rate	temp_GasIn
2		mg/kg or ppm			dscm/hr	Deg C
119	Laramie River Station	0.144	EPA 3051/3052/7471	Subbituminous	2298553	136.1
120	Laramie River Station	0.118	EPA 3051/3052/7471	Subbituminous	2648783	137.7
121	Laramie River Station	0.142	EPA 3051/3052/7471	Subbituminous	2776514	140.6
122	Laramie River Station	0.114	EPA 3051/3052/7471	Subbituminous	2645760	136.1
123	Lawrence	0.052	ASTM 6414	Subbituminous	376788	172
124	Lawrence	0.044	ASTM 6414	Subbituminous	382234	157
125	Lawrence	0.047	ASTM 6414	Subbituminous	381990	169
126	Leland Olds Station	ND(0.05)	EPA 7471	Lignite	1830157	199
127	Leland Olds Station	0.056	EPA 7471	Lignite	1895399	201
128	Leland Olds Station	ND(0.05)	EPA 7471	Lignite	1826759	205
129	Lewis & Clark	0.107	7471A	Lignite	207448	195
130	Lewis & Clark	0.121	7471A	Lignite	214924	198
131	Lewis & Clark	0.13	7471A	Lignite	214924	203
132	Limestone	0.121	ASTM 3684	Lignite	4920304	156
133	Limestone	0.171	ASTM 3684	Lignite	4845548	162
134	Limestone	0.125	ASTM 3684	Lignite	4818364	167
135	Logan Generating Plant	0.19	ASTM 3684	Bituminous	769254	145
136	Logan Generating Plant	0.18	ASTM 3684	Bituminous	759560	149
137	Logan Generating Plant	0.17	ASTM 3684	Bituminous	763218	148
138	Mecklenburg Cogeneration Facility	0.09	ASTM 3684	Bituminous	225117	149.4
139	Mecklenburg Cogeneration Facility	0.11	ASTM 3684	Bituminous	243126	147.2
140	Mecklenburg Cogeneration Facility	0.09	ASTM 3684	Bituminous	227410	147.2
141	Meramec	0.085	ASTM 3684	Subbituminous/Bituminous	1610937	169
142	Meramec	0.12	ASTM 3684	Subbituminous/Bituminous	1405042	172
143	Meramec	0.068	ASTM 3684	Subbituminous/Bituminous	1278496	168
144	Monticello	0.318	ASTM 6414	Lignite	1925000	178
145	Monticello	0.325	ASTM 6414	Lignite	2214400	183
146	Monticello	0.472	ASTM 6414	Lignite	2330200	182
147	Monticello	0.388	ASTM 6414	Lignite	4179262	179
148	Monticello	0.375	ASTM 6414	Lignite	4120503	175
149	Monticello	0.482	ASTM 6414	Lignite	4322378	175
150	Montrose	0.089	ASTM 6414	Subbituminous	158080	155.5
151	Montrose	0.107	ASTM 6414	Subbituminous	159491	157.8
152	Montrose	0.103	ASTM 6414	Subbituminous	158977	161.7
153	Navajo	0.040	EPA 7371/1631	Bituminous	3055474	157
154	Navajo	0.024	EPA 7371/1631	Bituminous	3004856	152
155	Navajo	0.027	EPA 7371/1631	Bituminous	3077836	156.
156	Nelson Dewey	0.06	ASTM 3684	Subbituminous/Petroleum Coke	387802	254
157	Nelson Dewey	0.06	ASTM 3684	Subbituminous/Petroleum Coke	379100	257
158	Nelson Dewey	0.06	ASTM 3684	Subbituminous/Petroleum Coke	390626	260
159	Newton	0.074	EPA 7473	Subbituminous	1882980	169
160	Newton	0.068	EPA 7473	Subbituminous	1830477	150
161	Newton	0.070	EPA 7473	Subbituminous	1901994	164
162	Northern States Power - Sherburne County Generating Plant	0.08	ASTM 3684	Subbituminous	3344159	145
163	Northern States Power - Sherburne County Generating Plant	0.08	ASTM 3684	Subbituminous	3362593	147
164	Northern States Power - Sherburne County Generating Plant	0.07	ASTM 3684	Subbituminous	3315734	150
165	Platte	0.11	ASTM 3684	Subbituminous	382795	411.8
166	Platte	0.09	ASTM 3684	Subbituminous	377498	413.2
167	Platte	0.07	ASTM 3684	Subbituminous	379912	415.9
168	Polk Power	ND(0.1)	EPA 7471	Bituminous		
169	Polk Power	ND(0.1)	EPA 7471	Bituminous		
170	Polk Power	ND(0.1)	EPA 7471	Bituminous		
171	Port Washington	0.09	ASTM 3684 EPA 7473 and 7471A	Bituminous	344842	403.8
172	Port Washington	0.09	ASTM 3684 EPA 7473 and 7471A	Bituminous	340791	406.7
173	Port Washington	0.09	ASTM 3684 EPA 7473 and 7471A	Bituminous	339646	406.4
174	Presque Isle	0.05	Proposed ASTM Method	Bituminous/Petroleum Coke	407436.43	170
175	Presque Isle	0.04	Proposed ASTM Method	Bituminous/Petroleum Coke	421072.69	172.22
176	Presque Isle	0.04	Proposed ASTM Method	Bituminous/Petroleum Coke	416619.58	174.44

	A	K	L	M	N	O
1	Plant Name	Hg	CoalAnalysisMethod	FuelType	Inlet Flow Rate	temp_GasIn
2		mg/kg or ppm			dscm/hr	Deg C
177	Presque Isle	0.07	Proposed ASTM Method	Bituminous/Petroleum Coke	304913.01	375.56
178	Presque Isle	0.07	Proposed ASTM Method	Bituminous/Petroleum Coke	318501.70	381.67
179	Presque Isle	0.07	Proposed ASTM Method	Bituminous/Petroleum Coke	311204.45	387.78
180	Presque Isle	0.03	Proposed ASTM Method	Subbituminous	371896.52	153.89
181	Presque Isle	0.05	Proposed ASTM Method	Subbituminous	363848.30	152.78
182	Presque Isle	0.04	Proposed ASTM Method	Subbituminous	370661.34	153.33
183	R. D. Morrow Sr. Generating plant	ND(0.1)	EPA 7471	Bituminous	850873	166
184	R. D. Morrow Sr. Generating plant	ND(0.1)	EPA 7471	Bituminous	869922	166
185	R. D. Morrow Sr. Generating plant	ND(0.1)	EPA 7471	Bituminous	808602	167
186	R.M. Heskett Station	0.098	EPA 7471A	Lignite	381222	164
187	R.M. Heskett Station	0.088	EPA 7471A	Lignite	360188	157
188	R.M. Heskett Station	0.073	EPA 7471A	Lignite	338645	166
189	Rawhide	0.07	ASTM 3684	Subbituminous	1088760	171.2
190	Rawhide	0.07	ASTM 3684	Subbituminous	1055239	170.5
191	Rawhide	0.08	ASTM 3684	Subbituminous	1068097	171.1
192	Salem Harbor	0.03	ASTM 3684	Bituminous	705491	124
193	Salem Harbor	0.02	ASTM 3684	Bituminous	672460	126
194	Salem Harbor	0.03	ASTM 3684	Bituminous	677049	127
195	Sam Seymour	0.139	EPA 7471A	Subbituminous	742598	152
196	Sam Seymour	0.115	EPA 7471A	Subbituminous	771746	150
197	Sam Seymour	0.114	EPA 7471A	Subbituminous	664148	147
198	San Juan	0.045	EPA 7371/1631	Subbituminous	1046292	145.5
199	San Juan	0.051	EPA 7371/1631	Subbituminous	962604	136.6
200	San Juan	0.065	EPA 7371/1631	Subbituminous	964490	146.6
201	Scrubgrass Generating Company L. P.	0.55	ASTM 3684	Waste Bituminous	217768	159
202	Scrubgrass Generating Company L. P.	0.52	ASTM 3684	Waste Bituminous	222024	161
203	Scrubgrass Generating Company L. P.	0.51	ASTM 3684	Waste Bituminous	213797	163
204	SEI - Birchwood Power Facility	0.11	EPA 7471	Bituminous	776654	134
205	SEI - Birchwood Power Facility	0.11	EPA 7471	Bituminous	763255	132
206	SEI - Birchwood Power Facility	0.11	EPA 7471	Bituminous	747652	136
207	Shawnee Fossil Plant	0.022	ASTM 6414	Bituminous/Subbituminous	603793	159
208	Shawnee Fossil Plant	0.039	ASTM 6414	Bituminous/Subbituminous	613149	157
209	Shawnee Fossil Plant	0.024	ASTM 6414	Bituminous/Subbituminous	616736	157
210	St Clair Power Plant	0.06	ASTM 6414	Subbituminous/Bituminous	707478	138
211	St Clair Power Plant	0.055	ASTM 6414	Subbituminous/Bituminous	717298	140
212	St Clair Power Plant	0.069	ASTM 6414	Subbituminous/Bituminous	778622	141
213	Stanton Station	0.086	EPA 3051/7471	Lignite	317712	173.3
214	Stanton Station	0.105	EPA 3051/7471	Lignite	292227	157.2
215	Stanton Station	0.056	EPA 3051/7471	Lignite	319411	164.4
216	Stanton Station	0.0865	EPA 3051/7471	Lignite	280334	169.1
217	Stanton Station	0.101	EPA 3051/7471	Lignite	275237	172.2
218	Stanton Station	0.063	EPA 3051/7471	Lignite	275237	186.7
219	Stockton Cogen Company	0.026	ASTM 3684	Bituminous/Petroleum Coke	274312	150
220	Stockton Cogen Company	0.026	ASTM 3684	Bituminous/Petroleum Coke	268688	148
221	Stockton Cogen Company	0.029	ASTM 3684	Bituminous/Petroleum Coke	275359	147
222	TNP-One	0.222	ASTM 6414	Lignite	555305	184
223	TNP-One	0.18	ASTM 6414	Lignite	584340	181
224	TNP-One	0.362	ASTM 6414	Lignite	573407	177
225	Valley	0.0092	ASTM 3684 EPA 7473 and 7471	Bituminous/Petroleum Coke	334586	157.0
226	Valley	0.013	ASTM 3684 EPA 7473 and 7471	Bituminous/Petroleum Coke	339094	156.6
227	Valley	0.015	ASTM 3684 EPA 7473 and 7471	Bituminous/Petroleum Coke	331724	156.4
228	Valmont	0.01	MODIFIED EPA 3051/7471A	Bituminous	858556	142
229	Valmont	0.0055	MODIFIED EPA 3051/7471A	Bituminous	844486	143
230	Valmont	0.0083	MODIFIED EPA 3051/7471A	Bituminous	849780	156
231	W. H. Sammis	0.081	ASTM 6414	Bituminous	739403	161
232	W. H. Sammis	0.12	ASTM 6414	Bituminous	729449	157
233	W. H. Sammis	0.117	ASTM 6414	Bituminous	706103	156
234	Wabash River Generating Station	0.064	ASTM 6414	Bituminous		

	A	K	L	M	N	O
1	Plant Name	Hg	CoalAnalysisMethod	FuelType	Inlet Flow Rate	temp_GasIn
2		mg/kg or ppm			dscm/hr	Deg C
235	Wabash River Generating Station	0.068	ASTM 6414	Bituminous		
236	Wabash River Generating Station	0.07	ASTM 6414	Bituminous		
237	Widows Creek Fossil Plant	0.029	ASTM 6414	Bituminous	438532	160
238	Widows Creek Fossil Plant	0.024	ASTM 6414	Bituminous	436101	162
239	Widows Creek Fossil Plant	0.021	ASTM 6414	Bituminous	445789	159
240	Wyodak	0.03	ASTM 3684	Subbituminous	1928365	162
241	Wyodak	0.04	ASTM 3684	Subbituminous	1789047	158
242	Wyodak	0.05	ASTM 3684	Subbituminous	1712592	160
243						
244	XB = Excessive reagent blank caused the data to be unreliable					
245						
246	NA = Data was not included in report					
247						
248	LS = Test sample was broken, damaged, or lost during testing or in transport					

