

11. J.W. O'Dell, J.D. Pfaff, M.E. Gales, and G.D. McKee. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. "Test Method: The Determination of Inorganic Anions in Water by Ion Chromatography—Method 300.0." EPA-600/4-84-017. Cincinnati, OH (March 1984).
12. U.S. Environmental protection Agency, Environmental Monitoring and Support Laboratory. "Fluoride, Method 340.2 (Potentiometric, Ion Selective Electrode)," *Methods for Chemical Analysis of Water and Wastes*. EPA-600/4-79-020. Cincinnati, OH (March 1983).
13. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. "Method 350.2: Nitrogen, Ammonia (Colorimetric, Titrimetric, Potentiometric Distillation Procedure," *Methods for Chemical Analysis of Water and Wastes*. EPA-600/4-79-020. Cincinnati, OH (March 1983).
14. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. "Method 350.1: Nitrogen, Ammonia (Colorimetric, Automated Phenate)," *Methods for Chemical Analysis of Water and Waste*. EPA-600/4/79-020. Cincinnati, OH (March 1983).
15. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 9012: Total and Amenable Cyanide (Colorimetric, Automated UV)," *Test Methods for Evaluating Solid Waste*. SW-484, 3rd ed. Washington, DC (November 1986).
16. Title 40, Part 266, Appendix IX, Section 3.5. "Sampling for Aldehyde and Ketone Emissions from Stationary Sources (Method 0011)," *Code of Federal Regulations*.
17. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 5040: Protocol for Analysis of Sorbent Cartridges from Volatile Organic Sampling Train," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
18. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 8240: Gas Chromatography/Mass Spectrometry for Volatile Organics," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
19. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 8270: Gas Chromatography/Mass Spectrometry for Semivolatile Organics: Capillary Column Technique," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
20. State of California Air Resources Board. "Method 429: Polycyclic Aromatic Hydrocarbons (PAH) Emissions: Methods for Determining Emissions of Toxic Air Contaminants from Stationary Sources," *Stationary Source Test Methods*, Vol. 3 (September 1989).

References

1. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 3051: Micro-wave Assisted Acid Digestion of Sediments, Sludges, Soils, and Oils," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
2. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 6010: Inductively Coupled Plasma Atomic Emission Spectroscopy," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
3. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 7060: Arsenic (AA, Furnace Technique)," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
4. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 7131: Cadmium (AA, Furnace Technique)," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
5. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 7421: Lead (AA, Furnace Technique)," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
6. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 7740: Selenium (AA, Furnace Technique)," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
7. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 7470: Mercury in Liquid Waste (Manual Cold-Vapor Technique)," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
8. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 3005: Acid Digestion of Waters for Total Recoverable or Dissolved Metals for Analysis by Flame Atomic Absorption Spectroscopy or Inductively Coupled Plasma Spectroscopy," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
9. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 3020: Acid Digestion of Aqueous Samples and Extracts for Total Metals for Analysis by GFAA Spectroscopy," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).
10. U.S. Environmental Protection Agency, Office of Solid Waste. "Method 6020: Inductively Coupled Plasma—Mass Spectrometry," *Test Methods for Evaluating Solid Waste*. SW-846, 3rd ed. Washington, DC (November 1986).

21. American Society for Testing and Materials. "Standard Method for Trace Elements in Coal and Coke Ash by Atomic Absorption," *1991 Annual Book of ASTM Standards*. Section 5, Vol. 5.05, Method D-3683. Philadelphia, PA (1991).
22. Bituminous Coal Research, Inc. "Analytical Methods for Determining Mercury in Coal and Coal Mine Water." Report No. 2 (July 1975).
23. American Society for Testing and Materials. "Major and Minor Elements in Coal and Coke Ash by X-Ray Fluorescence," *1991 Annual Book of ASTM Standards*. Section 5, Vol. 5.05, Method D-4326-84. Philadelphia, PA (1991).
24. American Society for Testing and Materials. "Test Method for Total Chlorine in Coal by Oxygen Bomb Combustion/Ion Selective Electrode Method," *1991 Annual Book of ASTM Standards*. Section 5, Vol. 5.05, Method D-4208-91. Philadelphia, PA (1991).
25. American Society for Testing and Materials. "Test Method for Total Fluorine in Coal by the Oxygen Bomb Combustion/Ion Selective Electrode Method," *1991 Annual Book of ASTM Standards*. Section 5, Vol. 5.05, Method D-3761-91. Philadelphia, PA (1991).
26. American Society for Testing and Materials. "Standard Practice of Ultimate Analysis of coal and Coke," *1991 Annual Book of ASTM Standards*. Section 5, Vol. 5.05, Method D-3176-89. Philadelphia, PA (1991).
27. American Society for Testing and Materials. "Standard Practice of Proximate Analysis of Coal and Coke," *1991 Annual Book of ASTM Standards*. Section 5, Vol. 5.05, Method D-3172-89. Philadelphia, PA (1991).
28. American Society for Testing and Materials. "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter," *1991 Annual Book of ASTM Standards*. Section 5, vol. 5.05, Method D-2015-85. Philadelphia, PA (1991).
29. U.S. Environmental Protection Agency. "Method 901.1," *Prescribed Procedures for the Measurement of Radioactivity in Drinking Water*. EPA-600/4/80-032, 1980.
30. N.R. McQuaker and M. Gurney. "Determination of Total Fluoride in Soil and Vegetation Using an Alkali Fusion—Selective Ion Electrode Technique," *Analytical Chemistry*. Vol. 49, No. 1, pp. 53-56. Washington, DC (January 1977).
31. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. "Phosphorus, All Forms, Method 365.2 (Colorimetric, Ascorbic Acid, Single Reagent)," *Methods for Chemical Analysis of Water and Wastes*. EPA-600/4-79-020. Cincinnati, OH (revised March 1983).
32. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. "Method 420.1: Phenolics, Total Recoverable," *Methods for Chemical Analysis of Water and Waste*. EPA-600/4-79-020. Cincinnati, OH (March 1983).

Appendix C: Sample Preparation and Analysis

33. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. "Method 410.1: Chemical Oxygen Demand," *Methods for Chemical Analysis of Water and Waste*. EPA-600/4-79-020. Cincinnati, OH (March 1983).
34. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. "Method 335.2: Cyanide, Total," *Methods for Chemical Analysis of Water and Waste*. EPA-600/4-79-020. Cincinnati, OH (March 1983).
35. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. "Method 335.1: Cyanides, Amenable to Chlorination," *Methods for Chemical Analysis of Water and Waste*. EPA-600/4-79-020. Cincinnati, OH (March 1983).

Appendix D: Calculations for Error, Bias, and Uncertainty

Coefficient of Variation

The CV is also known as the relative standard deviation (RSD), or the standard deviation expressed as a percentage of the mean. The CV is calculated as:

$$CV = \left(\frac{S}{\bar{x}} \right) * 100\% \quad (\text{eq. 2})$$

95% Confidence Interval

Most of the stream concentration results presented in this document are provided with 95% confidence intervals as uncertainty ranges. When an average analytical result is reported, the uncertainty in terms of the standard deviation depends upon the level of confidence placed on the average, or mean result. At the 95% confidence level, the uncertainty around the mean can be statistically determined using the "t" distribution as a function of the number of results included in the mean. The 95% confidence interval is calculated as:

$$95\% CI = \frac{S * t}{\sqrt{n}} \quad (\text{eq. 3})$$

where: t is defined in Table D-1 for the number of samples (n) included in the calculation of the mean.

Table D-1
Values of t by sample number, n

As an example, the three sample results obtained for arsenic in the turbine stack gas particulate are 1.81, 0.673, and 0.782 $\mu\text{g}/\text{Nm}^3$. The mean, standard deviation, and 95% confidence interval are calculated below:

$$\text{Mean} = \frac{1.81 + 0.673 + 0.782}{3} = 1.09$$

$$S = \sqrt{\frac{(1.81 - 1.09)^2 + (0.673 - 1.09)^2 + (0.782 - 1.09)^2}{(3 - 1)}} = 0.63, \text{ and}$$

$$95\% \text{ CI} = \frac{0.63 * 4.30}{\sqrt{3}} = 1.6$$

The vapor-phase component, calculated by the same formula, determined the mean concentration of the three samples at 0.0839 $\mu\text{g}/\text{Nm}^3$, $S = 0.036$, and the 95%CI = 0.089. The statistical confidence interval around the mean total gas concentration (i.e. the sum of the particulate- and vapor-phase mean results) is not the sum of the confidence intervals. The average standard deviation (S_{avg}) must first be determined and is calculated as:

$$S_{\text{avg}} = \sqrt{S_1^2 + S_2^2} \quad (\text{eq. 4})$$

where: S_1 and S_2 are the standard deviations for the 1st and 2nd set of results being added.

The t factor (Table D-1) is based on the degree of freedom which is calculated as:

$$Df = \frac{\left(S_1^2 + S_2^2\right)^2}{\frac{S_1^4}{(n_1 - 1)} + \frac{S_2^4}{(n_2 - 1)}} \quad (\text{eq. 5})$$

The 95% confidence interval for the sum of two separately determined mean results is then calculated as:

$$95\% \text{ CI} = \frac{t_{df} * S_{avg}}{\sqrt{n_1 + n_2}} \quad (\text{eq. 6})$$

Using the turbine stack gas results for particulate and vapor-phase arsenic as an example, the following variables are given:

$$S_1 = 0.63$$

$$S_2 = 0.036$$

$$n_1 = n_2 = 3$$

Calculating S_{avg} ,

$$S_{avg} = \sqrt{(0.63)^2 + (0.036)^2} = 0.63$$

The degrees of freedom are determined as:

$$Df = \frac{[(0.63)^2 + (0.036)^2]^2}{\frac{(0.63)^4}{(3 - 1)} + \frac{(0.036)^4}{(3 - 1)}} = 2$$

From Table D-1, the value of t_{df} with 2 degrees of freedom is 4.30, and the 95%CI is calculated as:

$$95\% \text{ CI} = \frac{4.30 * 0.63}{\sqrt{6}} = 1.1$$

The arsenic results calculated in these examples are found in Table 4-2.

Relative Percent Difference

The RPD is used to express the precision of two duplicate measurements such as duplicate analytical results for the same sample. RPD is calculated as:

$$RPD = \frac{|M - m|}{\left(\frac{M + m}{2} \right)} * 100\% \quad (\text{eq. 7})$$

where: M = first measurement value; and
m = second measurement value

Percent Recovery

In this program, percent recovery of matrix and surrogate spikes, control standards, and standard reference materials was used to indicate analytical accuracy. Percent recovery is calculated as:

$$\% \text{ Recovery} = \frac{\text{Measured Value}}{\text{Actual Value}} * 100 \quad (\text{eq. 8})$$

The percent spike recovery is calculated as:

$$\% \text{ Spike Recovery} = \frac{(\text{Value of Sample Plus Spike}) - (\text{Value of Unspiked Sample})}{\text{Value of Spike Added}} * 100 \quad (\text{eq. 9})$$



APPENDIX E: MATERIAL BALANCE, REMOVAL EFFICIENCY & EMISSION FACTOR CALCULATIONS

Mass Balance

A general mass balance equation which applies to any system is:

For all species, the generation term in equation E-1 is equal to zero. Ash is considered to be a

$$\left[\begin{array}{l} \text{Accumulation of} \\ \text{Mass in System} \end{array} \right] = \left[\begin{array}{l} \text{Mass into} \\ \text{System} \end{array} \right] - \left[\begin{array}{l} \text{Mass out} \\ \text{of System} \end{array} \right] + \left[\begin{array}{l} \text{Mass Generated} \\ \text{in System} \end{array} \right]$$

component of coal and is not generated. Mass balance closure is defined by the following expression:

$$\text{Mass Balance Closure (\%)} = 100 * \left[\frac{\text{Total Mass Out}}{(\text{Mass In} - \text{Mass Accumulated})} \right]$$

The mass flow rate (Q) for a given specie (i), can be defined as:

$$Q_{s,i} = F_s * C_i$$

where:

F_s = Stream mass flow rate,

C_i = Concentration of specie, i, and

$Q_{s,i}$ = Mass flow rate of specie (i) for a given process stream (s).

Therefore, the following equations apply to the determination of mass balances:

Mass Balance Around the Plant

$$\% \text{ Closure} = \frac{Q_{\text{turbine stack, i}} + Q_{\text{incin, i}} + Q_{\text{slag, i}} + Q_{\text{sulfur, i}} + Q_{\text{sweet water, i}}}{Q_{\text{coal, i}}} * 100$$

Mass Balance Around Selectamine™

$$\% \text{ Closure} = \frac{Q_{\text{sweet water, i}} + Q_{\text{acid gas, i}}}{Q_{\text{sour syngas, i}}} * 100$$

Mass Balance Around the Turbine Stack

$$\% \text{ Closure} = \frac{Q_{\text{turbine stack, i}}}{Q_{\text{sweet syngas, i}} + Q_{\text{nat'l gas, i}}} * 100$$

Mass Balance Around Selectox™

$$\% \text{ Closure} = \frac{Q_{\text{tail gas, i}} + Q_{\text{sulfur, i}}}{Q_{\text{acid gas, i}}} * 100$$

Mass Balance Around the Sour Water Stripper

$$\% \text{ Closure} = \frac{Q_{\text{sweet water, i}} + Q_{\text{sour gas, i}}}{Q_{\text{sour condensate, i}}} * 100$$

Mass Balance Around the Incinerator

$$\% \text{ Closure} = \frac{Q_{\text{incinerator stack, i}}}{Q_{\text{sour gas, i}} + Q_{\text{tail gas, i}} + Q_{\text{nat'l gas, i}}} * 100$$

Removal Efficiency

The general removal efficiency equation which can be applied to any system is:

$$\% \text{ Removal} = \frac{\text{Mass In} - \text{Mass Out}}{\text{Mass In}} * 100$$

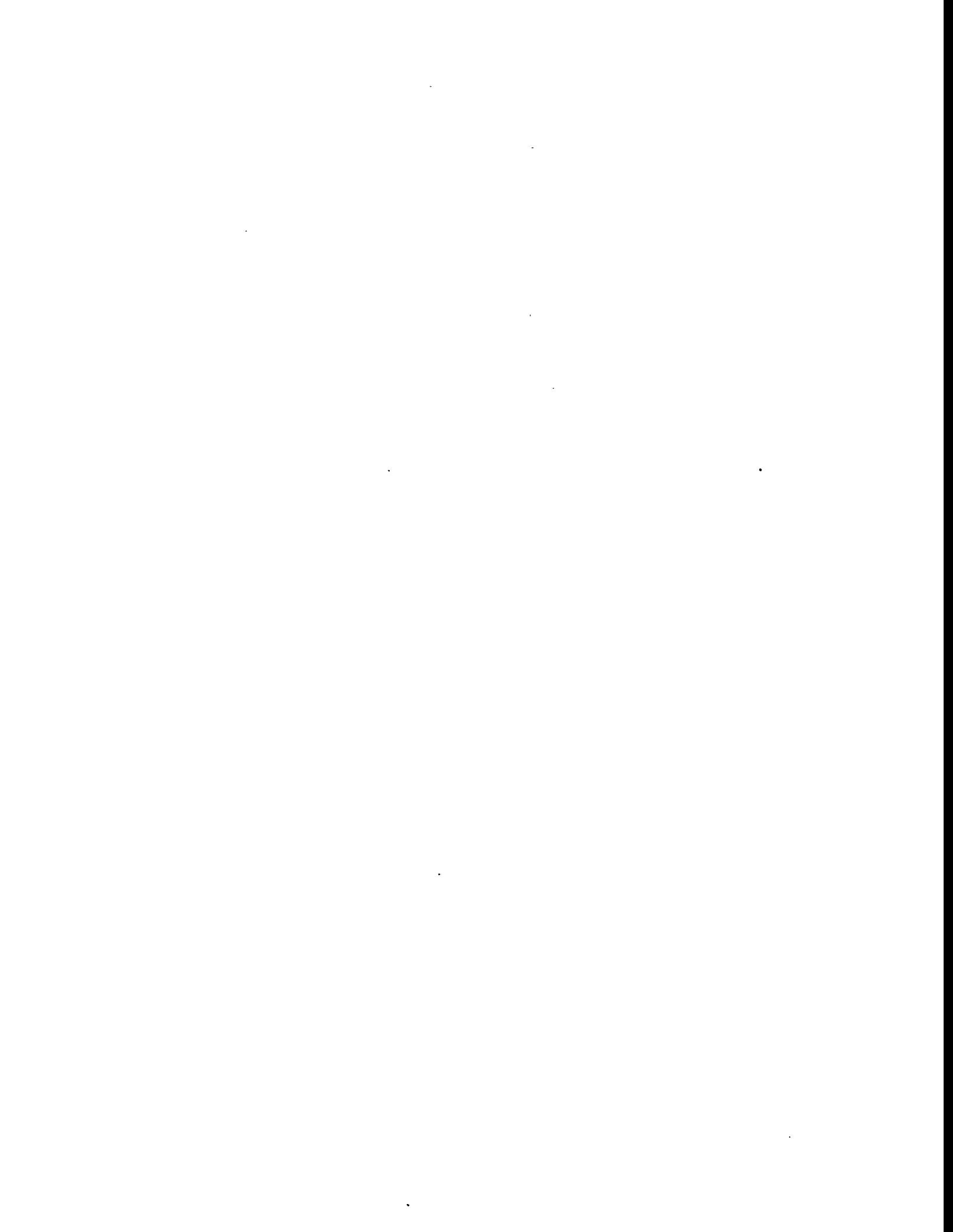
Emission Factors

Emission factors (for the plant) are typically expressed as pounds per trillion (10^{12}) Btu and were calculated according to the following equation:

$$\frac{\text{lb}_i}{10^{12} \text{ Btu}} = \frac{(Q_{\text{turbine}, i} + Q_{\text{incin}, i}) * Q_{\text{coal}, i}}{\text{Coal Heating Value}} * 10^{12}$$



APPENDIX F: SAMPLING DATA SUMMARY SHEETS



Plant Name Dow - LGTI
Location Raw Gas, 5a
Test Parameter Ammonia, Anions

Run No.	1	2	3	Average
Date	11-12-94	11-12-94	11-13-94	-
Time Start	1242	1510	839	-
Time Finish	1400	1636	1038	-
Operator	JWM	JDH	JWM	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.997	0.997	0.974	0.989
Barometric Pressure ("Hg)	30.06	30.06	30.00	30.04
Meter Volume (acf)	31.020	30.320	31.446	30.929
Average delta H (" H ₂ O)	3.00	2.00	3.50	2.83
Average DGM Temp (F)	73.0	74.0	78.0	75.0
Meter Volume (dscf @ 68 F)	31.006	30.176	30.398	30.527
Meter Volume (M3 @ 0 C)	0.818	0.796	0.802	0.805

Plant Name Dow - LGTI
Location Raw Gas, 5a
Test Parameter Cyanide

	1	2	3	Average
Run No.				
Date	11-12-94	11-12-94	11-13-94	-
Time Start	1215	1702	1045	-
Time Finish	1251	1737	1140	-
Operator	JWM	JDH	JWM	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.974	0.997	0.974	0.982
Barometric Pressure ("Hg)	30.06	30.06	30.00	30.04
Meter Volume (acf)	10.368	9.990	10.260	10.206
Average delta H (" H ₂ O)	3.00	2.00	2.50	2.50
Average DGM Temp (F)	74.0	73.0	83.0	76.7
Meter Volume (dscf @ 68 F)	10.105	9.961	9.803	9.956
Meter Volume (M3 @ 0 C)	0.267	0.263	0.259	0.263

Plant Name
Location
Test Parameter

Dow - LGTI
Raw Gas, 5a
Metals

Run No.	1	2	3	Average
Date	11-12-94	11-13-94	11-13-94	-
Time Start	1330	826	1352	-
Time Finish	1826	1237	906	-
Operator	JDH	JWM	JWM	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.974	0.997	0.974	0.982
Barometric Pressure ("Hg)	30.06	30	30.00	30.02
Meter Volume (acf)	102.209	103.194	102.044	102.482
Average delta H (" H ₂ O)	4.00	2.70	4.50	3.73
Average DGM Temp (F)	74.0	79.0	80.0	77.7
Condensed Water (g)	154.1	510.4	86.5	250.3
Meter Volume (dscf @ 68 F)	99.861	101.723	98.517	100.034
Meter Volume (M3 @ 0 C)	2.635	2.684	2.599	2.640
Flue Gas Moisture (%)	6.8	19.1	4.0	10.0

Plant Name
Location
Test Parameter

Dow - LGTI
Raw Gas, 5a
Metals, Charcoal

Run No.	1	2	3	Average
Date	11-12-94	11-13-94	11-13-94	-
Time Start	1600	850	1253	-
Time Finish	1745	1128	1628	-
Operator	JWM	JWM	JWM	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.000	1.000	1.000	1.000
Barometric Pressure ("Hg)	30.06	30.00	30.00	30.02
Meter Volume (L)	100.770	103.775	103.580	102.708
Average delta H (" H ₂ O)	0.00	0.00	0.00	0.00
Average DGM Temp (F)	73.0	75.0	73.0	73.7
Meter Volume (L @ 0 C)	93.454	95.689	95.868	95.004
Meter Volume (M ³ @ 0 C)	0.09345	0.09569	0.09587	0.0950

Plant Name Dow - LGTI
Location Raw Gas, 5b
Test Parameter Ammonia, Anions

Run No.	1	2	3	Average
Date	11-12-94	11-13-94	11-13-94	-
Time Start	1156	828	1152	-
Time Finish	1625	1029	1416	-
Operator	JPL	JPL	JPL	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.981	0.959	0.959	0.966
Barometric Pressure ("Hg)	30.06	30.00	30.00	30.02
Meter Volume (acf)	27.655	30.601	31.247	29.834
Average delta H (" H ₂ O)	3.00	2.00	1.50	2.17
Average DGM Temp (F)	80.0	84.0	87.0	83.7
Condensed Water (g)	6.9	21.2	17.5	15.2
Meter Volume (dscf @ 68 F)	26.846	28.699	29.109	28.218
Meter Volume (M3 @ 0 C)	0.708	0.757	0.768	0.745
Flue Gas Moisture (%)	1.2	3.4	2.8	2.4

Plant Name Dow - LGTI
Location Raw Gas, 5b
Test Parameter Cyanide

	1	2	3	Average
Run No.				
Date	11-12-94	11-13-94	11-13-94	-
Time Start	1604	805	1035	-
Time Finish	1736	920	1143	-
Operator	JPL	JPL	JPL	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.992	0.981	0.959	0.977
Barometric Pressure ("Hg)	30.06	30.00	30.00	30.02
Meter Volume (acf)	10.115	10.601	11.756	10.824
Average delta H (" H ₂ O)	2.00	1.00	1.50	1.50
Average DGM Temp (F)	69.0	75.0	88.0	77.3
Condensed Water (g)	6.5	8.2	4.2	6.3
Meter Volume (dscf @ 68 F)	10.111	10.316	10.932	10.453
Meter Volume (M3 @ 0 C)	0.267	0.272	0.288	0.276
Flue Gas Moisture (%)	2.9	3.6	1.8	2.8

Plant Name
Location
Test Parameter

Dow - LGTI
Raw Gas, 5b
Metals

Run No.	1	2	3	Average
Date	11-12-94	11-13-94	11-13-94	-
Time Start	1741	1357	1511	-
Time Finish	1352	816	1009	-
Operator	JPL	JPL	JPL	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.992	0.992	0.959	0.981
Barometric Pressure ("Hg)	30.06	30.00	30.00	30.02
Meter Volume (acf)	89.892	96.009	88.028	91.310
Average delta H (" H ₂ O)	1.50	2.00	2.60	2.03
Average DGM Temp (F)	75.0	83.0	95.0	84.3
Condensed Water (g)	34.5	69.1	62.7	55.4
Meter Volume (dscf @ 68 F)	88.742	93.313	81.040	87.698
Meter Volume (M3 @ 0 C)	2.342	2.462	2.138	2.314
Flue Gas Moisture (%)	1.8	3.4	3.5	2.9

Plant Name Dow - LGTI
Location Raw Gas, 5b
Test Parameter Metals, Charcoal

Run No.	1	2	3	Average
Date	11-13-94	11-13-94	11-13-94	-
Time Start	935	1319	1622	-
Time Finish	1247	1602	926	-
Operator	JPL	JPL	JPL	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.000	1.000	1.000	1.000
Barometric Pressure ("Hg)	30.00	30.00	30.00	30.00
Meter Volume (L)	100.484	116.089	100.520	105.698
Average delta H (" H ₂ O)	0.70	0.50	0.50	0.57
Average DGM Temp (F)	81.0	83.0	85.0	83.0
Meter Volume (L @ 0 C)	91.784	105.596	91.099	96.160
Meter Volume (M ³ @ 0 C)	0.092	0.106	0.091	0.096

Plant Name DOW - LGTI
Location Sour Syngas - #11
Test Parameter Ammonia, anions

Run No.	3	5	6	Average
Date	11-07-94	11-11-94	11-11-94	-
Time Start	0821	1035	1207	-
Time Finish	1042	1330	1424	-
Operator	JPL	JPL	JPL	-
Dry Gas Meter Calibration (Yd)	1.018	0.998	1.032	1.016
Barometric Pressure ("Hg)	30.00	30.04	30.04	30.03
Meter Volume (acf)	32.075	30.686	30.497	31.086
Average delta H (" H ₂ O)	5.00	2.50	3.70	3.73
Average Stack Temperature (F)	68	67	72	69
Average DGM Temp (F)	80.6	70.6	65.0	72.1
Test Duration (minutes)	141.0	175.0	137.0	151.0
Meter Volume (dscf @ 68 F)	32.368	30.782	32.068	31.739
Meter Volume (M3 @ 0 C)	0.8541	0.8122	0.8461	0.837

Plant Name
Location
Test Parameter

Dow - LGTI
Sour Syngas - #11
Cyanide

Run No.	3	5	6	Average
Date	11-07-94	11-10-94	11-11-94	-
Time Start	0814	0945	0850	-
Time Finish	0915	1030	0940	-
Operator	JPL	JPL	JPL	-
Dry Gas Meter Calibration (Yd)	0.997	0.998	1.032	1.009
Barometric Pressure ("Hg)	30.00	30.02	30.04	30.02
Static Pressure (PSI)	375	375	375	375
Meter Volume (acf)	10.608	10.878	10.149	10.545
Average delta H (" H ₂ O)	5.00	3.83	3.20	4.01
Average DGM Temp (F)	72.6	71.2	60.0	67.9
Test Duration (minutes)	61.0	45.0	50.0	52.0
Meter Volume (dscf @ 68 F)	10.641	10.929	10.761	10.777
Meter Volume (M3 @ 0 C)	0.2808	0.2884	0.2839	0.2844

Plant Name Dow - LGTI
Location Sour Syngas - #11
Test Parameter Metals

Run No.	3	5	6	Average
Date	11-07-94	11-10-94	11-11-94	-
Time Start	0920	0921	0746	-
Time Finish	1522	1321	1314	-
Operator	JPL	JPL	JPL	-
Dry Gas Meter Calibration (Yd)	0.997	0.959	0.998	0.985
Barometric Pressure ("Hg)	30.00	30.02	30.04	30.02
Static Pressure (PSI)	375	375	375	375
Meter Volume (acf)	100.218	100.742	100.982	100.647
Average delta H (" H ₂ O)	5.00	6.75	4.90	5.55
Average Stack Temperature (F)	70	67	71	69
Average DGM Temp (F)	88.0	74.4	65.0	75.8
Test Duration (minutes)	362.0	240.0	314.0	305.3
Meter Volume (dscf @ 68 F)	97.706	97.361	102.983	99.350
Meter Volume (M3 @ 0 C)	2.5781	2.5690	2.7173	2.621

Plant Name
Location
Test Parameter

Dow - LGTI
Sour Syngas - #11
Metals, Charcoal

Run No.	1	2	3	Average
Date	11-3-94	11-4-94	11-7-94	-
Time Start	1437	1149	1355	-
Time Finish	1730	1354	1643	-
Operator	JPL	JPL	JPL	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.986	0.986	0.986	0.986
Barometric Pressure ("Hg)	30.06	29.94	30.00	30.00
Meter Volume (L)	105.040	105.560	100.408	103.669
Average delta H (" H ₂ O)	0.03	0.05	5.00	1.69
Average DGM Temp (F)	91.3	84.1	78.4	84.6
Meter Volume (L @ 0 C)	92.869	94.190	91.824	92.961
Meter Volume (M ³ @ 0 C)	0.09287	0.09419	0.09182	0.0930

Plant Name
Location
Test Parameter

Dow - LGTI
Sour Syngas - #11
Aldehydes

Run No.	3	5	6	Average
Date	11-07-94	11-11-94	11-11-94	-
Time Start	1530	0953	1443	-
Time Finish	1737	1200	1708	-
Operator	JPL	JPL	JPL	-
Dry Gas Meter Calibration (Yd)	0.997	1.032	1.032	1.020
Barometric Pressure ("Hg)	30.00	30.04	30.04	30.03
Static Pressure (PSI)	375	375	375	375
Meter Volume (acf)	29.751	30.300	30.284	30.112
Average delta H (" H ₂ O)	3.39	3.80	3.40	3.53
Average Stack Temperature (F)	72	70	72	71
Average DGM Temp (F)	78.9	63.0	65.0	69.0
Test Duration (minutes)	127.0	127.0	145.0	133.0
Meter Volume (dscf @ 68 F)	29.379	31.990	31.820	31.063
Meter Volume (M3 @ 0 C)	0.7752	0.8441	0.8396	0.8196

Plant Name
Location
Test Parameter

Dow - LGTI
Sour Syngas - #11
Semi-Volatiles

Run No.	3	5	6	Average
Date	11-07-94	11-10-94	11-11-94	-
Time Start	1052	1349	1119	-
Time Finish	1737	1022	1730	-
Operator	JPL	JPL	JPL	-
Dry Gas Meter Calibration (Yd)	1.018	0.959	0.959	0.979
Barometric Pressure ("Hg)	30.00	30.02	30.04	30.02
Static Pressure (PSI)	375	375	375	375
Meter Volume (acf)	91.078	95.387	100.442	95.636
Average delta H (" H ₂ O)	5.00	2.90	3.70	3.87
Average Stack Temperature (F)	71	68	71	70
Average DGM Temp (F)	83.5	71.0	73.0	75.8
Test Duration (minutes)	405.0	453.0	371.0	409.7
Meter Volume (dscf @ 68 F)	91.421	91.912	96.671	93.334
Meter Volume (M3 @ 0 C)	2.4123	2.4252	2.5508	2.463

Plant Name Dow - LGTI
Location Sweet Syngas - #12
Test Parameter Ammonia, Anions

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	1548	1458	0952	-
Time Finish	1719	1631	1135	-
Operator	RMM	RMM	RMM	-
Dry Gas Meter Calibration (Yd)	0.981	0.974	0.974	0.976
Barometric Pressure ("Hg)	30.06	30.09	29.95	30.03
Meter Volume (acf)	31.505	30.812	31.177	31.165
Average delta H (" H ₂ O)	7.00	7.30	6.65	6.98
Average DGM Temp (F)	86.7	83.0	71.1	80.3
Test Duration (minutes)	91.0	93.0	103.0	95.7
Condensed Water (g)	2.7	7.3	8.6	6.2
Meter Volume (dscf)	30.502	29.871	30.714	30.363
Meter Volume (M3 @ 0 C)	0.805	0.788	0.810	0.801
Flue Gas Moisture (%)	0.4	1.1	1.3	1.0

Plant Name
Location
Test Parameter

Dow - LGTI
Sweet Syngas - #12
Cyanide

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	1640	1515	1418	-
Time Finish	1723	1618	1510	-
Operator	RMM	RMM	RMM	-
Dry Gas Meter Calibration (Yd)	0.974	0.981	0.974	0.976
Barometric Pressure ("Hg)	30.06	29.94	29.95	29.98
Meter Volume (acf)	11.360	10.535	11.430	11.108
Average delta H (" H ₂ O)	5.50	3.50	3.30	4.10
Average DGM Temp (F)	82.0	87.5	85.3	84.9
Test Duration (minutes)	43.0	58.0	58.0	53.0
Meter Volume (dscf @ 68 F)	10.975	10.059	10.878	10.637
Meter Volume (M3 @ 0 C)	0.290	0.265	0.287	0.281

Plant Name Dow - LGTI
Location Sweet Syngas - #12
Test Parameter Metals

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	0900	0822	0820	-
Time Finish	1400	1302	1412	-
Operator	RMM	RMM	RMM	-
Dry Gas Meter Calibration (Yd)	0.981	0.981	0.981	0.981
Barometric Pressure ("Hg)	30.06	30.09	29.95	30.03
Meter Volume (acf)	104.111	102.977	106.238	104.442
Average delta H (" H ₂ O)	6.50	7.19	7.00	6.90
Average DGM Temp (F)	86.0	83.0	70.6	79.9
Test Duration (minutes)	300.0	280.0	352.0	310.7
Condensed Water (g)	8.8	14.9	6.7	10.1
Meter Volume (dscf @ 68 F)	100.806	100.533	105.597	102.312
Meter Volume (M3 @ 0 C)	2.660	2.653	2.786	2.700
Flue Gas Moisture (%)	0.4	0.7	0.3	0.5

Plant Name
Location
Test Parameter

Dow - LGTI
Sweet Syngas - #12
Metals, Charcoal

Run No.	1	2	3	Average
Date	11-3-94	11-4-94	11-7-94	-
Time Start	1418	1057	1204	-
Time Finish	1644	1328	1430	-
Operator				-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.016	1.016	1.016	1.016
Barometric Pressure ("Hg)	30.06	30.06	29.95	30.02
Meter Volume (L)	101.470	102.640	105.990	103.367
Average delta H (" H ₂ O)	0.00	1.90	1.80	1.23
Average DGM Temp (F)	81.0	82.3	74.9	79.4
Meter Volume (L @ 0 C)	94.195	95.494	99.587	96.425
Meter Volume (M ³ @ 0 C)	0.09419	0.09549	0.09959	0.0964

Plant Name
Location
Test Parameter

Dow - LGTI
Sweet Syngas - #12
Hydrogen Sulfide, M-11

Run No.	1	2	3	Average
Date	11-11-94	11-11-94	11-11-94	-
Time Start	1110	1440	1701	-
Time Finish	1153	1547	1730	-
Operator				-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.000	1.000	1.000	1.000
Barometric Pressure ("Hg)	30.04	30.04	30.04	30.04
Meter Volume (L)	24.670	23.432	20.520	22.874
Average delta H (" H ₂ O)	0.50	0.50	0.50	0.50
Average DGM Temp (F)	62.5	60.0	63.0	61.8
Meter Volume (L @ 0 C)	23.352	22.286	19.405	21.681
Meter Volume (M3 @ 0 C)	0.02335	0.02229	0.01940	0.0217

