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SOURCE INVENTORY AND EMISSION FACTOR ANALYSIS, VOLUME II - APPENDICES

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

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SOURCE INVENTORY AND EMISSION FACTOR ANALYSIS, VOLUME II - APPENDICES

by

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APPENDIX A

PRECISION OF RESIDENTIAL FUEL USE DATA

APPENDIX A

Calculation of standard error for the number of dwelling units heating with different fuels in average counties of Ohio, Michigan, Iowa, and Kentucky.

Tables A-1 and A-2 present the data used for the determination of precisions for various fuels. The values of the standard error were obtained from Table B in Reference 9.

Table A-1 SUMMARY OF DATA USED IN CALCULATING PRECISIONS OF NUMBER OF DWELLING UNITS UTILIZING DIFFERENT FUELS

State	No. of Counties	No. of Dwelling Units	No. of D.U. Coal	No. of D.U. Oil	No. of D.U. N.G.	No. of D.U. Wood	No. of D.U. LPG
Ohio	88	3,389,432	101,229	462,939	2,517,093	4,628	72,436
Michigan	84	2,653,059	59,002	583,842	1,856,238	5,441	69,503
Kentucky	120	983,665	134,972	88,503	570,324	25,097	77,719
Iowa	99	896,311	13,055	186,079	563,016	1,405	112,302

Table A-2 PRECISIONS FOR DIFFERENT FUELS

Fuel	Avg. No. D.U./County	Avg. No. Using Fuel per County	σ (D.U.)	$\sigma \div$ Avg. Precision
Coal	20,000	790	108	0.14
Oil	20,000	3,380	206	0.06
N.G. & L.P.G.	20,000	14,933	300	0.02
Wood	20,000	94	39	0.42

APPENDIX B

PRECISION FOR DETERMINATION OF HEATING REQUIREMENT FACTORS FOR DIFFERENT FUELS

APPENDIX B

The ASHRAE Handbook of Fundamentals[21] gives examples showing heat loss from a house having seven rooms and good insulation for a temperature differential of 70 degrees. Heat loss values are also given for the same house under the same conditions, but with no insulation. The amount of fuel required to heat a dwelling unit for one degree-day is calculated by the following equation:

$$H = \frac{\text{heat loss}}{\text{hr-D.U.}} \times \frac{5 \text{ rooms}}{7 \text{ rooms}} \times \frac{24 \text{ hrs}}{1 \text{ day}} \times \frac{1}{70^{\circ}} \times \frac{\text{amount of fuel}}{\text{heat content}} \times \frac{1}{\text{eff. of heating unit}}$$

where H = heating requirement factor

D.U. = dwelling unit

Table B-1 lists the factors used and the values obtained for heating requirement factor for different fuels.

Table B-1 SUMMARY OF DATA USED IN CALCULATING THE HEATING REQUIREMENT FACTORS FOR DIFFERENT FUELS

Fuel	House	Heat Loss (BTU/hr)	Heat Content of Fuel	Efficiency of Heating Unit	Heating Requirement Factor
Coal	Insulated	75,230	24×10^6 BTU/ton	70%	0.001097 $\frac{\text{ton}}{\text{D.U.-D.D.}}$
Coal	Non-insulated	113,950	24×10^6 BTU/ton	70%	0.00161 $\frac{\text{ton}}{\text{D.U.-D.D.}}$
Fuel Oil	Insulated	75,230	140×10^6 BTU/1000 gal.	80%	.16847 $\frac{\text{gal.}}{\text{D.U.-D.D.}}$
Fuel Oil	Non-insulated	113,950	140×10^6 BTU/1000 gal.	80%	.26578 $\frac{\text{gal.}}{\text{D.U.-D.D.}}$
Wood	Insulated	75,230	13×10^6 BTU/ton	75%	.00189 $\frac{\text{ton}}{\text{D.U.-D.D.}}$
Wood	Non-insulated	113,950	13×10^6 BTU/ton	75%	.00286 $\frac{\text{ton}}{\text{D.U.-D.D.}}$

APPENDIX C

PRECISION FOR AREA SOURCE CONSUMPTION OF BITUMINOUS COAL

APPENDIX C

To calculate precisions of emissions inventories for different counties in different states, it is necessary to assume a value for point source consumption of bituminous coal by industry. As a basis for the following calculations assume that point sources account for 67 percent of the total industrial usage of bituminous coal. The following tables are calculations of precision values for random counties in Ohio, Kansas, and Kentucky. Figure C-1 is a plot of the calculated values of $\frac{\sigma(A_{B.C.})}{A_{B.C.}}$ Versus $A_{B.C}$. Equations are derived to describe the curve.