	A	P	Q	R	S	T	U
1	Plant Name	pct_StackGasMoistureIn	pct_StackGasO2In	Hg_ParticleBoundIn	Hg_OxidizedIn	Hg_ElementalIn	Outlet Flow Rate
2		%	%	ug/dscm	ug/dscm	ug/dscm	dscm/hr
3	AES Cayuga (NY) (formerly NYSEG Milliken)	8	4.9	NA	5.25	1.91	609379.18
4	AES Cayuga (NY) (formerly NYSEG Milliken)	8.1	5.28	0.72	5.59	2.10	609569.47
5	AES Cayuga (NY) (formerly NYSEG Milliken)	8.1	5.16	1.62	4.88	2.42	616217.70
6	AES Hawaii, Inc.	8.7	8.0	0.19	ND(0.056)	0.79	399840
7	AES Hawaii, Inc.	8.1	8.0	0.25	0.12	0.94	411360
8	AES Hawaii, Inc.	9.4	XB	0.26	0.077	0.72	406560
9	Antelope Valley Station	15.4	5.4	ND(0.13)	0.33	6.76	1915792
10	Antelope Valley Station	15	5.4	ND(0.18)	0.36	6.94	1932952
11	Antelope Valley Station	14.8	5.4	0.14	0.14	6.81	1873657
12	Bailly	8.63	5.63	0.036	2.92	2.41	2083127
13	Bailly	8.22	5.7	0.05	1.95	2.65	2107800
14	Bailly	8.19	6.28	0.06	2.76	2.22	2086775
15	Bay Front Plant Generating	9.82	8.7	0.52	0.53	1.48	95812
16	Bay Front Plant Generating	7.18	8.3	0.76	0.47	1.37	110435
17	Bay Front Plant Generating	7.12	9.0	0.06	0.51	1.16	105389
18	Big Bend	9.1	4.1	XB	4.56	2.25	1904069
19	Big Bend	9	4.4	XB	4.54	2.13	1907467
20	Big Bend	9	3.5	XB	4.14	2.07	1892516
21	Big Brown	14.67	5.6	2.22	7.14	26.73	2351953
22	Big Brown	13.53	5.2	0.47	9.1	23.97	2345298
23	Big Brown	13.79	5.2	0.2	12.41	19.25	2332550
24	Brayton Point	7.55	6.68	1.6	2.66	0.401	1031980
25	Brayton Point	7.7	6.8	2.06	2.88	0.318	1028595
26	Brayton Point	8.05	7.0	1.65	2.71	0.305	1056892
27	Brayton Point	8.9	8.1	2.11	2.75	0.39	2547085
28	Brayton Point	9.3	7.25	1.46	2.41	0.379	2520381
29	Brayton Point	7.45	6.85	1.05	2.55	2.39	2493881
30	Bruce Mansfield	7.3	7.1	0.33	6.68	1.22	3050116
31	Bruce Mansfield	6.69	7	0.57	7.65	1.62	3041448
32	Bruce Mansfield	6.66	6.3	0.34	6.81	1.39	2986566
33	Charles R. Lowman	7.02	6.2	XB	2.74	1.72	961444
34	Charles R. Lowman	6.45	6.7	1.23	3.16	1.72	955671
35	Charles R. Lowman	7.48	6.8	2.72	2.8	1.59	963479
36	Cholla	8.8	4.7	XB	0.61	4.24	986504
37	Cholla	9.2	3.8	0.95	NA	2.5	978703
38	Cholla	8.7	3.8	XB	1.21	2.86	990517
39	Cholla	9.7	3.8	XB	ND(0.08)	1.84	1101701
40	Cholla	9.5	3.9	XB	0.3	0.44	1085343
41	Cholla	9.3	3.7	XB	0.41	0.59	1077618
42	Clay Boswell	10.5	6.0	2.29	1.51	1.33	252527
43	Clay Boswell	10.4	6.7	1.58	1	1.16	243054
44	Clay Boswell	11.4	6.4	0.67	0.93	2.02	238502
45	Clay Boswell	10.8	5.4	0.01	0.22	5.25	1627639
46	Clay Boswell	12.5	5.4	ND(0.02)	0.27	5.2	1668489
47	Clay Boswell	11.4	5.5	0.05	0.53	4.49	1657786
48	Clay Boswell	10.4	5.6	0.09	0.28	4.32	2191238
49	Clay Boswell	11.5	5.2	2.62	0.94	1.29	2182773
50	Clay Boswell	10.7	5.2	2.41	0.48	1.02	2151376
51	Cliffside	8.71	4.3	0.16	3.45	3.07	220456
52	Cliffside	8.61	4.3	0.08	3.28	4.31	221841
53	Cliffside	9.01	4.4	0.07	3.83	6.7	214583
54	Clifty Creek	12.01	3.9	0.38	2.23	10.61	989499
55	Clifty Creek	11.62	3.8	0.02	3.42	10.64	880430
56	Clifty Creek	11.42	3.7	ND(0.01)	3.28	11.01	947181
57	Clover Power Station	6	4.5	0.05	0.86	0.96	1636723
58	Clover Power Station	6.15	4.7	0.03	0.94	1.09	1651090
59	Clover Power Station	6.15	4.75	0.07	1.02	0.54	1659892
60	Colstrip	9.58	4.6	1.62	2.09	0.98	3143106

	A	P	Q	R	S	T	U
1	Plant Name	pct_StackGasMoistureIn	pct_StackGasO2In	Hg_ParticleBoundIn	Hg_OxidizedIn	Hg_ElementalIn	Outlet Flow Rate
2		%	%	ug/dscm	ug/dscm	ug/dscm	dscm/hr
61	Colstrip	9.54	4.6	1.77	2.16	5.8	3124774
62	Colstrip	10.71	4.8	1.47	2.57	4.85	3157213
63	Columbia	13.48	3.8	0.02	0.89	13.64	2188995
64	Columbia	13.91	4	0.03	5.5	12.66	2159390
65	Columbia	11.85	4.2	0.04	0.43	13.67	2158955
66	Comanche	10	5.4	1.70	2.95	4.61	1262340
67	Comanche	9.4	6.5	2.15	0.87	4.27	1253400
68	Comanche	10.6	5.2	4.69	0.69	3.01	1290710
69	Coronado	10.05	4.94	ND(0.05)	0.88	1.95	1385518
70	Coronado	9.58	4.27	ND(0.05)	0.76	1.73	1380391
71	Coronado	10.27	3.97	ND(0.05)	1.03	1.77	1363637
72	Coyote	13.8	8.2	0.49	1.15	9.73	2126971
73	Coyote	13.7	8.3	0.83	2.1	9.81	2111511
74	Coyote	14	8.2	1.2	2.18	10.6	2083307
75	Craig	8.43	7.32	ND(0.06)	0.25	2.74	1741594
76	Craig	8.33	7.24	ND(0.06)	0.22	1.93	1711326
77	Craig	7.98	7.69	ND(0.06)	0.12	1.47	1767065
78	Craig	9.74	6.57	0.46	0.52	0.24	1897089
79	Craig	9.13	6.36	0.75	0.41	0.23	1902028
80	Craig	8.66	6.36	0.73	0.19	0.18	1868838
81	Dunkirk	8.0	5.1	0.16	7.56	2.49	481326
82	Dunkirk	8.83	4.9	.25	7.97	1.28	464347
83	Dunkirk	8.47	4.4	.32	8.43	2.91	469910
84	Dwayne Collier Battle Cogeneration Facility	7.4	4.3	2.03	ND(0.05)	ND(0.17)	135128
85	Dwayne Collier Battle Cogeneration Facility	8	4.3	1.93	0.17	0.39	132796
86	Dwayne Collier Battle Cogeneration Facility	7.8	4.3	1.85	ND(0.06)	ND(0.20)	132687
87	Gaston	7.9	4.2	3.99	0.8	2.46	938079
88	Gaston	8.7	4.2	2.4	0.66	3.32	973011
89	Gaston	7.5	4.1	0.4	3.7	2.66	980478
90	George Neal south	12.94	5.5	0.147	4.11	5.4	2630138
91	George Neal south	13.04	6.2	0.058	3.57	6.78	2671453
92	George Neal south	12.7	6.8	ND(0.03)	2.79	2.97	2660146
93	Gibson Generating Station (10/99 testing)	7.92	5.6	4.77	8.84	2.15	2587937
94	Gibson Generating Station (10/99 testing)	4.63	5.4	23.92	3.28	1.31	2952993
95	Gibson Generating Station (10/99 testing)	8.20	5.2	4.09	9.67	1.62	3508960
96	Gibson Generating Station (03/00 testing)	7.21	6.0	1.62	26.45	3.66	3195060
97	Gibson Generating Station (03/00 testing)	7.92	6.2	1.03	31.29	2.4	3152365
98	Gibson Generating Station (03/00 testing)	7.48	6.2	1.44	36.54	1.36	3189981
99	GRDA	12.59	5.4	0.22	3.83	6.73	1974682
100	GRDA	11.67	5.6	0.45	2.54	5.56	2007962
101	GRDA	12.53	5.2	1.0	7.71	3.26	1970052
102	Intermountain	7.2	4.5	ND(0.018)	0.94	0.125	3312000
103	Intermountain	6.7	4.4	ND(0.016)	1.05	0.127	3336000
104	Intermountain	6.6	5.1	ND(0.017)	1.21	0.145	3372000
105	Jack Watson	9.1	6.7	2.86	0.97	0.73	1043609
106	Jack Watson	8.4	6.7	3.9	0.92	0.2	961264
107	Jack Watson	7.9	6.8	3.66	0.47	ND(0.15)	971814
108	Jim Bridger	9.6	5.8	0.04	2.1	4.4	2187085
109	Jim Bridger	9.0	6.0	0.37	1.7	4.55	2133973
110	Jim Bridger	9.1	5.8	0.06	1.5	3.66	2159407
111	Kline Township Cogen Facility	6.4	2.4	46.02	ND(0.12)	0.47	285771
112	Kline Township Cogen Facility	7.4	2.4	44.56	ND(0.06)	0.41	278346
113	Kline Township Cogen Facility	6.4	2.1	47.22	ND(0.06)	0.36	276877
114	La Cygne	10.74	5.4	5.81	3.46	1.13	2871424
115	La Cygne	10.78	5.3	5.69	2.91	ND(1.04)	2856858
116	La Cygne	10.93	5.6	5.12	ND(1.01)	ND(1.04)	2897940
117	Laramie River Station	12.8	10	0.154	1.921	4.593	2376027
118	Laramie River Station	11.9	10.1	0.023	1.3058	5.055	2295053

	A	P	Q	R	S	T	U
1	Plant Name	pct_StackGasMoistureIn	pct_StackGasO2In	Hg_ParticleBoundIn	Hg_OxidizedIn	Hg_ElementalIn	Outlet Flow Rate
2		%	%	ug/dscm	ug/dscm	ug/dscm	dscm/hr
119	Laramie River Station	11.6	10.1	ND(0.02)	1.866	4.562	2334062
120	Laramie River Station	10.4	9.9	ND(0.032)	0.1368	0.3886	2648783
121	Laramie River Station	10.6	9.9	1.0417	0.3235	5.263	2776514
122	Laramie River Station	10.6	10.1	2.7544	0.2642	5.6211	2647467
123	Lawrence	8.82	6.6	0.18	1.32	3.99	401504
124	Lawrence	9.43	6.4	0.43	ND(1.03)	3.58	413938
125	Lawrence	9.19	7	0.19	ND(1.13)	3.86	425946
126	Leland Olds Station	12.1	5.3	0.49	0.2	2.74	1818264
127	Leland Olds Station	14.4	5.6	0.22	0.39	7.53	1879428
128	Leland Olds Station	14.8	5.6	LS	LS	LS	1818434
129	Lewis & Clark	14.6	4.5	1.05	15.1	10.68	197084
130	Lewis & Clark	14.5	4.4	1.55	12.58	7.77	186890
131	Lewis & Clark	14.5	4.4	1.3	5.79	9.41	185531
132	Limestone	13.2	6.5	0.01	18.97	10.78	3452368
133	Limestone	13.6	6.5	0.01	19.78	10.56	3479552
134	Limestone	13.6	6.5	0.02	22.68	11.37	3330040
135	Logan Generating Plant	9.6	3.7	12.3	4.85	0.89	824752
136	Logan Generating Plant	9.4	3.5	12.39	3.58	0.32	835164
137	Logan Generating Plant	10	3.8	11.9	1.92	0.55	815007
138	Mecklenburg Cogeneration Facility	9.08	4.4	10.46	3.14	6.24	271499
139	Mecklenburg Cogeneration Facility	9.54	4.0	5.35	3.98	ND(0.171)	275747
140	Mecklenburg Cogeneration Facility	9.81	4.0	6.52	2.87	ND(0.175)	272009
141	Meramec	10.92	6.61	6.08	0.39	0.20	1670346
142	Meramec	10.29	6.82	7.36	1.07	0.35	1579124
143	Meramec	10.84	6.43	4.57	1.56	0.5	1448087
144	Monticello	14.78	3.6	15.44	21.79	8.53	3171600
145	Monticello	14.55	5.4	0.32	12.84	40.12	3613000
146	Monticello	14.50	7.4	6.02	17.18	33.39	3615900
147	Monticello	10.17	9.4	0.12	10.63	18.94	3664245
148	Monticello	11.90	9.4	0.07	12.74	18.14	3735714
149	Monticello	11.49	9.6	0.08	16.36	17.23	3764935
150	Montrose	11.05	5.2	1.69	1.62	5.23	665841
151	Montrose	11.29	4.6	0.82	2.3	4.45	692741
152	Montrose	11.37	4.2	1.51	2.66	4.33	673398
153	Navajo	8.89	6.23	ND(0.05)	2.39	2.91	3000253
154	Navajo	8.53	5.88	ND(0.05)	0.38	3.3	2992900
155	Navajo	8.76	6.00	ND(0.045)	0.52	2.92	3047161
156	Nelson Dewey	10.75	4.4	0.0224	0.45	2.95	365757
157	Nelson Dewey	10.34	4.3	0.0167	0.22	2.03	364242
158	Nelson Dewey	10.29	3.8	0.0191	0.11	1.97	371406
159	Newton	14.98	4.0	ND(0.08)	0.55	9.16	2113031
160	Newton	14.15	4.05	ND(0.07)	0.59	9.28	2050761
161	Newton	13.82	3.96	ND(0.16)	1.56	8.77	2036644
162	Northern States Power - Sherburne County Generating Plant	11.67	3.8	ND(0.01)	0.51	10.43	3451947
163	Northern States Power - Sherburne County Generating Plant	12.02	3.6	ND(0.01)	0.22	10.56	3222806
164	Northern States Power - Sherburne County Generating Plant	12.03	4.2	ND(0.01)	0.18	9.56	3359506
165	Platte	12.38	4.5	0.03	3.8	9	403992
166	Platte	13.61	4.2	0.03	1.79	10.56	392228
167	Platte	15.08	2.9	0.03	4.41	11.69	402733
168	Polk Power						1430191
169	Polk Power						1453617
170	Polk Power						1414052
171	Port Washington	7.38	4.3	ND(0.008)	4.02	10.79	344842
172	Port Washington	8.2	4.3	ND(0.02)	7.19	10.22	340791
173	Port Washington	7.41	4.5	ND(0.009)	5.87	9.12	339646.00
174	Presque Isle	9.5	5.5	3.92	0.41	0.12	308484.33
175	Presque Isle	9.4	5	3.20	0.59	0.05	321648.27
176	Presque Isle	9.4	4.9	4.53	0.40	0.21	337525.53