Plant Name
Location
Test Parameter

Dow - LGTI
Sweet Syngas - #12
Aldehydes

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	1407	1314	1143	-
Time Finish	1531	1450	1324	-
Operator	RMM	RMM	RMM	-
Dry Gas Meter Calibration (Yd)	0.981	0.981	0.974	0.979
Barometric Pressure ("Hg)	30.06	30.09	29.95	30.03
Meter Volume (acf)	30.567	34.579	31.051	32.066
Average delta H (" H ₂ O)	7.10	7.50	6.70	7.10
Average DGM Temp (F)	88.9	87.6	78.0	84.8
Test Duration (minutes)	84.0	96.0	101.0	93.7
Meter Volume (dscf @ 68 F)	29.483	33.497	30.200	31.060
Meter Volume (M3 @ 0 C)	0.778	0.884	0.797	0.820

Plant Name
Location
Test Parameter

Dow - LGTI
Sweet Syngas - #12
Semivolatile Organics

Run No.	3	5	6	Average
Date	11-10-94	11-11-94	11-12-94	-
Time Start	1356	1043	1709	-
Time Finish	0936	1628	1153	-
Operator	WAW	WAW	WAW	-
Dry Gas Meter Calibration (Yd)	1.018	1.018	1.018	1.018
Barometric Pressure ("Hg)	30.02	30.04	30.06	30.04
Meter Volume (acf)	110.082	112.920	105.600	109.534
Average delta H (" H ₂ O)	4.94	5.38	4.00	4.77
Average DGM Temp (F)	62.7	63.4	65.0	63.7
Test Duration (minutes)	386.0	341.0	324.0	350.3
Meter Volume (dscf @ 68 F)	114.957	117.952	109.684	114.198
Meter Volume (M3 @ 0 C)	3.033	3.112	2.894	3.013

Plant Name Dow - LGTI
Location Acid Gas - #14
Test Parameter Anions/ Ammonia

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	1240	1307	1305	-
Time Finish	1326	1340	1330	-
Operator	JLM	JLM	JLM	-
Initial Leak Rate	0.000	0.000	0.000	-
Final Leak Rate		0.000		-
Dry Gas Meter Calibration (Yd)	0.992	0.992	0.992	0.992
Barometric Pressure ("Hg)	29.97	29.94	30.00	29.97
Meter Volume (acf)	11.750	13.402	10.923	12.025
Average delta H (" H ₂ O)	5.00	9.00	8.00	7.33
Average DGM Temp (F)	81.0	79.0	74.0	78.0
Test Duration (minutes)	46.0	33.0	25.0	34.7
Condensed Water (g)	7.3	13.7	12.6	11.2
Meter Volume (dscf @ 68 F)	11.535	13.320	10.953	11.936
Meter Volume (M3 @ 0 C)	0.304	0.351	0.289	0.315
Flue Gas Moisture (%)	2.9	4.6	5.2	4.2

Plant Name Dow - LGTI
Location Acid Gas - #14
Test Parameter Cyanide

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	1750	1307	1305	-
Time Finish	1800	1325	1315	-
Operator	JLM	JLM	JLM	-
Initial Leak Rate	0	0	0	-
Final Leak Rate	0	0	0	-
Dry Gas Meter Calibration (Yd)	0.998	0.998	0.998	0.998
Barometric Pressure ("Hg)	29.97	29.94	30.00	29.97
Meter Volume (acf)	2.350	2.073	2.240	2.221
Average delta H (" H ₂ O)	2.00	2.00	2.00	2.00
Average DGM Temp (F)	79.0	88.5	83.5	83.7
Test Duration (minutes)	10.0	18.0	10.0	12.7
Meter Volume (dscf @ 68 F)	2.313	2.003	2.188	2.168
Meter Volume (M3 @ 0 C)	0.0610	0.0528	0.0577	0.0572
Flue Gas Moisture (%)	3.5	3.4	3.6	3.5

Plant Name
Location
Test Parameter

Dow - LGTI
Acid Gas - #14
Metals - Impinger

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	0720	0746	0810	-
Time Finish	1145	1210	1235	-
Operator	JLM	JLM	JLM	-
Initial Leak Rate	0.002	0.000	0.000	-
Final Leak Rate	0.000	0.000		-
Dry Gas Meter Calibration (Yd)	0.998	0.998	0.998	0.998
Barometric Pressure ("Hg)	29.97	29.94	30.00	29.97
Meter Volume (acf)	104.638	102.703	101.423	102.921
Average delta H (" H ₂ O)	10.00	9.00	10.00	9.67
Average DGM Temp (F)	82.5	83.0	74.6	80.0
Test Duration (minutes)	265.0	264.0	255.0	261.3
Condensed Water (g)	80.7	80.0	76.8	79.2
Meter Volume (dscf @ 68 F)	104.305	101.937	102.689	102.977
Meter Volume (M3 @ 0 C)	2.752	2.690	2.710	2.717
Flue Gas Moisture (%)	3.5	3.6	3.4	3.5

Plant Name Dow - LGTI
Location Acid Gas
Test Parameter Metals - Charcoal Tubes

Run No.	1	2	3	Average
Date	11-3-94	11-4-94	11-7-94	-
Time Start	1446	1325	1350	-
Time Finish	1545	1450	1610	-
Operator	JWM	JWM	JWM	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.000	1.000	1.000	1.000
Barometric Pressure ("Hg)	29.97	29.94	30.00	29.97
Meter Volume (L)	66.870	54.070	52.000	57.647
Average delta H (" H ₂ O)	0.00	0.00	0.00	0.00
Average DGM Temp (F)	84.0	82.0	78.5	81.5
Meter Volume (L @ 0 C)	60.579	49.115	47.637	52.444
Meter Volume (M3 @ 0 C)	0.06058	0.04911	0.04764	0.0524

Plant Name Dow - LGTI
Location Acid Gas - #14
Test Parameter Semivols

Run No.	3	5	6	Average
Date	11-07-94	11-10-94	11-10-94	-
Time Start	0810	1018	1412	-
Time Finish	1230	1245	1642	-
Operator	JLM	JLM	JLM	-
Initial Leak Rate	0.000	0.001	0	-
Final Leak Rate		0.001	0	-
Dry Gas Meter Calibration (Yd)	0.992	0.992	0.992	0.992
Barometric Pressure ("Hg)	30.00	30.02	30.02	30.01
Meter Volume (acf)	104.405	101.262	106.645	104.104
Average delta H (" H ₂ O)	10.00	9.50	4.00	7.8
Average DGM Temp (F)	66.0	69.6	70.1	68.6
Test Duration (minutes)	260.0	147.0	150.0	185.667
Meter Volume (dscf @ 68 F)	106.796	102.815	106.761	105.458
Meter Volume (M3 @ 0 C)	2.818	2.713	2.817	2.783
Flue Gas Moisture (%)	4.2	4.2	4.2	4.2

Plant Name Dow - LGTI
Location Sour Gas - #22
Test Parameter Ammonia

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-09-94	-
Time Start	1613	0749	1026	-
Time Finish	1619	0754	1030	-
Operator	JPL	JPL	JPL	-
Dry Gas Meter Calibration (Yd)	0.973	0.973	0.973	0.973
Barometric Pressure ("Hg)	29.85	30.00	30.00	29.95
Meter Volume (acf)	1.069	1.142	1.146	1.119
Average delta H (" H ₂ O)	0.00	0.00	0.00	0.00
Average DGM Temp (F)	79.0	73.0	73.5	75.2
Test Duration (minutes)	6.0	5.0	4.0	5.0
Condensed Water (g)	41.2	30.3	40.2	37.2
Meter Volume (dscf @ 68 F)	1.484	1.497	1.567	1.516
Meter Volume (M3 @ 0 C)	0.0391	0.0395	0.0413	0.0400
Flue Gas Moisture (%)	56.7	48.9	54.8	53.5

Note, total volume adjusted to account for volume of ammonia that was removed

Plant Name Dow - LGTI
Location Sour Gas - #22
Test Parameter Cyanide

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-09-94	-
Time Start	1634	0826	1104	-
Time Finish	1642	0833	1110	-
Operator	JPL	JPL	JPL	-
Dry Gas Meter Calibration (Yd)	0.973	0.973	0.973	0.973
Barometric Pressure ("Hg)	29.85	30.00	30.00	29.95
Meter Volume (acf)	2.315	2.199	1.550	2.021
Average delta H (" H ₂ O)	0.00	0.00	0.00	0.00
Average DGM Temp (F)	79.5	73.0	76.0	76.2
Test Duration (minutes)	8.0	7.0	6.0	7.0
Meter Volume (dscf @ 68 F)	2.199	2.125	1.490	1.938
Meter Volume (M3 @ 0 C)	0.0580	0.0561	0.0393	0.0511

Plant Name
Location
Test Parameter

Dow - LGTI
Tail Gas - #15
Ammonia

Run No.	1-1	1-2	1-3	2-1	2-2	2-3	Average
Date	11-03-94	11-04-94	11-07-94	11-08-94	11-09-94	11-09-94	-
Time Start	1548	1526	1144	1334	0912	1248	-
Time Finish	1710	1700	1315	1500	1040	1413	-
Operator	JWM	JWM	JWM	JWM	JWM	JWM	-
Initial Leak Rate	0.004	0.008	0.018	0.010	0.003	0.020	-
Final Leak Rate	0.002	0.015	0.016	0.006	0.001	0.004	-
Dry Gas Meter Calibration (Yd)	0.964	1.032	1.032	1.032	1.032	1.032	1.021
Barometric Pressure ("Hg)	30.06	29.94	30.00	29.85	30.00	30.00	29.98
Meter Volume (acf)	24.590	39.881	32.030	31.778	30.475	31.354	31.685
Average delta H (° H2O)	5.30	8.00	7.13	8.13	7.33	7.67	7.26
Average DGM Temp (F)	87.0	88.0	80.8	87.0	84.3	93.9	86.8
Test Duration (minutes)	82.0	94.0	91.0	86.0	88.0	85.0	87.7
Meter Volume (dscf @ 68 F)	23.286	40.461	32.927	32.214	31.142	31.507	31.923
Meter Volume (M3 @ 0 C)	0.6144	1.0676	0.8688	0.8500	0.8217	0.8314	0.842

Plant Name
Location
Test Parameter

Dow - LGTI
Tail Gas - #15
Cyanide

Run No.	1-1	1-2	1-3	2-1	2-2	2-3	Average
Date	11-03-94	11-04-94	11-07-94	11-08-94	11-09-94	11-09-94	-
Time Start	1812	1643	1331	1506	0921	1106	-
Time Finish	1844	1722	1407	1543	0956	1142	-
Operator	JWM	JWM	JWM	JWM	JWM	JWM	-
Initial Leak Rate	0.000	0.004	0.007	0.001	0.004	0.002	-
Final Leak Rate	0.005	0.002	0.004	0.001	0.001	0.000	-
Dry Gas Meter Calibration (Yd)	0.964	0.964	1.032	0.964	0.964	0.964	0.987
Barometric Pressure ("Hg)	30.06	29.94	30.00	29.85	30.00	30.00	30.00
Meter Volume (acf)	4.448	10.314	10.169	10.284	11.021	10.106	8.310
Average delta H (" H ₂ O)	2.50	4.40	5.50	7.00	5.00	6.00	4.13
Average DGM Temp (F)	79.0	85.0	85.3	83.5	83.7	86.3	83.1
Test Duration (minutes)	32.0	39.0	36.0	37.0	35.0	36.0	35.7
Meter Volume (dscf @ 68 F)	4.246	9.743	10.327	9.774	10.472	9.580	8.105
Meter Volume (M3 @ 0 C)	0.1120	0.2571	0.2725	0.2579	0.2763	0.2528	0.214
Flue Gas Moisture (%)	6.7	6.7	6.7	6.7	6.7	6.7	6.7

Plant Name Dow - LGTI
Location Tail Gas - #15
Test Parameter Metals

Run No.	1	2	11-07-94	Average
Date	11-03-94	11-04-94		-
Time Start	0840	0946	810	-
Time Finish	1520	1500	1336	-
Operator	JWM	JWM	JWM	-
Initial Leak Rate	0.015	0.011	0.002	-
Final Leak Rate	0.022	0.016	0.004	-
Dry Gas Meter Calibration (Yd)	0.964	1.032	0.964	0.987
Barometric Pressure ("Hg)	30.06	29.94	30.00	30.00
Meter Volume (acf)	104.279	103.196	102.197	103.224
Average delta H (" H ₂ O)	5.00	7.06	6.04	6.03
Average DGM Temp (F)	86.0	85.7	74.6	82.1
Test Duration (minutes)	418.0	314.0	326.0	352.7
Condensed Water (g)	222.7	110.3	128.4	153.8
Meter Volume (dscf @ 68 F)	98.860	104.897	99.006	100.921
Meter Volume (M3 @ 0 C)	2.6086	2.7678	2.6124	2.6629
Flue Gas Moisture (%)	9.6	4.7	5.8	6.7

Plant Name
Location
Test Parameter

Dow - LGTI
Tail gas - #15
Semivolatiles

Run No.	1-1	1-2	1-3	2-1	2-2	2-3	Average
Date	11-03-94	11-04-94	11-07-94	11-08-94	11-10-94	11-10-94	-
Time Start	0840	1019	0853	1130	0912	1219	-
Time Finish	1355	1625	1113	1425	1130	1439	-
Operator	JWM	JWM	JWM	JWM	JWM	JWM	-
Initial Leak Rate	0.007	0.005	0.002	0.003	0.005	0.004	-
Final Leak Rate	0.017	0.004	0.018	0.006	0.007	0.004	-
Dry Gas Meter Calibration (Yd)	1.032	0.964	1.032	0.964	1.032	1.032	1.009
Barometric Pressure ("Hg)	30.06	29.94	30.00	29.85	30.02	30.02	29.98
Meter Volume (acf)	103.488	103.775	57.425	57.542	50.659	52.023	70.819
Average delta H (" H ₂ O)	7.00	5.42	8.25	7.25	7.67	6.00	6.93
Average DGM Temp (F)	85.0	87.1	71.1	85.8	67.7	66.2	77.1
Test Duration (minutes)	253.0	366.0	140.0	175.0	138.0	140.0	202.0
Meter Volume (dscf @ 68 F)	105.732	97.901	60.265	54.489	53.474	54.849	71.118
Meter Volume (M3 @ 0 C)	2.7899	2.5832	1.5902	1.4378	1.4110	1.4473	1.877
Flue Gas Moisture (%)	6.7	6.7	6.7	6.7	6.7	6.7	6.7

Plant Name Dow - LGTI
Location Combustion Air, K250
Test Parameter Ammonia - Anions

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-09-94	-
Time Start	0944	0830	1358	-
Time Finish	1126	1047	1720	-
Operator	RMM	JWM	JPL	-
Dry Gas Meter Calibration (Yd)	0.981	0.981	0.981	0.981
Barometric Pressure ("Hg)	29.85	30	30	29.95
Meter Volume (acf)	30.705	32.304	27.199	30.069
Average delta H (" H ₂ O)	6.63	5.29	2.70	4.87
Average DGM Temp (F)	80.5	84.9	90.2	85.2
Test Duration (minutes)	102.0	147.0	202.0	150.3
Condensed Water (g)	81.4	96.7	11.5	63.2
Meter Volume (dscf @ 68 F)	29.836	31.189	25.844	28.956
Meter Volume (M3 @ 0 C)	0.787	0.823	0.682	0.764
Flue Gas Moisture (%)	11.4	12.8	2.1	8.7

Plant Name Dow - LGTI
Location Combustion Air, K250
Test Parameter Cyanide

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-10-94	-
Time Start	1132	1054	0735	-
Time Finish	1255	1349	1055	-
Operator	RMM	JPL	JWM	-
Dry Gas Meter Calibration (Yd)	0.981	0.981	0.981	0.981
Barometric Pressure ("Hg)	29.85	30	30.02	29.96
Meter Volume (acf)	22.503	20.246	31.942	24.897
Average delta H (" H ₂ O)	5.90	2.17	3.19	3.75
Average DGM Temp (F)	87.6	88.7	74.5	83.6
Test Duration (minutes)	83.0	175.0	200.0	152.7
Meter Volume (dscf)	21.544	19.266	31.300	24.037
Meter Volume (M3 @ 0 C)	0.568	0.508	0.826	0.634

Plant Name
Location
Test Parameter

Dow - LGTI
Natural Gas
Metals

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-10-94	-
Time Start	0826	0817	1415	-
Time Finish	1250	1302	0945	-
Operator	RMM	JWM	JPL	-
Dry Gas Meter Calibration (Yd)	0.974	0.974	0.974	0.974
Barometric Pressure ("Hg)	29.85	30.00	30.02	29.96
Meter Volume (acf)	100.935	100.390	101.628	100.984
Average delta H (" H ₂ O)	6.60	5.55	4.57	5.57
Average DGM Temp (F)	77.3	82.4	82.7	80.8
Test Duration (minutes)	264	285	323	291
Condensed Water (g)	2.3	5.4	2.3	3.3
Meter Volume (dscf @ 68 F)	97.950	96.735	97.712	97.465
Meter Volume (M3 @ 0 C)	2.5845	2.5525	2.5782	2.5718
Flue Gas Moisture (%)	0.1	0.3	0.1	0.2
Molecular Weight (Wet) (g/g-mole)	16.00	16.00	16.00	16.00

Plant Name
Location
Test Parameter

Dow - LGTI
Incinerator Stack, 16
Anions / Ammonia / Cyanide

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-09-94	-
Time Start	0845	0736	1156	-
Time Finish	1025	0926	1338	-
Operator	MAB	MAB	MAB/TJB	-
Initial Leak Rate	0.010	0.000	0.010	-
Final Leak Rate	0.008	0.008	0.012	-
Stack Diameter (ft)	2.0	2.0	2.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	0.974	1.001	0.974	0.983
Nozzle Diameter (inches)	0.1500	0.1500	0.1500	-
Barometric Pressure ("Hg)	30.12	30.00	30.00	30.04
Static Pressure ("H2O)	4.5	4.5	5.3	4.8
Meter Volume (acf)	53.870	55.776	56.206	55.284
Average square root of delta p	2.1213	1.9748	2.0976	2.0646
Average delta H (" H2O)	1.20	1.04	1.15	1.13
Average Stack Temperature (F)	515	519	524	519
Average DGM Temp (F)	80.7	86.4	99.8	88.9
Test Duration (minutes)	100.0	110.0	102.0	104.0
Condensed Water (g)	204.4	235.7	204.1	214.7
% CO2	38.5	38.5	38.5	38.5
% O2	3.5	3.5	3.5	3.5
% N2	58.0	58.0	58.0	58.0
Meter Volume (dscf @ 68 F)	51.731	54.238	51.920	52.629
Meter Volume (M3 @ 0 C)	1.3650	1.4311	1.3700	1.3887
Flue Gas Moisture (%)	15.7	17.0	15.7	16.1
Molecular Weight (Wet) (g/g-mole)	31.74	31.53	31.75	31.67
Absolute Stack Pressure (" Hg)	30.45	30.33	30.39	30.39
Absolute Stack Temperature (R)	975	979	984	979
Average Gas Velocity (f/sec)	152.99	143.49	152.15	149.55
Avg Flow Rate (acf m)	28,838	27,048	28,680	28,189
Avg Flow Rate (dscfm)	13,393	12,266	13,174	12,944
Isokinetic Sampling Rate (%)	98.90	102.93	98.93	100.25

Plant Name
Location
Test Parameter

Dow - LGTI
Incinerator Stack, 16
Loading, Metals

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-10-94	-
Time Start	0844	0738	0731	-
Time Finish	1234	1128	1114	-
Operator	TJB	TJB/MAB	DJV/MAB	-
Initial Leak Rate	0.010	0.004	0.004	-
Final Leak Rate	0.005	0.005	0.008	-
Stack Diameter (ft)	2.0	2.0	2.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	1.001	0.974	0.974	0.983
Nozzle Diameter (inches)	0.1500	0.1500	0.1500	-
Barometric Pressure ("Hg)	30.16	30.00	30.02	30.06
Static Pressure ("H2O)	4.5	5.3	4.6	4.8
Meter Volume (acf)	107.084	111.149	108.971	109.068
Average square root of delta p	1.8645	1.9645	1.9964	1.9418
Average delta H (" H2O)	0.93	1.02	1.04	0.99
Average Stack Temperature (F)	518	518	514	517
Average DGM Temp (F)	87.6	91.2	76.2	85.0
Test Duration (minutes)	216.0	216.0	216.0	216.0
Condensed Water (g)	405.6	411.5	412.0	409.7
Filter Weight Gain (g)	0.2354	0.1585	0.1964	0.1968
PNR Weight Gain (g)	0.1769	0.1980	0.2029	0.1926
% CO2	38.5	38.5	38.5	38.5
% O2	3.5	3.5	3.5	3.5
% N2	58.0	58.0	58.0	58.0
Meter Volume (dscf @ 68 F)	104.423	104.239	105.128	104.597
Meter Volume (M3 @ 0 C)	2.7553	2.7505	2.7739	2.7599
Flue Gas Moisture (%)	15.5	15.7	15.6	15.6
Molecular Weight (Wet) (g/g-mole)	31.77	31.74	31.76	31.76
Absolute Stack Pressure (" Hg)	30.49	30.39	30.36	30.41
Absolute Stack Temperature (R)	978	978	974	977
Average Gas Velocity (f/sec)	134.55	142.03	144.13	140.24
Avg Flow Rate (acf m)	25,362	26,773	27,168	26,435
Avg Flow Rate (dscfm)	11,782	12,373	12,601	12,252
Isokinetic Sampling Rate (%)	105.06	99.86	98.90	101.27
Particulate Concentration (gr/dscf)	0.0609	0.0528	0.0586	0.0574
Particulate Concentration (mg/M3)	149.64	129.61	143.95	141.07
Particulate Emission (lbs/hour)	6.15	5.60	6.33	6.03

Plant Name
Location
Test Parameter

Dow - LGTI
Incinerator Stack, 16
PM-10

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-10-94	-
Time Start	1222	1115	0740	-
Time Finish	1615	1522	1417	-
Operator	TJB/MAB	MAB/TJB	DJV/MAB	-
Initial Leak Rate	0.015	0.004	0.005	-
Final Leak Rate	ND	ND	ND	-
Stack Diameter (ft)	2.0	2.0	2.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	0.974	1.001	1.001	0.992
Nozzle Diameter (inches)	0.1370	0.1370	0.1370	-
Barometric Pressure ("Hg)	30.12	30	30.02	30.05
Static Pressure ("H2O)	4.5	5.3	4.6	4.8
Meter Volume (acf)	101.131	103.232	108.237	104.200
Average square root of delta p	1.9493	1.9748	1.9748	1.9663
Average delta H (" H2O)	0.71	0.68	0.68	0.69
Average Stack Temperature (F)	517	518	515	517
Average DGM Temp (F)	97.7	101.0	71.2	90.0
Test Duration (minutes)	233.0	247.0	256.0	245.3
Condensed Water (g)	365.7		357.1	361.4
Filter Weight Gain (g)	0.0011	0.0018	0.0013	0.0014
PNR Weight Gain (g)	0.0023	0.0046	0.0092	0.0054
% CO2	38.5	38.5	38.5	38.5
% O2	3.5	3.5	3.5	3.5
% N2	58.0	58.0	58.0	58.0
Meter Volume (dscf @ 68 F)	94.042	97.679	108.232	99.985
Meter Volume (M3 @ 0 C)	2.4814	2.5774	2.8559	2.6382
Flue Gas Moisture (%)	15.5	15.5	13.5	14.8
Molecular Weight (Wet) (g/g-mole)	31.77	31.77	32.10	31.88
Absolute Stack Pressure (" Hg)	30.45	30.39	30.36	30.40
Absolute Stack Temperature (R)	977	978	975	977
Average Gas Velocity (f/sec)	140.67	142.72	141.86	141.75
Avg Flow Rate (acf m)	26,515	26,902	26,739	26,719
Avg Flow Rate (dscfm)	12,317	12,460	12,705	12,494
Isokinetic Sampling Rate (%)	100.58	97.42	102.14	100.05
Particulate Concentration (gr/dscf)	0.0006	0.0010	0.0015	0.0010
Particulate Concentration (mg/M3)	1.36	2.47	3.68	2.50
Particulate Emission (lbs/hour)	0.06	0.11	0.16	0.11

Plant Name
Location
Test Parameter

Dow - LGTI
Incinerator Stack, 16
Oxides of Nitrogen, M 7

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-09-94	-
Time Start	0850	0758	1311	-
Time Finish	1023	0920	1431	-
Operator	JLM	JLM	JLM	-
Initial Leak Rate	0.002	0.02	0.000	-
Final Leak Rate	0.002			-
Stack Diameter (ft)	2.0	2.0	2.0	-
Dry Gas Meter Calibration (Yd)	1.016	1.016	1.016	1.016
Barometric Pressure ("Hg)	30.12	30.00	30.00	30.04
Meter Volume (liters)	31.500	33.330	31.290	32.040
Average delta H (" H ₂ O)	1.38	1.40	1.40	1.39
Average DGM Temp (F)	71.3	78.7	86.0	78.7
Test Duration (minutes)	93.0	82.0	80.0	85.0
Condensed Water (g)	18.7	17.9	17.1	17.9
% CO ₂	38.5	38.5	38.5	38.5
% O ₂	3.5	3.5	3.5	3.5
% N ₂	58.0	58.0	58.0	58.0
Meter Volume (liters, dry, 0 C)	29.938	31.117	28.822	29.959
Flue Gas Moisture (%)	2.9	2.6	2.7	2.7
Molecular Weight (Wet) (g/g-mole)	33.83	33.87	33.86	33.85

Plant Name Dow - LGTI
Location Incinerator Stack
Test Parameter Sulfur Dioxide, M-8

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-09-94	-
Time Start	1105	1004	1420	-
Time Finish	1140	1040	1500	-
Operator	MAB	MAB	TJB	-
Initial Leak Rate	0.008	0.013	0.010	-
Final Leak Rate	0.005	0.008	0.005	
Stack Diameter (ft)	2.0	2.0	2.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	0.974	1.001	0.974	0.983
Nozzle Diameter (inches)	0.1500	0.1500	0.1500	-
Barometric Pressure ("Hg)	30.12	30.00	30.00	30.04
Static Pressure ("H2O)	4.5	5.3	5.3	5.0
Meter Volume (acf)	20.112	21.039	20.499	20.550
Average square root of delta p	2.0494	1.9748	1.9748	1.9997
Average delta H (" H2O)	1.10	1.10	1.10	1.10
Average Stack Temperature (F)	517	519	526	521
Average DGM Temp (F)	96.0	91.0	101.3	96.1
Test Duration (minutes)	35.0	39.0	38.0	37.3
Condensed Water (g)	79.4	78.2	83.0	80.2
% CO2	38.5	38.5	38.5	38.5
% O2	3.5	3.5	3.5	3.5
% N2	58.0	58.0	58.0	58.0
Meter Volume (dscf @68 F)	18.777	20.289	18.884	19.317
Meter Volume (M3 @ 0 C)	0.4955	0.5354	0.4983	0.5097
Flue Gas Moisture (%)	16.6	15.4	17.2	16.4
Molecular Weight (Wet) (g/g-mole)	31.59	31.79	31.50	31.63
Absolute Stack Pressure (" Hg)	30.45	30.39	30.39	30.41
Absolute Stack Temperature (R)	977	979	986	981
Average Gas Velocity (f/sec)	148.32	142.76	143.90	144.99
Avg Flow Rate (acf m)	27,958	26,909	27,125	27,331
Avg Flow Rate (dscfm)	12,814	12,467	12,218	12,499
Isokinetic Sampling Rate (%)	107.20	106.85	104.15	106.07

Plant Name Dow - LGTI
Location Incinerator Stack, 16
Test Parameter Hydrogen Sulfide, M-11

Run No.	2-1	2-2	2-3	Average
Date	11-12-94	11-12-94	11-12-94	-
Time Start	736	904	1100	-
Time Finish	816	954	1149	-
Operator				-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.016	1.016	1.016	1.016
Barometric Pressure ("Hg)	30.04	30.04	30.04	30.04
Meter Volume (L)	20.420	21.400	27.148	22.989
Average delta H (" H ₂ O)	1.40	1.40	1.40	1.40
Average DGM Temp (F)	64.5	74.0	74.5	71.0
Meter Volume (L @ 0 C)	19.606	20.182	25.578	21.789
Meter Volume (M ³ @ 0 C)	0.01961	0.02018	0.02558	0.0218

Plant Name Dow - LGTI
Location Incinerator Stack, 16
Test Parameter Aldehyde

Run No.	1	2	3	Average
Date	11-08-94	11-09-94	11-09-94	-
Time Start	1040	0816	1435	-
Time Finish	1255	1140	1600	-
Operator	JLM	JLM	JLM	-
Initial Leak Rate	0.015	0.002	0.001	-
Final Leak Rate	0.010		0.001	-
Stack Diameter (ft)	2.0	2.0	2.0	-
Dry Gas Meter Calibration (Yd)	1.031	1.031	1.031	1.031
Barometric Pressure ("Hg)	30.12	30.00	30.00	30.04
Meter Volume (acf)	56.103	31.607	34.280	40.663
Average delta H (" H ₂ O)	0.80	0.53	0.78	0.70
Average DGM Temp (F)	80.0	80.5	85.0	81.8
Test Duration (minutes)	135.0	204.0	85.0	141.3
% CO ₂	38.5	38.5	38.5	38.5
% O ₂	3.5	3.5	3.5	3.5
% N ₂	58.0	58.0	58.0	58.0
Meter Volume (dscf @ 68 F)	57.046	31.959	34.398	41.134
Meter Volume (M3 @ 0 C)	1.5052	0.8433	0.9076	1.0854
Flue Gas Moisture (%)	15.5	15.7	15.7	15.6
Molecular Weight (Wet) (g/g-mole)	31.77	31.74	31.74	31.75

Plant Name
Location
Test Parameter

Dow - LGTI
Incinerator Stack, 16
Semivolatiles, CARB 429

Run No.	1	2	3	Average
Date	11-10-94	11-11-94	11-11-94	-
Time Start	1330	0755	1530	-
Time Finish	1740	1414	2000	-
Operator	DJV/MAB	MAB/DJV	DJV/MAB	-
Initial Leak Rate	0.002	0.004	0.015	-
Final Leak Rate	0.002	0.014	0.018	-
Stack Diameter (ft)	2.0	2.0	2.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	0.974	0.978	0.974	0.975
Nozzle Diameter (inches)	0.1500	0.1500	0.1500	-
Barometric Pressure ("Hg)	30.02	30.04	30.04	30.03
Static Pressure ("H2O)	5.1	4.6	5.4	5.0
Meter Volume (acf)	118.130	115.756	113.646	115.844
Average square root of delta p	1.9685	1.9540	1.9330	1.9518
Average delta H (" H2O)	1.02	0.99	0.98	1.00
Average Stack Temperature (F)	514	518	517	516
Average DGM Temp (F)	73.9	68.6	74.3	72.3
Test Duration (minutes)	240.0	240.0	235.0	238.3
% CO2	38.5	38.5	38.5	38.5
% O2	3.5	3.5	3.5	3.5
% N2	58.0	58.0	58.0	58.0
Meter Volume (dscf @ 68 F)	114.448	113.811	110.085	112.781
Meter Volume (M3 @ 0 C)	3.0199	3.0030	2.9047	2.9759
Flue Gas Moisture (%)	15.5	15.5	15.5	15.5
Molecular Weight (Wet) (g/g-mole)	31.77	31.77	31.77	31.77
Absolute Stack Pressure (" Hg)	30.40	30.38	30.44	30.40
Absolute Stack Temperature (R)	974	978	977	976
Average Gas Velocity (f/sec)	141.97	141.22	139.49	140.89
Avg Flow Rate (acf m)	26,761	26,619	26,292	26,557
Avg Flow Rate (dscfm)	12,447	12,329	12,216	12,331
Isokinetic Sampling Rate (%)	98.10	98.48	98.19	98.26

Plant Name Dow - LGTI
Location Incinerator Stack, 16
Test Parameter TCO

Run No.	2-1	2-2	2-3	Average
Date	11-9-94	11-9-94	11-10-94	-
Time Start	1048	1311	0740	-
Time Finish	1255	1550	0940	-
Operator				-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.016	1.016	1.016	1.016
Barometric Pressure ("Hg)	30.00	30.00	30.02	30.01
Meter Volume (L)	102.560	102.730	103.430	102.907
Average delta H (" H ₂ O)	2.40	1.40	2.00	1.93
Average DGM Temp (F)	84.7	86.8	71.5	81.0
Meter Volume (L @ 0 C)	94.926	94.488	98.078	95.831
Meter Volume (M ³ @ 0 C)	0.09493	0.09449	0.09808	0.0958

Plant Name
Sample Location
Test Parameter

Dow - LGTI
Incinerator Stack, 16
VOST

Run No.	Date	Time	Sample Volume	DGM Temp	Delta H	Pbar	Meter Yd	Sample Volume (Std. L @ 0 C)
1a	11-11-94	0816-0904	20.910	59.0	1.8	30.04	1.016	20.309
1b	11-11-94	0911-0949	20.820	62.0	1.8	30.04	1.016	20.106
1c	11-11-94	0956-1036	22.230	61.0	1.8	30.04	1.016	21.508
2a	11-11-94	1052-1132	22.000	64.0	1.4	30.04	1.016	21.143
2b	11-11-94	1140-1220	23.150	64.0	1.4	30.04	1.016	22.249
2c	11-11-94	1227-1315	23.700	65.0	1.4	30.04	1.016	22.734
3a	11-11-94	1325-14095	19.870	68.0	1.4	30.04	1.016	18.952
3b	11-11-94	1411-1458	22.840	66.0	1.4	30.04	1.016	21.867
3c	11-11-94	1504-1645	18.840	66.0	1.4	30.04	1.016	18.038