Table C-1 PRECISIONS OF THE AREA SOURCE CONSUMPTION OF BITUMINOUS COAL BY INDUSTRIAL SOURCES FOR VARIOUS COUNTIES IN OHIO

Ohio

$I_{B.C.} = 15,206,000$

$P_{B.C.} = 10,137,000$

$(I_{B.C.} - P_{B.C.}) = 5,069,000 = A_{B.C._s}$

$E_s = 1,397 \times 10^3$

I = State Consumption (indus.)

P = Point Consumption (indus.)

E = Mfg. employees

	E_c (10^3)	$A_{B.C.}$	Var $(A_{B.C.})$	Std Dev $\sqrt{\text{Var}(A_{BC})}$ $\sigma(A_{B.C.})$	Precision $\frac{\sigma(A_{B.C.})}{A_{B.C.}}$
1.	277.3	1,006,000	± 53,879	232.1	2.307×10^{-4}
2.	151.9	551,168	± 39,204	198.0	3.592×10^{-4}
3.	92.5	335,635	± 35,235	187.7	5.592×10^{-4}
4.	64.4	226,418	± 31,962	178.8	7.896×10^{-4}
5.	23.6	85,632	± 33,063	181.8	2.123×10^{-3}
6.	1.2	4,354	± 32,899	181.1	4.166×10^{-2}
7.	.3	1,089	32,916	181.4	1.666×10^{-1}

$$= A_{BC}^2 \left[\left(\frac{\text{Var } I + \text{Var } P}{[I - P]^2} \right) + \left(\frac{\text{Var}E_c}{E_c^2} + \frac{\text{Var}E_s}{E_s^2} \right) \right] \text{ where Var} = \sigma^2_{\text{value}}$$

$$= \overline{1089}^2 \left[\frac{500^2 + 500^2}{5,069,000^2} + \left(\frac{50^2}{300^2} + \frac{50^2}{1,397,000^2} \right) \right]$$

$$= 32,916$$

Table C-2 PRECISIONS OF THE AREA SOURCE CONSUMPTION OF BITUMINOUS COAL BY INDUSTRIAL SOURCES FOR VARIOUS [illegible]ES IN KANSAS

Kansas

$I_{B.C.}$ = 169,000 tons/yr

$P_{B.C.}$ = 112,667 tons/yr

$I_{B.C.} - P_{B.C.}$ = 56,333 tons/yr

$E_s = 143.8 \times 10^3$

	E_c (10^3)	$A_{B.C.}$	Var ($A_{B.C.}$)	[illegible]$_{B.C.}$)	$\frac{\sigma(A_{B.C.})}{A_{B.C.}}$
1.	56.1	21976.9	±76,488	[illegible]6.6	1.258×10^{-2}
2.	22.6	8853.5	±12,736	[illegible]2.9	1.275×10^{-2}
3.	9.1	3564.9	± 2,386	[illegible]8.85	1.370×10^{-2}
4.	4.3	1684.5	± 830.8	28.82	1.711×10^{-2}
5.	1.9	744.3	± 470.9	[illegible].70	2.916×10^{-2}
6.	.5	195.9	± 389.7	19.74	1.007×10^{-1}
7.	.1	39.2	± 384.2	19.60	5.001×10^{-1}

Table C-3 PRECISIONS OF THE AREA SOURCE CONSUMPTION OF BITUMINOUS COAL BY INDUSTRIAL SOURCES FOR VARIOUS COUNTIES IN KENTUCKY

Kentucky

$I_{B.C.} = 2,292,000$

$P_{B.C.} = 1,528,000$

$(I - P) = 764,000$

$E_s = 224.6 \times 10^3$

	E_c (10^3)	$A_{B.C.}$	Var $(A_{B.C.})$	σ $(A_{B.C.})$	$\frac{\sigma (A_{B.C.})}{A_{B.C.}}$
1.	89.8	305,464	$\pm$113,463	336.8	1.102×10^{-3}
2.	16.0	54,426	$\pm$ 31,609	177.8	3.266×10^{-3}
3.	10.1	34,356	$\pm$ 29,988	173.1	5.040×10^{-3}
4.	8.4	28,573	$\pm$ 29,665	172.2	6.028×10^{-3}
5.	5.1	17,348	$\pm$ 29,194	170.9	9.849×10^{-3}
6.	3.3	11,225	$\pm$ 29,039	170.4	1.518×10^{-2}
7.	0.4	1,361	$\pm$ 28,939	170.1	1.250×10^{-1}