	A	P	Q	R	S	T	U
1	Plant Name	pct_StackGasMoistureIn	pct_StackGasO2In	Hg_ParticleBoundIn	Hg_OxidizedIn	Hg_ElementalIn	Outlet Flow Rate
2		%	%	ug/dscm	ug/dscm	ug/dscm	dscm/hr
177	Presque Isle	14.8	2.1	0.05	0.01	7.04	329268.33
178	Presque Isle	14.1	2	ND(0.02)	0.15	7.28	328624.41
179	Presque Isle	13.8	2.1	ND(0.03)	0.10	6.76	331716.61
180	Presque Isle	10.1	4.9	2.44	0.56	1.49	299943.40
181	Presque Isle	9.7	4.9	2.66	0.64	0.22	312538.17
182	Presque Isle	9.8	5.2	2.60	0.54	0.15	296973.53
183	R. D. Morrow Sr. Generating plant	7.9	7.3	0.044	8.22	3.36	869922
184	R. D. Morrow Sr. Generating plant	7.5	6.9	ND(0.013)	6.51	3.21	888834
185	R. D. Morrow Sr. Generating plant	7.2	6.8	ND(0.015)	5.51	2.62	823039
186	R.M. Heskett Station	14	8.6	3.26	3.71	2.27	356994
187	R.M. Heskett Station	14.7	8.6	2.02	0.66	1.8	340717
188	R.M. Heskett Station	15	8.2	5.28	0.31	1.98	333208
189	Rawhide	12.65	5.1	0.22	1.22	11.01	1088760
190	Rawhide	12.86	4.2	1.79	0.77	11.99	1055239
191	Rawhide	12.27	5.6	3.22	0.39	12.65	1068097
192	Salem Harbor	8.2	8.8	2.81	0.22	0.34	730321
193	Salem Harbor	8.3	8.5	2.83	0.034	0.14	701425
194	Salem Harbor	8.8	8.0	2.85	0.042	0.14	711038
195	Sam Seymour	9.9	4.5	0.02	2.02	6.12	707687
196	Sam Seymour	13.3	4.7	ND(0.01)	3.07	4.83	727462
197	Sam Seymour	7	4.75	ND(0.01)	3.9	8.66	656564
198	San Juan	8.96	5.61	ND(0.03)	5.34	4.97	1046292
199	San Juan	8.37	5.32	0.07	2.88	3.71	962604
200	San Juan	9.41	4.63	ND(0.05)	4.61	3.29	964490
201	Scrubgrass Generating Company L. P.	8.7	7.2	141.1	0.52	ND(0.12)	233086
202	Scrubgrass Generating Company L. P.	8.8	6.7	98.6	0.33	ND(0.10)	246691
203	Scrubgrass Generating Company L. P.	8.6	6.3	62.62	0.18	ND(0.12)	248881
204	SEI - Birchwood Power Facility	8.7	5.9	11.31	0.25	0.19	849391
205	SEI - Birchwood Power Facility	8.9	5.8	8	0.21	0.15	847458
206	SEI - Birchwood Power Facility	9.4	5.7	10.21	0.21	ND(0.27)	867496
207	Shawnee Fossil Plant	6.97	8.2	2.26	ND(0.82)	ND(1.03)	633712
208	Shawnee Fossil Plant	6.74	8.2	2.14	0.7	ND(0.94)	654382
209	Shawnee Fossil Plant	6.68	8.6	2.37	ND(0.79)	ND(0.92)	645238
210	St Clair Power Plant	8.23	7.4	1.91	1.73	1.49	638440
211	St Clair Power Plant	8.57	7.2	2.2	1.63	1.07	686046
212	St Clair Power Plant	7.70	8.0	0.71	1.4	3.09	670801
213	Stanton Station	12.89	6.9	ND(0.21)	0.099	7.34	317712
214	Stanton Station	12.22	6.7	ND(0.083)	0.08	6.83	292227
215	Stanton Station	13.35	6.5	0.054	0.039	7.56	319411
216	Stanton Station	14.29	5.5	ND(0.01)	0.18	7.59	280334
217	Stanton Station	14.94	5.7	ND(0.004)	0.26	7.13	275237
218	Stanton Station	14.98	5.4	NC(0.004)	0.52	7.10	275237
219	Stockton Cogen Company	5.9	3.7	2.737	ND(0.136)	ND(0.134)	266684
220	Stockton Cogen Company	6	4.36	ND(3.012)	ND(0.141)	ND(0.139)	266466
221	Stockton Cogen Company	6	3.87	2.1	ND(0.131)	ND(0.148)	275668
222	TNP-One	15.31	5.2	19	7.62	6.51	585120
223	TNP-One	13.16	5.4	9.23	3.91	5.28	584340
224	TNP-One	15.08	4.4	25.93	12.71	6.49	587654
225	Valley	7.63	6.6	0.03	1.15	0.97	361271
226	Valley	7.35	6.6	0.04	1.19	0.36	372104
227	Valley	7.52	6.5	0.03	0.98	0.54	377717
228	Valmont	11.7	5.4	0.8	0.1	0.16	692863
229	Valmont	8.57	5.3	0.8	0.06	0.12	667242
230	Valmont	7.37	5.5	1.06	0.09	0.15	648289
231	W. H. Sammis	6.13	6	9.814	ND(0.80)	ND(0.99)	742450
232	W. H. Sammis	6.7	6	12.788	ND(0.83)	ND(0.90)	716614
233	W. H. Sammis	6.95	6	12.186	ND(0.85)	ND(0.86)	699740
234	Wabash River Generating Station						1372064

	A	P	Q	R	S	T	U
1	Plant Name	pct_StackGasMoistureIn	pct_StackGasO2In	Hg_ParticleBoundIn	Hg_OxidizedIn	Hg_ElementalIn	Outlet Flow Rate
2		%	%	ug/dscm	ug/dscm	ug/dscm	dscm/hr
235	Wabash River Generating Station						1385884
236	Wabash River Generating Station						1352458
237	Widows Creek Fossil Plant	7.73	5.2	2.95	ND(0.78)	ND(0.94)	496976
238	Widows Creek Fossil Plant	7.29	5.6	2.55	ND(0.77)	ND(0.87)	500143
239	Widows Creek Fossil Plant	7.6	5	2.55	ND(0.83)	ND(0.88)	500532
240	Wyodak	9.3	8	1.8	2.8	8.2	1906278
241	Wyodak	9.9	8	2.2	3.4	6.8	1913074
242	Wyodak	9.8	7.4	1.7	2.7	8.7	1952151
243							
244	XB = Excessive reagent blank caused the data to be unreliable						
245							
246	NA = Data was not included in report						
247							
248	LS = Test sample was broken, damaged, or lost during testing or in transport						

	A	V	W	X	Y	Z	AA
1	Plant Name	temp_GasOut	pct_StackGasMoistureOut	pct_StackGasO2Out	Hg_ParticleBoundOut	Hg_OxidizedOut	Hg_ElementalOut
2		Deg C	%	%	ug/dscm	ug/dscm	ug/dscm
3	AES Cayuga (NY) (formerly NYSEG Milliken)	49.89	14.2	5.61	NA	0.26	2.22
4	AES Cayuga (NY) (formerly NYSEG Milliken)	50.44	14.4	5.31	0.013	0.14	2.19
5	AES Cayuga (NY) (formerly NYSEG Milliken)	49.94	14	5.32	0.02	0.13	2.50
6	AES Hawaii, Inc.	133.7	7.7	8.0	ND(0.003)	ND(0.03)	0.42
7	AES Hawaii, Inc.	133.2	7.5	8.0	ND(0.002)	ND(0.03)	0.59
8	AES Hawaii, Inc.	133.7	8.2	8.0	ND(0.002)	ND(0.03)	0.33
9	Antelope Valley Station	86	18.9	6	ND(0.01)	0.21	0.16
10	Antelope Valley Station	82	18.4	6	0.02	0.66	6.8
11	Antelope Valley Station	84	18.4	5.6	0.02	0.27	5.96
12	Bailly	54.5	15.5	7.0	ND(0.002)	0.28	2.22
13	Bailly	53.9	14.5	7.0	ND(0.002)	0.24	2.04
14	Bailly	54.2	15.06	7.0	0.003	0.3	2.16
15	Bay Front Plant Generating	135	8.10	9.0	0.79	0.4	1.27
16	Bay Front Plant Generating	132	7.15	9.0	0.57	1.83	1.2
17	Bay Front Plant Generating	134	7.17	9.1	0.32	2.36	1.18
18	Big Bend	52	13	7.3	XB	0.16	1.66
19	Big Bend	52	9.9	7.2	XB	0.09	1.34
20	Big Bend	52	12.4	7.1	XB	0.18	1.58
21	Big Brown	167	12.4	6	0.08	13.82	21
22	Big Brown	171	12.78	6.8	0.03	13.93	20.09
23	Big Brown	164	13.47	6.4	0.03	15	17.94
24	Brayton Point	144	6.7	7.2	0.59	2.94	0.252
25	Brayton Point	144	7.4	7.1	0.58	2.46	0.279
26	Brayton Point	141	7.4	7.4	0.58	2.28	0.261
27	Brayton Point	127	8.3	8.6	0.54	2.19	0.508
28	Brayton Point	126	7.6	9.4	0.62	1.59	0.376
29	Brayton Point	121	7.0	8.0	XB	2.48	2.37
30	Bruce Mansfield	52	15.37	7.4	0.14	1.43	5.3
31	Bruce Mansfield	53	14.75	7.1	0.14	2.11	6.15
32	Bruce Mansfield	52	12.76	6.8	0.13	0.96	6.54
33	Charles R. Lowman	122	8.46	6.6	0.03	1.34	2.71
34	Charles R. Lowman	121	7.41	6.4	0.05	1.51	2.84
35	Charles R. Lowman	123	8.43	6.4	0.02	1.67	2.59
36	Cholla	86.7	13.4	5.7	XB	0.18	3.34
37	Cholla	86.7	13.5	5.9	XB	0.12	3.92
38	Cholla	86.6	13.6	5.1	XB	0.12	3.73
39	Cholla	159	8.5	6.2	XB	0.42	1.54
40	Cholla	155	8.7	5.5	XB	NA	0.86
41	Cholla	159	8.6	5.7	XB	0.33	1.08
42	Clay Boswell	169	10.4	6.6	0.059	1.01	0.11
43	Clay Boswell	166	10.5	7.2	0.003	0.27	0.18
44	Clay Boswell	168	11.3	7.1	ND(0.01)	0.45	0.09
45	Clay Boswell	51	13.3	6.0	0.002	0.04	4.85
46	Clay Boswell	51	13.8	6.4	ND(0.001)	0.05	4.37
47	Clay Boswell	51	13.6	6.7	0.002	0.05	4.38
48	Clay Boswell	67	13.8	5.2	0.02	0.09	4.85
49	Clay Boswell	68	14.0	5.6	0.17	0.38	5.04
50	Clay Boswell	69	14.3	6.0	0.23	0.49	4.64
51	Cliffside	195.1	8.05	6.4	0.33	2.26	3.2
52	Cliffside	196.6	8.46	6.3	0.08	1.85	1.59
53	Cliffside	191.7	7.95	6.1	0.08	3.29	2.1
54	Clifty Creek	170	9.91	6.0	0.58	3	3.89
55	Clifty Creek	166	8.64	6.0	ND(0.01)	4.2	4.45
56	Clifty Creek	166	8.02	6.0	0.06	4.58	3.17
57	Clover Power Station	50.6	11.9	6.7	0.04	0.33	0.25
58	Clover Power Station	50	12.3	6.5	ND(0.02)	0.27	0.12
59	Clover Power Station	50	12.1	6.4	0.03	ND(0.08)	0.09
60	Colstrip	89	15.6	6.2	0.114	ND(0.69)	7.51