Plant Name
Location
Test Parameter

Dow LGTI
Turbine Stack, 13
Anions / Ammonia / Cyanide

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	0745	0756	0739	-
Time Finish	0925	0946	0915	-
Operator	MSS	MSS	MSS	-
Initial Leak Rate	0.008	0.004	0.01	-
Final Leak Rate	0.004	0.004	0.005	-
Stack Diameter (ft)	10.0	10.0	10.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	1.001	1.001	1.001	1.001
Nozzle Diameter (inches)	0.1930	0.1930	0.1930	-
Barometric Pressure ("Hg)	29.97	29.94	30.06	29.99
Static Pressure ("H2O)	0.7	0.7	0.6	0.67
Meter Volume (acf)	58.036	56.425	56.093	56.851
Average square root of delta p	1.0923	1.1290	1.0954	1.1056
Average delta H (" H2O)	1.22	1.30	1.20	1.24
Average Stack Temperature (F)	308	307	307	307
Average DGM Temp (F)	80.9	80.4	70.5	77.2
Test Duration (minutes)	100.0	94.0	96.0	96.7
Condensed Water (g)	122.0	119.1	92.1	111.1
% CO2	6.0	6.0	6.0	6.0
% O2	15.0	15.0	15.0	15.0
% N2	79.0	79.0	79.0	79.0
Meter Volume (dscf @ 68 F)	56.977	55.401	56.311	56.230
Meter Volume (M3 @ 0 C)	1.5034	1.4618	1.4858	1.4837
Flue Gas Moisture (%)	9.2	9.2	7.2	8.5
Molecular Weight (Wet) (g/g-mole)	28.50	28.50	28.73	28.58
Absolute Stack Pressure (" Hg)	30.02	29.99	30.10	30.04
Absolute Stack Temperature (R)	768	767	767	767
Average Gas Velocity (f/sec)	74.30	76.81	74.08	75.06
Avg Flow Rate (acf m)	350,141	361,946	349,071	353,719
Avg Flow Rate (dscfm)	219,366	226,659	224,361	223,462
Isokinetic Sampling Rate (%)	100	101	101	101

Plant Name
Location
Test Parameter

Dow - LGTI
Turbine Stack, 13
Loading/Metals

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	0756	0745	0808	-
Time Finish	1109	1058	1114	-
Operator	TJB	TJB	TJB	-
Initial Leak Rate	0.010	0.005	0.008	-
Final Leak Rate	0.008	0.010	0.004	-
Stack Diameter (ft)	10.0	10.0	10.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	0.974	1.031	0.974	0.993
Nozzle Diameter (inches)	0.1930	0.1930	0.1930	-
Barometric Pressure ("Hg)	30.06	29.94	30.06	30.02
Static Pressure ("H2O)	0.66	0.63	0.82	0.70
Meter Volume (acf)	111.351	102.897	107.911	107.386
Average square root of delta p	1.1280	1.1615	1.1284	1.1393
Average delta H (" H2O)	1.04	1.32	1.28	1.21
Average Stack Temperature (F)	306	304	306	305
Average DGM Temp (F)	80.8	83.0	81.7	81.8
Test Duration (minutes)	176.0	176.0	176.0	176.0
Condensed Water (g)	231.7	224.5	206.8	221.0
Filter Weight Gain (g)	0.0013	0.0008	0.0000	0.0007
PNR Weight Gain (g)	0.0141	0.0082	0.0077	0.0100
% CO2	6.0	6.0	6.0	6.0
% O2	15.0	15.0	15.0	15.0
% N2	79.0	79.0	79.0	79.0
Meter Volume (dscf @ 68 F)	106.654	103.559	103.249	104.488
Meter Volume (M3 @ 0 C)	2.8142	2.7325	2.7244	2.7570
Flue Gas Moisture (%)	9.3	9.3	8.6	9.1
Molecular Weight (Wet) (g/g-mole)	28.48	28.49	28.56	28.51
Absolute Stack Pressure (" Hg)	30.11	29.99	30.12	30.07
Absolute Stack Temperature (R)	766	764	766	765
Average Gas Velocity (f/sec)	76.55	78.89	76.44	77.29
Avg Flow Rate (acf m)	360,751	371,745	360,206	364,234
Avg Flow Rate (dscfm)	226,868	233,458	228,419	229,582
Isokinetic Sampling Rate (%)	103	97	99	100
Particulate Concentration (gr/dscf)	0.00223	0.00134	0.00115	0.00157
Particulate Concentration (mg/M3)	5.47	3.29	2.83	3.86
Particulate Emission (lbs/hour)	4.33	2.68	2.25	3.09

Plant Name
Location
Test Parameter

Dow - LGTI
Turbine Stack, 13
PM-10

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	0808	0813	0803	-
Time Finish	1408	1413	1300	-
Operator	RWM	RWM	TJB	-
Initial Leak Rate	0.010	0.010	0.015	-
Final Leak Rate	NA	NA	NA	-
Stack Diameter (ft)	10.0	10.0	10.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	0.971	0.971	0.971	0.971
Nozzle Diameter (inches)	0.1870	0.1870	0.1870	-
Barometric Pressure ("Hg)	29.97	29.94	30.06	29.99
Static Pressure ("H2O)	0.7	0.7	0.6	0.67
Meter Volume (acf)	199.977	200.127	163.539	187.881
Average square root of delta p	1.0950	1.0954	1.0950	1.0951
Average delta H (" H2O)	1.08	1.08	1.00	1.05
Average Stack Temperature (F)	313	311	312	312
Average DGM Temp (F)	92.0	93.8	85.7	90.5
Test Duration (minutes)	360.0	360.0	297.0	339.0
Condensed Water (g)	410.2	403.6	313.5	375.8
Filter Weight Gain (g)	0.0040	0.0040	0.0041	0.0040
PNR Weight Gain (g)	0.0084	0.0215	0.0181	0.0160
% CO2	6.0	6.0	6.0	6.0
% O2	15.0	15.0	15.0	15.0
% N2	79.0	79.0	79.0	79.0
Meter Volume (dscf @ 68 F)	186.539	185.878	154.747	175.721
Meter Volume (M3 @ 0 C)	4.9221	4.9046	4.0832	4.6366
Flue Gas Moisture (%)	9.4	9.3	8.7	9.1
Molecular Weight (Wet) (g/g-mole)	28.47	28.49	28.55	28.50
Absolute Stack Pressure (" Hg)	30.02	29.99	30.10	30.04
Absolute Stack Temperature (R)	773	771	772	772
Average Gas Velocity (f/sec)	74.78	74.71	74.54	74.68
Avg Flow Rate (acf m)	352,377	352,080	351,275	351,910
Avg Flow Rate (dscfm)	218,711	219,219	220,429	219,453
Isokinetic Sampling Rate (%)	98	97	97	97
Particulate Concentration (gr/dscf)	0.00102	0.00212	0.00221	0.00179
Particulate Concentration (mg/M3)	2.51	5.21	5.44	4.38
Particulate Emission (lbs/hour)	1.92	3.98	4.18	3.36

Plant Name
Location
Test Parameter

Dow - LGTI
Turbine Stack, 13
Sulfur Dioxide, M-8

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	1055	0750	0809	-
Time Finish	1258	1016	1051	-
Operator	DJV	TJB, DJV	DJV	-
Initial Leak Rate	0.005	0.005	0.004	-
Final Leak Rate	0.005	0.005	0.002	-
Stack Diameter (ft)	10.0	10.0	10.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	1.031	0.974	1.031	1.012
Nozzle Diameter (inches)	0.1930	0.1930	0.1930	-
Barometric Pressure ("Hg)	29.97	29.94	30.06	29.99
Static Pressure ("H2O)	0.7	0.63	0.73	0.69
Meter Volume (acf)	56.038	62.631	78.654	65.774
Average square root of delta p	1.1140	1.1220	1.1680	1.1347
Average delta H (" H2O)	1.28	1.26	1.40	1.31
Average Stack Temperature (F)	305	305	305	305
Average DGM Temp (F)	93.0	79.0	77.8	83.3
Test Duration (minutes)	96.0	101.0	128.0	108.3
Condensed Water (g)	119.1	127.5	318.5	188.4
% CO2	6.0	6.0	6.0	6.0
% O2	15.0	15.0	15.0	15.0
% N2	79.0	79.0	79.0	79.0
Meter Volume (dscf @ 68 F)	55.429	59.983	80.269	65.227
Meter Volume (M3 @ 0 C)	1.4626	1.5827	2.1180	1.7211
Flue Gas Moisture (%)	9.2	9.1	15.8	11.4
Molecular Weight (Wet) (g/g-mole)	28.50	28.51	27.74	28.25
Absolute Stack Pressure (" Hg)	30.02	29.99	30.11	30.04
Absolute Stack Temperature (R)	765	765	765	765
Average Gas Velocity (f/sec)	75.65	76.22	80.27	77.38
Avg Flow Rate (acf m)	356,490	359,195	378,245	364,643
Avg Flow Rate (dscfm)	224,060	225,719	221,246	223,675
Isokinetic Sampling Rate (%)	100	102	110	104

Plant Name Dow - LGTI
Location Turbine Stack, 13
Test Parameter Aldehyde

Run No.	1	2	3	Average
Date	11-03-94	11-04-94	11-07-94	-
Time Start	0940	1001	0926	-
Time Finish	1040	1101	1026	-
Operator	MSS	MSS	MSS	-
Initial Leak Rate	0.002	0.005	0.005	-
Final Leak Rate	0.010	0.005	0.005	-
Stack Diameter (ft)	10.0	10.0	10.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	0.84
Dry Gas Meter Calibration (Yd)	1.001	1.001	1.001	1.001
Nozzle Diameter (inches)	0.1930	0.1930	0.1930	-
Barometric Pressure ("Hg)	29.97	29.94	30.06	29.99
Static Pressure ("H2O)	0.7	0.63	0.82	0.72
Meter Volume (acf)	35.762	35.682	35.311	35.585
Average square root of delta p	1.0950	1.0950	1.0950	1.0950
Average delta H (" H2O)	1.22	1.20	1.20	1.21
Average Stack Temperature (F)	307	307	307	307
Average DGM Temp (F)	90.9	91.0	78.1	86.7
Test Duration (minutes)	60.0	60.0	60.0	60.0
Condensed Water (g)	NA	NA	NA	0.0
% CO2	6.0	6.0	6.0	6.0
% O2	15.0	15.0	15.0	15.0
% N2	79.0	79.0	79.0	79.0
Meter Volume (dscf @ 68 F)	34.470	34.351	34.949	34.590
Meter Volume (M3 @ 0 C)	0.9095	0.9064	0.9222	0.9127
Flue Gas Moisture (%)	9.0	9.0	9.0	9.0
Molecular Weight (Wet) (g/g-mole)	28.52	28.52	28.52	28.52
Absolute Stack Pressure (" Hg)	30.02	29.99	30.12	30.04
Absolute Stack Temperature (R)	767	767	767	767
Average Gas Velocity (f/sec)	74.42	74.47	74.30	74.40
Avg Flow Rate (acf m)	350,719	350,925	350,144	350,596
Avg Flow Rate (dscfm)	220,362	220,233	220,724	220,440
Isokinetic Sampling Rate (%)	101	101	102	101

Plant Name Dow - LGTI
Location Turbine Stack, 13
Test Parameter Semivolatiles, CARB 429

Run No.	5	6	3-1	Average
Date	11-11-94	11-11-94	11-12-94	-
Time Start	0751	1214	0737	-
Time Finish	1109	1525	1047	-
Operator	TJB	TJB	TJB	-
Initial Leak Rate	0.010	0.010	0.01	-
Final Leak Rate	0.005		0.005	-
Stack Diameter (ft)	10.0	10.0	10.0	-
Pitot Tube Correction Factor (Cp)	0.84	0.84	0.84	-
Dry Gas Meter Calibration (Yd)	0.971	0.971	0.971	-
Nozzle Diameter (inches)	0.1900	0.1900	0.1900	-
Barometric Pressure ("Hg)	30.04	29.97	30.06	30.02
Static Pressure ("H2O)	0.65	0.56	0.63	0.61
Meter Volume (acf)	114.956	111.996	111.392	112.781
Average square root of delta p	1.0954	1.0954	1.0920	1.094
Average delta H (" H2O)	1.20	1.20	1.20	1.20
Average Stack Temperature (F)	311	313	315	313
Average DGM Temp (F)	79	84	85	83
Test Duration (minutes)	188	191	190	190
% CO2	6.0	6.0	6.0	6.0
% O2	15.0	15.0	15.0	15.0
% N2	79.0	79.0	79.0	79.0
Meter Volume (dscf @ 68 F)	110.105	106.062	105.587	107.251
Meter Volume (M3 @ 0 C)	2.9053	2.7986	2.7861	2.8300
Flue Gas Moisture (%)	9.2	9.2	9.2	9.200
Molecular Weight (Wet) (g/g-mole)	28.50	28.50	28.50	28.50
Absolute Stack Pressure (" Hg)	30.09	30.01	30.11	30.07
Absolute Stack Temperature (R)	771	773	775	773
Average Gas Velocity (f/sec)	74.59	74.80	74.53	75
Avg Flow Rate (acf m)	351,514	352,506	351,224	351,748
Avg Flow Rate (dscfm)	219,719	219,101	218,537	219,119
Isokinetic Sampling Rate (%)	106	101	101	103

Plant Name			Dow LGTI					
Sampling Location			Turbine Stack, 13					
Test Parameter			VOST					
Run No.	Date	Time	Sample Volume	DGM Temp	Delta H	Pbar	Meter Yd	Sample Volume (Std. L @ 0 C)
3a	11-10-94	0824-0904	20.250	65.0	1.2	30	0.995	18.988
3b	11-10-94	0913-0953	20.070	66.0	1.2	30	0.995	18.784
3c	11-10-94	1001-1041	20.610	66.0	1.2	30	0.995	19.289
5a	11-10-94	1047-1127	20.160	66.0	1.2	30	0.995	18.868
5b	11-10-94	1135-1215	20.050	66.0	1.2	30	0.995	18.765
5c	11-10-94	1222-1302	20.090	66.0	1.2	30	0.995	18.803
6a	11-10-94	1313-1353	20.390	65.5	1.2	30	0.995	19.102
6b	11-10-94	1359-1439	20.350	65.0	1.2	30	0.995	19.082
6c	11-10-94	1451-1531	20.510	64.0	1.2	30	0.995	19.269

PERIOD 4—HOT GAS TESTING



Plant Name Dow - LGTI
Location Raw Gas, 5
Test Parameter Ammonia

Run No.	1	2	3	Average
Date	05/18/95	05/18/95	05/19/95	-
Time Start	11:10 AM	02:25 PM	02:13 PM	-
Time Finish	11:50 AM	02:50 PM	03:08 PM	-
Operator	WAW	WAW	WAW	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.003	1.003	1.000	1.002
Barometric Pressure ("Hg)	30.00	30.00	30.00	30
Meter Volume (acf)	11.682	10.294	11.140	11.039
Average delta H (" H ₂ O)	0.24	0.40	0.00	0.21
Average DGM Temp (F)	87.3	92.2	76.0	85.2
Meter Volume (dscf @ 68 F)	11.341	9.908	11.003	10.751
Meter Volume (M3 @ 0 C)	0.299	0.261	0.290	0.284

Plant Name Dow - LGTI
Location Raw Gas, 5
Test Parameter Anions

Run No.	1	2	3	Average
Date	05/18/95	05/19/95	05/19/95	-
Time Start	11:57 AM	03:05 PM	03:50 PM	-
Time Finish	01:42 PM	04:30 PM	05:14 PM	-
Operator	WAW	WAW	WAW	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.003	1.003	0.968	0.991
Barometric Pressure ("Hg)	30.00	30.00	30.00	30
Meter Volume (acf)	46.545	36.183	39.086	40.605
Average delta H (" H ₂ O)	0.48	0.39	0.49	0.45
Average DGM Temp (F)	91.1	91.9	94.9	92.6
Meter Volume (dscf @ 68 F)	44.900	34.846	36.141	38.629
Meter Volume (M3 @ 0 C)	1.185	0.919	0.954	1.019

Plant Name Dow - LGTI
Location Raw Gas, 5
Test Parameter Cyanide

Run No.	1	2	3	Average
Date	05/18/95	05/19/95	05/19/95	-
Time Start	01:48 PM	10:30 AM	01:38 PM	-
Time Finish	02:12 PM	10:46 AM	02:10 PM	-
Operator	WAW	WAW	WAW	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.003	0.968	1.000	0.990
Barometric Pressure ("Hg)	30.00	30.00	30.00	30
Meter Volume (acf)	7.030	5.230	4.980	5.747
Average delta H (" H ₂ O)	0.30	0.25	0.00	0.18
Average DGM Temp (F)	92.0	78.3	76.0	82.1
Meter Volume (dscf @ 68 F)	6.768	4.982	4.919	5.556
Meter Volume (M3 @ 0 C)	0.179	0.131	0.130	0.147

Plant Name Dow - LGTI
Location Raw Gas, 5
Test Parameter Metals, Charcoal

Run No.	1	2	3	Average
Date	05/18/95	05/19/95	05/19/95	-
Time Start	12:22 PM	03:00 PM	11:31 AM	-
Time Finish	02:52 PM	11:21 AM	01:05 PM	-
Operator	WAW	WAW	WAW	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	1.000	1.000	1.000	1.000
Barometric Pressure ("Hg)	30.00	30.00	30.00	30
Meter Volume (acf)	4.039	3.818	3.550	3.802
Average delta H (" H ₂ O)	0.00	0.00	0.00	0.00
Average DGM Temp (F)	86.0	74.0	72.0	77.3
Meter Volume (dscf @ 68 F)	3.916	3.785	3.533	3.745
Meter Volume (M3 @ 0 C)	0.103	0.100	0.093	0.099

Plant Name Dow - LGTI
Location Raw Gas, 5
Test Parameter Metals, M-29

Run No.	1	2	3	Average
Date	05/18/95	05/19/95	05/19/95	-
Time Start	10:03 AM	10:09 AM	10:57 AM	-
Time Finish	03:22 PM	03:00 PM	03:37 PM	-
Operator	WAW	WAW	WAW	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.968	1.003	0.968	0.980
Barometric Pressure ("Hg)	30.00	30.00	30.00	30
Meter Volume (acf)	73.920	90.227	84.583	82.910
Average delta H (" H2O)	0.14	0.22	0.21	0.19
Average DGM Temp (F)	89.9	85.4	87.2	87.5
Meter Volume (dscf @ 68 F)	68.912	87.892	79.256	78.687
Meter Volume (M3 @ 0 C)	1.818	2.319	2.091	2.076

Plant Name Dow - LGTI
Location Raw Gas, 5
Test Parameter Metals-Hg, M-29

Run No.	1	2	3	Average
Date	05/18/95	05/19/95	05/19/95	-
Time Start	10:03 AM	10:09 AM	10:57 AM	-
Time Finish	01:56 PM	12:20 PM	01:01 PM	-
Operator	WAW	WAW	WAW	-
Initial Leak Rate	NA	NA	NA	-
Final Leak Rate	NA	NA	NA	-
Dry Gas Meter Calibration (Yd)	0.968	1.003	0.968	0.980
Barometric Pressure ("Hg)	30.00	30.00	30.00	30
Meter Volume (acf)	58.172	40.125	29.428	42.575
Average delta H (" H ₂ O)	0.14	0.21	0.17	0.17
Average DGM Temp (F)	89.1	82.9	84.2	85.4
Meter Volume (dscf @ 68 F)	54.310	39.266	27.724	40.433
Meter Volume (M3 @ 0 C)	1.433	1.036	0.732	1.067

APPENDIX G: DETAILED ANALYTICAL RESULTS



Table G-1. Analytical Results Used in Calculations**Stream: Raw Syngas @ 1000 deg F (5)**

Analyte	Method	Units	Period	Result 1	Result 2	Result 3	Average	95% CI
Ionic Species-Vapor Phase								
Ammonia as N	EPA 350.1	ug/Nm ³		4				
Chloride	EPA 300.0	ug/Nm ³		4				
Cyanide	SW9012	ug/Nm ³		4				
Fluoride	EPA 340.2	ug/Nm ³		4				
Metals-Vapor Phase (Charcoal)								
Antimony	SW7041	ug/Nm ³		4				
Arsenic	SW7060	ug/Nm ³		4				
Barium	SW6010	ug/Nm ³		4				
Beryllium	SW6010	ug/Nm ³		4				
Boron	SW6010	ug/Nm ³		4				
Cadmium	SW7131	ug/Nm ³		4				
Chromium	SW6010	ug/Nm ³		4				
Cobalt	SW6010	ug/Nm ³		4				
Copper	SW6010	ug/Nm ³		4				
Iron	SW6010	ug/Nm ³		4				
Lead	SW7421	ug/Nm ³		4				
Manganese	SW6010	ug/Nm ³		4				
Mercury	SW7471	ug/Nm ³		4				
Molybdenum	SW6010	ug/Nm ³		4				
Nickel	SW6010	ug/Nm ³		4				
Selenium	SW7740	ug/Nm ³		4				
Vanadium	SW6010	ug/Nm ³		4				
Zinc	SW6010	ug/Nm ³		4				
Metals-Vapor Phase (M-29)								
Aluminum	SW6010	ug/Nm ³		4				
Antimony	ICP/MS	ug/Nm ³		4				
Arsenic	ICP/MS	ug/Nm ³		4				
Barium	ICP/MS	ug/Nm ³		4				
Beryllium	ICP/MS	ug/Nm ³		4				
Boron	SW6010	ug/Nm ³		4				
Cadmium	ICP/MS	ug/Nm ³		4				
Calcium	SW6010	ug/Nm ³		4				

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Table G-1. Analytical Results Used in Calculations

Analyte	Method	Units	Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Vapor Phase (M-29) (continued)								
Chromium	ICP/MS	ug/Nm3		4				
Cobalt	ICP/MS	ug/Nm3		4				
Copper	ICP/MS	ug/Nm3		4				
Iron	SW6010	ug/Nm3		4				
Lead	ICP/MS	ug/Nm3		4				
Magnesium	SW6010	ug/Nm3		4				
Manganese	ICP/MS	ug/Nm3		4				
Mercury, Nitric	SW7470	ug/Nm3		4				
Mercury, NaO	SW7470	ug/Nm3		4				
Mercury, KMn	SW7470	ug/Nm3		4				
Mercury, Total	SW7470	ug/Nm3		4				
Molybdenum	ICP/MS	ug/Nm3		4				
Nickel	ICP/MS	ug/Nm3		4				
Phosphorus	SW6010	ug/Nm3		4				
Potassium	SW6010	ug/Nm3		4				
Selenium	ICP/MS	ug/Nm3		4				
Silicon	SW6010	ug/Nm3		4				
Sodium	SW6010	ug/Nm3		4				
Titanium	SW6010	ug/Nm3		4				
Vanadium	ICP/MS	ug/Nm3		4				
Zinc	SW6010	ug/Nm3		4				

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Table G-1. Analytical Results Used in Calculations

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Ionic Species-Vapor Phase								
Ammonia as N	EPA 350.1	ug/Nm ³		3				
Chloride	EPA 300.0	ug/Nm ³		3				
Cyanide	SW9012	ug/Nm ³		3				
Fluoride	EPA 340.2	ug/Nm ³		3				
Metals-Vapor Phase (Charcoal)								
Antimony	SW7041	ug/Nm ³		3				
Arsenic	SW7060	ug/Nm ³		3				
Barium	SW6010	ug/Nm ³		3				
Beryllium	SW6010	ug/Nm ³		3				
Boron	SW6010	ug/Nm ³		3				
Cadmium	SW7131	ug/Nm ³		3				
Chromium	SW6010	ug/Nm ³		3				
Cobalt	SW6010	ug/Nm ³		3				
Copper	SW6010	ug/Nm ³		3				
Iron	SW6010	ug/Nm ³		3				
Lead	SW7421	ug/Nm ³		3				
Manganese	SW6010	ug/Nm ³		3				
Mercury	SW7471	ug/Nm ³		3				
Molybdenum	SW6010	ug/Nm ³		3				
Nickel	SW6010	ug/Nm ³		3				
Selenium	SW7740	ug/Nm ³		3				
Vanadium	SW6010	ug/Nm ³		3				
Zinc	SW6010	ug/Nm ³		3				
Metals-Vapor Phase (M-29)								
Aluminum	SW6010	ug/Nm ³		3				
Antimony	ICP/MS	ug/Nm ³		3				
Arsenic	ICP/MS	ug/Nm ³		3				
Barium	ICP/MS	ug/Nm ³		3				
Beryllium	ICP/MS	ug/Nm ³		3				
Boron	SW6010	ug/Nm ³		3				
Cadmium	ICP/MS	ug/Nm ³		3				
Calcium	SW6010	ug/Nm ³		3				

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Table G-1. Analytical Results Used in Calculations

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Vapor Phase (M-29) (continued)								
Chromium	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Cobalt	ICP/MS	ug/Nm3	ICP/MS	3	3	3	3	3
Copper	ICP/MS	ug/Nm3	ICP/MS	3	3	3	3	3
Iron	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Lead	ICP/MS	ug/Nm3	ICP/MS	3	3	3	3	3
Magnesium	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Manganese	ICP/MS	ug/Nm3	ICP/MS	3	3	3	3	3
Mercury	ICP/MS	ug/Nm3	SW7470	3	3	3	3	3
Molybdenum	ICP/MS	ug/Nm3	ICP/MS	3	3	3	3	3
Nickel	ICP/MS	ug/Nm3	ICP/MS	3	3	3	3	3
Phosphorus	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Potassium	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Selenium	ICP/MS	ug/Nm3	ICP/MS	3	3	3	3	3
Silicon	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Sodium	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Titanium	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Vanadium	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3
Zinc	ICP/MS	ug/Nm3	SW6010	3	3	3	3	3

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Table G-1. Analytical Results Used in Calculations

Analyte	Method	Units	Period	Result 1	Result 2	Result 3	Average	95% CI
Ionic Species-Vapor Phase								
Ammonia as N	EPA 350.1	ug/Nm ³		3				
Chloride	EPA 300.0	ug/Nm ³		3				
Cyanide	SW6012	ug/Nm ³		3				
Fluoride	EPA 340.2	ug/Nm ³		3				
Metals-Vapor Phase (Charcoal)								
Antimony	SW7041	ug/Nm ³		3				
Arsenic	SW7060	ug/Nm ³		3				
Barium	SW6010	ug/Nm ³		3				
Beryllium	SW6010	ug/Nm ³		3				
Boron	SW6010	ug/Nm ³		3				
Cadmium	SW7131	ug/Nm ³		3				
Chromium	SW6010	ug/Nm ³		3				
Cobalt	SW6010	ug/Nm ³		3				
Copper	SW6010	ug/Nm ³		3				
Iron	SW6010	ug/Nm ³		3				
Lead	SW7421	ug/Nm ³		3				
Manganese	SW6010	ug/Nm ³		3				
Mercury	SW7471	ug/Nm ³		3				
Molybdenum	SW6010	ug/Nm ³		3				
Nickel	SW6010	ug/Nm ³		3				
Selenium	SW7740	ug/Nm ³		3				
Vanadium	SW6010	ug/Nm ³		3				
Zinc	SW6010	ug/Nm ³		3				
Metals-Vapor Phase (M-29)								
Aluminum	SW6010	ug/Nm ³		3				
Antimony	ICP/MS	ug/Nm ³		3				
Arsenic	ICP/MS	ug/Nm ³		3				
Barium	ICP/MS	ug/Nm ³		3				
Beryllium	ICP/MS	ug/Nm ³		3				
Boron	SW6010	ug/Nm ³		3				
Cadmium	ICP/MS	ug/Nm ³		3				
Calcium	SW6010	ug/Nm ³		3				

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Table G-1. Analytical Results Used in Calculations**Stream: Scrubbed Raw Syngas (5b)**

Analyte	Method	Units	Period	Test	Result 1	Result 2	Result 3	Average	95% CI
Metals-Vapor Phase (M-29) (continued)									
Chromium	ICP/MS	ug/Nm3			3				
Cobalt	ICP/MS	ug/Nm3			3				
Copper	ICP/MS	ug/Nm3			3				
Iron	SW6010	ug/Nm3			3				
Lead	ICP/MS	ug/Nm3			3				
Magnesium	SW6010	ug/Nm3			3				
Manganese	ICP/MS	ug/Nm3			3				
Mercury	SW7470	ug/Nm3			3				
Molybdenum	ICP/MS	ug/Nm3			3				
Nickel	ICP/MS	ug/Nm3			3				
Phosphorus	SW6010	ug/Nm3			3				
Potassium	SW6010	ug/Nm3			3				
Selenium	ICP/MS	ug/Nm3			3				
Silicon	SW6010	ug/Nm3			3				
Sodium	SW6010	ug/Nm3			3				
Titanium	SW6010	ug/Nm3			3				
Vanadium	ICP/MS	ug/Nm3			3				
Zinc	SW6010	ug/Nm3			3				

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Table G-1. Analytical Results Used In Calculations
Stream: Sour Syngas (11)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Ionic Species-Vapor Phase								
Ammonia as N	EPA 350.1	ug/Nm ³	1	2,710	4,670	2,810	3,400	2,700
Chloride	EPA 300.0	ug/Nm ³	1	v	2,100	v	2,100	...
Cyanide	SW9012	ug/Nm ³	1	317	9,180	7,420	5,640	12,000
Fluoride	EPA 340.2	ug/Nm ³	1	11.5	15.5	16.4	14.5	6.5
Metals-Vapor Phase (Direct AAS)								
Arsenic	Radian	ug/Nm ³	1	v	v	v	870	...
Cadmium	Radian	ug/Nm ³	1	v	v	v	2.2	...
Chromium	Radian	ug/Nm ³	1	v	v	v	142	...
Lead	Radian	ug/Nm ³	1	v	v	v	85	...
Mercury	Radian	ug/Nm ³	1	v	v	v	6.1	2.1
Nickel	Radian	ug/Nm ³	1	v	v	v	498	...
Selenium	Radian	ug/Nm ³	1	v	v	v	564	...
Zinc	Radian	ug/Nm ³	1	v	v	v	2.2	...
Metals-Vapor Phase (Charcoal)								
Antimony	SW7041	ug/Nm ³	1	v	1.1	v	1.1	...
Arsenic	SW7050	ug/Nm ³	1	149	280	369	266	270
Barium	SW6010	ug/Nm ³	1	6.09	5.47	7.3	6.29	2.3
Beryllium	SW6010	ug/Nm ³	1	0.35	0.35	0.36	0.36	...
Boron	SW6010	ug/Nm ³	1	109	97.3	100	102	15
Cadmium	SW7131	ug/Nm ³	1	0.84	0.83	0.85	0.85	...
Chromium	SW6010	ug/Nm ³	1	97.6	86.6	94.4	92.9	14
Cobalt	SW6010	ug/Nm ³	1	5.8	5.7	v	5.9	...
Copper	SW6010	ug/Nm ³	1	45.4	42.3	50.3	46	10
Iron	SW6010	ug/Nm ³	1	2,390	2,280	2,240	2,300	190
Lead	SW7421	ug/Nm ³	1	v	0.82	v	0.85	...
Manganese	SW6010	ug/Nm ³	1	11	8.07	11	10	4.2
Mercury	SW7471	ug/Nm ³	1	5.59	12.4	16.5	11.2	13
Molybdenum	SW6010	ug/Nm ³	1	51.4	35.8	47.3	44.8	20
Nickel	SW6010	ug/Nm ³	1	23.6	v	v	17.1	24
Selenium	SW7740	ug/Nm ³	1	1.51	1.33	5.5	2.78	5.9
Vanadium	SW6010	ug/Nm ³	1	8.1	9.5	7.31	8.3	2.8
Zinc	SW6010	ug/Nm ³	1	3.7	v	v	3.8	...