Table C-4 SUMMARY OF PRECISIONS CALCULATED FOR THE AREA SOURCE CONSUMPTION OF BITUMINOUS COAL BY INDUSTRIAL SOURCES IN RANDOM COUNTIES

$A_{B.C.}$	$\frac{\sigma(A_{B.C.})}{A_{B.C.}}$
1,006,000	2.307×10^{-4}
551,168	3.592×10^{-4}
335,635	5.592×10^{-4}
85,632	2.123×10^{-3}
4,354	4.166×10^{-2}
1,089	1.666×10^{-1}
21,976.9	1.258×10^{-2}
8,853.5	1.275×10^{-2}
3,564.9	1.370×10^{-2}
1,684.5	1.711×10^{-2}
744.3	2.916×10^{-2}
195.9	1.007×10^{-1}
39.2	5.001×10^{-1}
305,464	1.102×10^{-3}
54,426	3.266×10^{-3}
34,356	5.040×10^{-3}
28,573	6.028×10^{-3}
17,348	9.849×10^{-3}
11,225	1.518×10^{-2}
1,361	1.250×10^{-1}

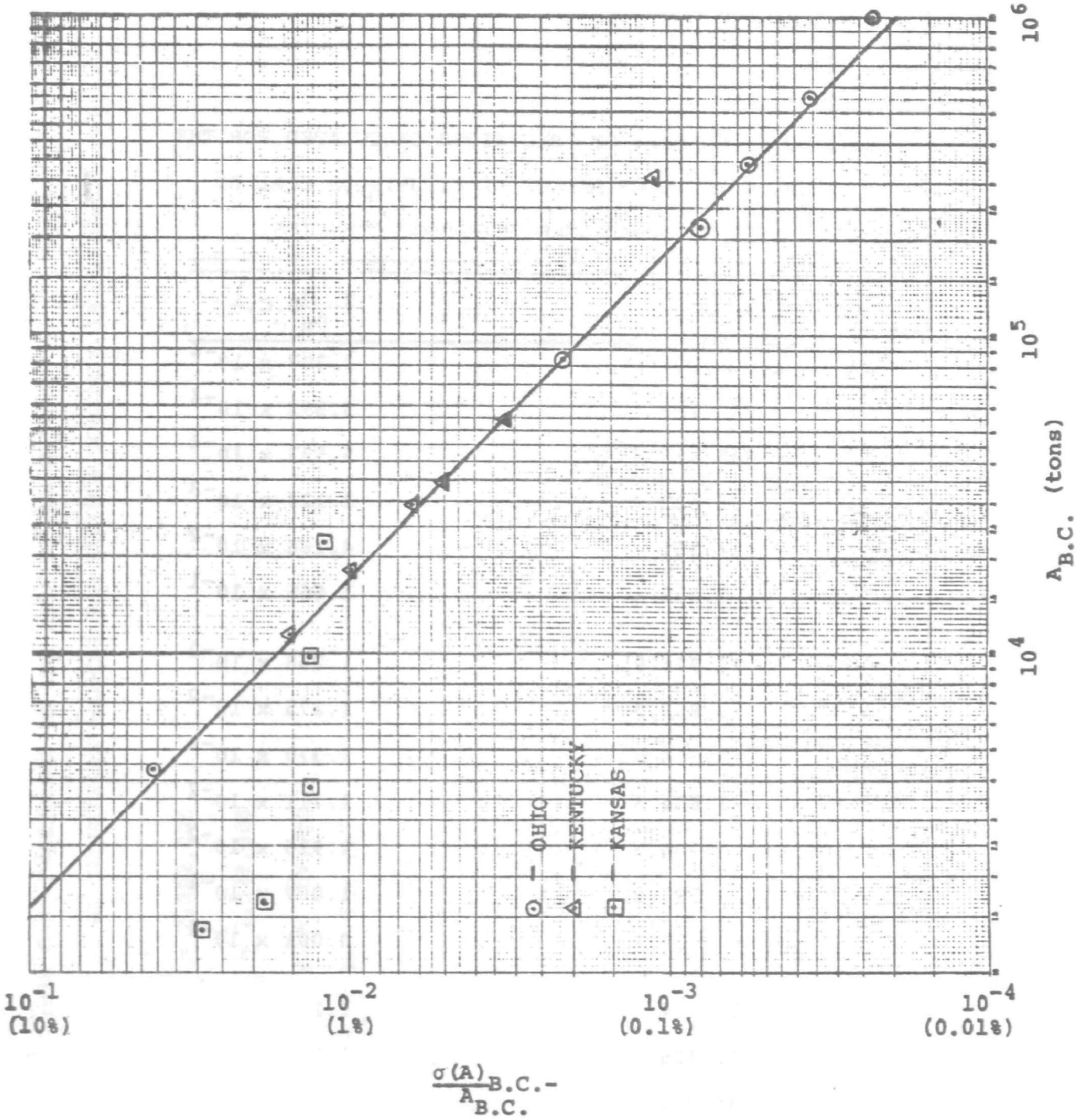


Figure C-1 Precision versus industrial bituminous coal usage.

A straight line on log versus log graphs indicates an equation of the form:

$$\log Y = b \log X + \log a$$

or $$y = a X^b$$

For several points on the plot of $\frac{\sigma (A_{B.C.})}{A}$ versus $A_{B.C.}$:

X	Y	Log Y	Log X
1×10^2	1.5	.176	2
1×10^3	1.6×10^{-1}	-.796	3
1×10^4	1.66×10^{-2}	-1.780	4
1×10^5	1.78×10^{-3}	-2.750	5

$$.176 = \log a + 2b$$
$$-(-.796 = \log a + 3b)$$
$$.972 = -b \qquad b = -.972$$

$$-.796 = \log a + 3b$$
$$-(-1.780 = \log a + 4b)$$
$$.984 = -b \qquad b = 0.984$$

$$-1.780 = \log a + 4b$$
$$-(-2.750 = \log a + 5b)$$
$$.970 = -b \qquad b = -.970$$

Use $b = -.970$

$$.176 = \log a + 2b$$

$$\log a = .176 - 2(-.970) = 2.116$$