	A	V	W	X	Y	Z	AA
1	Plant Name	temp_GasOut	pct_StackGasMoistureOut	pct_StackGasO2Out	Hg_ParticleBoundOut	Hg_OxidizedOut	Hg_ElementalOut
2		Deg C	%	%	ug/dscm	ug/dscm	ug/dscm
61	Colstrip	89	15.91	6.2	0.112	ND(0.75)	9.07
62	Colstrip	89	15.61	6.2	0.074	ND(0.64)	1.75
63	Columbia	149	11.7	6	0.004	2.28	9.76
64	Columbia	156	11.85	5.8	0.004	1.82	9.98
65	Columbia	157	11.88	6	0.004	2.21	9.99
66	Comanche	149.44	10.8	4.5	0.043	2.80	0.232
67	Comanche	157.78	11.1	4.5	ND(0.025)	3.38	0.537
68	Comanche	147.22	11.6	4.5	ND(0.038)	2.70	0.214
69	Coronado	48	13.7	5.71	ND(0.026)	0.037	3.02
70	Coronado	47	12.9	5.42	0.073	ND(0.061)	2.74
71	Coronado	49	13.8	5.39	0.097	0.115	2.67
72	Coyote	109	15.2	9.8	0.052	ND(0.017)	8.695
73	Coyote	96	16.8	9.7	0.09	0.152	ND(0.14)
74	Coyote	102	16.7	9.7	0.049	0.279	11.338
75	Craig	64	10.91	7.16	ND(0.006)	0.097	1.69
76	Craig	64	13.04	7.11	ND(0.005)	0.083	1.61
77	Craig	58	11.48	7.18	0.009	0.072	1.56
78	Craig	80.6	10.38	8.43	ND(0.005)	ND(0.05)	0.7
79	Craig	85.6	10.3	8.27	ND(0.005)	ND(0.05)	0.7
80	Craig	79.4	10.36	8.03	ND(0.005)	ND(0.05)	0.66
81	Dunkirk	293.4	7.50	5.9	0.35	5.78	3.08
82	Dunkirk	295.2	8.11	5.8	.13	3.86	2.08
83	Dunkirk	295.8	7.74	5.7	0.05	5.44	3.23
84	Dwayne Collier Battle Cogeneration Facility	85	11.6	5	0.05	ND(0.04)	ND(0.15)
85	Dwayne Collier Battle Cogeneration Facility	86	11.6	5.1	0.026	ND(0.05)	ND(0.166)
86	Dwayne Collier Battle Cogeneration Facility	86	12.1	5.3	ND(0.014)	ND(0.05)	ND(0.17)
87	Gaston	128	6.3	7.1	0.57	3.63	1.81
88	Gaston	124	7.0	6.9	0.31	4.54	2.72
89	Gaston	128	6.1	6.5	0.93	3.81	1.64
90	George Neal south	138	11.07	6.8	0.024	3.21	4.32
91	George Neal south	142	11.65	7	0.048	3.58	5.34
92	George Neal south	144	10.88	8.6	0.023	3.26	4.40
93	Gibson Generating Station (10/99 testing)	171	6.60	5.9	ND(0.04)	5.08	4.34
94	Gibson Generating Station (10/99 testing)	171	5.69	6.0	ND(0.08)	7.01	4.33
95	Gibson Generating Station (10/99 testing)	173	7.26	5.8	ND(0.04)	9.31	4.02
96	Gibson Generating Station (03/00 testing)	154	6.30	9.2	0.006	21	4.93
97	Gibson Generating Station (03/00 testing)	154	7.11	8.8	0.007	21.83	3.93
98	Gibson Generating Station (03/00 testing)	157	5.90	9.1	0.006	26.23	2.55
99	GRDA	84.0	15.81	6.1	0.01	1.28	9.241
100	GRDA	84.2	15.77	6.4	0.02	1.04	9.02
101	GRDA	84.2	15.68	6.3	0.01	0.28	8.825
102	Intermountain	49	11.5	4.5	0.012	ND(0.041)	0.139
103	Intermountain	49	11.5	4.4	0.0065	0.077	0.325
104	Intermountain	48	11.5	5.1	0.0092	0.076	0.269
105	Jack Watson	157	8.9	6.3	0.02	2.1	1.53
106	Jack Watson	150	8.3	7.1	0.04	2.31	0.69
107	Jack Watson	150	8.0	6.7	ND(0.05)	2.32	0.71
108	Jim Bridger	54	12.8	5.8	0.053	0.212	5.6
109	Jim Bridger	53	14.1	5.8	0.039	0.248	5.38
110	Jim Bridger	54	13.4	5.8	0.028	0.168	4.87
111	Kline Township Cogen Facility	173	6.9	5.2	ND(0.006)	ND(0.05)	0.07
112	Kline Township Cogen Facility	174	6.9	5.2	ND(0.006)	ND(0.05)	0.07
113	Kline Township Cogen Facility	174	6.1	5.2	ND(0.006)	0.063	ND(0.075)
114	La Cygne	72	13.98	7.4	0.13	ND(0.67)	6.6
115	La Cygne	72	14.65	7.2	0.1	ND(0.66)	5.68
116	La Cygne	74	13.6	6.8	0.16	ND(0.64)	4.02
117	Laramie River Station	64.4	15.2	10.5	XB	0.171	2.835
118	Laramie River Station	63.3	14.9	10.0	XB	0.072	3.501

	A	V	W	X	Y	Z	AA
1	Plant Name	temp_GasOut	pct_StackGasMoistureOut	pct_StackGasO2Out	Hg_ParticleBoundOut	Hg_OxidizedOut	Hg_ElementalOut
2		Deg C	%	%	ug/dscm	ug/dscm	ug/dscm
119	Laramie River Station	63.3	15.7	7.8	XB	ND(0.042)	3.286
120	Laramie River Station	77.7	15.3	10.0	0.0158	0.0592	2.368
121	Laramie River Station	78.9	14.8	10	0.0173	ND(0.046)	2.7609
122	Laramie River Station	78.9	14.9	9.8	0.0206	ND(0.048)	3.2811
123	Lawrence	68	16.94	7.2	0.09	ND(0.75)	4.88
124	Lawrence	66	15.09	7.8	0.17	ND(0.77)	4.92
125	Lawrence	68	15.23	7.7	0.16	ND(0.76)	4.58
126	Leland Olds Station	182	12.9	5.8	ND(0.004)	0.69	3.41
127	Leland Olds Station	182	13.1	5.8	ND(0.004)	0.92	4.44
128	Leland Olds Station	185	14	5.8	LS	LS	LS
129	Lewis & Clark	60	20.4	4.8	0.054	0.45	12.47
130	Lewis & Clark	60	20.9	4.7	ND(0.008)	0.32	12.85
131	Lewis & Clark	60	21.0	4.7	ND(0.008)	0.45	14.32
132	Limestone	59	18.5	8	0.03	1.94	11.53
133	Limestone	61	19.5	8	0.24	2.3	11.72
134	Limestone	59	18.7	8	0.09	0.92	12.41
135	Logan Generating Plant	86.7	12.9	5.3	0.0178	0.032	0.099
136	Logan Generating Plant	87	12.6	5.2	0.0162	0.052	0.080
137	Logan Generating Plant	87.2	13.4	5	0.0131	0.016	0.71
138	Mecklenburg Cogeneration Facility	75.5	13.15	4.8	ND(0.027)	0.066	ND(0.137)
139	Mecklenburg Cogeneration Facility	74.4	13.59	4.4	ND(0.026)	0.065	ND(0.134)
140	Mecklenburg Cogeneration Facility	73.9	14.09	4.8	ND(0.027)	ND(0.055)	ND(0.138)
141	Meramec	162	9.02	7.27	ND(0.004)	0.58	0.61
142	Meramec	163	8.91	7.20	0.006	1.69	0.87
143	Meramec	150	9.25	6.17	ND(0.004)	1.24	0.65
144	Monticello	166	12.73	10.4	0.1	18.85	0.93
145	Monticello	166	13.01	11.4	0.06	41.64	7.98
146	Monticello	164	13.59	12.2	0.04	42.48	9.09
147	Monticello	90	19.91	10.4	0.18	3.83	17.34
148	Monticello	89	17.3	8.0	0.13	0.32	18.43
149	Monticello	89	17.17	8.2	0.17	5.16	16.43
150	Montrose	166.1	10.41	6.8	0.0052	2.03	4.29
151	Montrose	167.8	10.74	6.6	ND(0.005)	2.08	4.72
152	Montrose	167.8	11.17	6.0	ND(0.003)	1.92	4.70
153	Navajo	49	13.8	5.96	0.045	ND(0.06)	3.07
154	Navajo	49	13.8	5.82	0.019	ND(0.06)	3.2
155	Navajo	49	14.1	5.85	0.011	ND(0.06)	3.17
156	Nelson Dewey	258	11.1	4.2	ND(0.092)	0.24	3.11
157	Nelson Dewey	258	10.78	4.2	ND(0.036)	0.15	2.24
158	Nelson Dewey	264	10.91	3.8	ND(0.035)	0.24	2.33
159	Newton	169	13.51	5.84	ND(0.007)	1.9	6.8
160	Newton	163	11.7	5.86	ND(0.005)	1.4	6
161	Newton	170	14.94	5.08	ND(0.005)	1.8	7.1
162	Northern States Power - Sherburne County Generating Plant	80	11.49	6.3	0.1	0.16	6.88
163	Northern States Power - Sherburne County Generating Plant	80	17.86	6.6	0.11	0.14	9.67
164	Northern States Power - Sherburne County Generating Plant	81	15.02	6.5	0.22	0.19	7.93
165	Platte	153.4	12.15	5.9	0.022	1.22	7.35
166	Platte	158.0	14.24	5.7	0.023	0.66	14.33
167	Platte	152.9	13.42	5.9	0.019	1.27	12.5
168	Polk Power	171	7.1	12.2	ND(0.01)	0.39	3.55
169	Polk Power	172	6.9	11.6	ND(0.01)	0.31	3.55
170	Polk Power	171	6.9	11.9	ND(0.01)	0.13	3.55
171	Port Washington	204.5	6.9	6.0	ND(0.0066)	5.34	2.55
172	Port Washington	206.3	6.89	6.0	ND(0.0065)	4.87	2.54
173	Port Washington	206.8	7.04	6.0	ND(0.0635)	5.43	2.53
174	Presque Isle	171.11	9.2	5.4	0.01	0.62	0.9225
175	Presque Isle	172.78	9.2	5	0.004	0.73	0.09
176	Presque Isle	171.67	9.3	5.2	0.04	0.62	0.80

	A	V	W	X	Y	Z	AA
1	Plant Name	temp_GasOut	pct_StackGasMoistureOut	pct_StackGasO2Out	Hg_ParticleBoundOut	Hg_OxidizedOut	Hg_ElementalOut
2		Deg C	%	%	ug/dscm	ug/dscm	ug/dscm
177	Presque Isle	195	14.4	4	0.00	0.54	5.95
178	Presque Isle	195.56	13.7	3.8	ND(0.005)	0.64	6.44
179	Presque Isle	196.67	13.7	3.6	ND(0.004)	0.52	6.17
180	Presque Isle	151.67	9.5	6.1	0.05	0.70	0.58
181	Presque Isle	151.11	9.5	5.8	0.02	0.85	0.78
182	Presque Isle	152.22	9.4	5.9	ND(0.004)	0.615	0.68
183	R. D. Morrow Sr. Generating plant	83	12.8	7.6	ND(0.041)	1.53	3.72
184	R. D. Morrow Sr. Generating plant	88	11.8	7.2	ND(0.024)	1.37	3.45
185	R. D. Morrow Sr. Generating plant	88	12.8	7.2	ND(0.026)	0.86	3.49
186	R.M. Heskett Station	159	14.7	7.9	0.077	1.049	3.23
187	R.M. Heskett Station	153	14.6	8	0.051	0.293	3.832
188	R.M. Heskett Station	161	14.6	8.2	0.038	0.131	3.266
189	Rawhide	103.8	12.78	6.0	0.20	0.63	9
190	Rawhide	104.9	16.27	5.5	ND(0.01)	0.59	8.53
191	Rawhide	103.3	16.19	6.0	0.05	0.82	7.5
192	Salem Harbor	128	8.0	9.6	0.0419	0.1756	0.24
193	Salem Harbor	128	8.2	8.3	0.0692	0.0491	0.11
194	Salem Harbor	130	7.9	8.4	0.0527	0.0527	0.14
195	Sam Seymour	57.1	17.6	8	0.04	0.16	8.25
196	Sam Seymour	53.9	20.1	8	0.07	0.20	8.97
197	Sam Seymour	56.1	18.1	8	0.04	0.23	8.07
198	San Juan	47.7	14.42	5.8	0.041	0.38	6.03
199	San Juan	47.7	13.73	5.7	0.071	0.32	4.07
200	San Juan	48.3	14.54	5.16	0.048	0.27	4.1
201	Scrubgrass Generating Company L. P.	156	8.4	7.3	ND(0.0043)	0.0495	ND(0.1205)
202	Scrubgrass Generating Company L. P.	157	8.5	7.0	ND(0.0043)	0.0373	ND(0.1196)
203	Scrubgrass Generating Company L. P.	158	8.3	7	ND(0.0041)	0.0313	ND(0.1141)
204	SEI - Birchwood Power Facility	90	12.6	6	0.009	0.29	0.18
205	SEI - Birchwood Power Facility	90	13	6.2	0.01	ND(0.14)	0.1
206	SEI - Birchwood Power Facility	90	12.7	5.9	0.013	ND(0.13)	ND(0.18)
207	Shawnee Fossil Plant	152	6.28	8.8	0.05	ND(0.86)	0.57
208	Shawnee Fossil Plant	149	7.39	9	0.08	ND(0.81)	ND(1.01)
209	Shawnee Fossil Plant	153	6.75	9	ND(0.09)	ND(0.80)	ND(0.91)
210	St Clair Power Plant	137	7.43	7.8	ND(0.177)	0.99	2.21
211	St Clair Power Plant	142	8.25	8.4	ND(0.061)	0.97	2.62
212	St Clair Power Plant	141	7.47	8.8	ND(0.113)	0.9	3.55
213	Stanton Station	191.1	13.36	6.4	ND(0.026)	0.28	7.35
214	Stanton Station	150.0	13.77	6.9	ND(0.014)	0.27	7.17
215	Stanton Station	158.3	14.03	6.7	ND(0.003)	0.28	7.56
216	Stanton Station	91.1	20.44	6.5	ND(0.01)	0.25	6.58
217	Stanton Station	95.0	19.17	6.4	ND(0.01)	0.11	6.96
218	Stanton Station	93.9	19.75	6.4	ND(0.01)	ND(0.2)	7.12
219	Stockton Cogen Company	147	5.7	5.07	ND(0.129)	ND(0.084)	ND(0.086)
220	Stockton Cogen Company	146	5.5	5.22	ND(0.146)	ND(0.097)	ND(0.102)
221	Stockton Cogen Company	145	5.7	5.15	ND(0.136)	ND(0.089)	ND(0.100)
222	TNP-One	177	13.33	6	0.06	10.11	3.95
223	TNP-One	178	11.99	5.4	0.05	5.88	2.55
224	TNP-One	171	13.54	4.8	0.04	12.19	4.56
225	Valley	157.8	7.02	6.8	0.09	1.59	0.32
226	Valley	158.7	7.00	6.7	0.03	1.23	0.33
227	Valley	158.8	7.11	6.7	ND(0.008)	1.5	0.41
228	Valmont	134	8.27	5.4	ND(0.01)	0.105	0.032
229	Valmont	138	8.51	5.4	ND(0.01)	0.084	0.017
230	Valmont	148	7.57	5.5	ND(0.01)	0.178	0.027
231	W. H. Sammis	153	6.64	7.1	0.03	ND(0.76)	ND(0.93)
232	W. H. Sammis	149	7.54	6.8	0.05	ND(0.93)	ND(0.87)
233	W. H. Sammis	150	8.25	7	0.04	ND(0.79)	ND(0.88)
234	Wabash River Generating Station	181.7	14.47	13.6	ND(0.05)	ND(0.84)	2.58