**Table G-1. Analytical Results Used in Calculations
Stream: Sour Syngas (11)**

Analyte	Method	Units	Period	Test			Result 3	Average	95% CI
				Result 1	Result 2	Result 3			
Metals-Vapor Phase (M-29)									
Aluminum	SW6010	ug/Nm3	1	11	12	12	0.018	0.018	---
Antimony	ICP/MS	ug/Nm3	1	0.017 C	0.017 C	0.017 C	0.017 C	0.018	---
Arsenic	ICP/MS	ug/Nm3	1	0.597 C	0.358 C	0.556 C	0.504	0.504	0.32
Barium	ICP/MS	ug/Nm3	1	0.0686 C	0.046 C	0.0782 C	0.0643	0.0643	0.041
Beryllium	ICP/MS	ug/Nm3	1	0.031 C	0.033 C	0.032 C	0.033	0.033	---
Boron	SW6010	ug/Nm3	1	3.8	4.1	4	4.1	4.1	---
Cadmium	ICP/MS	ug/Nm3	1	0.194 C	0.325 C	0.3 C	0.273	0.273	0.17
Calcium	SW6010	ug/Nm3	1	38.1	58.7	48.9	48.6	48.6	26
Chromium	ICP/MS	ug/Nm3	1	1.46 C	1.49 C	1.74 C	1.56	1.56	0.38
Cobalt	ICP/MS	ug/Nm3	1	0.0201 C	0.0288 C	0.013 C	0.0206	0.0206	0.02
Copper	ICP/MS	ug/Nm3	1	0.044 C	0.046 C	0.045	0.046	0.046	---
Iron	SW6010	ug/Nm3	1	5.01	8.79	6.34	6.71	6.71	4.8
Lead	ICP/MS	ug/Nm3	1	0.129 C	1.73 C	0.399 C	0.753	0.753	2.1
Magnesium	SW6010	ug/Nm3	1	10	11	11	11	11	---
Manganese	ICP/MS	ug/Nm3	1	0.0372	0.018	0.018	0.0184	0.0184	0.04
Mercury	SW7470	ug/Nm3	1	0.525	1.23	0.688	0.808	0.808	0.98
Molybdenum	ICP/MS	ug/Nm3	1	0.151 C	0.171 C	0.147 C	0.156	0.156	0.032
Nickel	ICP/MS	ug/Nm3	1	1.33 C	3.99 C	1.44 C	2.25	2.25	3.7
Phosphorus	SW6010	ug/Nm3	1	24	25	25	25	25	---
Potassium	SW6010	ug/Nm3	1	180	190	190	190	190	---
Selenium	ICP/MS	ug/Nm3	1	0.13	0.417	0.13	0.182	0.182	0.5
Silicon	SW6010	ug/Nm3	1	30.8	29.9	17.5	26.1	26.1	18
Sodium	SW6010	ug/Nm3	1	25.8	30.9	23.3	26.7	26.7	9.6
Titanium	SW6010	ug/Nm3	1	0.35	0.37	0.36	0.37	0.37	---
Vanadium	ICP/MS	ug/Nm3	1	0.063 C	0.0543 C	0.0612 C	0.0595	0.0595	0.011
Zinc	SW6010	ug/Nm3	1	7.74	9.9	8.49	8.71	8.71	2.7
Aldehydes									
Acetaldehyde	SW0011	ug/Nm3	1	8.77	9.36	9.53	9.22	9.22	0.99
Acrolein	SW0011	ug/Nm3	1	0.65	0.59	0.6	0.65	0.65	---
Benzaldehyde	SW0011	ug/Nm3	1	1.16	0.711	0.6	0.724	0.724	1.1
Formaldehyde	SW0011	ug/Nm3	1	1.94	0.865	2.02	1.61	1.61	1.6

Table G-1. Analytical Results Used in Calculations
Stream: Sour Syngas (11)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase	SW8270	ug/Nm3	1	1.8	1.7	1.8	1.8	—
1,2,4-Trichlorobenzene	SW8270	ug/Nm3	1	0.13	29	29	2.4	—
1,2-Dichlorobenzene	SW8270	ug/Nm3	1	0.12	24	24	2.2	—
1,3-Dichlorobenzene	SW8270	ug/Nm3	1	0.2	46	38	3.8	—
1,4-Dichlorobenzene	SW8270	ug/Nm3	1	0.17	34	32	3.2	—
2,4,5-Trichlorophenol	SW8270	ug/Nm3	1	0.16	31	3	3	—
2,4,6-Trichlorophenol	SW8270	ug/Nm3	1	0.19	26	25	2.6	—
2,4-Dichlorophenol	SW8270	ug/Nm3	1	2.6	99	99	2.6	—
2,4-Dimethylphenol	SW8270	ug/Nm3	1	10	10	9.9	10	—
2,4-Dinitrophenol	SW8270	ug/Nm3	1	1.1	22	21	21	—
2,4-Dinitrotoluene	SW8270	ug/Nm3	1	0.19	36	3.6	3.6	—
2,6-Dinitrotoluene	SW8270	ug/Nm3	1	0.16	32	3	3	—
2-Chloronaphthalene	SW8270	ug/Nm3	1	0.26	52	4.9	4.9	—
2-Chlorophenol	SW8270	ug/Nm3	1	0.359	37	3.5	3.5	—
2-Methylnaphthalene	SW8270	ug/Nm3	1	64.7	49.1	63.1	60	21
2-Methylphenol	SW8270	ug/Nm3	1	0.48	99	9	9	—
2-Nitroaniline	SW8270	ug/Nm3	1	0.17	48	3.3	3.3	—
2-Nitrophenol	SW8270	ug/Nm3	1	4.1	44	3.9	4.1	—
3,3-Dichlorobenzidine	SW8270	ug/Nm3	1	0.44	67	8.2	8.2	—
3-Nitroaniline	SW8270	ug/Nm3	1	0.21	42	4	4	—
4,6-Dinitro-2-methylphenol	SW8270	ug/Nm3	1	0.31	83	5.9	5.9	—
4-Aminobiphenyl	SW8270	ug/Nm3	1	0.75	150	14	14	—
4-Bromophenyl/phenyl ether	SW8270	ug/Nm3	1	0.23	49	4.3	4.3	—
4-Chloro-3-methylphenol	SW8270	ug/Nm3	1	2.8	28	2.6	2.8	—
4-Chlorophenyl/phenyl ether	SW8270	ug/Nm3	1	6.3	H2	6.3	6.3	—
4-Methylphenol/3,5-Methylphenol	SW8270	ug/Nm3	1	0.43	66	8.2	8.2	—
4-Nitroaniline	SW8270	ug/Nm3	1	0.21	42	4	4	—
4-Nitrophenol	SW8270	ug/Nm3	1	0.19	38	3.6	3.6	—
Acenaphthene	SW8270	ug/Nm3	1	120	116	105	114	19
Acenaphthylene	SW8270	ug/Nm3	1	255	264	270	263	19
Acetophenone	SW8270	ug/Nm3	1	0.14	28	2.7	2.7	—
Aniline	SW8270	ug/Nm3	1	0.34	87	6.3	6.3	—
Anthracene	SW8270	ug/Nm3	1	8.48	42	8.47	8.48	0.06

Table G-1. Analytical Results Used in Calculations
Stream: Sour Syngas (11)

Analyte	Method	Units	Period	Test	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)									
Benz(a)anthracene	SW8270	ug/Nm3	1	0.17	0.26	0.26	0.26	0.17	3.1
Benz(a)pyrene	SW8270	ug/Nm3	1	8.3	8.3	8.3	8.3	4.9	4.9
Benzidine	SW8270	ug/Nm3	1	0.41	0.41	0.41	0.41	160	160
Benzo(b)fluoranthene	SW8270	ug/Nm3	1	0.18	0.18	0.18	0.18	7.7	7.7
Benzo(g,h,i)perylene	SW8270	ug/Nm3	1	0.27	0.27	0.27	0.27	3.4	3.4
Benzo(k)fluoranthene	SW8270	ug/Nm3	1	50	50	50	50	5.2	5.2
Benzoic acid	SW8270	ug/Nm3	1	0.19	0.19	0.19	0.19	50	50
Benzyl alcohol	SW8270	ug/Nm3	1	0.22	0.22	0.22	0.22	3.6	3.6
Butylbenzylphthalate	SW8270	ug/Nm3	1	0.11	0.11	0.11	0.11	4.1	4.1
Chrysene	SW8270	ug/Nm3	1	0.18	0.18	0.18	0.18	2.1	2.1
Di-n-butylphthalate	SW8270	ug/Nm3	1	0.18	0.18	0.18	0.18	3.4	3.4
Di-n-octylphthalate	SW8270	ug/Nm3	1	0.18	0.18	0.18	0.18	3.5	3.5
Dibenz(a,h)anthracene	SW8270	ug/Nm3	1	0.2	0.2	0.2	0.2	3.8	3.8
Dibenzofuran	SW8270	ug/Nm3	1	21.8	21.8	21.8	21.8	22.4	22.4
Diethylphthalate	SW8270	ug/Nm3	1	0.13	0.13	0.13	0.13	26	26
Dimethylphthalate	SW8270	ug/Nm3	1	0.13	0.13	0.13	0.13	27	27
Diphenylamine/N-NitrosoDPA	SW8270	ug/Nm3	1	0.31	0.31	0.31	0.31	61	61
Fluoranthene	SW8270	ug/Nm3	1	8	8	8	8	8	8
Fluorene	SW8270	ug/Nm3	1	0.12	0.12	0.12	0.12	72.9	72.9
Hexachlorobenzene	SW8270	ug/Nm3	1	0.2	0.2	0.2	0.2	3.7	3.7
Hexachlorobutadiene	SW8270	ug/Nm3	1	2	2	2	2	2	2
Hexachlorocyclopentadiene	SW8270	ug/Nm3	1	0.68	0.68	0.68	0.68	13	13
Hexachloroethane	SW8270	ug/Nm3	1	0.1	0.1	0.1	0.1	1.9	1.9
Indeno(1,2,3-cd)pyrene	SW8270	ug/Nm3	1	0.22	0.22	0.22	0.22	4.1	4.1
Isophorone	SW8270	ug/Nm3	1	3.1	3.1	3.1	3.1	3.1	3.1
N-Nitroso-di-n-propylamine	SW8270	ug/Nm3	1	0.24	0.24	0.24	0.24	4.5	4.5
N-Nitrosodimethylamine	SW8270	ug/Nm3	1	0.17	0.17	0.17	0.17	3.3	3.3
Naphthalene	SW8270	ug/Nm3	1	2.7	2.7	2.7	2.7	2.5	2.5
Nitrobenzene	SW8270	ug/Nm3	1	0.46	0.46	0.46	0.46	8.7	8.7
Pentachloronitrobenzene	SW8270	ug/Nm3	1	43.9	43.9	43.9	43.9	17.4	17.4
Pentachlorophenol	SW8270	ug/Nm3	1	65.5	65.5	65.5	65.5	54.6	54.6
Phenanthrene	SW8270	ug/Nm3	1	31	31	31	31	87	87

Table G-1. Analytical Results Used In Calculations
Stream: Sour Syngas (11)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)								
Phenol	SW8270	ug/Nm ³	1	10.4	4.82	7.61	35	
Pyrene	SW8270	ug/Nm ³	1	9.29	10.8	10	9.6	
bis(2-Chloroethoxy)methane	SW8270	ug/Nm ³	1	2.3	2.2	2.3	2.3	---
bis(2-Chloroethyl)ether	SW8270	ug/Nm ³	1	0.16	3.1	3.1	---	---
bis(2-Chloroisopropyl)ether	SW8270	ug/Nm ³	1	0.18	3.4	3.4	---	---
bis(2-Ethylhexyl)phthalate	SW8270	ug/Nm ³	1	2.59	14	14	---	---
p-Chloroaniline	SW8270	ug/Nm ³	1	4.9	4.7	4.9	4.9	---
p-Dimethylaminoazobenzene	SW8270	ug/Nm ³	1	0.93	18	18	18	---

Table G-1. Analytical Results Used in Calculations
Stream: Sweet Syngas (12)

Analyte	Method	Units	Period	Test			Result 3	Average	95% CI
				Result 1	Result 2	Result 4			
Ionic Species-Vapor Phase									
Ammonia as N	EPA 350.1	ug/Nm ³	1	363	181	374	306	270	---
Chloride	EPA 300.0	ug/Nm ³	1	1,700	<	2,200	<	2,400	---
Cyanide	SW8012	ug/Nm ³	1	50.3	121	153	108	130	3.6
Fluoride	EPA 340.2	ug/Nm ³	1	21	22.4	19.5	21	21	3.6
Metals-Vapor Phase (Direct AAS)									
Arsenic	Radian	ug/Nm ³	1	1	<	<	<	217	---
Cadmium	Radian	ug/Nm ³	1	1	<	<	9.5	---	---
Chromium	Radian	ug/Nm ³	1	1	<	<	39	---	---
Lead	Radian	ug/Nm ³	1	1	<	<	85	---	---
Mercury	Radian	ug/Nm ³	1	1	<	<	3.8	3.6	3.6
Nickel	Radian	ug/Nm ³	1	1	<	<	19	---	---
Selenium	Radian	ug/Nm ³	1	1	<	<	201	---	---
Zinc	Radian	ug/Nm ³	1	1	<	<	2.2	---	---
Metals-Vapor Phase (Charcoal)									
Antimony	SW7041	ug/Nm ³	1	0.04	<	0.039	<	0.04	---
Arsenic	SW7060	ug/Nm ³	1	6.64	6.23	4.99	5.95	5.95	2.1
Barium	SW6010	ug/Nm ³	1	0.165	0.266	0.255	0.229	0.229	0.14
Beryllium	SW6010	ug/Nm ³	1	0.013	0.013	0.013	0.013	0.013	---
Boron	SW6010	ug/Nm ³	1	3.32	3.27	3.14	3.24	3.24	0.23
Cadmium	SW7131	ug/Nm ³	1	0.032	0.031	0.03	0.032	0.032	---
Chromium	SW6010	ug/Nm ³	1	3.2	4.37	3.14	3.57	3.57	1.7
Cobalt	SW6010	ug/Nm ³	1	0.22	0.21	0.248	0.22	0.22	---
Copper	SW6010	ug/Nm ³	1	1.79	1.8	1.67	1.75	1.75	0.18
Iron	SW6010	ug/Nm ³	1	80.9	90.5	83.3	84.9	84.9	12
Lead	SW7421	ug/Nm ³	1	0.031	0.031	0.03	0.031	0.031	---
Manganese	SW6010	ug/Nm ³	1	0.303	0.663	0.241	0.402	0.402	0.57
Mercury	SW7471	ug/Nm ³	1	0.0877	0.104	0.105	0.0989	0.0989	0.024
Molybdenum	SW6010	ug/Nm ³	1	1.56	1.85	1.25	1.55	1.55	0.75
Nickel	SW7740	ug/Nm ³	1	0.46	1.17	1.41	0.937	0.937	1.5
Selenium	SW6010	ug/Nm ³	1	0.146	0.143	0.252	0.18	0.18	0.15
Vanadium	SW6010	ug/Nm ³	1	0.185	0.421	0.234	0.28	0.28	0.31
Zinc	SW6010	ug/Nm ³	1	0.22	0.456	0.43	0.369	0.369	0.32

Table G-1. Analytical Results Used in Calculations
Stream: Sweet Syngas (12)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Vapor Phases (M-29)								
Aluminum	SW6010	ug/Nm3	1	v	12	v	10	v
Antimony	ICPMS	ug/Nm3	1	v	0.017 C	0.0181 C	0.015 C	0.017
Arsenic	ICPMS	ug/Nm3	1	v	0.428 C	0.456 C	0.379 C	0.421
Barium	ICPMS	ug/Nm3	1	v	0.301 C	0.141 C	0.0684 C	0.17
Beryllium	ICPMS	ug/Nm3	1	v	0.031 C	0.03 C	0.028 C	0.031
Boron	SW6010	ug/Nm3	1	v	17.6	v	3.7	7.05
Cadmium	ICPMS	ug/Nm3	1	v	0.499 C	0.429 C	0.391 C	0.44
Calcium	SW6010	ug/Nm3	1	v	61.8	v	26.9	31
Chromium	ICPMS	ug/Nm3	1	v	1.38 C	1.39 C	1.35 C	1.37
Cobalt	ICPMS	ug/Nm3	1	v	0.0581 C	0.0318 C	0.0254 C	0.0384
Copper	ICPMS	ug/Nm3	1	v	0.044	v	11 C	0.039
Iron	SW6010	ug/Nm3	1	v	8.82	v	5.49	8.98
Lead	ICPMS	ug/Nm3	1	v	0.532 C	0.303 C	0.151 C	0.329
Magnesium	SW6010	ug/Nm3	1	v	22.9	v	10	9
Manganese	ICPMS	ug/Nm3	1	v	0.018	v	0.017	0.016
Mercury	SW7470	ug/Nm3	1	v	0.187	v	0.168	0.333
Molybdenum	ICPMS	ug/Nm3	1	v	0.122 C	0.148 C	0.112 C	0.127
Nickel	ICPMS	ug/Nm3	1	v	1.21 C	1.26 C	1.03 C	1.17
Phosphorus	SW6010	ug/Nm3	1	v	24	v	23	21
Potassium	SW6010	ug/Nm3	1	v	180	v	170	160
Selenium	ICPMS	ug/Nm3	1	v	0.13	v	0.12	0.649
Silicon	SW6010	ug/Nm3	1	v	40.2	v	28.8	28.4
Sodium	SW6010	ug/Nm3	1	v	67.7	v	30.3	22
Titanium	SW6010	ug/Nm3	1	v	0.611	v	0.33	0.31
Vanadium	ICPMS	ug/Nm3	1	v	0.0576 C	0.0451 C	0.0462 C	0.0462
Zinc	SW6010	ug/Nm3	1	v	5.17	v	4.46	6.16
Aldehydes								
Acetaldehyde	SW0011	ug/Nm3	1	v	154	v	124	151
Acrolein	SW0011	ug/Nm3	1	v	1.3	v	1.1	1.3
Benzaldehyde	SW0011	ug/Nm3	1	v	1.3	v	1.1	1.3
Formaldehyde	SW0011	ug/Nm3	1	v	2.83	v	2.83	1.25

Table G-1. Analytical Results Used In Calculations
Stream: Sweet Syngas (12)

Analyte	Method	Units	Test Period	Result 1			Result 2			Result 3			Average			95% CI		
				1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
PAHs/SVOCs-Vapor Phase																		
1,2,4-Trichlorobenzene	SW8270	ug/Nm3		1	2											1.5	2.1	...
1,2-Dichlorobenzene	SW8270	ug/Nm3		1	1.9											2	2	...
1,3-Dichlorobenzene	SW8270	ug/Nm3		1	3.2											3.4	3.4	...
1,4-Dichlorobenzene	SW8270	ug/Nm3		1	2.7											2.8	2.8	...
2,4,5-Trichlorophenol	SW8270	ug/Nm3		1	2.5											2.6	2.6	...
2,4,6-Trichlorophenol	SW8270	ug/Nm3		1	8.3											8.7	8.7	...
2,4-Dimethylphenol	SW8270	ug/Nm3		1	18											17	18	...
2,4-Dichlorophenol	SW8270	ug/Nm3		1	3											2.9	3.2	...
2,4-Dinitrotoluene	SW8270	ug/Nm3		1	2.6											2.5	2.7	...
2,6-Dinitrotoluene	SW8270	ug/Nm3		1	4.1											4	4.3	...
2-Chloronaphthalene	SW8270	ug/Nm3		1	3											2.9	3.1	...
2-Chlorophenol	SW8270	ug/Nm3		1	52.8											45.3	49.3	9.4
2-Fluorophenol	SW8270	ug/Nm3		1	9.89											9.32	7.6	8.94
2-Methylnaphthalene	SW8270	ug/Nm3		1	7.6											7.4	7.9	...
2-Methylphenol	SW8270	ug/Nm3		1	2.8											2.7	2.9	...
2-Nitroaniline	SW8270	ug/Nm3		1	3.3											3.2	3.5	...
2-Nitrophenol	SW8270	ug/Nm3		1	6.9											6.7	7.3	...
3,3'-Dichlorobenzidine	SW8270	ug/Nm3		1	3.3											3.2	3.5	...
3-Nitroaniline	SW8270	ug/Nm3		1	5											4.9	5.3	...
4,6-Dinitro-2-methylphenol	SW8270	ug/Nm3		1	12											12	13	...
4-Aminobiphenyl	SW8270	ug/Nm3		1	3.6											3.5	3.5	...
4-Bromophenylphenyl ether	SW8270	ug/Nm3		1	5											4.9	5.2	...
4-Chlorophenylphenyl ether	SW8270	ug/Nm3		1	6.9											6.7	7.2	...
4-Methylphenol/3-Methylphenol	SW8270	ug/Nm3		1	3.4											3.3	3.5	...
4-Nitroaniline	SW8270	ug/Nm3		1	3											2.9	3.1	...
4-Nitrophenol	SW8270	ug/Nm3		1	2.7											2.6	2.8	...
Acenaphthene	SW8270	ug/Nm3		1	9.23											8.8	7.26	8.43
Acenaphthylene	SW8270	ug/Nm3		1	2.2											2.2	2.3	2.6
Acetophenone	SW8270	ug/Nm3		1	5.3											5.2	5.6	...
Aniline	SW8270	ug/Nm3		1	3.4											3.3	3.5	...
Anthracene	SW8270	ug/Nm3		1														

Table G-1. Analytical Results Used in Calculations
Stream: Sweet Syngas (12)

Analyte	Method	Units	Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)								
Benz(a)anthracene	SW8270	ug/Nm3	1	2.6	2.6	2.8	2.8	2.8
Benz(e)pyrene	SW8270	ug/Nm3	1	4.1	4	4.3	4.3	4.3
Benzidine	SW8270	ug/Nm3	1	130	130	140	140	140
Benz[b]fluoranthene	SW8270	ug/Nm3	1	6.5	6.3	6.8	6.8	6.8
Benz(g,h,i)perylene	SW8270	ug/Nm3	1	2.9	2.8	3	3	3
Benz(k)fluoranthene	SW8270	ug/Nm3	1	4.4	4.2	4.6	4.6	4.6
Benzolic acid	SW8270	ug/Nm3	1	40	39	42	42	42
Benzyl alcohol	SW8270	ug/Nm3	1	3	3	3.2	3.2	3.2
Butylbenzylphthalate	SW8270	ug/Nm3	1	3.5	3.4	3.7	3.7	3.7
Chrysene	SW8270	ug/Nm3	1	1.8	1.8	1.9	1.9	1.9
Di-n-butylphthalate	SW8270	ug/Nm3	1	2.9	2.8	3	3	3
Di-n-octylphthalate	SW8270	ug/Nm3	1	2.9	2.8	3.1	3.1	3.1
Dibenz(a,h)anthracene	SW8270	ug/Nm3	1	3.2	3.1	3.4	3.4	3.4
Dibenzo[furan	SW8270	ug/Nm3	1	2.4	2.3	2.5	2.5	2.5
Diethylphthalate	SW8270	ug/Nm3	1	2.1	2	2.2	2.2	2.2
Dimethylphthalate	SW8270	ug/Nm3	1	2.1	2.1	2.2	2.2	2.2
Diphenylamine/N-NitrosodPA	SW8270	ug/Nm3	1	4.9	4.8	5.1	5.1	5.1
Fluoranthene	SW8270	ug/Nm3	1	1.1	1.1	1.2	1.2	1.2
Fluorene	SW8270	ug/Nm3	1	1.9	1.8	2	2	2
Hexachlorobenzene	SW8270	ug/Nm3	1	3.1	3	3.3	3.3	3.3
Hexachlorobutadiene	SW8270	ug/Nm3	1	1.6	1.6	1.7	1.7	1.7
Hexachlorocyclopentadiene	SW8270	ug/Nm3	1	11	11	11	11	11
Hexachloroethane	SW8270	ug/Nm3	1	1.6	1.6	1.7	1.7	1.7
Indeno(1,2,3-cd)pyrene	SW8270	ug/Nm3	1	3.4	3.3	3.6	3.6	3.6
Isophorone	SW8270	ug/Nm3	1	2.4	2.4	2.6	2.6	2.6
N-Nitroso-di-n-propylamine	SW8270	ug/Nm3	1	3.8	3.7	3.9	3.9	3.9
N-Nitrosodimethylamine	SW8270	ug/Nm3	1	2.7	2.7	2.9	2.9	2.9
Naphthalene	SW8270	ug/Nm3	1	992	922	950	955	98
Nitrobenzene	SW8270	ug/Nm3	1	2.1	2.1	2.2	2.2	2.2
Pentachloronitrobenzene	SW8270	ug/Nm3	1	7.3	7.1	7.7	7.7	7.7
Pentachlorophenol	SW8270	ug/Nm3	1	1.2	1.2	1.3	1.3	1.3
Phenanthrene	SW8270	ug/Nm3	1	2.5	2.4	2.5	2.5	2.5

**Table G-1. Analytical Results Used in Calculations
Stream: Sweet Syngas (12)**

Analyte	Method	Units	Test Period	95% CI		
				Result 1	Result 2	Result 3
PAHs/SVOCs-Vapor Phase (continued)						
Phenol	SW8270	ug/Nm ³	1	<	3.5	<
Pyrene	SW8270	ug/Nm ³	1	< v	1.6	3.7
bis(2-Chloroethoxy)methane	SW8270	ug/Nm ³	1	v v v	1.8	1.7
bis(2-Chloroethyl)ether	SW8270	ug/Nm ³	1	v v v	2.6	1.9
bis(2-Chloroisopropyl)ether	SW8270	ug/Nm ³	1	v v v	2.6	2.7
bis(2-Ethylhexyl)phthalate	SW8270	ug/Nm ³	1	v v v	2.8	3
p-Chloroaniline	SW8270	ug/Nm ³	1	v v v	12	12
p-Dimethylaminoazobenzene	SW8270	ug/Nm ³	1	v v v	3.9	4.1
					15	16
					14	16

Table G-1. Analytical Results Used in Calculations
Stream: Acid Gas (14)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Ionic Species								
Ammonia as N	EPA 350.1	ug/Nm ³	1	18,100	23,600	14,200	18,600	12,000
Chloride	EPA 300.0	ug/Nm ³	1	5,100	5,600	5,100	5,600	---
Cyanide	SW9012	ug/Nm ³	1	1,330	1,350	1,440	1,370	150
Fluoride	EPA 340.2	ug/Nm ³	1	39.9	50.1	36.3	42.1	18
Metals-Vapor Phase (Charcoal)								
Antimony	SW7041	ug/Nm ³	1	1.6	2.42	2.12	1.78	2.1
Arsenic	SW7060	ug/Nm ³	1	3.37	8.25	2.98	4.87	7.3
Barium	SW6010	ug/Nm ³	1	11.1	14.7	10.8	12.2	5.4
Beryllium	SW6010	ug/Nm ³	1	0.54	0.67	0.69	0.69	---
Boron	SW6010	ug/Nm ³	1	151	187	192	177	56
Cadmium	SW7131	ug/Nm ³	1	1.49	2.1	1.6	1.6	---
Chromium	SW6010	ug/Nm ³	1	170	218	229	206	78
Cobalt	SW6010	ug/Nm ³	1	9	11	11	11	---
Copper	SW6010	ug/Nm ³	1	48.7	63.3	61.9	58	20
Iron	SW6010	ug/Nm ³	1	3,280	4,500	4,160	3,980	1,600
Lead	SW7421	ug/Nm ³	1	1.3	4.76	23.5	9.64	30
Manganese	SW6010	ug/Nm ³	1	8.1	23.4	10.3	10.9	27
Mercury	SW7471	ug/Nm ³	1	3.52	4.26	4.3	4.03	1.1
Molybdenum	SW6010	ug/Nm ³	1	70.2	68.6	78.5	72.4	13
Nickel	SW6010	ug/Nm ³	1	28.2	23	34	24.6	29
Selenium	SW7740	ug/Nm ³	1	1.3	1.6	1.7	1.7	---
Vanadium	SW6010	ug/Nm ³	1	10.8	6.21	12.6	9.87	8.2
Zinc	SW6010	ug/Nm ³	1	5.7	7.1	7.3	7.3	---
Metals-Vapor Phase (M-29)								
Aluminum	SW6010	ug/Nm ³	1	16.8	12	11	12	---
Antimony	ICP/MS	ug/Nm ³	1	0.0607	C	0.0446	C	0.0615
Arsenic	ICP/MS	ug/Nm ³	1	4.6	C	2.96	C	2.73
Barium	ICP/MS	ug/Nm ³	1	0.595	C	0.254	C	0.47
Beryllium	ICP/MS	ug/Nm ³	1	0.036	C	0.034	C	0.036
Boron	SW6010	ug/Nm ³	1	9.05	6.36	3.8	5.77	9
Cadmium	ICP/MS	ug/Nm ³	1	0.477	C	0.47	C	0.412
Calcium	SW6010	ug/Nm ³	1	144	70.3	70.5	94.9	110

Table G-1. Analytical Results Used in Calculations
Stream: Acid Gas (14)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Vapor Phase (M-29) (continued)								
Chromium	ICP/MS	ug/Nm ³	1	85.5	C	95.4	C	13.5 C
Cobalt	ICP/MS	ug/Nm ³	1	1.96	C	1.06	C	0.499 C
Copper	ICP/MS	ug/Nm ³	1	22	C	16.3	C	5.09 C
Iron	SW6010	ug/Nm ³	1	232		113		85.6
Lead	ICP/MS	ug/Nm ³	1	0.948	C	0.378	C	0.654 C
Magnesium	SW6010	ug/Nm ³	1	34.6		14.8		12.5
Manganese	ICP/MS	ug/Nm ³	1	39.4		12.5		4.99
Mercury	SW7470	ug/Nm ³	1	0.801		0.653		1.52
Molybdenum	ICP/MS	ug/Nm ³	1	7.85	C	3.48	C	2.31 C
Nickel	ICP/MS	ug/Nm ³	1	378	C	209	C	110 C
Phosphorus	SW6010	ug/Nm ³	1	72.7		144		48.5
Potassium	SW6010	ug/Nm ³	1	v	210	v	200	v
Selenium	ICP/MS	ug/Nm ³	1	2.83		7.9		0.231
Silicon	SW6010	ug/Nm ³	1	90.5		68.9		62.8
Sodium	SW6010	ug/Nm ³	1	129		61.5		43.8
Titanium	SW6010	ug/Nm ³	1	0.948		1.1		0.403
Vanadium	ICP/MS	ug/Nm ³	1	0.636	C	2.05	C	0.125 C
Zinc	SW6010	ug/Nm ³	1	6.18		6.62		30
PAHs/SVOCs-Vapor Phase								
1,2-Dichlorobenzene	SW8270	ug/Nm ³	1	2.2		4.5		4.5
1,3-Dichlorobenzene	SW8270	ug/Nm ³	1	2		4.2		4.2
1,4-Dichlorobenzene	SW8270	ug/Nm ³	1	3.4		7.2		7.2
2,4,5-Trichlorophenol	SW8270	ug/Nm ³	1	2.9		6		5.8
2,4,6-Tribromophenol	SW8270	ug/Nm ³	1	26.1		22.5		21.3
2,4,6-Trichlorophenol	SW8270	ug/Nm ³	1	2.7		5.6		5.4
2,4-Dinitrophenol	SW8270	ug/Nm ³	1	19		39		38
2,4-Dinitrotoluene	SW8270	ug/Nm ³	1	3.2		6.7		6.5
2,6-Dinitrotoluene	SW8270	ug/Nm ³	1	2.7		5.7		5.5
2-Chloronaphthalene	SW8270	ug/Nm ³	1	4.4		9.2		9.9
2-Chlorophenol	SW8270	ug/Nm ³	1	3.2		6.7		6.4
2-Fluorobiphenyl	SW8270	ug/Nm ³	1	17.4		17.2		15.7
2-Fluorophenol	SW8270	ug/Nm ³	1	27.3		26		23.8

Table G-1. Analytical Results Used in Calculations
Stream: Acid Gas (14)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)								
2-Methylnaphthalene	SW8270	ug/Nm3	1	640	560	540	640	...
2-Methylphenol	SW8270	ug/Nm3	1	8	17	16	17	...
2-Nitroaniline	SW8270	ug/Nm3	1	3	6.2	6	6.2	...
3,3'-Dichlorobenzidine	SW8270	ug/Nm3	1	7	15	15	15	...
3-Nitroaniline	SW8270	ug/Nm3	1	3.6	7.5	7.2	7.5	...
4,6-Dinitro-2-methylphenol	SW8270	ug/Nm3	1	5.4	11.2	10.8	11.2	...
4-Aminobiphenyl	SW8270	ug/Nm3	1	13	27	26	27	...
4-Bromophenyl/phenyl ether	SW8270	ug/Nm3	1	3.9	8	7.7	8	...
4-Chlorophenyl/phenyl ether	SW8270	ug/Nm3	1	5.4	11.1	10.7	11.1	...
4-Methylphenol/3-Methylphenol	SW8270	ug/Nm3	1	7	15	15	15	...
4-Nitroaniline	SW8270	ug/Nm3	1	3.6	7.5	7.2	7.5	...
4-Nitrophenol	SW8270	ug/Nm3	1	3.2	6.7	6.5	6.7	...
Acenaphthene	SW8270	ug/Nm3	1	1,850	1,650	1,500	1,670	440
Acenaphthylene	SW8270	ug/Nm3	1	3,080	3,360	2,720	3,050	800
Acetophenone	SW8270	ug/Nm3	1	2.4	5	4.8	5	...
Aniline	SW8270	ug/Nm3	1	5.7	11.9	11.5	11.9	...
Anthracene	SW8270	ug/Nm3	1	22.5	33.5	36.2	30.7	18
Benz(a)anthracene	SW8270	ug/Nm3	1	2.8	5.9	5.7	5.9	...
Benz(a)pyrene	SW8270	ug/Nm3	1	4.4	9.2	8.9	9.2	...
Benzidine	SW8270	ug/Nm3	1	140	290	280	290	...
Benzo(b)fluoranthene	SW8270	ug/Nm3	1	7	14	14	14	...
Benzo(g,h,i)perylene	SW8270	ug/Nm3	1	3.1	6.4	6.2	6.4	...
Benzo(k)fluoranthene	SW8270	ug/Nm3	1	4.7	9.7	9.4	9.7	...
Benzyl alcohol	SW8270	ug/Nm3	1	3.3	6.8	6.5	6.8	...
Butylbenzylphthalate	SW8270	ug/Nm3	1	3.8	7.8	7.5	7.8	...
Chrysene	SW8270	ug/Nm3	1	1.9	4.1	3.9	4.1	...
Di-n-butylphthalate	SW8270	ug/Nm3	1	3.1	6.5	6.2	6.5	...
Di-n-octylphthalate	SW8270	ug/Nm3	1	3.1	6.5	6.3	6.5	...
Dibenz(a,h)anthracene	SW8270	ug/Nm3	1	3.4	7.2	6.9	7.2	...
Dibenzofuran	SW8270	ug/Nm3	1	296	268	230	265	82
Diethylphthalate	SW8270	ug/Nm3	1	2.2	4.6	4.5	4.6	...
Dimethylphthalate	SW8270	ug/Nm3	1	2.3	4.8	4.6	4.8	...