$$a = 1.305 \times 10^2$$

$$-.796 = \log a + 3b$$

$\log a = -.796 - 3\ (-.970) = 2.114$

$a = 1.301 \times 10^2$

$-1.780 = \log a + 4b$

$\log a = -1.780 - 4\ (-.97) = 2.100$

$a = 1.26 \times 10^2$

$-2.750 = \log a + 5b$

$\log a = -2.750 - 5\ (.97) = 2.100$

$a = 1.26 \times 10^2$

therefore: $Y = 1.26 \times 10^2 X^{-.97}$

or $\frac{\sigma(A)}{A} = 1.26 \times 10^2\ (A)^{-.97}$

APPENDIX D

CALCULATION OF PRECISION OF SOURCE TEST DATA

Table D-1 PRECISION OF SOURCE TEST DATA

RELATIVE TO PARTICULATES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. Deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Boiler - oil fired (units in lb/10^3 gal.)	22 13 26 27	22.0	14.0	2.06	6.80	0.309	0.155
Boiler - coal fired (Detroit Edison Power) (units in lb/ton)	0.17A 0.27A 0.57A 0.34A	0.338A	0.40A	2.06	0.194A	0.574	0.287
Sludge incinerator (Lower Patomac,Fairfax,Va.) (units in lb/ton)	3.2 1.2 4.1	2.83	2.9	1.69	1.72	0.608	0.351
Feed mfg. (inlet) (Kaiser Agricultural Chem.) (units in lb/ton)	0.05650 0.03812 0.19966	0.098093	0.16154	1.69	0.0956	0.976	0.563
Primary aluminum smelting (inlet) (Alcoa) (units in lb/ton)	11.35 12.36 12.05	11.92	1.01	1.69	0.598	0.0502	0.0230
Pellet cooler (inlet) (Ralston Purina Co.) (units in lb/ton)	4.99 5.51 5.80	5.433	0.81	1.69	0.479	0.0882	0.0509

a) Data from U.S. EPA files unless otherwise noted.