	A	V	W	X	Y	Z	AA
1	Plant Name	temp_GasOut	pct_StackGasMoistureOut	pct_StackGasO2Out	Hg_ParticleBoundOut	Hg_OxidizedOut	Hg_ElementalOut
2		Deg C	%	%	ug/dscm	ug/dscm	ug/dscm
235	Wabash River Generating Station	168.3	14.46	14.0	ND(0.05)	ND(0.089)	2.6
236	Wabash River Generating Station	178.3	13.79	13.6	0.03	ND(0.90)	2.77
237	Widows Creek Fossil Plant	162	6.95	8.2	0.1	1.05	ND(1.15)
238	Widows Creek Fossil Plant	158	6.53	7.2	0.04	0.98	ND(1.04)
239	Widows Creek Fossil Plant	151	6.79	7.6	0.06	ND(0.97)	ND(1.00)
240	Wyodak	82	13.7	8	ND(0.025)	0.048	7.03
241	Wyodak	82	13.7	8	ND(0.029)	0.12	6.98
242	Wyodak	81	13.2	8	ND(0.028)	0.18	6.95
243							
244	XB = Excessive reagent blank caused the data to be unreliable						
245							
246	NA = Data was not included in report						
247							
248	LS = Test sample was broken, damaged, or lost during testing or in transport						

ATTACHMENT 3

Hg_speciation_data_CAMR.xls
s (Tab: 03_Data_Bin_Table)

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
3						
4	Emission control device type Bin 0					
5	Polk Power	0184540000-07242	1	1 ⁽⁴⁾	1.2338	coal to stack
6	Polk Power	0184540000-07242	1	2 ⁽⁴⁾	1.2667	coal to stack
7	Polk Power	0184540000-07242	1	3 ⁽⁴⁾	1.4601	coal to stack
8	Wabash River Generating Station	0154700000-01010	1 + 1A	1	0.7153	coal to stack
9	Wabash River Generating Station	0154700000-01010	1 + 1A	2	0.6070	coal to stack
10	Wabash River Generating Station	0154700000-01010	1 + 1A	3	0.7017	coal to stack
11						
12				Average emission modification factor	0.9974	
13						
14	Emission control device type Bin 1					
15	Brayton Point	0134330000-01619	1	1	0.8420	across control
16	Brayton Point	0134330000-01619	1	2	0.6449	across control
17	Brayton Point	0134330000-01619	1	3	0.6887	across control
18	Brayton Point	0134330000-01619	3	1	0.6416	across control
19	Brayton Point	0134330000-01619	3	2	0.7214	across control
20	Brayton Point	0134330000-01619	3	3	0.8813	across control
21	Gibson Generating Station (03/00 testing)	0154700000-06113	3	1	1.0391	across control
22	Gibson Generating Station (03/00 testing)	0154700000-06113	3	2	0.9003	across control
23	Gibson Generating Station (03/00 testing)	0154700000-06113	3	3	0.9100	across control
24	Gibson Generating Station (10/99 testing)	0154700000-06113	3	1	0.6109	across control
25	Gibson Generating Station (10/99 testing)	0154700000-06113	3	2	0.4151	across control
26	Gibson Generating Station (10/99 testing)	0154700000-06113	3	3	0.9023	across control
27	Jack Watson	0126860000-02049	4	1	0.7787	across control
28	Jack Watson	0126860000-02049	4	2	0.6230	across control
29	Jack Watson	0126860000-02049	4	3	0.7214	across control
30	Widows Creek Fossil Plant	0186420000-00050	6	1	0.5589	across control
31	Widows Creek Fossil Plant	0186420000-00050	6	2	0.5100	across control
32	Widows Creek Fossil Plant	0186420000-00050	6	3	0.3665	across control
33						
34				Average emission modification factor	0.7087	
35						
36	Emission control device type Bin 2					
37	Presque Isle	0208470000-01769	5	1	0.3471	across control
38	Presque Isle	0208470000-01769	5	2	0.3813	across control
39	Presque Isle	0208470000-01769	5	3	0.2856	across control
40	Presque Isle	0208470000-01769	6	1	0.4546	across control
41	Presque Isle	0208470000-01769	6	2	0.4971	across control
42	Presque Isle	0208470000-01769	6	3	0.4127	across control
43						
44				Average emission modification factor	0.3964	
45						
46	Emission control device type Bin 3					
47	Salem Harbor	0134330000-01626	3	1	0.1453	across control
48	Salem Harbor	0134330000-01626	3	2	0.0748	across control
49	Salem Harbor	0134330000-01626	3	3	0.0835	across control

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
50						
51				Average emission modification factor	0.1012	
52						
53	Emission control device type Bin 4					
54	Cliffside	0054160000-02721	1	1	0.9914	across control
55	Cliffside	0054160000-02721	1	2	0.5214	across control
56	Cliffside	0054160000-02721	1	3	0.5749	across control
57	Dunkirk	0135730000-02554	2	1	0.9499	across control
58	Dunkirk	0135730000-02554	2	2	0.6768	across control
59	Dunkirk	0135730000-02554	2	3	0.8114	across control
60	Gaston	0001950000-00026	1	1	1.0019	across control
61	Gaston	0001950000-00026	1	2	1.4137	across control
62	Gaston	0001950000-00026	1	3	1.1000	across control
63						
64				Average emission modification factor	0.8935	
65						
66	Emission control device type Bin 5					
67	Bruce Mansfield	0147160000-06094	1	1	0.8532	across control
68	Bruce Mansfield	0147160000-06094	1	2	0.8598	across control
69	Bruce Mansfield	0147160000-06094	1	3	0.9249	across control
70						
71				Average emission modification factor	0.8793	
72						
73	Emission control device type Bin 6					
74	Port Washington	0208470000-04040	4	1	0.5932	across control
75	Port Washington	0208470000-04040	4	2	0.4738	across control
76	Port Washington	0208470000-04040	4	3	0.5863	across control
77						
78				Average emission modification factor	0.5511	
79						
80	Emission control device type Bin 7					
81	W. H. Sammis	0139980000-02866	1	1	0.0882	across control
82	W. H. Sammis	0139980000-02866	1	2	0.0735	across control
83	W. H. Sammis	0139980000-02866	1	3	0.0719	across control
84	Valmont	0154660000-00477	5	1	0.1340	across control
85	Valmont	0154660000-00477	5	2	0.1089	across control
86	Valmont	0154660000-00477	5	3	0.1615	across control
87						
88				Average emission modification factor	0.1063	
89						
90	Emission control device type Bin 8					
91	Mecklenburg Cogeneration Facility	52007	GEN 1	1	0.0076	across control
92	Mecklenburg Cogeneration Facility	52007	GEN 1	2	0.0158	across control
93	Mecklenburg Cogeneration Facility	52007	GEN 1	3	0.0122	across control
94						
95				Average emission modification factor	0.0119	
96						
97	Emission control device type Bin 9					

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
98	SEI - Birchwood Power Facility	54304	1	1	0.0410	across control
99	SEI - Birchwood Power Facility	54304	1	2	0.0221	across control
100	SEI - Birchwood Power Facility	54304	1	3	0.0161	across control
101	Logan Generating Plant	10043	Gen 1	1	0.0091	across control
102	Logan Generating Plant	10043	Gen 1	2	0.0101	across control
103	Logan Generating Plant	10043	Gen 1	3	0.0553	across control
104						
105				Average emission modification factor	0.0256	
106						
107	Emission control device type Bin 10					
108	Big Bend	0184540000-00645	BB03	1	0.3297	last control
109	Big Bend	0184540000-00645	BB03	2	0.2579	last control
110	Big Bend	0184540000-00645	BB03	3	0.3568	last control
111	AES Cayuga (NY) (formerly NYSEG Milliken)	0135110000-02535	2	1	0.3624	last control
112	AES Cayuga (NY) (formerly NYSEG Milliken)	0135110000-02535	2	2	0.2791	last control
113	AES Cayuga (NY) (formerly NYSEG Milliken)	0135110000-02535	2	3	0.3001	last control
114						
115				Second unit average emission modification factor	0.3143	
116				First unit average emission modification correction factor	0.7087	
117				Combined emission modification factor ⁶	0.2228	
118						
119	Emission control device type Bin 11					
120	Charles R. Lowman	0001890000-00056	2	1	0.9402	last control
121	Charles R. Lowman	0001890000-00056	2	2	0.7053	last control
122	Charles R. Lowman	0001890000-00056	2	3	0.5855	last control
123	R. D. Morrow Sr. Generating plant	0175680000-06061	2	1	0.4636	last control
124	R. D. Morrow Sr. Generating plant	0175680000-06061	2	2	0.5076	last control
125	R. D. Morrow Sr. Generating plant	0175680000-06061	2	3	0.5517	last control
126	Navajo	0165720000-04941	3	1	0.5800	last control
127	Navajo	0165720000-04941	3	2	0.8735	last control
128	Navajo	0165720000-04941	3	3	0.9182	last control
129						
130				Second unit average emission modification factor	0.6806	
131				First unit average emission modification correction factor	0.8935	
132				Combined emission modification factor	0.6081	
133						
134	Emission control device type Bin 12					
135	Clover Power Station	0198760000-07213	2	1	0.3826	last control
136	Clover Power Station	0198760000-07213	2	2	0.2183	last control
137	Clover Power Station	0198760000-07213	2	3	0.1093	last control
138	Intermountain	0112080000-06481	2SGA	1	0.1597	last control
139	Intermountain	0112080000-06481	2SGA	2	0.3447	last control
140	Intermountain	0112080000-06481	2SGA	3	0.2598	last control
141						
142				Second unit average emission modification factor	0.2457	
143				First unit average emission modification correction factor	0.1063	
144				Combined emission modification factor	0.0261	
145						

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
146	Emission control device type Bin 13					
147	Montrose	0100000000-02080	1	1	0.8241	across control
148	Montrose	0100000000-02080	1	2	1.0234	across control
149	Montrose	0100000000-02080	1	3	0.8725	across control
150	George Neal South	0123410000-07343	4	1	0.8538	across control
151	George Neal South	0123410000-07343	4	2	0.9109	across control
152	George Neal South	0123410000-07343	4	3	1.5235	across control
153	Newton	0032530000-06017	2	1	1.0010	across control
154	Newton	0032530000-06017	2	2	0.8367	across control
155	Newton	0032530000-06017	2	3	0.9154	across control
156						
157				Average emission modification factor	0.9735	
158						
159	Emission control device type Bin 14					
160	Cholla	0008030000-00113	3	1	1.2116	across control
161	Cholla	0008030000-00113	3	2	1.2821	across control
162	Cholla	0008030000-00113	3	3	1.5943	across control
163	Columbia	0208560000-08023	1	1	0.9492	across control
164	Columbia	0208560000-08023	1	2	0.7258	across control
165	Columbia	0208560000-08023	1	3	0.9667	across control
166	Platte	0406060000-00059	1	1	0.7318	across control
167	Platte	0406060000-00059	1	2	1.3316	across control
168	Platte	0406060000-00059	1	3	1.0247	across control
169	Presque Isle	0208470000-01769	9	1	0.9990	across control
170	Presque Isle	0208470000-01769	9	2	1.0523	across control
171	Presque Isle	0208470000-01769	9	3	1.0577	across control
172						
173				Average emission modification factor	1.0772	
174						
175	Emission control device type Bin 15					
176	Clay Boswell	0126470000-01893	2	1	0.2394	across control
177	Clay Boswell	0126470000-01893	2	2	0.1255	across control
178	Clay Boswell	0126470000-01893	2	3	0.1581	across control
179	Comanche	0154660000-00470	2	1	0.3140	across control
180	Comanche	0154660000-00470	2	2	0.4737	across control
181	Comanche	0154660000-00470	2	3	0.3348	across control
182						
183				Average emission modification factor	0.2742	
184						
185						
186	Emission control device type Bin 16					
187	Clay Boswell	0126470000-01893	3	1	0.9284	across control
188	Clay Boswell	0126470000-01893	3	2	0.8619	across control
189	Clay Boswell	0126470000-01893	3	3	0.9475	across control
190	Clay Boswell	0126470000-01893	4	1	1.0308	across control
191	Clay Boswell	0126470000-01893	4	2	1.1825	across control
192	Clay Boswell	0126470000-01893	4	3	1.4440	across control
193	Cholla	0008030000-00113	2	1	0.7732	across control