Table G-1. Analytical Results Used in Calculations
Stream: Acid Gas (14)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)								
Diphenylamine/N-NitrosoDPA	SW8270	ug/Nm3	1	5.3	v	11	11	---
Fluoranthene	SW8270	ug/Nm3	1	1.2	v	2.5	2.5	---
Fluorene	SW8270	ug/Nm3	1	653	v	655	655	12
Hexachlorobenzene	SW8270	ug/Nm3	1	3.4	v	7	7	---
Hexachlorocyclopentadiene	SW8270	ug/Nm3	1	12	v	24	24	---
Hexachloroethane	SW8270	ug/Nm3	1	1.7	v	3.6	3.6	---
Indeno(1,2,3-cd)pyrene	SW8270	ug/Nm3	1	3.7	v	7.7	7.7	---
N-Nitroso-di-n-propylamine	SW8270	ug/Nm3	1	4	v	8.4	8.4	---
N-Nitrosodimethylamine	SW8270	ug/Nm3	1	3	v	6.2	6.2	---
Naphthalene	SW8270	ug/Nm3	1	114,000	v	96,600	110,000	28,000
Pentachloronitrobenzene	SW8270	ug/Nm3	1	8	v	16	16	---
Pentachlorophenol	SW8270	ug/Nm3	1	1.3	v	2.7	2.7	---
Phenanthrene	SW8270	ug/Nm3	1	104	v	282	287	290
Phenol	SW8270	ug/Nm3	1	6.39	v	7.9	7.9	---
Pyrene	SW8270	ug/Nm3	1	1.7	v	3.6	3.6	---
bis(2-Chloroethyl)ether	SW8270	ug/Nm3	1	2.8	v	5.9	5.9	---
bis(2-Chloroisopropyl)ether	SW8270	ug/Nm3	1	3.1	v	6.4	6.4	---
bis(2-Ethylhexyl)phthalate	SW8270	ug/Nm3	1	13	v	26	26	---
p-Dimethylaminooazobenzene	SW8270	ug/Nm3	1	16	v	33	33	---

Table G-1. Analytical Results Used in Calculations
Stream: Sour Gas (22)

<u>Analyte</u>	<u>Method</u>	<u>Units</u>	<u>Test Period</u>	<u>Result 1</u>	<u>Result 2</u>	<u>Result 3</u>	<u>Average</u>	<u>95% CI</u>
Ionic Species-Vapor Phase								
Ammonia as N	EPA 350.1 SW9012	vol.% ug/Nm ³	2 2	37.7 184,000	29.3 233,000	34.2 143,000	33.7 187,000	11 110,000
Cyanide								

Table G-1. Analytical Results Used in Calculations
Stream: Tail Gas (15)

Analyte	Method	Units	Period	Test	Result 1	Result 2	Result 3	Average	95% CI
Ionic Species-Vapor Phase									
Ammonia as N	EPA 350.1	ug/Nm ³	1	98,400	44,300	67,200	70,000	67,000	
Ammonia as N	EPA 350.1	ug/Nm ³	2	123,000	43,800	144,000	104,000	130,000	
Cyanide	SW9012	ug/Nm ³	1	924	895	266	695	920	
Cyanide	SW9012	ug/Nm ³	2	79,400	95,000	93,900	89,400	22,000	
Metal-Vapor Phase (M-29)									
Aluminum	SW6010	ug/Nm ³	1	v	14	v	14	v	118
Antimony	ICP/MS	ug/Nm ³	1	v	0.021	C	0.177	C	0.0269
Arsenic	ICP/MS	ug/Nm ³	1	v	0.143	C	0.952	C	0.106
Barium	ICP/MS	ug/Nm ³	1	v	0.281	C	1.57	C	0.231
Beryllium	ICP/MS	ug/Nm ³	1	v	0.04	C	0.32	C	0.04
Boron	SW6010	ug/Nm ³	1	v	5	v	40	v	40
Cadmium	ICP/MS	ug/Nm ³	1	v	0.316	C	4.33	C	0.57
Calcium	SW6010	ug/Nm ³	1	v	79.2	v	489	v	92.5
Chromium	ICP/MS	ug/Nm ³	1	v	2.02	C	76.9	C	2.99
Cobalt	ICP/MS	ug/Nm ³	1	v	0.0772	C	18.1	C	1.27
Copper	ICP/MS	ug/Nm ³	1	v	0.05	v	7.23	C	4.22
Iron	SW6010	ug/Nm ³	1	v	11	v	76.3	v	15.3
Lead	ICP/MS	ug/Nm ³	1	v	0.869	C	19.3	C	3.13
Magnesium	SW6010	ug/Nm ³	1	v	30.5	v	109	v	13
Manganese	ICP/MS	ug/Nm ³	1	v	1.61	v	0.182	v	0.592
Mercury	SW7470	ug/Nm ³	1	v	3.62	v	25.8	v	4.51
Molybdenum	ICP/MS	ug/Nm ³	1	v	0.21	C	1.39	C	0.214
Nickel	ICP/MS	ug/Nm ³	1	v	24.9	C	60.4	C	19.9
Phosphorus	SW6010	ug/Nm ³	1	v	600	v	5,000	v	300
Potassium	SW6010	ug/Nm ³	1	v	220	v	1,900	v	220
Selenium	ICP/MS	ug/Nm ³	1	v	0.16	v	1.3	v	0.16
Silicon	SW6010	ug/Nm ³	1	v	41.1	v	387	v	71.3
Sodium	SW6010	ug/Nm ³	1	v	63.5	v	612	v	135
Titanium	SW6010	ug/Nm ³	1	v	0.503	v	3.6	v	0.4
Vanadium	ICP/MS	ug/Nm ³	1	v	0.12	C	0.995	C	0.146
Zinc	SW6010	ug/Nm ³	1	v	9.52	v	106	v	33.8

Table G-1. Analytical Results Used in Calculations
Stream: Tail Gas (15)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase	SW8270	ug/Nm ³	1	60	7.7	5.30	60	...
1,2,4-Trichlorobenzene	SW8270	ug/Nm ³	1	3.8	11	4.40	11	...
1,2-Dichlorobenzene	SW8270	ug/Nm ³	1	3.6	10	4.60	10	...
1,3-Dichlorobenzene	SW8270	ug/Nm ³	1	6.1	17	4.90	17	...
1,4-Dichlorobenzene	SW8270	ug/Nm ³	1	5.2	15	4.00	15	...
2,4,5-Trichlorophenol	SW8270	ug/Nm ³	1	4.7	13	3.40	13	...
2,4,6-Trichlorophenol	SW8270	ug/Nm ³	1	180	11	60	180	...
2,4-Dichlorophenol	SW8270	ug/Nm ³	1	400	45	8.80	400	...
2,4-Dimethylphenol	SW8270	ug/Nm ³	1	34	95	1.60	95	...
2,4-Dinitrotoluene	SW8270	ug/Nm ³	1	5.7	16	8.80	16	...
2,6-Dinitrotoluene	SW8270	ug/Nm ³	1	4.9	14	7.40	14	...
2-Chloronaphthalene	SW8270	ug/Nm ³	1	7.9	22	6.20	22	...
2-Chlorophenol	SW8270	ug/Nm ³	1	5.7	16	2.90	16	...
2-Methylnaphthalene	SW8270	ug/Nm ³	1	520	624	4.00	520	...
2-Methylphenol	SW8270	ug/Nm ³	1	14	41	3.60	41	...
2-Nitroaniline	SW8270	ug/Nm ³	1	5.3	15	6.50	15	...
2-Nitrophenol	SW8270	ug/Nm ³	1	130	18	2.90	130	...
3,3-Dichlorobenzidine	SW8270	ug/Nm ³	1	13	37	7.50	37	...
3-Nitroaniline	SW8270	ug/Nm ³	1	6.4	18	4.80	18	...
4,6-Dinitro-2-methylphenol	SW8270	ug/Nm ³	1	9.6	27	6.10	27	...
4-Aminobiphenyl	SW8270	ug/Nm ³	1	23	64	7.40	64	...
4-Bromophenyl/phenyl ether	SW8270	ug/Nm ³	1	6.9	19	4.40	19	...
4-Chloro-3-methylphenol	SW8270	ug/Nm ³	1	140	12	2.20	140	...
4-Chlorophenyl/phenyl ether	SW8270	ug/Nm ³	1	9.5	27	6.10	27	...
4-Methylphenol/S-Methylphenol	SW8270	ug/Nm ³	1	13	37	6.60	37	...
4-Nitroaniline	SW8270	ug/Nm ³	1	6.4	18	4.10	18	...
4-Nitrophenol	SW8270	ug/Nm ³	1	5.7	16	4.40	16	...
Acenaphthene	SW8270	ug/Nm ³	1	54.7	32.4	9.90	43.6	140
Acenaphthylene	SW8270	ug/Nm ³	1		27	6.60	27	...

Table G-1. Analytical Results Used in Calculations
Stream: Tail Gas (15)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)								
Acetophenone	SW8270	ug/Nm3	1	11.1	12	12	12	12
Aniline	SW8270	ug/Nm3	1	10	29	29	29	29
Anthracene	SW8270	ug/Nm3	1	6.4	18	18	18	18
Benz(a)anthracene	SW8270	ug/Nm3	1	5	14	14	14	14
Benz(e)pyrene	SW8270	ug/Nm3	1	7.9	22	22	22	22
Benzidine	SW8270	ug/Nm3	1	250	710	710	710	710
Benzo(b)fluoranthene	SW8270	ug/Nm3	1	12	35	35	35	35
Benzog(h,i)perylene	SW8270	ug/Nm3	1	5.5	15	15	15	15
Benzo(k)fluoranthene	SW8270	ug/Nm3	1	8.3	23	23	23	23
Benzoic acid	SW8270	ug/Nm3	1	940	210	210	210	210
Benzyl alcohol	SW8270	ug/Nm3	1	5.8	16	16	16	16
Butylbenzylphthalate	SW8270	ug/Nm3	1	6.7	19	19	19	19
Chrysene	SW8270	ug/Nm3	1	3.4	9.7	9.7	9.7	9.7
Di-n-butylphthalate	SW8270	ug/Nm3	1	5.5	16	16	16	16
Di-n-octylphthalate	SW8270	ug/Nm3	1	5.6	16	16	16	16
Dibenz(a,h)anthracene	SW8270	ug/Nm3	1	6.1	17	17	17	17
Dibenzofuran	SW8270	ug/Nm3	1	197	128	128	128	128
Diethylphthalate	SW8270	ug/Nm3	1	4	11	11	11	11
Dimethylphthalate	SW8270	ug/Nm3	1	4.1	11	11	11	11
Diphenylamine/N-NitrosoDPA	SW8270	ug/Nm3	1	9.4	26	26	26	26
Fluoranthene	SW8270	ug/Nm3	1	2.1	6	6	6	6
Fluorene	SW8270	ug/Nm3	1	17.7	10	10	10	10
Hexachlorobenzene	SW8270	ug/Nm3	1	6	17	17	17	17
Hexachlorobutadiene	SW8270	ug/Nm3	1	210	8.6	8.6	8.6	8.6
Hexachlorocyclopentadiene	SW8270	ug/Nm3	1	21	58	58	58	58
Hexachloroethane	SW8270	ug/Nm3	1	3.1	8.7	8.7	8.7	8.7
Indeno(1,2,3-cd)pyrene	SW8270	ug/Nm3	1	6.5	18	18	18	18
Isophorone	SW8270	ug/Nm3	1	95	13	13	13	13
N-Nitroso-di-n-propylamine	SW8270	ug/Nm3	1	7.2	20	20	20	20
N-Nitrosodimethylamine	SW8270	ug/Nm3	1	5.2	15	15	15	15
Naphthalene	SW8270	ug/Nm3	1	98,100	71,600	97,400	97,400	97,400
Nitrobenzene	SW8270	ug/Nm3	1	120	11	11	11	11

Table G-1. Analytical Results Used in Calculations
Stream: Tail Gas (15)

Analyte	Method	Units	Period	Test	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)									
Pentachloronitrobenzene	SW8270	ug/Nm3	1		14			39	
Pentachlorophenol	SW8270	ug/Nm3	1		2.3			6.4	
Phanthrene	SW8270	ug/Nm3	1		150			150	
Phenol	SW8270	ug/Nm3	1		6.7			19	
Pyrene	SW8270	ug/Nm3	1		3.1			8.6	
bis(2-Chloroethoxy)methane	SW8270	ug/Nm3	1		110			110	
bis(2-Chloroethyl)ether	SW8270	ug/Nm3	1		5			14	
bis(2-Chloroisopropyl)ether	SW8270	ug/Nm3	1		5.5			15	
bis(2-Ethylhexyl)phthalate	SW8270	ug/Nm3	1		22			63	
p-Chloroaniline	SW8270	ug/Nm3	1		310			310	
p-Dimethylaminoazobenzene	SW8270	ug/Nm3	1		28			80	

Table G-1. Analytical Results Used In Calculations**Stream: Combustion Air (K250)**

Analyte	Method	Units	Period	Test			Result 3	Average	95% CI
				Result 1	Result 2	Result 3			
Ionic Species-Vapor Phase									
Ammonia as N	EPA 350.1	ug/Nm ³	2	442,000	448,000	483,000	483,000	458,000	55,000
Cyanide	SW9012	ug/Nm ³	2	11,400	9,520	10,100	10,100	10,300	2,400

Table G-1. Analytical Results Used In Calculations
Stream: Natural Gas (99)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Vapor Phase (M-29)								
Aluminum	SW6010	ug/Nm ³	2	v	11	<	11	v
Antimony	ICP/MS	ug/Nm ³	2	v	0.016	c	0.018	c
Arsenic	ICP/MS	ug/Nm ³	2	v	0.0716	c	0.0773	c
Barium	ICP/MS	ug/Nm ³	2	v	0.0936	c	0.0591	c
Beryllium	ICP/MS	ug/Nm ³	2	v	0.029	c	0.0494	c
Boron	SW6010	ug/Nm ³	2	v	3.6	<	4.1	v
Cadmium	ICP/MS	ug/Nm ³	2	v	0.284	c	0.483	c
Calcium	SW6010	ug/Nm ³	2	v	34.4	49.6	44.3	42.8
Chromium	ICP/MS	ug/Nm ³	2	v	1.42	c	1.59	c
Cobalt	ICP/MS	ug/Nm ³	2	v	0.0138	c	0.0272	c
Copper	ICP/MS	ug/Nm ³	2	v	0.041	v	0.047	v
Iron	SW6010	ug/Nm ³	2	v	4.42	7.03	6.55	v
Lead	ICP/MS	ug/Nm ³	2	v	0.0989	c	9.22	c
Magnesium	SW6010	ug/Nm ³	2	v	10	11	10	v
Manganese	ICP/MS	ug/Nm ³	2	v	0.016	v	0.129	v
Mercury	SW7470	ug/Nm ³	2	v	0.307	v	0.317	v
Molybdenum	ICP/MS	ug/Nm ³	2	v	0.112	c	0.155	c
Nickel	ICP/MS	ug/Nm ³	2	v	1.03	c	1.18	c
Phosphorus	SW6010	ug/Nm ³	2	v	22	v	26	v
Potassium	SW6010	ug/Nm ³	2	v	170	v	190	v
Selenium	ICP/MS	ug/Nm ³	2	v	0.12	v	0.14	v
Silicon	SW6010	ug/Nm ³	2	v	19.6	v	28	v
Sodium	SW6010	ug/Nm ³	2	v	25.6	v	33.6	v
Titanium	SW6010	ug/Nm ³	2	v	0.33	v	0.435	v
Vanadium	ICP/MS	ug/Nm ³	2	v	0.0496	c	0.026	c
Zinc	SW6010	ug/Nm ³	2	v	7.2	v	8.72	v
							8.88	

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Period	Test			Result 3	Average	95% CI
				Result 1	Result 2	Result 3			
Ionic Species-Particulate Phase									
Chloride	EPA 300.0	ug/Nm3	2	v	150	v	140	v	150
Fluoride	EPA 340.2	ug/Nm3	2	v	1.7	v	1.6	v	1.7
Sulfate	EPA 300.0	ug/Nm3	2	v	136,000	v	131,000	v	138,000
Ionic Species-Vapor Phase									
Chloride	EPA 300.0	ug/Nm3	2	v	2,100	v	1,600	v	2,100
Fluoride	EPA 340.2	ug/Nm3	2	v	35.5	v	24.6	v	26
H2SO4 (as sulfate)	EPA 300.0	ug/Nm3	2	v	284,000	v	243,000	v	286,000
Sulfur dioxide (as sulfate)	EPA 300.0	ug/Nm3	2	v	11,100,000	v	10,200,000	v	12,100,000
Sulfur oxides (as sulfate)	EPA 300.0	ug/Nm3	2	v	11,400,000	v	10,400,000	v	12,400,000
Ammonia as N	EPA 350.1	ug/Nm3	2	v	570	v	304	v	1,360
Cyanide	SW9012	ug/Nm3	2	v	8.15	v	5.13	v	3.6
Metals-Particulate Phase									
Aluminum	SW6010	ug/Nm3	2	v	51.9	v	52.4	v	52.3
Antimony	SW6010	ug/Nm3	2	v	2.1	v	2.1	v	2.1
Arsenic	SW7060	ug/Nm3	2	v	0.347	v	0.034	v	0.178
Barium	SW6010	ug/Nm3	2	v	1.44	v	2.17	v	0.17
Beryllium	SW6010	ug/Nm3	2	v	0.012	v	0.012	v	0.012
Cadmium	SW7131	ug/Nm3	2	v	0.37	v	0.516	v	0.447
Calcium	SW6010	ug/Nm3	2	v	40.7	v	42.2	v	42.3
Chromium	SW6010	ug/Nm3	2	v	2.64	v	2.4	v	2.79
Cobalt	SW6010	ug/Nm3	2	v	0.468	v	0.292	v	0.23
Copper	SW6010	ug/Nm3	2	v	2.38	v	1.63	v	1.73
Iron	SW6010	ug/Nm3	2	v	244	v	165	v	150
Lead	SW7421	ug/Nm3	2	v	0.295	v	0.0691	v	0.443
Magnesium	SW6010	ug/Nm3	2	v	7.84	v	7.05	v	7.03
Manganese	SW6010	ug/Nm3	2	v	1.48	v	1.07	v	1.56
Mercury	SW7471	ug/Nm3	2	v	0.0171	v	0.00764	v	0.0216
Molybdenum	SW6010	ug/Nm3	2	v	5.19	v	4.91	v	5.3
Nickel	SW6010	ug/Nm3	2	v	3.74	v	1.63	v	3.86
Phosphorus	SW6010	ug/Nm3	2	v	180	v	171	v	173
Potassium	SW6010	ug/Nm3	2	v	21.1	v	16.1	v	16
Selenium	SW7740	ug/Nm3	2	v	0.0541	v	0.029	v	0.029

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Particulate Phase (continued)								
Sodium	SW6010	ug/Nm ³	2	194	91.3	88.3	125	150
Titanium	SW6010	ug/Nm ³	2	1.11	0.774	0.8	0.895	0.46
Vanadium	SW6010	ug/Nm ³	2	0.49	0.56	0.584	0.545	0.12
Zinc	SW6010	ug/Nm ³	2	10.2	6.25	12.1	9.52	7.4
Metals-Vapor Phase (M-29)								
Aluminum	SW6010	ug/Nm ³	2	v	19	v	v	v
Antimony	ICP/MS	ug/Nm ³	2	v	0.0402	C	v	0.025 C
Arsenic	ICP/MS	ug/Nm ³	2	v	0.285	C	v	0.028
Barium	ICP/MS	ug/Nm ³	2	v	0.201	C	v	0.511
Beryllium	ICP/MS	ug/Nm ³	2	v	0.0577	C	v	1.2
Boron	SW6010	ug/Nm ³	2	v	15.9	v	v	v
Cadmium	ICP/MS	ug/Nm ³	2	v	3.41	C	v	0.0476 C
Calcium	SW6010	ug/Nm ³	2	v	64.1	34.8	v	0.106
Chromium	ICP/MS	ug/Nm ³	2	v	1.36	C	v	0.046 C
Cobalt	ICP/MS	ug/Nm ³	2	v	0.0828	C	v	0.051
Copper	ICP/MS	ug/Nm ³	2	v	1.88	C	v	0.051
Iron	SW6010	ug/Nm ³	2	v	18.9	17.5	v	0.051
Lead	ICP/MS	ug/Nm ³	2	v	2.04	C	v	v
Magnesium	SW6010	ug/Nm ³	2	v	17	v	v	v
Manganese	ICP/MS	ug/Nm ³	2	v	22.3	0.028	v	v
Mercury, Nitric Imps.	SW7470	ug/Nm ³	2	v	3.1	5.01	v	v
Mercury, KMnO ₄ Imps.	SW7470	ug/Nm ³	2	v	24.2	24.4	v	v
Mercury, Total Vapor Phase	SW7470	ug/Nm ³	2	v	27.3	29.41	v	v
Molybdenum	ICP/MS	ug/Nm ³	2	v	0.05	C	v	v
Nickel	ICP/MS	ug/Nm ³	2	v	2.67	C	v	v
Phosphorus	SW6010	ug/Nm ³	2	v	780	760	v	v
Potassium	SW6010	ug/Nm ³	2	v	340	290	v	v
Selenium	ICP/MS	ug/Nm ³	2	v	0.21	C	v	v
Silicon	SW6010	ug/Nm ³	2	v	60.6	61.2	v	v
Sodium	SW6010	ug/Nm ³	2	v	140	63	v	v
Titanium	SW6010	ug/Nm ³	2	v	0.57	0.55	v	v
Vanadium	ICP/MS	ug/Nm ³	2	v	0.284	C	v	v
					0.325	C	1.6	1.9
						C	0.736	1.9

Incinerator (16)

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Vapor Phase (M-29) (continued)								
Zinc	SW6010	ug/Nm3	2	28.7	11.5	7.69	16	28
Aldehydes								
Acetaldehyde	SW0011	ug/Nm3	2	0.638	1.04	0.55	0.651	0.95
Acrolein	SW0011	ug/Nm3	2	0.33	0.59	0.55	0.59	---
Benzaldehyde	SW0011	ug/Nm3	2	0.33	0.59	0.55	0.59	---
Formaldehyde	SW0011	ug/Nm3	2	0.864	0.83	0.65	0.781	0.29
Volatile Organic Compounds								
1,1,1-Trichloroethane	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---
1,1,1-Trichloroethane	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	---
1,1,1-Trichloroethane	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	---
1,1,2,2-Tetrachloroethane	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---
1,1,2,2-Tetrachloroethane	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	---
1,1,2,2-Tetrachloroethane	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	---
1,1,2-Trichloroethane	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---
1,1,2-Trichloroethane	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	---
1,1,2-Trichloroethane	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	---
1,1-Dichloroethane	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---
1,1-Dichloroethane	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	---
1,1-Dichloroethane	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	---
1,1-Dichloroethane	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---
1,1-Dichloroethene	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	---
1,1-Dichloroethene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	---
1,1-Dichloroethene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---
1,2-Dichlorobenzene	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	---
1,2-Dichlorobenzene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	---
1,2-Dichlorobenzene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---
1,2-Dichloroethane	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	---
1,2-Dichloroethane	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	---
1,2-Dichloroethene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---
1,2-Dichloropropane	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	---
1,2-Dichloropropane	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	---
1,3-Dichlorobenzene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	---

Table G-1. Analytical Results Used In Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Volatile Organic Compounds (continued)								
1,3-Dichlorobenzene	SW8240	ug/Nm3	2	0.53	0.48	v	0.49	0.49
1,3-Dichlorobenzene	SW8240	ug/Nm3	2	0.5	0.47	v	0.59	0.59
1,4-Dichlorobenzene	SW8240	ug/Nm3	2	0.53	0.51	v	0.57	0.57
1,4-Dichlorobenzene	SW8240	ug/Nm3	2	0.53	0.48	v	0.49	0.49
1,4-Dichlorobenzene	SW8240	ug/Nm3	2	0.5	0.47	v	0.59	0.59
2-Butanone	SW8240	ug/Nm3	2	3.12	2.5	v	2.8	2.8
2-Butanone	SW8240	ug/Nm3	2	2.6	2.4	v	2.7	2.7
2-Butanone	SW8240	ug/Nm3	2	2.6	2.4	v	2.7	2.7
2-Hexanone	SW8240	ug/Nm3	2	2.6	2.4	v	2.8	2.8
2-Hexanone	SW8240	ug/Nm3	2	2.6	2.5	v	2.5	2.5
2-Hexanone	SW8240	ug/Nm3	2	2.7	2.4	v	2.5	2.5
2-Hexanone	SW8240	ug/Nm3	2	2.5	2.4	v	3	3
4-Methyl-2-Pentanone	SW8240	ug/Nm3	2	2.6	2.5	v	2.8	2.8
4-Methyl-2-Pentanone	SW8240	ug/Nm3	2	2.7	2.4	v	2.5	2.5
4-Methyl-2-Pentanone	SW8240	ug/Nm3	2	2.5	2.4	v	3	3
Acetone	SW8240	ug/Nm3	2	2.6	2.5	v	2.8	2.8
Acetone	SW8240	ug/Nm3	2	2.7	2.4	v	2.5	2.5
Acetone	SW8240	ug/Nm3	2	2.5	2.4	v	3	3
Benzene	SW8240	ug/Nm3	2	12.7	1.44	v	1.55	1.55
Benzene	SW8240	ug/Nm3	2	1.98	0.482	v	1.27	1.24
Bromodichloromethane	SW8240	ug/Nm3	2	1.76	1.08	v	0.595	0.57
Bromodichloromethane	SW8240	ug/Nm3	2	0.53	0.51	v	0.49	0.49
Bromodichloromethane	SW8240	ug/Nm3	2	0.53	0.48	v	0.47	0.47
Bromoform	SW8240	ug/Nm3	2	0.5	0.51	v	0.57	0.57
Bromoform	SW8240	ug/Nm3	2	0.53	0.48	v	0.49	0.49
Bromomethane	SW8240	ug/Nm3	2	0.5	0.47	v	0.59	0.59
Bromomethane	SW8240	ug/Nm3	2	0.51	0.53	v	0.57	0.57
Bromomethane	SW8240	ug/Nm3	2	6.09	4.82	v	8.5	8.5
Bromomethane	SW8240	ug/Nm3	2	5.21	2.4	v	0.59	0.59
Carbon Disulfide	SW8240	ug/Nm3	2	0.53	5.23	v	5.99	5.99
Carbon Disulfide	SW8240	ug/Nm3	2	6.09	6.27	v	7.08	7.08
Carbon Disulfide	SW8240	ug/Nm3	2	6.79	3.58	v	5.12	5.12

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Period	Test	Result 1	Result 2	Result 3	Average	95% CI
Volatile Organic Compounds (continued)									
Carbon Tetrachloride	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.57
Carbon Tetrachloride	SW8240	ug/Nm3	2	0.53	0.53	0.47	0.47	0.59	0.53
Carbon Tetrachloride	SW8240	ug/Nm3	2	0.5	0.5	0.51	0.51	0.59	0.53
Chlorobenzene	SW8240	ug/Nm3	2	0.53	0.53	0.57	0.57	0.57	0.57
Chlorobenzene	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.53
Chlorobenzene	SW8240	ug/Nm3	2	0.5	0.5	0.47	0.47	0.59	0.53
Chlorobenzene	SW8240	ug/Nm3	2	0.53	0.53	0.51	0.51	0.57	0.57
Chloroethane	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.53
Chloroethane	SW8240	ug/Nm3	2	0.5	0.5	0.47	0.47	0.59	0.53
Chloroform	SW8240	ug/Nm3	2	0.53	0.53	0.51	0.51	0.57	0.57
Chloroform	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.53
Chloroform	SW8240	ug/Nm3	2	0.5	0.5	0.47	0.47	0.59	0.53
Chloromethane	SW8240	ug/Nm3	2	0.53	0.53	0.51	0.51	0.57	0.57
Chloromethane	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.53
Chloromethane	SW8240	ug/Nm3	2	0.5	0.5	0.47	0.47	0.59	0.53
cis-1,3-Dichloropropene	SW8240	ug/Nm3	2	0.53	0.53	0.51	0.51	0.57	0.57
cis-1,3-Dichloropropene	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.53
cis-1,3-Dichloropropene	SW8240	ug/Nm3	2	0.5	0.5	0.47	0.47	0.59	0.53
Dibromochloromethane	SW8240	ug/Nm3	2	0.53	0.53	0.51	0.51	0.57	0.57
Dibromochloromethane	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.53
Dibromochloromethane	SW8240	ug/Nm3	2	0.5	0.5	0.47	0.47	0.59	0.59
Ethyl Benzene	SW8240	ug/Nm3	2	0.53	0.53	0.51	0.51	0.57	0.57
Ethyl Benzene	SW8240	ug/Nm3	2	0.5	0.5	0.48	0.48	0.49	0.53
m,p-Xylene	SW8240	ug/Nm3	2	0.53	0.53	0.47	0.47	0.59	0.53
m,p-Xylene	SW8240	ug/Nm3	2	0.5	0.5	0.51	0.51	0.53	0.53
Methylene Chloride	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.53
Methylene Chloride	SW8240	ug/Nm3	2	0.5	0.5	0.47	0.47	0.59	0.59
o-Xylene	SW8240	ug/Nm3	2	0.53	0.53	0.51	0.51	0.57	0.57
o-Xylene	SW8240	ug/Nm3	2	0.53	0.53	0.48	0.48	0.49	0.49

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Volatile Organic Compounds (continued)								
o-Xylene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
Styrene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	...
Styrene	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	...
Styrene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
Tetrachloroethene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	...
Tetrachloroethene	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	...
Tetrachloroethene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
Toluene	SW8240	ug/Nm3	2	3.06	0.51	0.57	1.2	4
Toluene	SW8240	ug/Nm3	2	3.36	0.48	0.49	1.28	4.5
Toluene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
trans-1,2-Dichloroethene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	...
trans-1,2-Dichloroethene	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	...
trans-1,2-Dichloroethene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
trans-1,3-Dichloropropene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	...
trans-1,3-Dichloropropene	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	...
trans-1,3-Dichloropropene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
Trichloroethene	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	...
Trichloroethene	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	...
Trichloroethene	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
Trichlorofluoromethane	SW8240	ug/Nm3	2	2.01	0.51	0.57	0.57	...
Trichlorofluoromethane	SW8240	ug/Nm3	2	0.53	0.48	0.687	0.53	...
Trichlorofluoromethane	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
Vinyl Acetate	SW8240	ug/Nm3	2	2.6	2.5	2.8	2.8	...
Vinyl Acetate	SW8240	ug/Nm3	2	2.7	2.4	2.5	2.5	...
Vinyl Acetate	SW8240	ug/Nm3	2	2.5	2.4	3	3	...
Vinyl Chloride	SW8240	ug/Nm3	2	0.53	0.51	0.57	0.57	...
Vinyl Chloride	SW8240	ug/Nm3	2	0.53	0.48	0.49	0.49	...
Vinyl Chloride	SW8240	ug/Nm3	2	0.5	0.47	0.59	0.59	...
PAHs/SVOCs-Particulate Phase								
1,2,4-Trichlorobenzene	SW8270	ug/Nm3	2	0.69	0.76	0.73	0.76	...
1,2-Dichlorobenzene	SW8270	ug/Nm3	2	0.65	0.73	0.71	0.73	...
1,3-Dichlorobenzene	SW8270	ug/Nm3	2	0.67	0.75	0.72	0.75	...

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Particulate Phase (continued)								
1,4-Dichlorobenzene	SW8270	ug/Nm3	2				0	---
2,2'-Oxybis(1-Chloropropane)	SW8270	ug/Nm3	2	0.87	0.98	0.95	0.98	---
2,4,5-Trichlorophenol	SW8270	ug/Nm3	2	0.86	0.93	0.91	0.93	---
2,4,6-Trichlorophenol	SW8270	ug/Nm3	2	0.91	0.98	0.96	0.98	---
2,4-Dichlorophenol	SW8270	ug/Nm3	2	0.84	0.93	0.9	0.93	---
2,4-Dimethylphenol	SW8270	ug/Nm3	2	0.86	0.96	0.92	0.96	---
2,4-Dinitrophenol	SW8270	ug/Nm3	2	2.7	2.9	2.8	2.9	---
2,4-Dinitrotoluene	SW8270	ug/Nm3	2	0.92	0.99	0.97	0.99	---
2,6-Dinitrotoluene	SW8270	ug/Nm3	2	1.3	1.4	1.4	1.4	---
2-Chloronaphthalene	CARB 429	ug/Nm3	2		0.000037 E	0.000060	0.000077	---
2-Chlorophenol	SW8270	ug/Nm3	2	0.79	0.89	0.86	0.89	---
2-Methylnaphthalene	CARB 429	ug/Nm3	2	0.071	0.0655	0.058	0.0648	0.016
2-Methylphenol	SW8270	ug/Nm3	2	1	1.1	1.1	1.1	---
2-Nitroaniline	SW8270	ug/Nm3	2	1.2	1.3	1.3	1.3	---
2-Nitrophenol	SW8270	ug/Nm3	2	1.3	1.4	1.4	1.4	---
3,3'-Dichlorobenzidine	SW8270	ug/Nm3	2	0.87	0.89	0.95	0.95	---
3-Nitroaniline	SW8270	ug/Nm3	2	1.4	1.5	1.4	1.5	---
3/4-Methylphenol	SW8270	ug/Nm3	2	0.86	0.97	0.94	0.97	---
4,6-Dinitro-2-methylphenol	SW8270	ug/Nm3	2	1.8	1.7	1.9	1.9	---
4-Aminobiphenyl	SW8270	ug/Nm3	2	0.38	0.38	0.41	0.41	---
4-Bromophenyl-phenylether	SW8270	ug/Nm3	2	1.2	1.1	1.2	1.2	---
4-Chloro-3-methylphenol	SW8270	ug/Nm3	2	0.9	0.99	0.96	0.99	---
4-Chloroaniline	SW8270	ug/Nm3	2	0.7	0.77	0.74	0.77	---
4-Chlorophenyl-phenylether	SW8270	ug/Nm3	2	0.66	0.71	0.69	0.71	---
4-Nitroaniline	SW8270	ug/Nm3	2	1.3	1.4	1.4	1.4	---
4-Nitrophenol	SW8270	ug/Nm3	2	1.5	1.7	1.6	1.7	---
Acenaphthene	CARB 429	ug/Nm3	2	0.0125	0.0098	0.00676	0.00969	0.0071
Acenaphthylene	CARB 429	ug/Nm3	2	0.00401	0.00308	0.0024	0.00316	0.002
Acetophenone	SW8270	ug/Nm3	2	0.66	0.74	0.72	0.74	---
Aniline	SW8270	ug/Nm3	2	0.55	0.62	0.6	0.62	---
Anthracene	CARB 429	ug/Nm3	2	0.00227	0.0015	0.00121	0.00166	0.0014
Benzidine	SW8270	ug/Nm3	2	0.52	0.53	0.56	0.56	---

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Particulate Phase (continued)								
Benzo(a)anthracene	CARB 429	ug/Nm3	2	0.000368	0.000342	0.000402	0.0000371	0.0000075
Benzo(a)pyrene	CARB 429	ug/Nm3	2	0.000263	0.000413	0.000336	0.0000337	0.000019
Benzo(b)fluoranthene	CARB 429	ug/Nm3	2	0.000699	0.000859	0.000859, ^a	0.000866	0.000023
Benzo(e)pyrene	CARB 429	ug/Nm3	2	0.00177	0.00114	0.0015	0.00147	0.000079
Benzo(g,h,i)perylene	CARB 429	ug/Nm3	2	0.00227	0.00281	0.00233	0.00247	0.000074
Benzo(k)fluoranthene	CARB 429	ug/Nm3	2	0.00201	0.000204	0.000164	0.0000793	0.000026
Benzolic acid	SW8270	ug/Nm3	2	1.8	2	1.9	2	--
Benzyl alcohol	SW8270	ug/Nm3	2	1.2	1.3	1.3	1.3	--
Butylbenzylphthalate	SW8270	ug/Nm3	2	0.55	0.56	0.6	0.6	--
Chrysene	CARB 429	ug/Nm3	2	0.00133	0.00078	0.000856	0.0000989	0.000074
Di-n-butylphthalate	SW8270	ug/Nm3	2	0.32	0.35	12.4	4.13	18
Di-n-octylphthalate	SW8270	ug/Nm3	2	0.000052	0.000059	0.000042	0.0000359	--
Dibenz(a,h)anthracene	CARB 429	ug/Nm3	2	0.25	0.27	0.27	0.27	--
Dibenzofuran	SW8270	ug/Nm3	2	0.33	0.36	0.35	0.36	--
Diethylphthalate	SW8270	ug/Nm3	2	1.1	1.1	1.1	1.1	--
Dimethylaminobenzene	SW8270	ug/Nm3	2	0.33	0.36	0.35	0.36	--
Dimethylphthalate	SW8270	ug/Nm3	2	0.00508	0.00593	0.00713	0.00605	0.00026
Fluoranthene	CARB 429	ug/Nm3	2	0.0222	0.0169	0.0158	0.0163	0.00085
Fluorene	CARB 429	ug/Nm3	2	0.84	0.84	0.9	0.9	--
Hexachlorobenzene	SW8270	ug/Nm3	2	1	1.1	1.1	1.1	--
Hexachlorobutadiene	SW8270	ug/Nm3	2	1.1	1.2	1.2	1.2	--
Hexachlorocyclopentadiene	SW8270	ug/Nm3	2	1.2	1.3	1.3	1.3	--
Hexachloroethane	SW8270	ug/Nm3	2	0.000499	0.000738	0.000586	0.000608	0.00003
Indeno(1,2,3-cd)pyrene	CARB 429	ug/Nm3	2	0.47	0.51	0.5	0.51	--
Isophorone	SW8270	ug/Nm3	2	1.3	1.4	1.4	1.4	--
N-Nitroso-di-n-propylamine	SW8270	ug/Nm3	2	0.085	0.095	0.0825	0.0875	0.016
Naphthalene	CARB 429	ug/Nm3	2	0.81	0.9	0.87	0.9	--
Nitrobenzene	SW8270	ug/Nm3	2	2.3	2.3	2.4	2.4	--
Pentachloronitrobenzene	SW8270	ug/Nm3	2	1.8	1.7	1.9	1.9	--
Pentachlorophenol	CARB 429	ug/Nm3	2	0.000113	0.000087	0.000113	0.000063	--
Perylene	CARB 429	ug/Nm3	2	0.0285	0.0355	0.0336	0.0325	0.009
Phenanthrene								

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Particulate Phase (continued)								
Phenol	SW8270	ug/Nm3	2	0.76	0.85	0.82	0.85	...
Pyrene	CARB 429	ug/Nm3	2	0.00559	0.00575	0.00631	0.00588	0.00094
bis(2-Chloroethoxy)methane	SW8270	ug/Nm3	2	0.84	0.93	0.9	0.93	...
bis(2-Chloroethyl)ether	SW8270	ug/Nm3	2	1.1	1.2	1.2	1.2	...
bis(2-Ethylhexyl)phthalate	SW8270	ug/Nm3	2				0	...
n-Nitrosodimethylamine	SW8270	ug/Nm3	2	2.2	2.5	2.4	2.5	...
PAHs/SVOCs-Vapor Phase								
1,2,4-Trichlorobenzene	SW8270	ug/Nm3	2	0.81	0.86	0.87	0.87	...
1,2-Dichlorobenzene	SW8270	ug/Nm3	2	0.79	0.82	0.88	0.88	...
1,3-Dichlorobenzene	SW8270	ug/Nm3	2	0.81	0.84	0.9	0.9	...
1,4-Dichlorobenzene	SW8270	ug/Nm3	2	0.74	0.76	0.82	0.82	...
2,2'-oxybis(1-Chloropropane)	SW8270	ug/Nm3	2	1.1	1.1	1.2	1.2	...
2,4,5-Trichlorophenol	SW8270	ug/Nm3	2	1.1	1.1	1.1	1.1	...
2,4,6-Trichlorophenol	SW8270	ug/Nm3	2	1.1	1.1	1.2	1.2	...
2,4-Dichlorophenol	SW8270	ug/Nm3	2	1	1.1	1.1	1.1	...
2,4-Dimethylphenol	SW8270	ug/Nm3	2	1	1.1	1.1	1.1	...
2,4-Dinitrophenol	SW8270	ug/Nm3	2	3.3	3.3	3.4	3.4	...
2,4-Dinitrotoluene	SW8270	ug/Nm3	2	1.1	1.1	1.2	1.2	...
2,6-Dinitrotoluene	SW8270	ug/Nm3	2	1.7	1.6	1.7	1.7	...
2-Chloronaphthalene	CARB 429	ug/Nm3	2	0.000133	0.000088 E	0.000072	0.000098	0.000079
2-Chlorophenol	SW8270	ug/Nm3	2	1	1	1.1	1.1	...
2-Methylnaphthalene	CARB 429	ug/Nm3	2	0.0656	0.061	0.0703	0.0656	0.012
2-Methylphenol	SW8270	ug/Nm3	2	1.2	1.2	1.3	1.3	...
2-Nitroaniline	SW8270	ug/Nm3	2	1.5	1.5	1.5	1.5	...
2-Nitrophenol	SW8270	ug/Nm3	2	1.6	1.7	1.7	1.7	...
3,3-Dichlorobenzidine	SW8270	ug/Nm3	2	1.3	1.1	1.2	1.2	...
3-Nitroaniline	SW8270	ug/Nm3	2	1.7	1.7	1.7	1.7	...
3/4-Methylphenol	SW8270	ug/Nm3	2	1.1	1.1	1.2	1.2	...
4,6-Dinitro-2-methylphenol	SW8270	ug/Nm3	2	2.1	2.1	2.1	2.1	...
4-Aminobiphenyl	SW8270	ug/Nm3	2	0.46	0.46	0.47	0.47	...
4-Bromophenyl-phenyl ether	SW8270	ug/Nm3	2	1.4	1.4	1.4	1.4	...
4-Chloro-3-methylphenol	SW8270	ug/Nm3	2	1.1	1.1	1.1	1.1	...