Table D-1 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO PARTICULATES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. Deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Rock dryer scrubber (inlet) (IMC Corporation) (units in lb/ton)	2.307 3.343 2.574	2.741	1.036	1.69	0.613	0.224	0.129
Rock grinder (inlet) (IMC Corporation) (units in lb/ton)	2.574 1.861 2.223	2.219	0.713	1.69	0.422	0.190	0.110
Asphalt concrete (Plant A_1) (units in lb/ton)	0.007 0.011 0.010	0.00933	0.004	1.69	0.00237	0.254	0.147
Asphalt concrete (Plant B) (units in lb/ton)	0.007 0.012 0.005	0.00800	0.007	1.69	0.00414	0.518	0.299
Asphalt concrete (Plant C) (units in lb/ton)	0.054 0.051 0.022 0.022	0.0373	0.032	2.06	0.0155	0.416	0.208
Catalytic crackers (Plant A_2) (units in lb/hr)	36.7 31.8 35.6	34.70	4.9	1.69	2.90	0.0836	0.0483

a) Data from U.S. EPA files unless otherwise noted.

Table D-1 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO PARTICULATES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. Deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Catalytic crackers (Plant B) (units in lb/hr)	54.2 56.6 64.1	58.30	9.9	1.69	5.86	0.101	0.0583
Lead smelting (blast furnace) (Plant C) (units in lb/ton)	1.3570 0.7750 1.2849	1.1390	0.5820	1.69	0.344	0.302	0.174
Lead smelting (reverberatory furnace) (Plant G) (units in lb/ton)	0.2565 0.1763 0.2046	0.2125	0.0802	1.69	0.0475	0.224	0.129
Brass and bronze (reverberatory furnace) (Plant B) (units in lb/ton)	0.60 0.41 0.43 0.42	0.465	0.19	2.06	0.0922	0.198	0.0990
Brass and bronze (rotary furnace) (Plant D) (units in lb/ton)	0.71 2.00 1.31	1.34	1.29	1.69	0.763	0.569	0.329
Basic oxygen furnace (Plant A_1) (units in lb/ton)	0.0021 0.0015 0.0048	0.0028	0.0033	1.69	0.00195	0.696	0.402

a) Data from U.S. EPA files unless otherwise noted.

Table D-1 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO PARTICULATES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. Deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Basic oxygen furnace (Plant C) (units in lb/ton)	0.730 0.370 0.0471	0.05237	0.036	1.69	0.0213	0.407	0.235
Sludge incinerator (Plant D) (units in lb/ton)	2.20 3.24 2.87	2.77	1.04	1.69	0.615	0.222	0.128
							Average 0.196

a) Data from U.S. EPA files unless otherwise noted.

Table D-2 PRECISION OF SOURCE TEST DATA RELATIVE TO SULFUR OXIDES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. Deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Boiler - coal fired (Test results taken from PEDCo Environmental files) (units in lbs/mm BTU)	1.6 1.3 1.2 1.1	1.30	0.5	2.06	0.243	0.187	0.0935
Boiler - coal fired (Test results taken from PEDCo Environmental files) (units in lbs/mm BTU)	5.6 5.9 6.1 5.2	5.70	0.9	2.06	0.437	0.0767	0.0384
Sludge incinerator (Waldwick, N.J.) (units in lb/ton)	0.088 0.076 0.043	0.0690	0.045	1.69	0.0267	0.387	0.223
Boiler - coal fired (Test results taken from PEDCo Environmental files) (units in lbs/mm BTU)	3.6 4.3	3.95	0.7	1.13	0.619	0.157	0.111
Sludge incinerator (Barstow, California) (units in lb/ton)	0.46 0.74 0.72	0.640	0.28	1.69	0.167	0.261	0.151
Sludge incinerator (So. Tahoe, California) (units in lb/ton)	1.5 1.3 1.3	1.37	0.2	1.69	0.118	0.0861	0.0497

a) Data from U.S. EPA files unless otherwise noted.