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
194	Cholla	0008030000-00113	2	2	1.3339	across control
195	Cholla	0008030000-00113	2	3	1.0233	across control
196	Colstrip	0128250000-06076	3	1	1.8828	across control
197	Colstrip	0128250000-06076	3	2	1.0884	across control
198	Colstrip	0128250000-06076	3	3	0.2640	across control
199	Lawrence	0002250000-01250	4	1	1.0159	across control
200	Lawrence	0002250000-01250	4	2	1.3383	across control
201	Lawrence	0002250000-01250	4	3	1.1678	across control
202						
203				Average emission modification factor	1.0855	
204						
205	Emission control device type Bin 17					
206	GRDA	0074900000-00165	2	1	1.0228	across control
207	GRDA	0074900000-00165	2	2	1.2436	across control
208	GRDA	0074900000-00165	2	3	0.8185	across control
209	Laramie River Station	0013070000-06204	3	1	4.5534	across control
210	Laramie River Station	0013070000-06204	3	2	0.4265	across control
211	Laramie River Station	0013070000-06204	3	3	0.3746	across control
212	Wyodak	0143540000-06101	BW 91	1	0.5540	across control
213	Wyodak	0143540000-06101	BW 91	2	0.5738	across control
214	Wyodak	0143540000-06101	BW 91	3	0.5705	across control
215						
216				Average emission modification factor	1.1264	
217						
218	Emission control device type Bin 18					
219	Craig	0301510000-06021	C3	1	0.6846	across control
220	Craig	0301510000-06021	C3	2	0.6019	across control
221	Craig	0301510000-06021	C3	3	0.7055	across control
222	Rawhide	0151430000-06761	101	1	0.8369	across control
223	Rawhide	0151430000-06761	101	2	0.6798	across control
224	Rawhide	0151430000-06761	101	3	0.5285	across control
225	Northern States Power - Sherburne County Generating Plant	0137810000-06090	#3	1	0.7633	across control
226	Northern States Power - Sherburne County Generating Plant	0137810000-06090	#3	2	1.1114	across control
227	Northern States Power - Sherburne County Generating Plant	0137810000-06090	#3	3	0.9916	across control
228						
229				Average emission modification factor	0.7670	
230						
231	Emission control device type Bin 19					
232	Jim Bridger	0143540000-08066	BW 74	1	0.8968	last control
233	Jim Bridger	0143540000-08066	BW 74	2	0.8448	last control
234	Jim Bridger	0143540000-08066	BW 74	3	0.9705	last control
235	Laramie River Station	0013070000-06204	1	1	0.4723	last control
236	Laramie River Station	0013070000-06204	1	2	0.5546	last control
237	Laramie River Station	0013070000-06204	1	3	0.4242	last control
238	Sam Seymour	0112690000-06179	3	1	1.3143	last control
239	Sam Seymour	0112690000-06179	3	2	1.4656	last control
240	Sam Seymour	0112690000-06179	3	3	0.8297	last control
241						

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
242				Second unit average emission modification factor	0.8636	
243				First unit average emission modification correction factor	0.9735	
244				Combined emission modification factor	0.8407	
245						
246	Emission control device type Bin 20					
247	Coronado	0615720000-06177	U1B	1	1.1295	last control
248	Coronado	0615720000-06177	U1B	2	1.2141	last control
249	Coronado	0615720000-06177	U1B	3	1.1130	last control
250	Craig	0301510000-06021	C1	1	0.5859	last control
251	Craig	0301510000-06021	C1	2	0.7705	last control
252	Craig	0301510000-06021	C1	3	0.9756	last control
253	San Juan	0154730000-02451	2	1	0.6326	last control
254	San Juan	0154730000-02451	2	2	0.6865	last control
255	San Juan	0154730000-02451	2	3	0.5761	last control
256						
257				Second unit average emission modification factor	0.8537	
258				First unit average emission modification correction factor	1.0772	
259				Combined emission modification factor	0.9197	
260						
261	Emission control device type Bin 21					
262	Stanton Station	0195140000-02824	1	1	0.9784	across control
263	Stanton Station	0195140000-02824	1	2	1.0865	across control
264	Stanton Station	0195140000-02824	1	3	1.0390	across control
265						
266				Average emission modification factor	1.0346	
267						
268	Emission control device type Bin 22					
269	La Cygne	0100000000-01241	1	1	0.7792	across control
270	La Cygne	0100000000-01241	1	2	0.7622	across control
271	La Cygne	0100000000-01241	1	3	0.7942	across control
272						
273				Average emission modification factor	0.7785	
274						
275	Emission control device type Bin 23					
276	Nelson Dewey	0208560000-04054	1	1	0.9805	across control
277	Nelson Dewey	0208560000-04054	1	2	1.0560	across control
278	Nelson Dewey	0208560000-04054	1	3	1.2327	across control
279						
280				Average emission modification factor	1.0897	
281						
282	Emission control device type Bin 24					
283	Leland Olds Station	0013070000-02817	2	1	1.2353	across control
284	Leland Olds Station	0013070000-02817	2	2	0.6674	across control
285						
286				Average emission modification factor	0.9513	
287						
288	Emission control device type Bin 25					
289	Stockton Cogen Company	10640	GEN1	1	0.0565	across control

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
290	Stockton Cogen Company	10640	GEN1	2	0.1105	across control
291	Stockton Cogen Company	10640	GEN1	3	0.0784	across control
292						
293				Average emission modification factor	0.0818	
294						
295	Emission control device type Bin 26 - Not Used in Model					
296						
297	Emission control device type Bin 27					
298	Scrubgrass Generating Company L. P.	50974	GEN1	1	0.0008	across control
299	Scrubgrass Generating Company L. P.	50974	GEN1	2	0.0010	across control
300	Scrubgrass Generating Company L. P.	50974	GEN1	3	0.0015	across control
301						
302				Average emission modification factor	0.0011	
303						
304	Emission control device type Bin 28					
305	R.M. Heskett Station	0128190000-02790	B2	1	0.4462	across control
306	R.M. Heskett Station	0128190000-02790	B2	2	0.8891	across control
307	R.M. Heskett Station	0128190000-02790	B2	3	0.4538	across control
308						
309				Average emission modification factor	0.5964	
310						
311	Emission control device type Bin 29					
312	TNP-One	0400510000-07030	U2	1	0.4489	across control
313	TNP-One	0400510000-07030	U2	2	0.4604	across control
314	TNP-One	0400510000-07030	U2	3	0.3812	across control
315						
316				Average emission modification factor	0.4302	
317						
318	Emission control device type Bin 30					
319	Kline Township Cogen Facility	50039	GEN1	1	0.0025	across control
320	Kline Township Cogen Facility	50039	GEN1	2	0.0026	across control
321	Kline Township Cogen Facility	50039	GEN1	3	0.0026	across control
322						
323				Average emission modification factor	0.0026	
324						
325	Emission control device type Bin 31					
326	Dwayne Collier Battle Cogeneration Facility	10384	2B	1	0.0707	across control
327	Dwayne Collier Battle Cogeneration Facility	10384	2B	2	0.0565	across control
328	Dwayne Collier Battle Cogeneration Facility	10384	2B	3	0.0629	across control
329						
330				Average emission modification factor	0.0634	
331						
332	Emission control device type Bin 32 - Not Used in Model					
333						
334	Emission control device type Bin 33					
335	Big Brown	0443720000-03497	1	1	0.9928	last control

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
336	Big Brown	0443720000-03497	1	2	1.1296	last control
337	Big Brown	0443720000-03497	1	3	1.1199	last control
338	Monticello	0443720000-06147	1	1	0.7131	last control
339	Monticello	0443720000-06147	1	2	1.5152	last control
340	Monticello	0443720000-06147	1	3	1.4095	last control
341						
342				Second unit average emission modification factor	1.1467	
343				First unit average emission modification correction factor	1.0346	
344				Combined emission modification factor	1.1864	
345						
346	Emission control device type Bin 34					
347	Antelope Valley Station	0013070000-06469	B1	1	0.0545	across control
348	Antelope Valley Station	0013070000-06469	B1	2	1.0527	across control
349	Antelope Valley Station	0013070000-06469	B1	3	0.8930	across control
350	Stanton Station	0195140000-02824	10	1	0.9397	across control
351	Stanton Station	0195140000-02824	10	2	1.0030	across control
352	Stanton Station	0195140000-02824	10	3	1.0131	across control
353						
354				Average emission modification factor	0.8260	
355						
356	Emission control device type Bin 35					
357	Lewis & Clark	0128190000-06089	B1	1	0.4925	across control
358	Lewis & Clark	0128190000-06089	B1	2	0.6126	across control
359	Lewis & Clark	0128190000-06089	B1	3	0.9119	across control
360						
361				Average emission modification factor	0.6723	
362						
363	Emission control device type Bin 36					
364	Monticello	0443720000-06147	3	1	0.7869	last control
365	Monticello	0443720000-06147	3	2	0.5443	last control
366	Monticello	0443720000-06147	3	3	0.5756	last control
367	Limestone	0089010000-00298	LIM1	1	0.5060	last control
368	Limestone	0089010000-00298	LIM1	2	0.5241	last control
369	Limestone	0089010000-00298	LIM1	3	0.4393	last control
370						
371				Second unit average emission modification factor	0.5627	
372				First unit average emission modification correction factor	1.0346	
373				Combined emission modification factor	0.5822	
374						
375	Emission control device type Bin 37					
376	Bay Front Plant Generating	0137810000-03982	5	1	0.9966	across control
377	Bay Front Plant Generating	0137810000-03982	5	2	1.4654	across control
378	Bay Front Plant Generating	0137810000-03982	5	3	2.2500	across control
379						
380				Average emission modification factor	1.5707	
381						
382	Emission control device type Bin 38					
383	Bailly	0137560000-00995	7 and 8	1	0.5117	last control

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
384	Bailly	0137560000-00995	7 and 8	2	0.5361	last control
385	Bailly	0137560000-00995	7 and 8	3	0.5138	last control
386						
387				Second unit average emission modification factor	0.5205	
388				First unit average emission modification correction factor	0.9513	
389				Combined emission modification factor	0.4952	
390						
391	Emission control device type Bin 39					
392	Coyote	0128190000-08222	1	1	0.8801	across control
393	Coyote	0128190000-08222	1	2	0.0275	across control
394	Coyote	0128190000-08222	1	3	0.9453	across control
395						
396				Average emission modification factor	0.6176	
397						
398	Emission control device type Bin 40					
399	AES Hawaii, Inc.	10673	AB	1	0.4330	across control
400	AES Hawaii, Inc.	10673	AB	2	0.4626	across control
401	AES Hawaii, Inc.	10673	AB	3	0.5288	across control
402						
403				Average emission modification factor	0.4748	
404						
405	Emission control device type Bin 41					
406	Meramec	0194360000-02104	4	1	0.1873	across control
407	Meramec	0194360000-02104	4	2	0.3003	across control
408	Meramec	0194360000-02104	4	3	0.2804	across control
409	St Clair Power Plant	0051090000-01743	4	1	0.6605	across control
410	St Clair Power Plant	0051090000-01743	4	2	0.8093	across control
411	St Clair Power Plant	0051090000-01743	4	3	0.9235	across control
412						
413				Average emission modification factor	0.5269	
414						
415	Emission control device type Bin 42					
416	Clifty Creek	0092690000-00983	6	1	0.6442	across control
417	Clifty Creek	0092690000-00983	6	2	0.7049	across control
418	Clifty Creek	0092690000-00983	6	3	0.6301	across control
419						
420				Average emission modification factor	0.6597	
421						
422	Emission control device type Bin 43					
423	Valley	0208470000-04042	2	1	0.9433	across control
424	Valley	0208470000-04042	2	2	1.0070	across control
425	Valley	0208470000-04042	2	3	1.2521	across control
426						
427				Average emission modification factor	1.0675	
428						
429	Emission control device type Bin 44					
430	Shawnee Fossil Plant	0186420000-01379	3	1	0.3459	across control

	A	B	C	D	E	F
1						
2	Plant ID	EIA Plant Code & ORIS Plant Code or just ORIS Plant Code	Unit No.	Run Number	Emission Modification Factor (fractional Hg retention across testing locations)	Testing locations
431	Shawnee Fossil Plant	0186420000-01379	3	2	0.3190	across control
432	Shawnee Fossil Plant	0186420000-01379	3	3	0.2884	across control
433						
434				Average emission modification factor	0.3178	
435						
436						
437						
438	¹ Although combustion NO _x controls and furnace bottom type are listed in this column, they have no effect on the bin into which the unit was classified.					
439	² This column addresses external NO _x controls only.					
440	³ Speciation was accomplished by analyzing the data in the test reports and computing the total mercury leaving the last control device for each run. Then, within the run, we computed the percentage that each Hg species composed of the total. Then, within the bin, we took the average of each species column. These average percentages were then applied to the units that used the specific bin. A "0" in the data occurred when any speciated Hg outlet number was not provided or was unacceptable (according to the test method). The sum of the fractional splits is 1 except where slight rounding errors exist.					
441	⁴ All test runs are listed as 1, 2, and 3. This does not mean that during the stack testing that these were the actual 1st, 2nd, or 3rd test runs. However, these were the runs presented in the test reports and date order was maintained.					
442	⁵ Coal gasification units burn synthetic gas (derived from coal) in a complex process that requires no PM or SO ₂ control following the process.					
443	⁶ A different method was used to average fuel type/boiler type/emission control system(s) from all dual-controlled units (units having both a PM and an SO ₂ control device) than was used for single-controlled units. Since stack test flue-gas speciated Hg was analyzed at the inlet and outlet of the last control device, the effect of the PM control on Hg removal on these dual-controlled units was not clear. Thus: EPA decided that it would be more realistic to add the PM control device removal of Hg to the SO ₂ control device removal of Hg for dual-controlled units. The PM control device average EMF was taken from the bin of a unit with a similar fuel type/boiler type/PM emission control system to the dual-controlled bin it was modifying. The average EMF of a tested unit with a single PM control device was multiplied by each individual run EMF from a similarly configured dual-controlled unit. These modified EMFs were averaged. This average was used to compute the Hg removal of a dual-controlled unit in the national emissions model.					
444	⁷ All fluidized bed combustor units tested had limestone injection in their furnaces to reduce SO ₂ .					