Table G-1. Analytical Results Used In Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1			Result 2			Result 3			Average	95% CI
				Test	Period	Result 1	Test	Period	Result 1	Test	Period	Result 1		
PAH&SVOCs-Vapor Phase (continued)														
4-Chloroaniline	SW8270	ug/Nm3	2			0.82			0.88			0.89		
4-Chlorophenyl-phenylether	SW8270	ug/Nm3	2			0.82			0.81			0.84		
4-Nitroaniline	SW8270	ug/Nm3	2			1.6			1.6			1.7		
4-Nitrophenol	SW8270	ug/Nm3	2			1.9			1.9			2		
Acenaphthene	CARB 429	ug/Nm3	2			0.00882			0.0118			0.0124		0.0048
Acenaphthylene	CARB 429	ug/Nm3	2			0.0132			0.0112			0.0115		0.0027
Acetophenone	SW8270	ug/Nm3	2									0		
Aniline	SW8270	ug/Nm3	2			0.67			0.69			0.74		
Anthracene	CARB 429	ug/Nm3	2			0.00146			0.00162			0.00136		0.00081
Benzidine	SW8270	ug/Nm3	2			0.75			0.67			0.69		
Benz[e]anthracene	CARB 429	ug/Nm3	2			0.000721			0.000855			0.000933		0.0003
Benz[e]pyrene	CARB 429	ug/Nm3	2			0.000611			0.000576			0.000483		0.00016
Benz[b]fluoranthene	CARB 429	ug/Nm3	2			0.00164			0.00207			0.00209		0.00063
Benz[e]pyrene	CARB 429	ug/Nm3	2			0.00216			0.00216			0.00177		0.000203
Benz[g,h]perylene	CARB 429	ug/Nm3	2			0.00212			0.00199			0.0029		0.00056
Benz[k]fluoranthene	CARB 429	ug/Nm3	2			0.000427			0.000491			0.000524		0.00012
Benzoic acid	SW8270	ug/Nm3	2			89.2			79.4			73.1		
Benzyl alcohol	SW8270	ug/Nm3	2			1.4						80.6		20
Butylbenzylphthalate	SW8270	ug/Nm3	2			0.78			0.7			0		
Chrysene	CARB 429	ug/Nm3	2			0.00179			0.00222			0.72		
Di-n-butylphthalate	SW8270	ug/Nm3	2			28.7						0.000202		
Di-n-octylphthalate	SW8270	ug/Nm3	2			0.42			44.1			21.2		
Dibenz[a,h]anthracene	CARB 429	ug/Nm3	2			0.000168			0.000172			0.4		
Dibenzofuran	SW8270	ug/Nm3	2			0.31			0.31			0.00015		
Diethylphthalate	SW8270	ug/Nm3	2									0.32		
Dimethylaminoazobenzene	SW8270	ug/Nm3	2			1.5			1.5			1.4		
Dimethylphthalate	SW8270	ug/Nm3	2			0.41			0.41			0.42		
Fluoranthene	CARB 429	ug/Nm3	2			0.0138			0.0132			0.0144		0.0038
Fluorene	CARB 429	ug/Nm3	2			0.0125			0.0142			0.0133		0.0021
Hexachlorobenzene	SW8270	ug/Nm3	2			1			1			1		
Hexachlorobutadiene	SW8270	ug/Nm3	2			1.2			1.3			1.3		
Hexachlorocyclopentadiene	SW8270	ug/Nm3	2			1.4			1.4			1.4		

Table G-1. Analytical Results Used in Calculations
Stream: Incinerator (16)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)								
Hexachloroethane	SW8270	ug/Nm ³	2	<	1.4	<	1.6	<
Indeno(1,2,3-cd)pyrene	CARB 429	ug/Nm ³	2	<	0.000737	<	0.000873	<
Isophorone	SW8270	ug/Nm ³	2	<	0.55	<	0.6	<
N-Nitroso-dl-n-propylamine	SW8270	ug/Nm ³	2	<	1.6	<	1.7	<
Naphthalene	CARB 429	ug/Nm ³	2	<	0.0127	<	0.0099	<
Nitrobenzene	SW8270	ug/Nm ³	2	<	1	<	1	<
Pentachloronitrobenzene	SW8270	ug/Nm ³	2	<	2.7	<	2.8	<
Pentachlorophenol	SW8270	ug/Nm ³	2	<	2.1	<	2.1	<
Perylene	CARB 429	ug/Nm ³	2	<	0.000245	<	0.000367	<
Phenanthrene	CARB 429	ug/Nm ³	2	<	0.039	<	0.0403	<
Phenol	SW8270	ug/Nm ³	2	<	0.0121	<	0.0346	<
Pyrene	CARB 429	ug/Nm ³	2	<	0.0188	<	0.0218	<
bis(2-Chloroethoxy)methane	SW8270	ug/Nm ³	2	<	1	<	1.1	<
bis(2-Chloroethyl)ether	SW8270	ug/Nm ³	2	<	1.3	<	1.5	<
bis(2-Ethylhexyl)phthalate	SW8270	ug/Nm ³	2	<	2.7	<	16	5.33
n-Nitrosodimethylamine	SW8270	ug/Nm ³	2	<	2.8	<	3	3

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Period	Result 1	Result 2	Result 3	Average	95% CI
Ionic Species-Particulate Phase								
Chloride	EPA 300.0	ug/Nm ³	1	160	21.8	22.6	68.1	200
Fluoride	EPA 340.2	ug/Nm ³	1	2.45	3.81	1.6	2.35	3.7
Sulfate	EPA 300.0	ug/Nm ³	1	772	1,310	1,120	1,070	680
Ionic Species-Vapor Phase								
Chloride	EPA 300.0	ug/Nm ³	1	371	329	< 1.330	350	270
Fluoride	EPA 340.2	ug/Nm ³	1	25.8	20.4	11.3	19.2	18
H2SO4 (as sulfate)	EPA 300.0	ug/Nm ³	1	3,910	2,080	2,520	2,840	2,400
Sulfur dioxide (as sulfate)	EPA 300.0	ug/Nm ³	1	22,600	22,400	15,300	20,100	10,000
Sulfur oxides (as sulfate)	EPA 300.0	ug/Nm ³	1	26,510	24,480	17,820	22,900	7,500
Ammonia as N	EPA 350.1	ug/Nm ³	1	191	296	90.6	193	260
Cyanide	SW9012	ug/Nm ³	1	< 3.3	< 2.6	< 3.2	< 3.3	---
Metals-Particulate Phase								
Aluminum	SW6010	ug/Nm ³	1	40.9	26.7	34.5	34	18
Antimony	SW6010	ug/Nm ³	1	< 2.1	< 2.1	< 2.2	< 2.2	---
Arsenic	SW7060	ug/Nm ³	1	1.81	0.673	0.782	1.09	1.6
Barium	SW6010	ug/Nm ³	1	1.73	1.05	2.08	1.62	1.3
Beryllium	SW6010	ug/Nm ³	1	0.012	0.012	0.012	0.012	---
Cadmium	SW7131	ug/Nm ³	1	0.636	0.615	0.609	0.62	0.035
Calcium	SW6010	ug/Nm ³	1	177	34.8	34.8	82.2	200
Chromium	SW6010	ug/Nm ³	1	1.3	0.948	0.826	1.02	0.61
Cobalt	SW6010	ug/Nm ³	1	0.284	0.49	0.2	0.291	0.48
Copper	SW6010	ug/Nm ³	1	13.2	8.05	1.19	7.48	15
Iron	SW6010	ug/Nm ³	1	181	23.2	16.9	73.7	230
Lead	SW7421	ug/Nm ³	1	1.66	0.725	0.573	0.986	1.5
Magnesium	SW6010	ug/Nm ³	1	15.5	6.84	7.56	9.97	12
Manganese	SW6010	ug/Nm ³	1	1.06	0.2	0.18	0.45	1.3
Mercury	SW7471	ug/Nm ³	1	0.00782	0.00805	0.0151	0.0103	0.01
Molybdenum	SW6010	ug/Nm ³	1	2.83	3.33	5.32	3.83	3.3
Nickel	SW6010	ug/Nm ³	1	0.917	1.22	0.808	0.982	0.53
Phosphorus	SW6010	ug/Nm ³	1	127	131	130	129	5.2
Potassium	SW6010	ug/Nm ³	1	197	39.2	16	81.4	250
Selenium	SW7740	ug/Nm ³	1	0.995	0.283	0.0455	0.441	1.2

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Particulate Phase (continued)								
Sodium	SW6010	ug/Nm3	1	151	173	108	144	82
Titanium	SW6010	ug/Nm3	1	5.61	2.4	0.58	2.86	6.3
Vanadium	SW6010	ug/Nm3	1	0.318	0.329	0.459	0.369	0.19
Zinc	SW6010	ug/Nm3	1	19.4	10.3	10.2	13.3	13
Metals-Vapor Phase (M-29)								
Aluminum	SW6010	ug/Nm3	1	v	v	12	v	15
Antimony	ICP/MS	ug/Nm3	1	v	v	0.018	c	v
Arsenic	ICP/MS	ug/Nm3	1	v	v	0.02	c	v
Barium	ICP/MS	ug/Nm3	1	v	v	0.124	c	v
Beryllium	ICP/MS	ug/Nm3	1	v	v	0.594	c	v
Boron	SW6010	ug/Nm3	1	v	v	0.036	c	v
Cadmium	ICP/MS	ug/Nm3	1	v	v	6.83	v	v
Calcium	SW6010	ug/Nm3	1	v	v	0.326	c	v
Chromium	ICP/MS	ug/Nm3	1	v	v	0.646	c	v
Cobalt	ICP/MS	ug/Nm3	1	v	v	0.0274	c	v
Copper	ICP/MS	ug/Nm3	1	v	v	0.051	c	v
Iron	SW6010	ug/Nm3	1	v	v	7.68	v	v
Lead	ICP/MS	ug/Nm3	1	v	v	0.241	c	v
Magnesium	SW6010	ug/Nm3	1	v	v	12	v	v
Manganese	ICP/MS	ug/Nm3	1	v	v	0.021	v	v
Mercury, Nitric Imps.	SW7470	ug/Nm3	1	v	v	0.347	v	v
Mercury, KMnO4 Imps.	SW7470	ug/Nm3	1	v	v	0.277	v	v
Molybdenum	ICP/MS	ug/Nm3	1	v	v	0.624	v	v
Nickel	ICP/MS	ug/Nm3	1	v	v	0.034	c	v
Phosphorus	SW6010	ug/Nm3	1	v	v	0.463	c	v
Potassium	SW6010	ug/Nm3	1	v	v	28	v	v
Selenium	ICP/MS	ug/Nm3	1	v	v	1.67	v	v
Silicon	SW6010	ug/Nm3	1	v	v	32.9	v	v
Sodium	SW6010	ug/Nm3	1	v	v	51.1	v	v
Titanium	SW6010	ug/Nm3	1	v	v	0.473	v	v
Vanadium	ICP/MS	ug/Nm3	1	v	v	0.201	c	v

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Metals-Vapor Phase (M-29) (continued)								
Zinc	SW6010	ug/Nm3	1	6.04	10.9	26.3	14.4	26
Aldehydes	SW0011	ug/Nm3	1	1.32	1.02	0.629	0.99	0.86
Acetaldehyde	SW0011	ug/Nm3	1	0.55	0.55	0.54	0.55	---
Acrolein	SW0011	ug/Nm3	1	2.09	1.88	0.976	1.65	1.5
Benzaldehyde	SW0011	ug/Nm3	1	11	9.71	7.48	9.4	4.4
Formaldehyde	SW0011	ug/Nm3	1	11	9.71	7.48	9.4	4.4
Volatile Organic Compounds								
1,1,1-Trichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
1,1,1-Trichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
1,1,1-Trichloroethane	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.57	0.57
1,1,2,2-Tetrachloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
1,1,2,2-Tetrachloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
1,1,2,2-Tetrachloroethane	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.57	0.57
1,1,2-Trichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
1,1,2-Trichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
1,1,2-Trichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
1,1,2-Trichloroethane	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.57	0.57
1,1-Dichloroethane	SW8240	ug/Nm3	1	0.56	0.56	0.56	0.57	0.57
1,1-Dichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,1-Dichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,1-Dichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,1-Dichloroethane	SW8240	ug/Nm3	1	0.56	0.56	0.56	0.56	0.56
1,1-Dichloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,1-Dichloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,1-Dichloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,1-Dichloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,1-Dichloroethene	SW8240	ug/Nm3	1	0.56	0.56	0.56	0.56	0.56
1,2-Dichlorobenzene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichlorobenzene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichlorobenzene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichlorobenzene	SW8240	ug/Nm3	1	0.56	0.56	0.56	0.56	0.56
1,2-Dichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichloroethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichloropropane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichloropropane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
1,2-Dichloropropane	SW8240	ug/Nm3	1	0.56	0.56	0.56	0.56	0.56
1,3-Dichlorobenzene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57

Table G-1. Analytical Results Used In Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Volatile Organic Compounds (continued)								
1,3-Dichlorobenzene	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.56	0.57
1,3-Dichlorobenzene	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
1,4-Dichlorobenzene	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.56	0.57
1,4-Dichlorobenzene	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.56	0.57
1,4-Dichlorobenzene	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
1,4-Dichlorobenzene	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
2-Butanone	SW8240	ug/Nm3	1	2.8	2.8	2.8	2.8	2.8
2-Butanone	SW8240	ug/Nm3	1	2.9	2.9	2.8	2.9	2.9
2-Butanone	SW8240	ug/Nm3	1	2.8	2.9	2.8	2.9	2.9
2-Hexanone	SW8240	ug/Nm3	1	2.8	2.8	2.8	2.8	2.8
2-Hexanone	SW8240	ug/Nm3	1	2.9	2.9	2.8	2.9	2.9
2-Hexanone	SW8240	ug/Nm3	1	2.8	2.9	2.8	2.9	2.9
4-Methyl-2-Pentanone	SW8240	ug/Nm3	1	2.8	2.8	2.8	2.8	2.8
4-Methyl-2-Pentanone	SW8240	ug/Nm3	1	2.9	2.9	2.8	2.9	2.9
4-Methyl-2-Pentanone	SW8240	ug/Nm3	1	2.8	2.9	2.8	2.9	2.9
Acetone	SW8240	ug/Nm3	1	2.8	2.8	2.8	2.8	2.8
Acetone	SW8240	ug/Nm3	1	2.9	2.9	2.8	2.9	2.9
Benzene	SW8240	ug/Nm3	1	2.37	2.46	0.67	1.83	2.5
Benzene	SW8240	ug/Nm3	1	2.8	2.8	2.8	2.8	2.8
Benzene	SW8240	ug/Nm3	1	1.82	1.37	5.37	2.85	5.4
Benzene	SW8240	ug/Nm3	1	1.91	3.21	2.84	2.65	1.7
Bromodichloromethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
Bromodichloromethane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.57	0.57
Bromodichloromethane	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
Bromoform	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Bromoform	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Bromoform	SW8240	ug/Nm3	1	0.56	0.57	0.57	0.56	0.57
Bromomethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Bromomethane	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Bromomethane	SW8240	ug/Nm3	1	0.56	0.57	0.57	0.56	0.57
Carbon Disulfide	SW8240	ug/Nm3	1	0.791	0.914	6.68	2.8	8.4
Carbon Disulfide	SW8240	ug/Nm3	1	0.569	0.57	0.56	0.57	0.57
Carbon Disulfide	SW8240	ug/Nm3	1	0.618	0.619	0.56	0.56	0.56

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Volatile Organic Compounds (continued)								
Carbon Tetrachloride	SW8240	ug/Nm ₃	1	0.57	0.56	0.57	0.57	0.57
Carbon Tetrachloride	SW8240	ug/Nm ₃	1	0.57	0.56	0.57	0.57	0.57
Carbon Tetrachloride	SW8240	ug/Nm ₃	1	0.56	0.56	0.57	0.57	0.57
Chlorobenzene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Chlorobenzene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Chlorobenzene	SW8240	ug/Nm ₃	1	0.56	0.56	0.57	0.57	0.57
Chloroethane	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Chloroethane	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Chloroethane	SW8240	ug/Nm ₃	1	0.56	0.56	0.57	0.57	0.57
Chloroform	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Chloroform	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Chloromethane	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Chloromethane	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Chloromethane	SW8240	ug/Nm ₃	1	0.56	0.56	0.57	0.57	0.57
cis-1,3-Dichloropropene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
cis-1,3-Dichloropropene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
cis-1,3-Dichloropropene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Dibromochloromethane	SW8240	ug/Nm ₃	1	0.56	0.56	0.57	0.57	0.57
Dibromochloromethane	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Dibromochloromethane	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Ethyl Benzene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Ethyl Benzene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Ethyl Benzene	SW8240	ug/Nm ₃	1	0.56	0.56	0.57	0.57	0.57
m,p-Xylene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
m,p-Xylene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
Methylene Chloride	SW8240	ug/Nm ₃	1	0.56	0.56	0.57	0.57	0.57
Methylene Chloride	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
o-Xylene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57
o-Xylene	SW8240	ug/Nm ₃	1	0.57	0.57	0.57	0.57	0.57

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
Volatile Organic Compounds (continued)								
o-Xylene	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
Styrene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Styrene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Styrene	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
Tetrachloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.56	0.57
Tetrachloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Tetrachloroethene	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
Toluene	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.56	0.57
Toluene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
trans-1,2-Dichloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
trans-1,2-Dichloroethene	SW8240	ug/Nm3	1	0.56	0.56	0.56	0.56	0.57
trans-1,2-Dichloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
trans-1,3-Dichloropropene	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.56	0.57
trans-1,3-Dichloropropane	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.56	0.57
trans-1,3-Dichloropropene	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
Trichloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Trichloroethene	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Trichloroethene	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
Trichlorofluoromethane	SW8240	ug/Nm3	1	32.2	26.3	17.8	17.8	23.0
Trichlorofluoromethane	SW8240	ug/Nm3	1	0.57	0.57	1.43	1.43	0.667
Trichlorofluoromethane	SW8240	ug/Nm3	1	13.5	1.86	0.557	0.557	1.6
Vinyl Acetate	SW8240	ug/Nm3	1	2.8	2.8	2.8	2.8	2.8
Vinyl Acetate	SW8240	ug/Nm3	1	2.9	2.9	2.8	2.8	2.9
Vinyl Acetate	SW8240	ug/Nm3	1	2.8	2.9	2.8	2.8	2.9
Vinyl Chloride	SW8240	ug/Nm3	1	0.57	0.57	0.56	0.56	0.57
Vinyl Chloride	SW8240	ug/Nm3	1	0.57	0.57	0.57	0.57	0.57
Vinyl Chloride	SW8240	ug/Nm3	1	0.56	0.57	0.56	0.56	0.57
PAHs/SVOCs-Particulate Phase	SW8270	ug/Nm3	1	0.87	0.23	0.55	0.55	0.55
1,2,4-Trichlorobenzene	SW8270	ug/Nm3	1	0.88	0.21	0.54	0.54	0.54
1,2-Dichlorobenzene	SW8270	ug/Nm3	1	0.89	0.19	0.54	0.54	0.54
1,3-Dichlorobenzene	SW8270	ug/Nm3	1					

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Particulate Phase (continued)								
1,4-Dichlorobenzene	SW8270	ug/Nm3	1	0.1	0.1	0.1	0.1	0.1
2,2'-Oxybis(1-Chloropropane)	SW8270	ug/Nm3	1	1.17	0.36	0.76	0.76	0.76
2,4,5-Trichlorophenol	SW8270	ug/Nm3	1	1.05	0.41	0.73	0.73	0.73
2,4,6-Trichlorophenol	SW8270	ug/Nm3	1	1.11	0.43	0.77	0.77	0.77
2,4-Dichlorophenol	SW8270	ug/Nm3	1	1.07	0.25	0.66	0.66	0.66
2,4-Dimethylphenol	SW8270	ug/Nm3	1	1.1	0.23	0.66	0.66	0.66
2,4-Dinitrophenol	SW8270	ug/Nm3	1	3.3	1	2.1	2.1	2.1
2,4-Dinitrotoluene	SW8270	ug/Nm3	1	1.13	0.35	0.73	0.73	0.73
2,6-Dinitrotoluene	SW8270	ug/Nm3	1	1.6	0.4	1	1	1
2-Chloronaphthalene	CARB 429	ug/Nm3	1	0.000068	E	0.000054	0.000054	0.000054
2-Chlorophenol	SW8270	ug/Nm3	1	1.06	0.2	0.63	0.63	0.63
2-Methylnaphthalene	CARB 429	ug/Nm3	1	0.281	0.0614	0.0543	0.0543	0.0543
2-Methylphenol	SW8270	ug/Nm3	1	1.3	0.24	0.76	0.76	0.76
2-Nitroaniline	SW8270	ug/Nm3	1	1.45	0.46	0.95	0.95	0.95
2-Nitrophenol	SW8270	ug/Nm3	1	1.7	0.4	1	1	1
3,3'-Dichlorobenzidine	SW8270	ug/Nm3	1	1.07	0.38	0.73	0.73	0.73
3-Nitroaniline	SW8270	ug/Nm3	1	1.7	0.4	1	1	1
3/4-Methylphenol	SW8270	ug/Nm3	1	1.16	0.22	0.69	0.69	0.69
4,6-Dinitro-2-methylphenol	SW8270	ug/Nm3	1	2.2	0.8	1.4	1.4	1.4
4-Aminobiphenyl	SW8270	ug/Nm3	1	0.48	0.14	0.29	0.29	0.29
4-Bromophenyl-phenylether	SW8270	ug/Nm3	1	1.43	0.49	0.9	0.9	0.9
4-Chloro-3-methylphenol	SW8270	ug/Nm3	1	1.15	0.25	0.69	0.69	0.69
4-Chloroaniline	SW8270	ug/Nm3	1	0.89	0.17	0.52	0.52	0.52
4-Chlorophenyl-phenylether	SW8270	ug/Nm3	1	0.8	0.3	0.55	0.55	0.55
4-Nitroaniline	SW8270	ug/Nm3	1	1.6	0.5	1	1	1
4-Nitrophenol	SW8270	ug/Nm3	1	1.9	0.8	1.4	1.4	1.4
Acenaphthene	CARB 429	ug/Nm3	1	0.00329	0.00339	0.00451	0.00451	0.00451
Acenaphthylene	CARB 429	ug/Nm3	1	0.00481	0.00179	0.00175	0.00175	0.00175
Acetophenone	SW8270	ug/Nm3	1	0.88	0.8	0.43	0.43	0.43
Aniline	SW8270	ug/Nm3	1	0.74	0.13	0.43	0.43	0.43
Anthracene	CARB 429	ug/Nm3	1	0.00252	0.00107	0.00109	0.00109	0.00109
Benzidine	SW8270	ug/Nm3	1	0.64	0.23	0.44	0.44	0.44

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Particulate Phase (continued)								
Benzo(a)anthracene	CARB 429	ug/Nm3	1	0.000338	0.000277	0.000271	0.000295	0.000092
Benzo(a)pyrene	CARB 429	ug/Nm3	1	0.000353	0.000332	0.000351	0.000345	0.000029
Benzo(b)fluoranthene	CARB 429	ug/Nm3	1	0.000705	0.000654	0.000616	0.000658	0.000111
Benzo(e)pyrene	CARB 429	ug/Nm3	1	0.00129	0.00121	0.00151	0.00134	0.00039
Benzo(g,h,i)perylene	CARB 429	ug/Nm3	1	0.00312	0.00297	0.00284	0.00298	0.00035
Benzo(k)fluoranthene	CARB 429	ug/Nm3	1	0.000226	0.000165	0.000178	0.00019	0.00008
Benzolic acid	SW8270	ug/Nm3	1	2.3	0.4	1.3	2.3	...
Benzyl alcohol	SW8270	ug/Nm3	1	1.6	1.7	0.8	1.7	...
Butylbenzylphthalate	SW8270	ug/Nm3	1	0.67	0.19	0.43	0.67	...
Chrysene	CARB 429	ug/Nm3	1	0.000631	0.000551	0.000688	0.000623	0.00017
Di-n-butylphthalate	SW8270	ug/Nm3	1	0.33	0.33	0.33	0.33	...
Di-n-octylphthalate	SW8270	ug/Nm3	1	0.39	0.09	0.25	0.25	...
Dibenz(a,h)anthracene	CARB 429	ug/Nm3	1	0.000048	0.000040	0.000038	0.000048	...
Dibenzofuran	SW8270	ug/Nm3	1	0.31	0.09	0.2	0.31	...
Dimethylphthalate	SW8270	ug/Nm3	1	0.87	0.84	0.17	0.87	...
Dimethylaminocarbazone	SW8270	ug/Nm3	1	0.32	0.45	0.85	0.85	...
Dimethylphthalate	SW8270	ug/Nm3	1	0.41	0.11	0.26	0.41	...
Fluoranthene	CARB 429	ug/Nm3	1	0.00695	0.00431	0.00477	0.00534	0.0035
Fluorene	CARB 429	ug/Nm3	1	0.0399	0.0119	0.0117	0.0212	0.04
Hexachlorobenzene	SW8270	ug/Nm3	1	1.05	0.36	0.66	1.1	...
Hexachlorobutadiene	SW8270	ug/Nm3	1	1.3	0.46	0.88	1.3	...
Hexachlorocyclopentadiene	SW8270	ug/Nm3	1	1.34	0.4	0.86	1.3	...
Hexachloroethane	SW8270	ug/Nm3	1	1.55	0.39	0.97	1.6	...
Indeno(1,2,3-cd)pyrene	CARB 429	ug/Nm3	1	0.000599	0.000584	0.000564	0.000582	0.000044
Naphthalene	SW8270	ug/Nm3	1	0.59	0.13	0.36	0.59	...
N-Nitroso-di-n-propylamine	CARB 429	ug/Nm3	1	1.7	0.4	1.1	1.7	...
Naphthalene	SW8270	ug/Nm3	1	1.04	0.22	0.62	1	0.0475
Nitrobenzene	SW8270	ug/Nm3	1	2.8	1	1.8	2.8	...
Pentachlorophenol	SW8270	ug/Nm3	1	2.2	0.6	1.3	2.2	...
Perylene	CARB 429	ug/Nm3	1	0.000105	0.000115	0.000149	0.000123	0.000057
Phenanthrene	CARB 429	ug/Nm3	1	0.0481	0.0247	0.0261	0.033	0.033

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Particulate Phase (continued)								
Phenol	SW8270	ug/Nm3	1	<	1.6	<	1.7	1.7
Pyrene	CARB 429	ug/Nm3	1	<	0.00636	<	0.00556	0.00537
bis(2-Chloroethoxy)methane	SW8270	ug/Nm3	1	<	1.07	<	0.62	0.0027
bis(2-Chloroethyl)ether	SW8270	ug/Nm3	1	<	1.47	<	0.84	1.1
bis(2-Ethylhexyl)phthalate	SW8270	ug/Nm3	1	<	12.7	<	4.23	1.5
n-Nitrosodimethylamine	SW8270	ug/Nm3	1	<	3	<	3	1.8
PAHs/SVOCs-Vapor Phase								
1,2,4-Trichlorobenzene	SW8270	ug/Nm3	1	<	0.8	<	0.87	0.92
1,2-Dichlorobenzene	SW8270	ug/Nm3	1	<	0.82	<	0.89	0.96
1,3-Dichlorobenzene	SW8270	ug/Nm3	1	<	0.83	<	0.9	0.92
1,4-Dichlorobenzene	SW8270	ug/Nm3	1	<	0.78	<	0.85	0.9
2,2'-oxybis(1-Chloropropane)	SW8270	ug/Nm3	1	<	1.1	<	1.2	1.3
2,4,5-Trichlorophenol	SW8270	ug/Nm3	1	<	1	<	1	1.2
2,4,6-Trichlorophenol	SW8270	ug/Nm3	1	<	1.2	<	1.2	1.2
2,4-Dichlorophenol	SW8270	ug/Nm3	1	<	1	<	1.1	1.1
2,4-Dimethylphenol	SW8270	ug/Nm3	1	<	0.9	<	1	1.1
2,4-Dinitrophenol	SW8270	ug/Nm3	1	<	2.5	<	2.5	3.2
2,4-Dinitrotoluene	SW8270	ug/Nm3	1	<	1.1	<	1.1	1.3
2,6-Dinitrotoluene	SW8270	ug/Nm3	1	<	1.6	<	1.6	1.8
2-Chloronaphthalene	CARB 429	ug/Nm3	1	<	0.000136	<	0.000080	0.000107
2-Chlorophenol	SW8270	ug/Nm3	1	<	0.89	<	0.97	1.1
2-Methylnaphthalene	CARB 429	ug/Nm3	1	<	0.0818	<	0.0721	0.0626
2-Methylphenol	SW8270	ug/Nm3	1	<	1.4	<	1.3	1.3
2-Nitroaniline	SW8270	ug/Nm3	1	<	1.5	<	1.6	1.6
2-Nitrophenol	SW8270	ug/Nm3	1	<	0.75	<	0.69	1.7
3,3-Dichlorobenzidine	SW8270	ug/Nm3	1	<	1.5	<	1.4	1.4
3-Nitroaniline	SW8270	ug/Nm3	1	<	1.1	<	1.5	1.8
3/4-Methylphenol	SW8270	ug/Nm3	1	<	1.2	<	1.2	1.2
4,6-Dinitro-2-methylphenol	SW8270	ug/Nm3	1	<	1.7	<	1.7	2.1
4-Aminobiphenyl	SW8270	ug/Nm3	1	<	0.51	<	0.51	0.51
4-Bromophenyl phenyl ether	SW8270	ug/Nm3	1	<	1.3	<	1.3	1.5
4-Chloro-3-methylphenol	SW8270	ug/Nm3	1	<	1	<	1.1	1.1