	G	H	I	J	K	L	M	N
1							Speciated Hg split in stack (fraction) ³	
2	Primary Fuel/ Secondary Fuel	Boiler/furnace type ¹	PM Control	SO2 Control	External NO _x Control ²	Particle-bound Hg	Oxidized Hg	Elemental Hg
3								
4								
5	Bituminous/None	COAL GAS	COAL GAS ⁵	COAL GAS ⁵	NONE	0.00127	0.09886	0.89987
6	Bituminous/None	COAL GAS	COAL GAS ⁵	COAL GAS ⁵	NONE	0.00129	0.08021	0.91850
7	Bituminous/None	COAL GAS	COAL GAS ⁵	COAL GAS ⁵	NONE	0.00136	0.03528	0.96337
8	Bituminous/None	COAL GAS	COAL GAS ⁵	COAL GAS ⁵	NONE	0.00826	0.13884	0.85289
9	Bituminous/None	COAL GAS	COAL GAS ⁵	COAL GAS ⁵	NONE	0.00937	0.01667	0.97397
10	Bituminous/None	COAL GAS	COAL GAS ⁵	COAL GAS ⁵	NONE	0.00923	0.13846	0.85231
11								
12					Average speciated Hg fraction	0.00513	0.08472	0.91015
13								
14								
15	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.15600	0.77737	0.06663
16	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.17475	0.74119	0.08406
17	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.18584	0.73054	0.08363
18	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.16677	0.67634	0.15689
19	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.23975	0.61485	0.14540
20	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00000	0.51134	0.48866
21	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00023	0.80969	0.19008
22	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00027	0.84721	0.15252
23	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00021	0.91121	0.08858
24	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00212	0.53814	0.45975
25	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00351	0.61599	0.38049
26	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00150	0.69738	0.30112
27	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00548	0.57534	0.41918
28	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.01316	0.75987	0.22697
29	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00818	0.75941	0.23241
30	Bituminous/None	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL	NONE	0.05797	0.60870	0.33333
31	Bituminous/None	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL	NONE	0.02597	0.63636	0.33766
32	Bituminous/None	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL	NONE	0.05742	0.46411	0.47847
33								
34					Average speciated Hg fraction	0.06106	0.68195	0.25699
35								
36								
37	Bituminous/Pet Coke	CONV/PC/NONOX/WET	ESP- CS	COMP COAL	NONE	0.00599	0.40120	0.59281
38	Bituminous/Pet Coke	CONV/PC/NONOX/WET	ESP- CS	COMP COAL	NONE	0.00228	0.44470	0.55302
39	Bituminous/Pet Coke	CONV/PC/NONOX/WET	ESP- CS	COMP COAL	NONE	0.01035	0.43338	0.55627
40	Bituminous/Pet Coke	CONV/PC/NONOX/WET	ESP- CS	COMP COAL	NONE	0.03657	0.52743	0.43601
41	Bituminous/Pet Coke	CONV/PC/NONOX/WET	ESP- CS	COMP COAL	NONE	0.01353	0.51297	0.47351
42	Bituminous/Pet Coke	CONV/PC/NONOX/WET	ESP- CS	COMP COAL	NONE	0.00154	0.47409	0.52437
43								
44					Average speciated Hg fraction	0.01171	0.46563	0.52267
45								
46								
47	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	SNCR	0.09158	0.38383	0.52459
48	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	SNCR	0.30311	0.21507	0.48182
49	Bituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	SNCR	0.21475	0.21475	0.57050

	G	H	I	J	K	L	M	N
1							Speciated Hg split in stack (fraction) ³	
2	Primary Fuel/ Secondary Fuel	Boiler/furnace type ¹	PM Control	SO2 Control	External NOx Control ²	Particle-bound Hg	Oxidized Hg	Elemental Hg
146								
147	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00082	0.32094	0.67824
148	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00037	0.30577	0.69386
149	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00023	0.28996	0.70981
150	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00318	0.42494	0.57188
151	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00535	0.39920	0.59545
152	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00299	0.42431	0.57269
153	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00040	0.21830	0.78129
154	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00034	0.18913	0.81054
155	Subbituminous/None	CONV/PC/NOX/DRY	ESP- CS	COMP COAL	NONE	0.00028	0.20219	0.79753
156								
157					Average speciated Hg fraction	0.00155	0.30830	0.69014
158								
159								
160	Subbituminous/None	CONV/PC/NONOX/DRY	ESP- HS	NONE	NONE	0.00000	0.21429	0.78571
161	Subbituminous/None	CONV/PC/NONOX/DRY	ESP- HS	NONE	NONE	0.00000	0.00000	1.00000
162	Subbituminous/None	CONV/PC/NONOX/DRY	ESP- HS	NONE	NONE	0.00000	0.23404	0.76596
163	Subbituminous/None	CONV/PC/NOX/DRY	ESP- HS	COMP COAL	NONE	0.00033	0.18931	0.81036
164	Subbituminous/None	CONV/PC/NOX/DRY	ESP- HS	COMP COAL	NONE	0.00034	0.15419	0.84548
165	Subbituminous/None	CONV/PC/NOX/DRY	ESP- HS	COMP COAL	NONE	0.00033	0.18109	0.81858
166	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.00256	0.14199	0.85545
167	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.00153	0.04396	0.95451
168	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.00138	0.09210	0.90652
169	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.00043	0.08318	0.91639
170	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.00035	0.09076	0.90889
171	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.00030	0.07797	0.92173
172								
173					Average speciated Hg fraction	0.00063	0.12524	0.87413
174								
175								
176	Subbituminous/None	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	NONE	0.05004	0.85666	0.09330
177	Subbituminous/None	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	NONE	0.00662	0.59603	0.39735
178	Subbituminous/None	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	NONE	0.00917	0.82569	0.16514
179	Subbituminous/None	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	NONE	0.01398	0.91057	0.07545
180	Subbituminous/None	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	NONE	0.00318	0.86016	0.13666
181	Subbituminous/None	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	NONE	0.00648	0.92056	0.07296
182								
183					Average speciated Hg fraction	0.01491	0.82828	0.15681
184								
185								
186								
187	Subbituminous/None	CONV/PC/NOX/DRY	PARTSCRUB	COMP COAL	NONE	0.00041	0.00818	0.99141
188	Subbituminous/None	CONV/PC/NOX/DRY	PARTSCRUB	COMP COAL	NONE	0.00011	0.01131	0.98858
189	Subbituminous/None	CONV/PC/NOX/DRY	PARTSCRUB	COMP COAL	NONE	0.00045	0.01128	0.98827
190	Subbituminous/None	CONV/PC/NOX/DRY	PARTSCRUB	NONE	NONE	0.00403	0.01815	0.97782
191	Subbituminous/None	CONV/PC/NOX/DRY	PARTSCRUB	NONE	NONE	0.03041	0.06798	0.90161
192	Subbituminous/None	CONV/PC/NOX/DRY	PARTSCRUB	NONE	NONE	0.04291	0.09142	0.86567
193	Subbituminous/None	CONV/PC/NONOX/DRY	MECH/PARTSCRUB	NONE	NONE	0.00000	0.05114	0.94886

	G	H	I	J	K	L	M	N
1							Speciated Hg split in stack (fraction) ³	
2	Primary Fuel/ Secondary Fuel	Boiler/furnace type ¹	PM Control	SO2 Control	External NO _x Control ²	Particle-bound Hg	Oxidized Hg	Elemental Hg
242					Average speciated Hg fraction	0.00428	0.02940	0.96631
243								
244								
245								
246								
247	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	WETSCRUB	NONE	0.00423	0.01205	0.98371
248	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	WETSCRUB	NONE	0.02567	0.01073	0.96360
249	Subbituminous/None	CONV/PC/NOX/WET	ESP- HS	WETSCRUB	NONE	0.03366	0.03990	0.92644
250	Subbituminous/None	CONV/PC/NOX/DRY	ESP- HS	WETSCRUB	NONE	0.00168	0.05419	0.94413
251	Subbituminous/None	CONV/PC/NOX/DRY	ESP- HS	WETSCRUB	NONE	0.00147	0.04895	0.94957
252	Subbituminous/None	CONV/PC/NOX/DRY	ESP- HS	WETSCRUB	NONE	0.00548	0.04388	0.95064
253	Subbituminous/None	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB	NONE	0.00636	0.05891	0.93474
254	Subbituminous/None	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB	NONE	0.01592	0.07173	0.91235
255	Subbituminous/None	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB	NONE	0.01086	0.06111	0.92802
256								
257					Average speciated Hg fraction	0.01170	0.04461	0.94369
258								
259								
260								
261								
262	Lignite/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00170	0.03663	0.96166
263	Lignite/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00094	0.03626	0.96280
264	Lignite/None	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00019	0.03571	0.96410
265								
266					Average speciated Hg fraction	0.00094	0.03620	0.96286
267								
268								
269	Subbituminous/None	CYCLONE/NOX/WET	PARTSCRUB	NONE	NONE	0.01840	0.04742	0.93418
270	Subbituminous/None	CYCLONE/NOX/WET	PARTSCRUB	NONE	NONE	0.01637	0.05401	0.92962
271	Subbituminous/None	CYCLONE/NOX/WET	PARTSCRUB	NONE	NONE	0.03556	0.07111	0.89333
272								
273					Average speciated Hg fraction	0.02344	0.05751	0.91905
274								
275								
276	Subbituminous/Pet Coke	CYCLONE/NOX/WET	ESP- HS	COMP COAL	NONE	0.01355	0.07067	0.91578
277	Subbituminous/Pet Coke	CYCLONE/NOX/WET	ESP- HS	COMP COAL	NONE	0.00748	0.06229	0.93023
278	Subbituminous/Pet Coke	CYCLONE/NOX/WET	ESP- HS	COMP COAL	NONE	0.00676	0.09275	0.90048
279								
280					Average speciated Hg fraction	0.00926	0.07524	0.91550
281								
282								
283	Lignite/None	CYCLONE/NOX/WET	ESP- CS	NONE	NONE	0.00049	0.16821	0.83130
284	Lignite/None	CYCLONE/NOX/WET	ESP- CS	NONE	NONE	0.00037	0.17158	0.82805
285								
286					Average speciated Hg fraction	0.00043	0.16989	0.82968
287								
288								
289	Bituminous/Pet Coke	FBC ⁷	BAGHOUSE	NONE	SNCR	0.43144	0.28094	0.28763

	G	H	I	J	K	L	M	N
1							Speciated Hg split in stack (fraction) ³	
2	Primary Fuel/ Secondary Fuel	Boiler/furnace type ¹	PM Control	SO2 Control	External NO _x Control ²	Particle-bound Hg	Oxidized Hg	Elemental Hg
290	Bituminous/Pet Coke	FBC ⁷	BAGHOUSE	NONE	SNCR	0.42319	0.28116	0.29565
291	Bituminous/Pet Coke	FBC ⁷	BAGHOUSE	NONE	SNCR	0.41846	0.27385	0.30769
292								
293					Average speciated Hg fraction	0.42436	0.27865	0.29699
294								
295								
296								
297								
298	Waste Bituminous/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.01921	0.44236	0.53843
299	Waste Bituminous/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.02166	0.37582	0.60252
300	Waste Bituminous/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.02268	0.34624	0.63108
301								
302					Average speciated Hg fraction	0.02118	0.38814	0.59068
303								
304								
305	Lignite/None	FBC ⁷	ESP- CS	NONE	NONE	0.01768	0.24082	0.74151
306	Lignite/None	FBC ⁷	ESP- CS	NONE	NONE	0.01221	0.07016	0.91762
307	Lignite/None	FBC ⁷	ESP- CS	NONE	NONE	0.01106	0.03814	0.95080
308								
309					Average speciated Hg fraction	0.01365	0.11637	0.86998
310								
311								
312	Lignite/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.00425	0.71601	0.27975
313	Lignite/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.00590	0.69340	0.30071
314	Lignite/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.00238	0.72603	0.27159
315								
316					Average speciated Hg fraction	0.00418	0.71181	0.28401
317								
318								
319	Waste Anthracite/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.03061	0.25510	0.71429
320	Waste Anthracite/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.03061	0.25510	0.71429
321	Waste Anthracite/None	FBC ⁷	BAGHOUSE	NONE	NONE	0.02899	0.60870	0.36232
322								
323					Average speciated Hg fraction	0.03007	0.37297	0.59696
324								
325								
326	Bituminous/None	STOKER/NOX/DRY	BAGHOUSE	SDA	NONE	0.34483	0.13793	0.51724
327	Bituminous/None	STOKER/NOX/DRY	BAGHOUSE	SDA	NONE	0.19403	0.18657	0.61940
328	Bituminous/None	STOKER/NOX/DRY	BAGHOUSE	SDA	NONE	0.05983	0.21368	0.72650
329								
330					Average speciated Hg fraction	0.19956	0.17939	0.62105
331								
332								
333								
334								
335	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	COMP COAL	NONE	0.00229	0.39599	0.60172

	G	H	I	J	K	L	M	N
1							Speciated Hg split in stack (fraction) ³	
2	Primary Fuel/ Secondary Fuel	Boiler/furnace type ¹	PM Control	SO2 Control	External NOx Control ²	Particle-bound Hg	Oxidized Hg	Elemental Hg
336	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	COMP COAL	NONE	0.00088	0.40910	0.59001
337	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	COMP COAL	NONE	0.00091	0.45496	0.54413
338	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	COMP COAL	NONE	0.00503	0.94819	0.04678
339	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	COMP COAL	NONE	0.00121	0.83816	0.16063
340	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	COMP COAL	NONE	0.00078	0.82310	0.17613
341								
342					Average speciated Hg fraction	0.00185	0.64492	0.35323
343								
344								
345								
346								
347	Lignite/None	CONV/PC/NOX/DRY	BAGHOUSE	SDA	NONE	0.01333	0.56000	0.42667
348	Lignite/None	CONV/PC/NOX/DRY	BAGHOUSE	SDA	NONE	0.00267	0.08824	0.90909
349	Lignite/None	CONV/PC/NOX/DRY	BAGHOUSE	SDA	NONE	0.00320	0.04320	0.95360
350	Lignite/None	CONV/PC/NOX/DRY	BAGHOUSE	SDA	NONE	0.00073	0.03658	0.96269
351	Lignite/None	CONV/PC/NOX/DRY	BAGHOUSE	SDA	NONE	0.00071	0.01555	0.98375
352	Lignite/None	CONV/PC/NOX/DRY	BAGHOUSE	SDA	NONE	0.00069	0.01384	0.98547
353								
354					Average speciated Hg fraction	0.00356	0.12623	0.87021
355								
356								
357	Lignite/None	CONV/PC/NOX/DRY	PARTSCRUB	NONE	NONE	0.00416	0.03468	0.96115
358	Lignite/None	CONV/PC/NOX/DRY	PARTSCRUB	NONE	NONE	0.00030	0.02429	0.97541
359	Lignite/None	CONV/PC/NOX/DRY	PARTSCRUB	NONE	NONE	0.00027	0.03046	0.96927
360								
361					Average speciated Hg fraction	0.00158	0.02981	0.96861
362								
363								
364	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS	WETSCRUB	NONE	0.00843	0.17939	0.81218
365	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS	WETSCRUB	NONE	0.00689	0.01695	0.97617
366	Lignite/None	CONV/PC/NONOX/DRY	ESP- CS	WETSCRUB	NONE	0.00781	0.23713	0.75506
367	Lignite/None	CONV/PC/NOX/WET	ESP- CS	WETSCRUB	NONE	0.00222	0.14370	0.85407
368	Lignite/None	CONV/PC/NOX/WET	ESP- CS	WETSCRUB	NONE	0.01683	0.16129	0.82188
369	Lignite/None	CONV/PC/NOX/WET	ESP- CS	WETSCRUB	NONE	0.00671	0.06855	0.92474
370								
371					Average speciated Hg fraction	0.00815	0.13450	0.85735
372								
373								
374								
375								
376	Bituminous/None	CYCLONE/NONOX/WET	MECH	NONE	NONE	0.32114	0.16260	0.51626
377	Bituminous/None	CYCLONE/NONOX/WET	MECH	NONE	NONE	0.15833	0.50833	0.33333
378	Bituminous/None	CYCLONE/NONOX/WET	MECH	NONE	NONE	0.08290	0.61140	0.30570
379								
380					Average speciated Hg fraction	0.18746	0.42744	0.38510
381								
382								
383	Bituminous/Pet Coke	CYCLONE/NONOX/WET	ESP- CS	WETSCRUB	NONE	0.00040	0.11196	0.88765

	G	H	I	J	K	L	M	N
1							Speciated Hg split in stack (fraction) ³	
2	Primary Fuel/ Secondary Fuel	Boiler/furnace type ¹	PM Control	SO2 Control	External NO _x Control ²	Particle-bound Hg	Oxidized Hg	Elemental Hg
384	Bituminous/Pet Coke	CYCLONE/NONOX/WET	ESP- CS	WETSCRUB	NONE	0.00044	0.10522	0.89434
385	Bituminous/Pet Coke	CYCLONE/NONOX/WET	ESP- CS	WETSCRUB	NONE	0.00122	0.12180	0.87698
386								
387					Average speciated Hg fraction	0.00069	0.11299	0.88632
388								
389								
390								
391								
392	Lignite/None	CYCLONE/NONOX/WET	BAGHOUSE	SDA	NONE	0.00594	0.00097	0.99309
393	Lignite/None	CYCLONE/NONOX/WET	BAGHOUSE	SDA	NONE	0.28846	0.48718	0.22436
394	Lignite/None	CYCLONE/NONOX/WET	BAGHOUSE	SDA	NONE	0.00420	0.02392	0.97188
395								
396					Average speciated Hg fraction	0.09953	0.17069	0.72978
397								
398								
399	Subbituminous/None	FBC ⁷	BAGHOUSE	NONE	SNCR	0.00344	0.03436	0.96220
400	Subbituminous/None	FBC ⁷	BAGHOUSE	NONE	SNCR	0.00165	0.02475	0.97360
401	Subbituminous/None	FBC ⁷	BAGHOUSE	NONE	SNCR	0.00289	0.04335	0.95376
402								
403					Average speciated Hg fraction	0.00266	0.03416	0.96318
404								
405								
406	Subbituminous/Bituminous	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00168	0.48658	0.51175
407	Subbituminous/Bituminous	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00234	0.65861	0.33905
408	Subbituminous/Bituminous	CONV/PC/NOX/DRY	ESP- CS	NONE	NONE	0.00106	0.65539	0.34355
409	Subbituminous/Bituminous	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL	NONE	0.02691	0.30105	0.67204
410	Subbituminous/Bituminous	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL	NONE	0.00842	0.26792	0.72366
411	Subbituminous/Bituminous	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL	NONE	0.01254	0.19971	0.78775
412								
413					Average speciated Hg fraction	0.00882	0.42821	0.56297
414								
415								
416	Subbituminous/Bituminous	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.07764	0.40161	0.52075
417	Subbituminous/Bituminous	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.00058	0.48527	0.51415
418	Subbituminous/Bituminous	CONV/PC/NOX/WET	ESP- HS	COMP COAL	NONE	0.00768	0.58643	0.40589
419								
420					Average speciated Hg fraction	0.02863	0.49110	0.48026
421								
422								
423	Bituminous/Pet Coke	CONV/PC/NOX/DRY	BAGHOUSE	NONE	NONE	0.04500	0.79500	0.16000
424	Bituminous/Pet Coke	CONV/PC/NOX/DRY	BAGHOUSE	NONE	NONE	0.01887	0.77358	0.20755
425	Bituminous/Pet Coke	CONV/PC/NOX/DRY	BAGHOUSE	NONE	NONE	0.00209	0.78370	0.21421
426								
427					Average speciated Hg fraction	0.02199	0.78409	0.19392
428								
429								
430	Bituminous/Subbituminous	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL	NONE	0.04762	0.40952	0.54286

ATTACHMENT
4

Hg_speciation_data_CAMR.xls
(Tab:
04_Hg_Speciation_Profiles)

A LISTING OF TEST BINS WITH HG REMOVALS AND PERCENT SPECIATION

Bin Type	Fuel, Boiler, Emission control device(s)	Hg Removal	PERCENT SPECIATION		
			Particulate Hg	Oxidized Hg	Elemental Hg
0	Bituminous Coal, Coal Gasification	0.26%	0.51%	8.47%	91.02%
1	Bituminous Coal, PC Boiler with ESP-CS	29.13%	6.11%	68.20%	25.70%
2	Bituminous Coal and Pet. Coke, PC Boiler with ESP-CS	60.36%	1.17%	46.56%	52.27%
3	Bituminous Coal, PC Boiler with SNCR and ESP-CS	89.88%	20.32%	27.12%	52.56%
4	Bituminous Coal, PC Boiler with ESP-HS	10.65%	4.90%	57.84%	37.26%
5	Bituminous Coal, PC Boiler with PM Scrubber	12.07%	1.80%	19.51%	78.69%
6	Bituminous Coal, PC Boiler with Dry Sorbent Injection and ESP-CS	44.89%	0.16%	67.10%	32.74%
7	Bituminous Coal, PC Boiler with FF Baghouse	89.37%	3.98%	62.58%	33.44%
8	Bituminous Coal, PC Boiler with SDA/FF Baghouse	98.17%	9.17%	28.86%	61.97%
9	Bituminous Coal, PC Boiler with SCR and SDA/FF Baghouse	97.36%	5.06%	46.04%	48.90%
10	Bituminous Coal, PC Boiler with ESP-CS and Wet FGD	77.73%	0.22%	7.78%	92.00%
11	Bituminous Coal, PC Boiler with ESP-HS and Wet FGD	39.19%	0.63%	20.68%	78.70%
12	Bituminous Coal, PC Boiler with FF Baghouse and Wet FGD	97.39%	6.48%	33.00%	60.52%
13	Subbituminous Coal, PC Boiler with ESP-CS	2.65%	0.16%	30.83%	69.01%
14	Subbituminous Coal, PC Boiler with ESP-HS	0.00%	0.06%	12.52%	87.41%
15	Subbituminous Coal, PC Boiler with FF Baghouse	72.58%	1.49%	82.83%	15.68%
16	Subbituminous Coal, PC Boiler with PM Scrubber	0.00%	1.45%	5.11%	93.44%
17	Subbituminous Coal, PC Boiler with SDA/ESP	0.00%	0.32%	3.82%	95.86%
18	Subbituminous Coal, PC Boiler with SDA/FF Baghouse	23.30%	0.99%	4.35%	94.67%
19	Subbituminous Coal, PC Boiler with ESP-CS and Wet FGD	15.93%	0.43%	2.94%	96.63%
20	Subbituminous Coal, PC Boiler with ESP-HS and Wet FGD	8.03%	1.17%	4.46%	94.37%
21	Lignite Coal, PC Boiler with ESP-CS	0.00%	0.09%	3.62%	96.29%
22	Subbituminous Coal, Cyclone Boiler with PM Scrubber	22.15%	2.34%	5.75%	91.91%
23	Subbituminous Coal/Pet. Coke, Cyclone Boiler with ESP-HS	0.00%	0.93%	7.52%	91.55%
24	Lignite Coal Coal, Cyclone Boiler with ESP-CS	4.87%	0.04%	16.99%	82.97%
25	Bituminous Coal/Pet.Coke, Fluidized Bed Combustor with SNCR and FF Baghouse	91.82%	42.44%	27.87%	29.70%
26	Not Used				
27	Bituminous Waste, Fluidized Bed Combustor with FF Baghouse	99.89%	2.12%	38.81%	59.07%
28	Lignite Coal, Fluidized Bed Combustor with ESP-CS	40.36%	1.37%	11.64%	87.00%
29	Lignite Coal, Fluidized Bed Combustor with FF Baghouse	56.98%	0.42%	71.18%	28.40%
30	Antracite Waste, Fluidized Bed Combustor with FF Baghouse	99.75%	3.01%	37.30%	59.70%
31	Bituminous Coal, Stoker Boiler with SDA/FF Baghouse	93.66%	19.96%	17.94%	62.11%
32	Not Used				
33	Lignite Coal, PC Boiler with ESP-CS and FF Baghouse	0.00%	0.19%	64.49%	35.32%
34	Lignite Coal, PC Boiler with SDA/FF Baghouse	17.40%	0.36%	12.62%	87.02%
35	Lignite Coal, PC Boiler with PM Scrubber	32.77%	0.16%	2.98%	96.86%
36	Lignite Coal, PC Boiler with ESP-CS and Wet FGD	41.78%	0.82%	13.45%	85.74%
37	Bituminous Coal, Cyclone Boiler with Mechanical Collector	0.00%	18.75%	42.74%	38.51%
38	Bituminous Coal/Pet. Coke, Cyclone with ESP-CS and Wet FGD	50.48%	0.07%	11.30%	88.63%
39	Lignite Coal, Cyclone Boiler with SDA/FF Baghouse	38.24%	9.95%	17.07%	72.98%
40	Subbituminous Coal, Fluidized Bed Combustor with SNCR and FF Baghouse	52.52%	0.27%	3.42%	96.32%
41	Subbituminous Coal/Bituminous Coal, PC Boiler with ESP-CS	47.31%	0.88%	42.82%	56.30%
42	Subbituminous Coal/Bituminous Coal, PC Boiler with ESP-HS	34.03%	2.86%	49.11%	48.03%
43	Bituminous Coal/Pet. Coke, PC Boiler with FF Baghouse	0.00%	2.20%	78.41%	19.39%
44	Bituminous Coal/Subbituminous Coal, PC Boiler with FF Baghouse	68.22%	5.95%	42.10%	51.95%

United States
Environmental Protection
Agency

Office of Air Quality Planning and Standards
Air Quality Assessment Division
Research Triangle Park, NC

Publication No. EPA-454/R-11-010
November, 2011