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)								
4-Chloroaniline	SW8270	ug/Nm3	1	0.77	0.84	0.88	0.88	---
4-Chlorophenyl-phenylether	SW8270	ug/Nm3	1	0.82	0.81	0.9	0.9	---
4-Nitroaniline	SW8270	ug/Nm3	1	1.4	1.4	1.9	1.9	---
4-Nitropheno1	SW8270	ug/Nm3	1	1.5	1.5	2.2	2.2	---
Acenaphthene	CARB 429	ug/Nm3	1	0.00938	0.00915	0.00818	0.0089	0.0016
Acenaphthylene	CARB 429	ug/Nm3	1	0.00605	0.00713	0.00478	0.0059	0.0029
Acetophenone	SW8270	ug/Nm3	1	0.76	0.75	0.75	0.76	---
Aniline	CARB 429	ug/Nm3	1	0.00175	0.00249	0.00261	0.00228	0.0012
Anthracene	SW8270	ug/Nm3	1	0.8	0.82	0.82	0.82	---
Benzidine	CARB 429	ug/Nm3	1	0.000925	0.00129	0.000766	0.000994	0.00067
Benz(a)anthracene	CARB 429	ug/Nm3	1	0.000493	0.000816	0.000597	0.000635	0.00041
Benz(a)pyrene	CARB 429	ug/Nm3	1	0.00161	0.00207	0.00177	0.00182	0.00058
Benz(b)fluoranthene	CARB 429	ug/Nm3	1	0.00151	0.00173	0.00205	0.00176	0.00067
Benz(e)pyrene	CARB 429	ug/Nm3	1	0.00175	0.00303	0.00229	0.00236	0.0016
Benz(g,h,i)perylene	CARB 429	ug/Nm3	1	0.000419	0.000563	0.000334	0.000439	0.00029
Benz(k)fluoranthene	SW8270	ug/Nm3	1	70.4	97.5	71.4	79.8	38
Benzoic acid	SW8270	ug/Nm3	1	1.5	1.5	1.5	1.5	---
Benzyl alcohol	SW8270	ug/Nm3	1	0.41	0.37	0.8	0.8	---
Butylbenzylphthalate	SW8270	ug/Nm3	1	0.00186	0.00207	0.00185	0.00193	0.00031
Chrysene	CARB 429	ug/Nm3	1	26.1	269	17.5	104	350
Di-n-butylphthalate	SW8270	ug/Nm3	1	0.21	0.18	0.41	0.41	---
Di-n-octylphthalate	SW8270	ug/Nm3	1	0.000159	0.00016	0.000149	0.00016	---
Dibenz(a,h)anthracene	CARB 429	ug/Nm3	1	0.31	0.31	0.34	0.34	---
Dibenzofuran	SW8270	ug/Nm3	1	1.4	1.4	1.4	1.4	---
Diethylphthalate	SW8270	ug/Nm3	1	1.5	1.6	1.6	1.6	---
Dimethylaminoazobenzene	SW8270	ug/Nm3	1	0.39	0.39	0.45	0.45	---
Dimethylphthalate	SW8270	ug/Nm3	1	0.0124	0.0161	0.0149	0.0145	0.0047
Fluoranthene	CARB 429	ug/Nm3	1	0.0149	0.0135	1	0.0149	0.0036
Fluorene	SW8270	ug/Nm3	1	0.9	1	1.1	1.1	---
Hexachlorobenzene	SW8270	ug/Nm3	1	1.2	1.4	1.4	1.4	---
Hexachlorobutadiene	SW8270	ug/Nm3	1	1.8	1.8	1.4	1.8	---
Hexachlorocyclopentadiene	SW8270	ug/Nm3	1					

Table G-1. Analytical Results Used in Calculations
Stream: Turbine Exhaust Gas (13)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Average	95% CI
PAHs/SVOCs-Vapor Phase (continued)								
Hexachloroethane	SW8270	ug/Nm3	1	v	1.5	v	1.6	v
Indeno(1,2,3-cd)pyrene	CARB 429	ug/Nm3	1	v	0.000841	v	0.00106	0.000977
Isophorone	SW8270	ug/Nm3	1	v	0.54	v	0.59	0.63
N-Nitroso-di-n-propylamine	SW8270	ug/Nm3	1	v	1.8	v	2	2
Naphthalene	CARB 429	ug/Nm3	1	v	0.0113	v	0.276	0.177
Nitrobenzene	SW8270	ug/Nm3	1	v	0.91	v	0.99	1.04
Pentachloronitrobenzene	SW8270	ug/Nm3	1	v	3	v	2.9	3
Pentachlorophenol	SW8270	ug/Nm3	1	v	1.4	v	1.4	1.8
Perylene	CARB 429	ug/Nm3	1	v	0.000138	v	0.000417	0.000262
Phenanthrene	CARB 429	ug/Nm3	1	v	0.0449	v	0.0386	0.0527
Phenol	SW8270	ug/Nm3	1	v	0.74	v	0.74	0.74
Pyrene	CARB 429	ug/Nm3	1	v	0.0117	v	0.0182	0.0122
bis(2-Chloroethoxy)methane	SW8270	ug/Nm3	1	v	1	v	1.1	1.1
bis(2-Chloroethyl)ether	SW8270	ug/Nm3	1	v	1.2	v	1.3	1.5
bis(2-Ethylhexyl)phthalate	SW8270	ug/Nm3	1	v	0.65	v	0.65	0.65
n-Nitrosodimethylamine	SW8270	ug/Nm3	1	v	3.3	v	3.3	3.3

Table G-1. Analytical Results Used in Calculations**Stream: Raw Coal (1a)**

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ultimate/Proximate/HHV									
Moisture, total	D3302	Wt. %	1	29.1	28.2	28.4	28.6	28.8	1.2
Moisture, total	D3302	Wt. %	2	29.0	28.7	28.6	28.6	28.8	0.52
Moisture, total	D3302	Wt. %	3	29.1	28.9	28.7	28.7	28.9	0.5
Ash	D3174	Wt. %	1	6.61	6.56	7.33	7.33	6.83	1.1
Ash	D3174	Wt. %	2	6.55	6.29	7.33	7.33	6.72	1.3
Ash	D3174	Wt. %	3	6.88	6.79	6.31	6.31	6.66	0.76
Carbon	D5373	Wt. %	1	69.3	70.6	70.1	70.1	70	1.6
Carbon	D5373	Wt. %	2	70.4	70.3	69.7	69.7	70.1	0.94
Carbon	D5373	Wt. %	3	69.4	70.2	69.5	69.5	69.7	1.1
Fixed Carbon	D3172	Wt. %	1	47.2	47.8	47.2	47.2	47.4	0.86
Fixed Carbon	D3172	Wt. %	2	47	48	46.7	46.7	47.2	1.7
Fixed Carbon	D3172	Wt. %	3	46.2	47.2	47.7	47.7	47	1.9
HHV	D2015	Btu/lb	1	11,900	11,800	12,100	12,100	11,900	380
HHV	D2015	Btu/lb	2	12,000	12,000	11,900	12,000	12,000	140
HHV	D2015	Btu/lb	3	12,000	11,900	11,900	11,900	11,900	140
Hydrogen	D5373	Wt. %	1	4.5	4.63	4.65	4.65	4.59	0.2
Hydrogen	D5373	Wt. %	2	4.6	4.6	4.58	4.58	4.59	0.029
Hydrogen	D5373	Wt. %	3	4.75	4.62	4.83	4.83	4.73	0.26
Nitrogen	D5373	Wt. %	1	1.04	0.99	0.98	0.98	1	0.08
Nitrogen	D5373	Wt. %	2	0.98	1	0.99	0.99	0.99	0.025
Nitrogen	D5373	Wt. %	3	0.97	0.98	0.97	0.97	0.973	0.014
Oxygen (by difference)	D3176	Wt. %	1	18.2	17	16.7	16.7	17.3	2
Oxygen (by difference)	D3176	Wt. %	2	17.2	17.5	17.1	17.1	17.6	1.3
Oxygen (by difference)	D3176	Wt. %	3	17.7	17.1	18.1	18.1	0.277	0.029
Sulfur	D4239	Wt. %	1	0.29	0.27	0.27	0.27	0.287	0.014
Sulfur	D4239	Wt. %	2	0.28	0.29	0.29	0.29	0.29	0.29
Sulfur	D4239	Wt. %	3	0.29	0.29	0.29	0.29	0.29	---
Volatile Matter	D3175	Wt. %	1	46.2	45.6	45.5	45.5	45.8	0.94
Volatile Matter	D3175	Wt. %	2	46.5	45.7	46	46	46.1	1
Volatile Matter	D3175	Wt. %	3	46.9	46	46	46	46.3	1.3

Table G-1. Analytical Results Used in Calculations
Stream: Raw Coal (1a)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ionic Species									
Chloride	D4208/I/C	ug/g	1	41.5	36.6	35.8		38	7.7
Chloride	D4208/I/C	ug/g	2	34.9	49.5	28		37.5	27
Chloride	D4208/I/C	ug/g	3	48.9	32.2	43.2		41.4	21
Fluoride	D3751/I/C	ug/g	1	90.9	161	62.9		105	130
Fluoride	D3751/I/C	ug/g	2	75.3	52.4	58.8		62.2	29
Fluoride	D3751/I/C	ug/g	3	79.4	44.8	60.2		61.5	43
Metals									
Aluminum	D4326	Wt. %	1	0.57	0.65	0.73		0.65	0.2
Aluminum	D4326	Wt. %	2	0.61	0.6	0.67		0.627	0.094
Aluminum	D4326	Wt. %	3	0.63	0.62	0.56		0.603	0.094
Antimony	ICP/MS	ug/g	1	0.111	C	0.113	C	0.139	0.12
Antimony	ICP/MS	ug/g	2	0.0881	C	0.132	C	0.115	0.059
Antimony	ICP/MS	ug/g	3	0.109	C	0.119	C	0.109	0.024
Arsenio	ICP/MS	ug/g	1	1.04	C	0.863	C	1.09	C
Arsenic	ICP/MS	ug/g	2	0.983	C	0.87	C	1.09	C
Arsenic	ICP/MS	ug/g	3	0.939	C	1.01	C	0.926	C
Barium	SW6010	ug/g	1	41	330	400		257	470
Barium	SW6010	ug/g	2	400	410	440		417	52
Barium	SW6010	ug/g	3	400	410	450		420	66
Beryllium	ICP/MS	ug/g	1	0.21	0.253	0.292		0.252	0.1
Beryllium	ICP/MS	ug/g	2	0.281	0.274	0.262		0.272	0.024
Beryllium	ICP/MS	ug/g	3	0.287	0.348	0.248		0.294	0.13
Boron	SW6010	ug/g	1	31	31	30		30.7	1.4
Boron	SW6010	ug/g	2	31	31	34		32	4.3
Boron	SW6010	ug/g	3	33	32	31		32	2.5
Cadmium	ICP/MS	ug/g	1	0.121	C	0.08	C	0.0756	C
Cadmium	ICP/MS	ug/g	2	0.106	C	0.064	C	0.0891	C
Cadmium	ICP/MS	ug/g	3	0.151	C	0.0353	C	0.185	C
Calcium	D4326	Wt. %	1	0.99	1.08	1.05		1.04	0.11
Calcium	D4326	Wt. %	2	1.04	1.07	1.19		1.1	0.2
Calcium	D4326	Wt. %	3	1.04	1.06	1.01		1.04	0.063
Chromium	ICP/MS	ug/g	1	6.64	C	4.05	C	5.49	3.2
								5.39	

Table G-1. Analytical Results Used in Calculations
Stream: Raw Coal (1a)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)									
Chromium	ICP/MS	ug/g	2	3.86	3.85	5.62	2.5	4.44	0.066
Chromium	ICP/MS	ug/g	3	4.36	4.37	4.32	4.35	4.35	0.52
Cobalt	ICP/MS	ug/g	1	1.99	1.74	2.16	1.96	1.96	0.43
Cobalt	ICP/MS	ug/g	2	1.77	1.73	2.05	1.85	1.85	0.025
Cobalt	ICP/MS	ug/g	3	1.87	1.88	1.89	1.88	1.88	0.025
Copper	ICP/MS	ug/g	1	11.8	10.8	12.6	11.7	11.7	2.2
Copper	ICP/MS	ug/g	2	10.2	10.2	13.2	11.2	11.2	4.3
Copper	ICP/MS	ug/g	3	11.8	12.1	11.6	11.8	11.8	0.63
Iron	D4326	Wt. %	1	0.23	0.24	0.24	0.237	0.014	0.043
Iron	D4326	Wt. %	2	0.24	0.24	0.27	0.25	0.25	0.029
Iron	D4326	Wt. %	3	0.23	0.25	0.23	0.237	0.014	0.043
Lead	ICP/MS	ug/g	1	1.39	1.13	1.87	1.46	1.46	0.93
Lead	ICP/MS	ug/g	2	1.37	1.1	1.36	1.28	1.28	0.38
Lead	ICP/MS	ug/g	3	1.47	0.99	1.4	1.29	1.29	0.64
Magnesium	D4326	Wt. %	1	0.21	0.23	0.22	0.22	0.025	0.043
Magnesium	D4326	Wt. %	2	0.22	0.22	0.25	0.23	0.014	0.043
Magnesium	D4326	Wt. %	3	0.22	0.22	0.21	0.217	0.014	0.043
Manganese	ICP/MS	ug/g	1	9.98	9.12	10.3	9.8	9.8	1.5
Manganese	ICP/MS	ug/g	2	8.94	8.93	11.3	9.72	9.72	3.4
Manganese	ICP/MS	ug/g	3	9.99	9.49	10.6	10.6	10.6	0.57
Mercury	DGA/CVAA	ug/g	1	0.13	0.13	0.09	0.117	0.057	0.038
Mercury	DGA/CVAA	ug/g	2	0.11	0.09	0.12	0.107	0.038	0.025
Mercury	DGA/CVAA	ug/g	3	0.11	0.1	0.09	0.1	0.1	0.025
Molybdenum	ICP/MS	ug/g	1	0.642	0.473	0.625	0.58	0.58	0.23
Molybdenum	ICP/MS	ug/g	2	0.531	0.549	0.617	0.566	0.566	0.11
Molybdenum	ICP/MS	ug/g	3	0.572	0.478	0.453	0.501	0.501	0.16
Nickel	SW6010	ug/g	1	3	1	1	1.67	1.67	2.9
Nickel	SW6010	ug/g	2	2	1	2	1.67	1.67	1.4
Nickel	SW6010	ug/g	3	2	1	1	1.33	1.33	1.4
Phosphorus	D4326	Wt. %	1	0.03	0.03	0.03	0.03	0.03	...
Phosphorus	D4326	Wt. %	2	0.03	0.03	0.03	0.03	0.03	...
Phosphorus	D4326	Wt. %	3	0.03	0.03	0.03	0.03	0.03	...

Table G-1. Analytical Results Used in Calculations
Stream: Raw Coal (1a)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)									
Potassium	D4326	Wt. %	1	0.02	0.02	0.03	0.0233	0.014	
Potassium	D4326	Wt. %	2	0.02	0.02	0.02	0.02	0.02	...
Potassium	D4326	Wt. %	3	0.02	0.02	0.02	0.02	0.02	...
Selenium	ICPMS	ug/g	1	2.64	2.14	12.3	5.69	14	
Selenium	ICPMS	ug/g	2	2.26	1.72	2.56	2.18	1.1	
Selenium	ICPMS	ug/g	3	2.28	1.8	2.47	2.18	0.86	
Silicon	D4326	Wt. %	1	1.15	1.02	1.28	1.15	0.32	
Silicon	D4326	Wt. %	2	1.01	0.97	1.17	1.05	0.26	
Silicon	D4326	Wt. %	3	1.13	1.12	0.99	1.08	0.19	
Sodium	D4326	Wt. %	1	0.1	0.1	0.1	0.1	0.1	...
Sodium	D4326	Wt. %	2	0.1	0.1	0.11	0.103	0.014	
Sodium	D4326	Wt. %	3	0.11	0.1	0.1	0.103	0.014	
Strontium	D4326	Wt. %	1	0.02	0.02	0.02	0.02	0.02	...
Strontium	D4326	Wt. %	2	0.02	0.02	0.02	0.02	0.02	...
Strontium	D4326	Wt. %	3	0.02	0.02	0.02	0.02	0.02	...
Titanium	D4326	Wt. %	1	0.05	0.05	0.06	0.06	0.025	
Titanium	D4326	Wt. %	2	0.05	0.05	0.05	0.07	0.06	
Titanium	D4326	Wt. %	3	0.07	0.05	0.05	0.07	0.0567	0.029
Vanadium	ICPMS	ug/g	1	13	12.1	14.8	13.3	3.4	
Vanadium	ICPMS	ug/g	2	11.5	11.4	13.9	12.3	3.5	
Vanadium	ICPMS	ug/g	3	12.3	11.9	12.5	12.2	0.76	
Zinc	SW6010	ug/g	1	9	8	6	7.67	3.8	
Zinc	SW6010	ug/g	2	8	7	8	7.67	1.4	
Zinc	SW6010	ug/g	3	9	7	9	8.33	2.9	
Radionuclides									
Actinium-228 @ 338 KeV	gamma	pCi/g	3	0.05	-0.07	0.16	0.047	0.29	
Actinium-228 @ 911 KeV	gamma	pCi/g	3	-0.06	0.3	0.11	0.12	0.45	
Actinium-228 @ 968 KeV	gamma	pCi/g	3	0.02	0.53	-0.12	0.14	0.85	
Bismuth-212 @ 727 KeV	gamma	pCi/g	3	0.41	-0.5	-0.71	-0.27	1.5	
Bismuth-214 @ 1120 KeV	gamma	pCi/g	3	0.34	0.26	0.33	0.31	0.11	
Bismuth-214 @ 1764 KeV	gamma	pCi/g	3	0.6	0.15	0.21	0.32	0.61	
Bismuth-214 @ 609 KeV	gamma	pCi/g	3	0.25	0.12	0.11	0.16	0.19	

Table G-1. Analytical Results Used in Calculations

<i>Stream: Raw Coal (1a)</i>	Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Radionuclides (continued)										
Lead-210 @ 46 KeV	gamma	pCi/g	3	1.2	0	0.00	0	0.4	1.7	
Lead-212 @ 238 KeV	gamma	pCi/g	3	0.14	0.12	0.12	0.13	0.13	0.029	
Lead-214 @ 295 KeV	gamma	pCi/g	3	0.26	0.2	0.17	0.21	0.21	0.11	
Lead-214 @ 351 KeV	gamma	pCi/g	3	0.13	0.14	0.18	0.15	0.15	0.066	
Potassium-40 @ 1460 KeV	gamma	pCi/g	3	-0.09	-0.024	0.00	-0.038	-0.038	0.12	
Radium-226 @ 226 KeV	gamma	pCi/g	3	0.06	0.04	0.07	0.057	0.057	0.038	
Thorium-208 @ 583 KeV	gamma	pCi/g	3	0.01	0.03	0.07	0.037	0.037	0.076	
Thorium-208 @ 860 KeV	gamma	pCi/g	3	0.21	-0.44	-0.46	-0.23	-0.23	0.95	
Thorium-234 @ 63 KeV	gamma	pCi/g	3	0.24	0.14	0.14	0.13	0.13	0.29	
Thorium-234 @ 92 KeV	gamma	pCi/g	3	-0.13	0.13	0.14	0.047	0.047	0.38	
Uranium-235 @ 143 KeV	gamma	pCi/g	3	0.03	0.00	-0.1	-0.023	-0.023	0.17	

Table G-1. Analytical Results Used in Calculations
Stream: Coal Slurry (32)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ultimate/Proximate/HHV									
% Solids in Slurry	D3902	Wt. %	1	55.4	54.2	54.8	54.8	54.8	1.5
% Solids in Slurry	D3902	Wt. %	2	54.5	54.7	54.4	54.5	54.5	0.38
% Solids in Slurry	D3902	Wt. %	3	54.7	55.1	54.3	54.7	54.7	0.99
Ash	D3174	Wt. %	1	6.35	6.26	6.5	6.37	6.37	0.3
Ash	D3174	Wt. %	2	6.52	6.29	6.39	6.4	6.4	0.29
Ash	D3174	Wt. %	3	6.33	6.48	6.3	6.37	6.37	0.24
Carbon	D5373	Wt. %	1	70.1	69.5	68.9	69.5	69.5	1.5
Carbon	D5373	Wt. %	2	68.2	68.7	68.6	68.5	68.5	0.66
Carbon	D5373	Wt. %	3	69.3	69.1	68.8	69.1	69.1	0.63
Fixed Carbon	D3172	Wt. %	1	47.5	48	47.1	47.5	47.5	1.1
Fixed Carbon	D3172	Wt. %	2	47.9	48	48.2	48	48	0.38
Fixed Carbon	D3172	Wt. %	3	47.9	48.2	48.5	48.2	48.2	0.75
HHV	D2015	Btu/lb	1	12,000	12,000	12,000	12,000	12,000	...
HHV	D2015	Btu/lb	2	12,000	12,000	12,000	12,000	12,000	...
HHV	D2015	Btu/lb	3	11,900	11,900	12,000	11,900	11,900	...
Hydrogen	D5373	Wt. %	1	4.64	4.74	4.74	4.71	4.71	0.14
Hydrogen	D5373	Wt. %	2	4.84	4.94	4.79	4.86	4.86	0.19
Hydrogen	D5373	Wt. %	3	4.67	4.63	4.91	4.75	4.74	0.38
Nitrogen	D5373	Wt. %	1	1.03	1.03	0.99	1.02	1.02	0.057
Nitrogen	D5373	Wt. %	2	1.02	1.05	1.06	1.04	1.04	0.052
Nitrogen	D5373	Wt. %	3	1.03	1.03	1.02	1.03	1.03	0.014
Oxygen (by difference)	D3176	Wt. %	1	17.6	18.2	18.6	18.1	18.1	1.3
Oxygen (by difference)	D3176	Wt. %	2	19.1	18.7	18.9	18.9	18.9	0.5
Oxygen (by difference)	D3176	Wt. %	3	18.4	18.4	18.7	18.6	18.5	0.43
Sulfur	D4239	Wt. %	1	0.29	0.27	0.27	0.277	0.277	0.029
Sulfur	D4239	Wt. %	2	0.27	0.28	0.28	0.277	0.277	0.014
Sulfur	D4239	Wt. %	3	0.28	0.29	0.28	0.283	0.283	0.014
Volatile Matter	D3175	Wt. %	1	46.1	45.7	46.4	46.1	46.1	0.87
Volatile Matter	D3175	Wt. %	2	45.6	45.8	45.5	45.6	45.6	0.38
Volatile Matter	D3175	Wt. %	3	45.7	45.3	45.2	45.6	45.4	0.66

Table G-1. Analytical Results Used in Calculations

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ionic Species									
Chloride	D4208/IC	ug/g	1	61.5	36.2	50.5	49.4	32	7.6
Chloride	D4208/IC	ug/g	2	33.8	39.3	34.3	35.8	10	10
Chloride	D4208/IC	ug/g	3	49.3	42.1	42.15	44.5	8	6.7
Fluoride	D3751/IC	ug/g	1	42.1	37.7	42.6	40.8	21	1.03
Fluoride	D3751/IC	ug/g	2	41	41	46.6	42.9	1	0.038
Fluoride	D3751/IC	ug/g	3	52.1	58.3	41.95	50.8	1.04	0.066
Metals									
Aluminum	D4326	Wt. %	1	0.55	0.59	0.61	0.583	0.076	0.043
Aluminum	D4326	Wt. %	2	0.6	0.57	0.57	0.58	0.025	0.025
Aluminum	D4326	Wt. %	3	0.57	0.59	0.58	0.55	0.13	0.13
Antimony	ICP/MS	ug/g	1	0.181	C	0.0749	C	0.125	0.035
Antimony	ICP/MS	ug/g	2	0.0746	C	0.0876	C	0.103	0.0884
Antimony	ICP/MS	ug/g	3	0.0367	C	0.111	C	0.109	0.0956
Arsenic	ICP/MS	ug/g	1	0.801	C	0.566	C	0.737	0.37
Arsenic	ICP/MS	ug/g	2	0.621	C	0.75	C	0.745	0.3
Arsenic	ICP/MS	ug/g	3	0.441	C	0.89	C	0.897	0.66
Barium	SW6010	ug/g	1	390	410	390	390	29	29
Barium	SW6010	ug/g	2	400	380	390	390	25	25
Barium	SW6010	ug/g	3	390	380	410	410	38	38
Beryllium	ICP/MS	ug/g	1	0.241	0.193	0.21	0.215	0.06	0.06
Beryllium	ICP/MS	ug/g	2	0.165	0.232	0.213	0.203	0.086	0.086
Beryllium	ICP/MS	ug/g	3	0.0955	0.238	0.272	0.227	0.202	0.23
Boron	SW6010	ug/g	1	30	26	28	28	5	2.9
Boron	SW6010	ug/g	2	28	28	26	27.3	9	9
Boron	SW6010	ug/g	3	26	19	24	30	23	0.03
Cadmium	ICP/MS	ug/g	1	0.0617	C	0.0778	C	0.0644	0.061
Cadmium	ICP/MS	ug/g	2	0.0623	C	0.064	C	0.0774	0.067
Cadmium	ICP/MS	ug/g	3	0.054	C	0.108	C	0.0807	0.067
Calcium	D4326	Wt. %	1	1.03	1.01	1	1.01	0.038	0.038
Calcium	D4326	Wt. %	2	1.02	0.98	1.03	1.04	1.04	0.014
Calcium	D4326	Wt. %	3	1.04	1.05	0.98	1.04	3.55	1.8
Chromium	ICP/MS	ug/g	1	3.84	C	2.73	C	4.09	1

Table G-1. Analytical Results Used in Calculations
Stream: Coal Slurry (32)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)									
Chromium	ICP/MS	ug/g		2	2.52	2.36	C	2.93	2.1
Chromium	ICP/MS	ug/g		3	2.18	3.72	C	3.37	2.6
Cobalt	ICP/MS	ug/g		1	1.84	1.21	C	1.54	0.79
Cobalt	ICP/MS	ug/g		2	1.14	1.65	C	1.72	0.79
Cobalt	ICP/MS	ug/g		3	0.985	1.74	C	2.02	1.3
Copper	ICP/MS	ug/g		1	10.5	7.7	C	10.1	3.8
Copper	ICP/MS	ug/g		2	6.71	10.6	C	10.4	5.4
Copper	ICP/MS	ug/g		3	6.75	11	C	12.3	7.2
Iron	D4326	Wt. %		1	0.23	0.21		0.22	0.025
Iron	D4326	Wt. %		2	0.22	0.22		0.223	0.014
Iron	D4326	Wt. %		3	0.23	0.24		0.22	0.014
Lead	ICP/MS	ug/g		1	1.01	0.573	C	0.878	0.56
Lead	ICP/MS	ug/g		2	0.602	0.803	C	1.06	0.57
Lead	ICP/MS	ug/g		3	0.59	1	C	1.01	0.67
Magnesium	D4326	Wt. %		1	0.21	0.22		0.21	0.014
Magnesium	D4326	Wt. %		2	0.22	0.21		0.21	0.014
Magnesium	D4326	Wt. %		3	0.22	0.22		0.21	0.014
Manganese	ICP/MS	ug/g		1	9.17	6.52	C	8.58	3.5
Manganese	ICP/MS	ug/g		2	5.83	8.55	C	9.41	4.6
Manganese	ICP/MS	ug/g		3	5.29	8.75	C	10.1	6.2
Mercury	DGACVAA	ug/g		1	0.1	0.1		0.1	---
Mercury	DGACVAA	ug/g		2	0.1	0.08		0.2	0.16
Mercury	DGACVAA	ug/g		3	0.08	0.1		0.08	0.029
Molybdenum	ICP/MS	ug/g		1	0.574	0.37	C	0.49	0.25
Molybdenum	ICP/MS	ug/g		2	0.362	0.534	C	0.566	0.27
Molybdenum	ICP/MS	ug/g		3	0.286	0.592	C	0.606	0.45
Nickel	SW6010	ug/g		1	2	2		1	1.4
Nickel	SW6010	ug/g		2	2	2		1	1.4
Nickel	SW6010	ug/g		3	2	1		2	2.5
Phosphorus	D4326	Wt. %		1	0.03	0.03		0.03	---
Phosphorus	D4326	Wt. %		2	0.03	0.02		0.0267	0.014
Phosphorus	D4326	Wt. %		3	0.03	0.03		0.03	---

Table G-1. Analytical Results Used in Calculations
Stream: Coal Slurry (32)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)									
Potassium	D4326	Wt. %	1	0.02	0.02	0.02	0.02	0.02	---
Potassium	D4326	Wt. %	2	0.02	0.02	0.02	0.02	0.02	---
Potassium	D4326	Wt. %	3	0.02	0.02	0.02	0.02	0.02	---
Selenium	ICPMS	ug/g	1	2.04	0.722	1.44	1.4	1.4	1.6
Selenium	ICPMS	ug/g	2	0.787	1.54	1.9	1.41	1.4	1.4
Selenium	ICPMS	ug/g	3	<	1.76	1.99	1.25	2.7	2.7
Silicon	D4326	Wt. %	1	0.97	0.96	1.04	0.99	0.99	0.11
Silicon	D4326	Wt. %	2	1.02	0.98	0.97	0.99	0.99	0.0666
Silicon	D4326	Wt. %	3	0.96	1.01	0.96	0.977	0.972	0.072
Sodium	D4326	Wt. %	1	0.1	0.1	0.1	0.1	0.1	---
Sodium	D4326	Wt. %	2	0.1	0.1	0.1	0.1	0.1	---
Sodium	D4326	Wt. %	3	0.1	0.1	0.1	0.1	0.1	---
Strontium	D4326	Wt. %	1	0.02	0.02	0.02	0.02	0.02	---
Strontium	D4326	Wt. %	2	0.02	0.02	0.02	0.02	0.02	---
Strontium	D4326	Wt. %	3	0.02	0.02	0.02	0.02	0.02	---
Titanium	D4326	Wt. %	1	0.05	0.06	0.06	0.06	0.06	0.014
Titanium	D4326	Wt. %	2	0.07	0.05	0.05	0.05	0.0567	0.029
Titanium	D4326	Wt. %	3	0.05	0.05	0.05	0.05	0.05	---
Vanadium	ICPMS	ug/g	1	11.3	8.98	11.8	10.7	10.7	3.7
Vanadium	ICPMS	ug/g	2	8.28	11.3	11.3	10.3	10.3	4.3
Vanadium	ICPMS	ug/g	3	6.9	11.2	12.4	10.2	10.2	7.2
Zinc	SW6010	ug/g	1	8	6	8	11.6	7.33	2.9
Zinc	SW6010	ug/g	2	7	8	17	14	10.7	14
Zinc	SW6010	ug/g	3	8	7	8	7.67	7.67	1.4

Table G-1. Analytical Results Used in Calculations
Stream: Coal Slurry (32)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 4	Average	95% CI
Ultimate/Proximate/HHV									
Ash	D3174	Wt. %	4	6.30	6.27	6.46	6.47	6.38	0.17
Ionic Species									
Chloride	D4208/C	ug/g	4	59.4	73.5	123	62.1	79.5	47
Fluoride	D3751/C	ug/g	4	34.3	34.8	36.7	37.9	35.9	2.7
Metals									
Aluminum	D4326	Wt. %	4	0.534	0.513	0.54	0.534	0.53	0.019
Antimony	SW7041	ug/g	4	0.158	0.103	0.118	0.125	0.126	0.037
Arsenic	SW7050	ug/g	4	0.655	0.671	0.736	0.738	0.7	0.069
Barium	D4326	Wt. %	4	0.0358	0.0448	0.0448	0.0448	0.0426	0.0071
Beryllium	SW6010a	ug/g	4	0.193	0.174	0.208	0.196	0.193	0.022
Boron	SW6010	ug/g	4	35	36	41	39	37.8	4.4
Cadmium	SW7131	ug/g	4	0.0249	0.0303	0.0303	0.122	0.0521	0.075
Calcium	D4326	Wt. %	4	1.02	0.994	1	0.958	0.994	0.043
Chromium	SW6010a	ug/g	4	3.07	2.92	3.12	3.32	3.11	0.26
Cobalt	SW6010a	ug/g	4	1.29	1.21	1.31	1.35	1.29	0.094
Copper	SW6010a	ug/g	4	9.77	9.22	9.24	9.06	9.32	0.49
Iron	D4326	Wt. %	4	0.231	0.203	0.21	0.21	0.213	0.019
Lead	SW7421	ug/g	4	1.78	2.07	2.4	2.77	2.25	0.68
Magnesium	D4326	Wt. %	4	0.189	0.199	0.199	0.199	0.199	---
Manganese	SW6010a	ug/g	4	6.8	6.52	6.78	7.64	6.94	0.77
Mercury	DGACVAA	ug/g	4	0.08	0.08	0.09	0.07	0.08	0.013
Molybdenum	SW6010a	ug/g	4	0.353	0.322	0.414	0.425	0.378	0.079
Nickel	SW6010a	ug/g	4	2.02	2.03	2.06	2.31	2.12	0.21
Phosphorus	D4326	Wt. %	4	0.0305	0.0349	0.0305	0.0316	0.0316	0.0035
Potassium	D4326	Wt. %	4	0.0083	0.0083	0.0166	0.0166	0.0125	0.0076
Selenium	SW7740	ug/g	4	0.687	0.709	0.724	0.731	0.712	0.031
Silicon	D4326	Wt. %	4	0.892	0.855	0.906	0.92	0.892	0.048
Sodium	D4326	Wt. %	4	0.0816	0.089	0.0816	0.089	0.0853	0.0068
Strontium	D4326	Wt. %	4	0.00846	0.0169	0.0169	0.0169	0.0148	0.0067
Titanium	D4326	Wt. %	4	0.048	0.048	0.048	0.048	0.048	---
Vanadium	SW6010a	ug/g	4	10.3	9.97	10.3	11.8	10.6	1.3
Zinc	SW6010a	ug/g	4	5.47	5.23	5.45	5.35	6.12	2.4

Table G-1. Analytical Results Used in Calculations

Stream:	Coal Slurry (33)	Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
		Ultimate/Proximate/HHV									
% Solids in Slurry	D3302	Wt. %		1		53.2	52.1	52.0	52.4	52.4	1.7
% Solids In Slurry	D3302	Wt. %		2		52.3	52.7	52.6	52.5	52.5	0.52
% Solids In Slurry	D3302	Wt. %		3		52.0	51.3	51.7	51.7	51.7	0.87
Ash	D3174	Wt. %		1		7.57	7.89	8.05	7.84	7.84	0.61
Ash	D3174	Wt. %		2		7.85	7.52	7.47	7.61	7.61	0.51
Ash	D3174	Wt. %		3		7.81	7.84	7.61	7.75	7.75	0.31
Carbon	D5373	Wt. %		1		68.8	68.8	69	68.9	68.9	0.29
Carbon	D5373	Wt. %		2		69.5	69.2	69.9	69.5	69.5	0.87
Carbon	D5373	Wt. %		3		68.7	69.4	69.4	69.2	69.2	1
Fixed Carbon	D3172	Wt. %		1		47.2	47.9	46.9	47.3	47.3	1.3
Fixed Carbon	D3172	Wt. %		2		46.3	47.6	47.1	47	47	1.6
Fixed Carbon	D3172	Wt. %		3		46.3	47	48.3	47.2	47.2	2.5
HHV	D2015	Btu/lb		1		11,800	11,800	11,800	11,800	11,800	---
HHV	D2015	Btu/lb		2		11,800	11,800	11,900	11,800	11,800	140
HHV	D2015	Btu/lb		3		11,700	11,700	11,800	11,700	11,700	140
Hydrogen	D5373	Wt. %		1		4.75	4.65	4.79	4.73	4.73	0.18
Hydrogen	D5373	Wt. %		2		4.77	4.85	4.74	4.79	4.79	0.14
Hydrogen	D5373	Wt. %		3		4.74	4.59	4.59	4.64	4.64	0.22
Nitrogen	D5373	Wt. %		1		0.98	1	1	0.993	0.993	0.029
Nitrogen	D5373	Wt. %		2		1.04	1.06	1.08	1.06	1.06	0.05
Nitrogen	D5373	Wt. %		3		1.02	1.14	1.2	1.12	1.12	0.23
Oxygen (by difference)	D3176	Wt. %		1		17.6	17.4	16.9	17.3	17.3	0.9
Oxygen (by difference)	D3176	Wt. %		2		16.5	17.1	16.5	16.7	16.7	0.86
Oxygen (by difference)	D3176	Wt. %		3		17.5	16.8	16.9	17.1	17.1	0.94
Sulfur	D4289	Wt. %		1		0.29	0.27	0.27	0.277	0.277	0.029
Sulfur	D4289	Wt. %		2		0.28	0.27	0.28	0.277	0.277	0.014
Sulfur	D4289	Wt. %		3		0.28	0.29	0.28	0.283	0.283	0.014
Volatile Matter	D3175	Wt. %		1		45.2	44.2	45.1	44.8	44.8	1.4
Volatile Matter	D3175	Wt. %		2		45.8	44.9	45.4	45.4	45.4	1.1
Volatile Matter	D3175	Wt. %		3		45.9	45.1	44.1	45	45	2.2

Table G-1. Analytical Results Used in Calculations
Stream: Coal Slurry (33)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ionic Species									
Chloride	D4208/I/C	ug/g	1	80.4	50.8	68.1		66.4	37
Chloride	D4208/I/C	ug/g	2	59.5	48	42.6		50	21
Chloride	D4208/I/C	ug/g	3	48.2	50.1	52		50.1	4.7
Fluoride	D3751/I/C	ug/g	1	196	277	265		246	110
Fluoride	D3751/I/C	ug/g	2	250	188	204		214	80
Fluoride	D3751/I/C	ug/g	3	287	312	364		321	98
Metals									
Aluminum	D4326	Wt. %	1	0.68	0.74	0.77		0.73	0.11
Aluminum	D4326	Wt. %	2	0.74	0.7	0.69		0.71	0.066
Aluminum	D4326	Wt. %	3	0.71	0.73	0.7		0.713	0.038
Antimony	ICP/MS	ug/g	1	0.342	C	0.465	C	0.512	C
Antimony	ICP/MS	ug/g	2	0.517	C	0.38	C	0.393	C
Antimony	ICP/MS	ug/g	3	0.401	C	0.468	C	0.426	C
Arsenic	ICP/MS	ug/g	1	1.64	C	2.56	C	2.24	C
Arsenic	ICP/MS	ug/g	2	2.18	C	1.69	C	1.88	C
Arsenic	ICP/MS	ug/g	3	2.73	C	2.71	C	2.44	C
Barium	SW6010	ug/g	1	510	540	560		537	63
Barium	SW6010	ug/g	2	490	480	480		483	14
Barium	SW6010	ug/g	3	480	470	450		467	38
Beryllium	ICP/MS	ug/g	1	0.193	0.295	0.327		0.272	0.17
Beryllium	ICP/MS	ug/g	2	0.338	0.327	0.284		0.316	0.071
Beryllium	ICP/MS	ug/g	3	0.371	0.305	0.342		0.316	0.092
Boron	SW6010	ug/g	1	35	35	36		35.3	1.4
Boron	SW6010	ug/g	2	35	34	33		34	2.5
Boron	SW6010	ug/g	3	36	34	34		34.7	2.9
Cadmium	ICP/MS	ug/g	1	0.387	C	1.21	C	0.956	1.2
Cadmium	ICP/MS	ug/g	2	1.57	C	0.925	C	1.09	C
Cadmium	ICP/MS	ug/g	3	2.79	C	3.27	C	3.59	C
Calcium	D4326	Wt. %	1	1.25	1.29	1.27		1.26	1.27
Calcium	D4326	Wt. %	2	1.26	1.19	1.22		1.22	0.087
Calcium	D4326	Wt. %	3	1.31	1.26	1.28		1.28	0.063
Chromium	ICP/MS	ug/g	1	3.76	C	5.05	C	4.78	2.3

Table G-1. Analytical Results Used in Calculations
Stream: Coal Slurry (33)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)									
Chromium	ICP/MS	ug/g	2	5.44	4.88	4.86	5.06	0.82	
Chromium	ICP/MS	ug/g	3	6.37	5.65	5.18	5.06	1.5	
Cobalt	ICP/MS	ug/g	1	1.77	2.06	2.11	1.98	0.46	
Cobalt	ICP/MS	ug/g	2	2.27	2.03	2.18	2.16	0.3	
Cobalt	ICP/MS	ug/g	3	2.42	2.36	2.3	2.16	0.15	
Copper	ICP/MS	ug/g	1	11.2	13.6	15.1	13.3	4.9	
Copper	ICP/MS	ug/g	2	15	13.6	14.6	14.4	1.8	
Copper	ICP/MS	ug/g	3	15.8	18.7	15.5	14.4	4.4	
Iron	D4326	Wt. %	1	0.29	0.3	0.29	0.29	0.014	
Iron	D4326	Wt. %	2	0.29	0.27	0.27	0.27	0.029	
Iron	D4326	Wt. %	3	0.3	0.29	0.29	0.29	0.014	
Lead	ICP/MS	ug/g	1	4.1	10.4	8.27	7.59	8	
Lead	ICP/MS	ug/g	2	7.77	5.01	6.1	6.29	3.5	
Lead	ICP/MS	ug/g	3	9.46	11.8	11.6	6.29	3.2	
Magnesium	D4326	Wt. %	1	0.26	0.28	0.27	0.27	0.025	
Magnesium	D4326	Wt. %	2	0.27	0.25	0.26	0.26	0.025	
Magnesium	D4326	Wt. %	3	0.28	0.26	0.26	0.267	0.028	
Manganese	ICP/MS	ug/g	1	8.81	10.7	11	10.2	2.9	
Manganese	ICP/MS	ug/g	2	11.3	10.2	11.7	11.1	1.9	
Manganese	ICP/MS	ug/g	3	11.8	12.2	11.7	11.1	0.66	
Mercury	DGA/ACVAA	ug/g	1	0.08	0.08	0.08	0.08	...	
Mercury	DGA/ACVAA	ug/g	2	0.1	0.09	0.1	0.08	0.014	
Mercury	DGA/ACVAA	ug/g	3	0.08	0.07	0.1	0.0833	0.038	
Molybdenum	ICP/MS	ug/g	1	0.554	0.686	0.681	0.64	0.19	
Molybdenum	ICP/MS	ug/g	2	0.761	0.693	0.766	0.72	0.19	
Molybdenum	ICP/MS	ug/g	3	0.816	0.804	0.842	0.72	0.048	
Nickel	SW6010	ug/g	1	1	<	1	<	1	...
Nickel	SW6010	ug/g	2	1	2	1	1	1.17	1.9
Nickel	SW6010	ug/g	3	1	<	1	<	1	...
Phosphorus	D4326	Wt. %	1	0.03	0.04	0.03	0.033	0.014	
Phosphorus	D4326	Wt. %	2	0.03	0.03	0.03	0.03	0.03	
Phosphorus	D4326	Wt. %	3	0.03	0.03	0.03	0.03	0.03	

Table G-1. Analytical Results Used in Calculations
Stream: Coal Slurry (33)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)									
Potassium	D4326	Wt. %	1	0.02	0.02	0.03	0.0233	0.014	...
Potassium	D4326	Wt. %	2	0.02	0.02	0.02	0.02	0.02	...
Potassium	D4326	Wt. %	3	0.02	0.02	0.02	0.02	0.02	...
Selenium	ICP/MS	ug/g	1	2.16	4.28	4.62	3.69	3.3	3.3
Selenium	ICP/MS	ug/g	2	4.79	3.6	4.65	4.35	1.6	1.6
Selenium	ICP/MS	ug/g	3	6.21	7.07	7.63	3.69	1.8	1.8
Silicon	D4326	Wt. %	1	1.18	1.23	1.3	1.24	0.15	0.15
Silicon	D4326	Wt. %	2	1.25	1.22	1.16	1.21	0.11	0.11
Silicon	D4326	Wt. %	3	1.21	1.25	1.18	1.21	0.087	...
Sodium	D4326	Wt. %	1	0.13	0.13	0.13	0.13	0.13	...
Sodium	D4326	Wt. %	2	0.13	0.13	0.13	0.13	0.13	...
Sodium	D4326	Wt. %	3	0.13	0.13	0.13	0.13	0.13	...
Strontium	D4326	Wt. %	1	0.02	0.02	0.02	0.02	0.02	...
Strontium	D4326	Wt. %	2	0.02	0.02	0.02	0.02	0.02	...
Strontium	D4326	Wt. %	3	0.02	0.02	0.02	0.02	0.02	...
Titanium	D4326	Wt. %	1	0.06	0.07	0.07	0.07	0.014	0.014
Titanium	D4326	Wt. %	2	0.07	0.07	0.07	0.07	0.07	...
Titanium	D4326	Wt. %	3	0.07	0.07	0.07	0.07	0.07	...
Vanadium	ICP/MS	ug/g	1	11.3	14	15.2	13.5	5	5
Vanadium	ICP/MS	ug/g	2	15.1	13.8	14	14.3	1.7	1.7
Vanadium	ICP/MS	ug/g	3	14.6	14.9	14.3	14.3	0.75	0.75
Zinc	SW6010	ug/g	1	39	51	57	49	23	23
Zinc	SW6010	ug/g	2	49	36	44	43	16	16
Zinc	SW6010	ug/g	3	44	60	140	78	130	130

Table G-1. Analytical Results Used in Calculations

Stream: Coal Slurry (33)	Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 4	Average	95% CI
Ultimate/Proximate/HHV	Ash	D3174	Wt. %	4	7.54	7.60	7.37	7.54	7.51	0.16
Ionic Species	Chloride	D4208/I/C	ug/g	4	161	92.1	84	96	108	56
Fluoride		D3751/I/C	ug/g	4	376	414	311	241	336	120
Metals	Aluminum	D4326	Wt. %	4	0.635	0.619	0.624	0.63	0.627	0.011
Antimony	SW7041	ug/g	4	0.973	0.813	0.833	0.636	0.814	0.22	
Arsenic	SW7060	ug/g	4	1.67	1.69	1.63	1.61	1.65	0.056	
Barium	D4326	Wt. %	4	0.0448	0.0448	0.0538	0.0538	0.0493	0.0082	
Beryllium	SW6010a	ug/g	4	0.243	0.209	0.264	0.26	0.244	0.04	
Boron	SW6010	ug/g	4	44	36	38	39	39.3	5.4	
Cadmium	SW7131	ug/g	4	0.95	1.09	1.01	0.95	0.999	0.1	
Calcium	D4326	Wt. %	4	1.24	1.2	1.17	1.15	1.19	0.059	
Chromium	SW6010a	ug/g	4	4.03	3.64	3.85	4.15	3.92	0.35	
Cobalt	SW6010a	ug/g	4	1.63	1.43	1.61	1.61	1.57	0.15	
Copper	SW6010a	ug/g	4	14	12.9	12.5	12.4	13	1.2	
Iron	D4326	Wt. %	4	0.28	0.262	0.245	0.252	0.257	0.025	
Lead	SW7421	ug/g	4	38.5	41.2	31.5	30.3	35.4	8.4	
Magnesium	D4326	Wt. %	4	0.241	0.241	0.235	0.235	0.238	0.0055	
Manganese	SW6010a	ug/g	4	8.07	7.59	8.33	9.12	8.28	1	
Mercury	DGACVAA	ug/g	4	0.07	0.07	0.07	0.07	0.07	...	
Molybdenum	SW6010a	ug/g	4	0.554	0.542	0.612	0.606	0.579	0.057	
Nickel	SW6010a	ug/g	4	2.62	2.36	2.6	2.77	2.59	0.26	
Phosphorus	D4326	Wt. %	4	0.0322	0.0436	0.0436	0.0436	0.0425	0.0035	
Potassium	D4326	Wt. %	4	0.0166	0.0166	0.0166	0.0166	0.0166	...	
Selenium	SW7740	ug/g	4	4.08	4.67	4.08	3.59	4.1	0.71	
Silicon	D4326	Wt. %	4	1.08	1.01	1.05	1.08	1.05	0.055	
Sodium	D4326	Wt. %	4	0.111	0.111	0.104	0.111	0.109	0.0059	
Strontrium	D4326	Wt. %	4	0.0169	0.0169	0.0169	0.0169	0.0169	...	
Titanium	D4326	Wt. %	4	0.054	0.054	0.054	0.054	0.0555	0.0048	
Vanadium	SW6010a	ug/g	4	12.7	11.9	12.4	12.7	12.4	0.61	
Zinc	SW6010a	ug/g	4	44.3	45.8	40.9	37.8	42.2	5.7	

Table G-1. Analytical Results Used in Calculations**Stream: Raw Gas Char-Filtered @1000 deg F (5)**

Analyte	Method	Units	Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ultimate/Proximate/HHV									
Ash	D3174	Wt. %		4					
Ionic Species									
Chloride	D4208/I/C	ug/g		4					
Fluoride	D3751/I/C	ug/g		4					
Metals									
Aluminum	D4326	Wt. %		4					
Antimony	GFAAS	ug/g		4					
Arsenic	GFAAS	ug/g		4					
Barium	D4326	Wt. %		4					
Beryllium	SW6010a	ug/g		4					
Boron	SW6010	ug/g		4					
Cadmium	GFAAS	ug/g		4					
Calcium	D4326	Wt. %		4					
Chromium	SW6010a	ug/g		4					
Cobalt	SW6010a	ug/g		4					
Copper	SW6010a	ug/g		4					
Iron	D4326	Wt. %		4					
Lead	GFAAS	ug/g		4					
Magnesium	D4326	Wt. %		4					
Manganese	SW6010a	ug/g		4					
Mercury	DGAICVAA	ug/g		4					
Molybdenum	SW6010a	ug/g		4					
Nickel	SW6010a	ug/g		4					
Phosphorus	D4326	Wt. %		4					
Potassium	D4326	Wt. %		4					
Selenium	GFAAS	ug/g		4					
Silicon	D4326	Wt. %		4					
Sodium	D4326	Wt. %		4					
Strontium	D4326	Wt. %		4					
Titanium	D4326	Wt. %		4					
Vanadium	SW6010a	ug/g		4					
Zinc	SW6010a	ug/g		4					

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Table G-1. Analytical Results Used in Calculations**Stream: Raw Gas Char-Filtered @ 500 deg F (5a)**

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ultimate/Proximate/HHV									
Ash	D3174	Wt. %		4					
Ionic Species									
Chloride	D4208/IC	ug/g		4					
Fluoride	D3751/IC	ug/g		4					
Metals									
Aluminum	D4326	Wt. %		4					
Antimony	GFAAS	ug/g		4					
Arsenic	GFAAS	ug/g		4					
Barium	D4326	Wt. %		4					
Beryllium	SW6010a	ug/g		4					
Boron	SW6010	ug/g		4					
Cadmium	GFAAS	ug/g		4					
Calcium	D4326	Wt. %		4					
Chromium	SW6010a	ug/g		4					
Cobalt	SW6010a	ug/g		4					
Copper	SW6010a	ug/g		4					
Iron	D4326	Wt. %		4					
Lead	GFAAS	ug/g		4					
Magnesium	D4326	Wt. %		4					
Manganese	SW6010a	ug/g		4					
Mercury	DGA/CVAA	ug/g		4					
Molybdenum	SW6010a	ug/g		4					
Nickel	SW6010a	ug/g		4					
Phosphorus	D4326	Wt. %		4					
Potassium	D4326	Wt. %		4					
Selenium	GFAAS	ug/g		4					
Silicon	D4326	Wt. %		4					
Sodium	D4326	Wt. %		4					
Strontium	D4326	Wt. %		4					
Titanium	D4326	Wt. %		4					
Vanadium	SW6010a	ug/g		4					
Zinc	SW6010a	ug/g		4					

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Table G-1. Analytical Results Used in Calculations

<i>Stream: Recycled Char Solids (5c)</i>	<i>Test</i>	<i>Period</i>	<i>Units</i>	<i>Method</i>	<i>Analyte</i>	<i>Result 1</i>	<i>Result 2</i>	<i>Result 3</i>	<i>Result 3D</i>	<i>Average</i>	<i>95% CI</i>
Ultimate/Proximate/HHV											
Ash	D3174		Wt. %			3					
Carbon	D5373		Wt. %			3					
Fixed Carbon	D3172		Wt. %			3					
HHV	D2015		Btu/lb			3					
Hydrogen	D5373		Wt. %			3					
Nitrogen	D5373		Wt. %			3					
Oxygen (by diff)	D3176		Wt. %			3					
Sulfur	D4239		Wt. %			3					
Volatile Matter	D3175		Wt. %			3					
Ionic Species											
Chloride	D4208/I/C		ug/g			3					
Fluoride	D3751/I/C		ug/g			3					
Metals											
Aluminum	D4326		Wt. %			3					
Antimony	ICP/MS		ug/g			3					
Arsenic	ICP/MS		ug/g			3					
Barium	SW6010		ug/g			3					
Beryllium	ICP/MS		ug/g			3					
Boron	SW6010		ug/g			3					
Cadmium	ICP/MS		ug/g			3					
Calcium	D4326		Wt. %			3					
Chromium	ICP/MS		ug/g			3					
Cobalt	ICP/MS		ug/g			3					
Copper	ICP/MS		ug/g			3					
Iron	D4326		Wt. %			3					
Lead	ICP/MS		ug/g			3					
Magnesium	D4326		Wt. %			3					
Manganese	ICP/MS		ug/g			3					
Mercury	DGA/CVAA		ug/g			3					
Molybdenum	ICP/MS		ug/g			3					
Nickel	SW6010		ug/g			3					
Phosphorus	D4326		Wt. %			3					

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Table G-1. Analytical Results Used in Calculations

Analyte	Method	Units	Period	Test	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)										
Potassium	D4326	Wt. %		ICP/MS	3					
Selenium	D4326	ug/g		D4326	3					
Silicon	D4326	Wt. %		D4326	3					
Sodium	D4326	Wt. %		D4326	3					
Strontium	D4326	Wt. %		D4326	3					
Titanium	D4326	Wt. %		ICP/MS	3					
Vanadium	SW6010	ug/g		SW6010	3					
Zinc		ug/g								

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Table G-1. Analytical Results Used in Calculations
Stream: Slag (4)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ultimate Analysis									
Ash	D3174	Wt. %	1	96.2	84.7	93.6		91.5	15
Ash	D3174	Wt. %	2	90.3	93.9	93.8		92.7	5.1
Ash	D3174	Wt. %	3	93.9	86.51	75.34		85.3	23
Carbon	D5373	Wt. %	1	2.78	14.5	6.12		7.8	15
Carbon	D5373	Wt. %	2	9.35	5.98	5.78		7.04	5
Carbon	D5373	Wt. %	3	3.83	12.94	23.97		13.6	25
Hydrogen	D5373	Wt. %	1	0.1	0.31	0.08		0.163	0.32
Hydrogen	D5373	Wt. %	2	0.14	0.08	0.14		0.12	0.086
Hydrogen	D5373	Wt. %	3	0.08	0.2	0.26		0.18	0.23
Nitrogen	D5373	Wt. %	1	0.01	0.09	0.01		0.0333	0.12
Nitrogen	D5373	Wt. %	2	0.01	0.01	<		0.01	...
Nitrogen	D5373	Wt. %	3	<	0.01	0.01		0.0783	0.21
Oxygen (by difference)	D3176	Wt. %	1	0.87	0.43	0.17		0.49	0.88
Oxygen (by difference)	D3176	Wt. %	2	0.2	0.05	0.21		0.153	0.22
Oxygen (by difference)	D3176	Wt. %	3	0.08	0.24	0.19		0.17	0.2
Sulfur	D4239	Wt. %	1	0.03	0.04	0.01		0.0267	0.038
Sulfur	D4239	Wt. %	2	0.03	0.02	0.01		0.02	0.025
Sulfur	D4239	Wt. %	3	0.02	0.05	0.07		0.0467	0.063
Ionic Species									
Chloride	SIE	ug/g	1	68.4	98.6	260		142	260
Chloride	SIE	ug/g	2	<	52.5	31.1		32.4	49
Chloride	SIE	ug/g	3	76.6	43.9	99.9		73.5	70
Fluoride	NaOH/SIE	ug/g	1	254	199	112		188	180
Fluoride	NaOH/SIE	ug/g	2	210	131	195	219	179	100
Fluoride	NaOH/SIE	ug/g	3	166	321	245		244	190
Metals									
Aluminum	D4326	Wt. %	1	9.56	8.69	9.77		9.34	1.4
Aluminum	D4326	Wt. %	2	9.29	9.51	9.45		9.42	0.28
Aluminum	D4326	Wt. %	3	9.41	8.67	7.56		8.55	2.3
Antimony	ICP/MS	ug/g	1	1.24	C	1.03	C	1.33	0.88
Antimony	ICP/MS	ug/g	2	0.779	C	0.707	C	1.37	0.9
Antimony	ICP/MS	ug/g	3	0.83	C	0.833	C	1.11	0.4

Slag (4)

Table G-1. Analytical Results Used in Calculations
Stream: Slag (4)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)									
Arsenic	ICP/MS	ug/g	1	4.31	C	6.19	C	5.74	C
Arsenic	ICP/MS	ug/g	2	5.74	C	4.42	C	6.32	C
Arsenic	ICP/MS	ug/g	3	8.08	C	7.49	C	5.61	C
Barium	SW6010	ug/g	1	5,900		5,600		6,400	
Barium	SW6010	ug/g	2	6,200		5,880		6,700	
Barium	SW6010	ug/g	3	6,020		5,540		4,960	
Beryllium	ICP/MS	ug/g	1	3.87		3.27		3.42	
Beryllium	ICP/MS	ug/g	2	3.16		3.6		4.11	
Beryllium	ICP/MS	ug/g	3	3.82		3.19		2.48	
Boron	SW6010	ug/g	1	380		300		370	
Boron	SW6010	ug/g	2	370		330		390	
Boron	SW6010	ug/g	3	370		340		280	
Cadmium	ICP/MS	ug/g	1	<		0.181	C	0.18	C
Cadmium	ICP/MS	ug/g	2	<		0.462	C	0.27	C
Cadmium	ICP/MS	ug/g	3	<		0.462	C	0.27	C
Calcium	D4326	Wt. %	1	17.8		15.3		16.3	
Calcium	D4326	Wt. %	2	15.9		16.5		17.1	
Calcium	D4326	Wt. %	3	17.1		15.4		13.5	
Chromium	ICP/MS	ug/g	1	85.9	C	66.6	C	74.5	C
Chromium	ICP/MS	ug/g	2	68.2	C	94	C	79.8	C
Chromium	ICP/MS	ug/g	3	84.6	C	71.3	C	60.5	C
Cobalt	ICP/MS	ug/g	1	29.1	C	19.3	C	24.6	C
Cobalt	ICP/MS	ug/g	2	24.7	C	25.3	C	29.3	C
Cobalt	ICP/MS	ug/g	3	30.4	C	27.6	C	27.7	C
Copper	D4326	Wt. %	1	162	C	146	C	152	C
Copper	D4326	Wt. %	2	151	C	147	C	172	C
Copper	D4326	Wt. %	3	173	C	148	C	125	C
Iron	D4326	Wt. %	1	4.12		3.51		3.83	
Iron	D4326	Wt. %	2	3.63		3.8		3.91	
Iron	D4326	Wt. %	3	3.92		3.61		3.12	
Lead	ICP/MS	ug/g	1	3.02	C	3.89	C	2.57	C
Lead	ICP/MS	ug/g	2	1.73	C	1.41	C	2.41	C

Table G-1. Analytical Results Used in Calculations

Stream: Slag (4)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)									
Lead	ICP/MS	ug/g	3	4.5 C	3.38 C	4.04 C	3.97	1.4	
Magnesium	D4326	Wt. %	1	3.7	3.12	3.43	3.42	0.72	
Magnesium	D4326	Wt. %	2	3.35	3.49	3.53	3.46	0.23	
Magnesium	D4326	Wt. %	3	3.55	3.19	2.76	3.17	0.98	
Manganese	ICP/MS	ug/g	1	143 C	120 C	119 C	127	34	
Manganese	ICP/MS	ug/g	2	121 C	125 C	152 C	133	42	
Manganese	ICP/MS	ug/g	3	155 C	140 C	112 C	136	54	
Mercury	DGACVAA	ug/g	1	<	0.02	0.02	0.02	0.026	
Mercury	DGACVAA	ug/g	2	<	0.02	0.02	0.02	0.026	
Mercury	DGACVAA	ug/g	3	<	0.02	0.02	0.02	0.026	
Molybdenum	ICP/MS	ug/g	1	7.58 C	7.48 C	7 C	7.35	0.77	
Molybdenum	ICP/MS	ug/g	2	7.77 C	7.04 C	9 C	7.94	2.5	
Molybdenum	ICP/MS	ug/g	3	8.16 C	7.25 C	6.85 C	7.42	1.7	
Nickel	SW6010	ug/g	1	37	35	47	39.7	16	
Nickel	SW6010	ug/g	2	34	41	43	39	12	
Nickel	SW6010	ug/g	3	43	36	30	36.3	16	
Phosphorus	D4326	Wt. %	1	0.43	0.42	0.42	0.423	0.014	
Phosphorus	D4326	Wt. %	2	0.4	0.4	0.43	0.44	0.41	
Phosphorus	D4326	Wt. %	3	0.44	0.4	0.35	0.397	0.11	
Potassium	D4326	Wt. %	1	0.28	0.26	0.32	0.287	0.076	
Potassium	D4326	Wt. %	2	0.29	0.31	0.27	0.27	0.05	
Potassium	D4326	Wt. %	3	0.27	0.26	0.21	0.247	0.03	
Selenium	ICP/MS	ug/g	1	5.61	0.0842	14.2	6.63	18	
Selenium	ICP/MS	ug/g	2	11.8	12.7	16.9	13.8	6.8	
Selenium	ICP/MS	ug/g	3	26.1	17.7	16.1	20	13	
Silicon	D4326	Wt. %	1	16.7	14.5	16.4	15.9	3	
Silicon	D4326	Wt. %	2	15.8	16.6	16.1	16.2	1	
Silicon	D4326	Wt. %	3	16.1	15.1	12.9	14.7	4.1	
Sodium	D4326	Wt. %	1	1.75	1.52	1.67	1.65	0.29	
Sodium	D4326	Wt. %	2	1.62	1.62	1.68	1.66	0.086	
Sodium	D4326	Wt. %	3	1.65	1.48	1.27	1.47	0.47	
Strontium	D4326	Wt. %	1	0.25	0.22	0.24	0.237	0.038	

Slag (4)

Table G-1. Analytical Results Used in Calculations

Stream: Slag (4)	Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Metals (continued)										
Strontium	D4326	Wt. %	2		0.23	0.24	0.25	0.25	0.24	0.025
Strontium	D4326	Wt. %	3		0.25	0.23	0.19	0.223	0.223	0.076
Titanium	D4326	Wt. %	1		0.86	0.77	0.89	0.84	0.84	0.16
Titanium	D4326	Wt. %	2		0.83	0.86	0.85	0.847	0.847	0.038
Titanium	D4326	Wt. %	3		0.76	0.77	0.69	0.74	0.74	0.11
Vanadium	ICP/MS	ug/g	1		182	169	175	175	175	16
Vanadium	ICP/MS	ug/g	2		168	176	193	179	179	32
Vanadium	ICP/MS	ug/g	3		194	170	137	167	167	71
Zinc	SW6010	ug/g	1		32	46	53	43.7	43.7	27
Zinc	SW6010	ug/g	2		51	39	46	45.3	45.3	15
Zinc	SW6010	ug/g	3		52	54	50	52	52	5
Radionuclides										
Actinium-228 @ 338 KeV	gamma	pCi/g	3		2.6	2.4	1.9	2.3	2.3	0.9
Actinium-228 @ 911 KeV	gamma	pCi/g	3		2.8	2.7	2.0	2.5	2.5	1.1
Actinium-228 @ 968 KeV	gamma	pCi/g	3		2.9	2.6	2.0	2.5	2.5	1.1
Bismuth-212 @ 727 KeV	gamma	pCi/g	3		3.3	2.8	2.4	2.8	2.8	1.1
Bismuth-214 @ 1120 KeV	gamma	pCi/g	3		3.1	2.6	2.4	2.7	2.7	0.9
Bismuth-214 @ 1764 KeV	gamma	pCi/g	3		3.1	2.7	2.0	2.6	2.6	1.4
Bismuth-214 @ 609 KeV	gamma	pCi/g	3		3.2	2.7	2.2	2.7	2.7	1.2
Lead-210 @ 46 KeV	gamma	pCi/g	3		1.0	0.00	0.00	0.38	0.38	1.4
Lead-212 @ 238 KeV	gamma	pCi/g	3		2.6	2.3	1.9	2.3	2.3	0.87
Lead-214 @ 295 KeV	gamma	pCi/g	3		3.3	2.8	2.3	2.8	2.8	1.2
Lead-214 @ 351 KeV	gamma	pCi/g	3		3.3	2.8	2.3	2.8	2.8	1.2
Potassium-40 @ 1460 KeV	gamma	pCi/g	3		2.6	2.1	1.2	2	2	1.8
Radium-226 @ 226 KeV	gamma	pCi/g	3		4.0	3.4	3.0	3.5	3.5	1.3
Thallium-208 @ 583 KeV	gamma	pCi/g	3		0.95	0.84	0.68	0.82	0.82	0.34
Thallium-208 @ 8860 KeV	gamma	pCi/g	3		1.3	1.1	0.88	1.1	1.1	0.52
Thorium-234 @ 63 KeV	gamma	pCi/g	3		3.0	1.4	1.4	1.9	1.9	2.3
Thorium-234 @ 92 KeV	gamma	pCi/g	3		1.7	1.3	1.1	1.4	1.4	0.76
Uranium-235 @ 143 KeV	gamma	pCi/g	3		0.16	0.1	-0.26	0	0	0.56

Table G-1. Analytical Results Used in Calculations
Stream: Slag (4)

Analyte	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 4	Average	95% CI
Ultimate/Proximate HHV									
Ash	D3174	Wt. %	4	98.6	97.1	99.1	98.6	98.3	1.4
Ionic Species									
Chloride	SIE	ug/g	4	<	27	<	25	<	---
Fluoride	NaOH/SIE	ug/g	4	89.4	184	154	117	136	66
Metals									
Aluminum	D4326	Wt. %	4	9.94	9.77	10.1	9.88	0.22	
Antimony	SW7041	ug/g	4	2.68	0.693	4.99	2.56	2.9	
Arsenic	SW7060	ug/g	4	5.54	4.75	3.91	4.55	4.68	1.1
Barium	D4326	Wt. %	4	0.757	0.797	0.735	0.78	0.767	0.043
Beryllium	SW6010a	ug/g	4	3.47	3.26	3.55	3.42	3.43	0.19
Boron	SW6010	ug/g	4	55.0	56.0	58.0	52.0	55.3	40
Cadmium	SW7131	ug/g	4	0.277	0.412	0.331	0.337	0.339	0.088
Calcium	D4326	Wt. %	4	18.8	18.7	18.6	18.1	18.5	0.49
Chromium	SW6010a	ug/g	4	14.4	35.5	123	397	285	230
Cobalt	SW6010a	ug/g	4	22.3	21	21.7	21.9	21.7	0.87
Copper	SW6010a	ug/g	4	18.0	17.8	17.7	16.7	17.6	9.7
Iron	D4326	Wt. %	4	3.98	3.94	4.37	3.94	4.05	0.34
Lead	SW7421	ug/g	4	7.8	5.99	6.77	5.18	6.43	1.8
Magnesium	D4326	Wt. %	4	3.77	3.72	3.59	3.71	3.7	0.12
Manganese	SW6010a	ug/g	4	11.9	11.8	125	131	123	9.3
Mercury	DGACVAA	ug/g	4	0.04	0.04	0.04	0.03	0.0375	0.008
Molybdenum	SW6010a	ug/g	4	7.53	7.85	6.65	7.2	7.31	0.81
Nickel	SW6010a	ug/g	4	38.2	36.4	37	37.6	37.3	1.3
Phosphorus	D4326	Wt. %	4	0.608	0.619	0.571	0.606	0.601	0.033
Potassium	D4326	Wt. %	4	0.191	0.183	0.199	0.232	0.201	0.035
Selenium	SW7740	ug/g	4	6.14	5.91	6.58	6.41	6.26	0.47
Silicon	D4326	Wt. %	4	16.1	15.5	16.5	16.3	16.1	0.65
Sodium	D4326	Wt. %	4	1.69	1.66	1.56	1.63	1.64	0.091
Strontium	D4326	Wt. %	4	0.309	0.305	0.305	0.305	0.306	0.0034
Titanium	D4326	Wt. %	4	0.918	0.882	0.846	0.87	0.879	0.048
Vanadium	SW6010a	ug/g	4	191	185	190	186	188	4.6
Zinc	SW6010a	ug/g	4	45.7	45.2	38.5	34	40.8	8.9

Slag (4)

Table G-1. Analytical Results Used in Calculations

Analyte	Stream: Sulfur by-product (24)	Method	Units	Test Period	Result 1	Result 2	Result 3	Result 3D	Average	95% CI
Ultimate Analysis										
Sulfur	D4239		Wt. %	3						99.2
Sulfur	D4239		Wt. %	3						98.1
Metals										
Aluminum	SW6010	ug/g	3							8
Aluminum	SW6010	ug/g	3							28
Antimony	SW7741	ug/g	3							3
Antimony	SW7741	ug/g	3							3
Arsenic	SW7760	ug/g	3							3
Arsenic	SW7760	ug/g	3							3
Barium	SW6010	ug/g	3							3
Barium	SW6010	ug/g	3							2
Beryllium	SW6010	ug/g	3							2
Beryllium	SW6010	ug/g	3							2
Boron	SW6010	ug/g	3							10
Boron	SW6010	ug/g	3							10
Cadmium	SW7131	ug/g	3							2
Cadmium	SW7131	ug/g	3							2
Calcium	SW6010	ug/g	3							27
Calcium	SW6010	ug/g	3							12
Chromium	SW6010	ug/g	3							7
Chromium	SW6010	ug/g	3							2
Cobalt	SW6010	ug/g	3							4
Cobalt	SW6010	ug/g	3							4
Copper	SW6010	ug/g	3							4
Copper	SW6010	ug/g	3							2
Iron	SW6010	ug/g	3							12
Iron	SW6010	ug/g	3							6
Lead	SW7721	ug/g	3							3
Lead	SW7721	ug/g	3							3
Magnesium	SW6010	ug/g	3							6
Magnesium	SW6010	ug/g	3							4
Manganese	SW6010	ug/g	3							2