Table D-2 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO SULFUR OXIDES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. Deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Slude incinerator (Fairfax Co., Va.) (units in lb/ton)	0.29 0.21 0.76	0.420	0.55	1.69	0.325	0.774	0.447
Boiler - coal fired (Detroit Edison Power) (units in lb/ton)	52 S 20 S 12 S 30 S	28.5 S	40.0 S	2.06	19.4 S	0.681	0.341
Lead smelting (blast furnace) (Plant A) (units in lb/ton)	27.3 23.6 15.3	22.1	12.0	1.69	7.10	0.321	0.185
Lead smelting (inlet) (blast furnace) (Plant B) (units in lb/ton)	127 66 205	133	139	1.69	82.2	0.618	0.357
Lead smelting (blast furnace) (Plant C) (units in lb/ton)	0.0049 0.0041 0.0082	0.00573	0.0041	1.69	0.00243	0.424	0.245
Lead smelting (reverberatory furnace) (Plant G) (units in lb/ton)	109 110 108	109	2.0	1.69	1.18	0.0108	0.00624

a) Data from U.S. EPA files unless otherwise noted.

Table D-2 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO SULFUR OXIDES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. Deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Lead smelting (reverberatory furnace) (Plant H) (units in lb/ton)	200 197 159	185	41.0	1.69	24.3	0.131	0.0756
Boiler - oil fired (Test results taken from PEDCo Environmental files) (units in lbs/mm BTU)	0.92 0.71	0.815	0.21	1.13	0.186	0.228	0.280
Sludge incinerator (Plant C) (units in lb/ton)	1.56 1.47 1.36	1.46	0.20	1.69	0.118	0.0808	0.0466
Sludge incinerator (Plant D) (units in lb/ton)	0.459 0.738 0.992	0.7297	0.533	1.69	0.315	0.432	0.249
Sludge incinerator (Plant E) (units in lb/ton)	7.85 7.97 17.70	11.17	9.85	1.69	5.83	0.522	0.301
Boiler - coal fired pulverized (Test results taken from PEDCo Environmental files) (units in lbs/mm BTU)	3.55 3.83	3.69	0.28	1.13	0.248	0.0672	0.0475

a) Data from U.S. EPA files unless otherwise noted.

Table D-2 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO SULFUR OXIDES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. Deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Boiler - coal fired pulverized (Test results taken from PEDCo Environmental files) (units in lbs/mm BTU)	4.67 4.20	4.44	0.47	1.13	0.416	0.294	0.208
Boiler - coal fired (Test results taken from PEECo Environmental files) (units in lbs/mm BTU)	1.45 1.63	1.54	0.18	1.13	0.159	0.103	0.0728
							Average 0.177

a) Data from U.S. EPA files unless otherwise noted.

Table D-3 PRECISION OF SOURCE TEST DATA

RELATIVE TO NITROGEN OXIDES[a]

$S = (\text{Max.}-\text{min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Municipal incinerator (Brooklyn, New York) (units in lb/ton)	1.3 2.0 2.0	1.76	0.7	1.69	0.414	0.235	0.136
Sludge incinerator (Waldwick, N.J.) (units in lb/ton)	1.31 1.58 1.47	1.45	0.27	1.69	0.160	0.110	0.0635
Sludge incinerator (Monterey, California) (units in lb/ton)	2.69 1.48 0.87	1.68	1.82	1.69	1.08	0.643	0.371
Sludge incinerator (Barstow, Califronia) (untis in lb/ton)	5.37 1.48 7.63	4.827	6.15	1.69	3.64	0.754	0.435
Sludge incinerator (So. Tahoe, California) (units in lb/ton)	21.40 5.85 5.38	10.9	16.0	1.69	9.47	0.869	0.502
Sludge incinerator (Fairfax Co., Va.) (units in lb/ton)	5.55 5.65 12.50	7.90	7.0	1.69	4.14	0.524	0.303

a) Data from U.S. EPA files unless otherwise noted.

Table D-3 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO NITROGEN OXIDES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Plant incinerator (Plant A_1) (units in lb/ton)	0.16 0.19 0.22	0.190	0.06	1.69	0.0355	0.187	0.108
Boiler - coal fired (Detroit Edison Power) (units in lb/ton)	14.6 13.5 13.5 11.5	17.7	3.1	2.06	1.50	0.0847	0.0424
Power plant boiler - n. gas fired (W.B.Tuttle-Unit 3) (units in lbs/mm BTU)	0.0785 0.0626 0.0548	0.653	0.0237	1.69	0.0140	0.0214	0.0124
Power plant boiler - n. gas fired (W.B.Tuttle-Unit 3) (units in lbs/mm BTU)	0.1796 0.2184 0.2232	0.2071	0.0436	1.69	0.0258	0.125	0.0722
Power plant boiler - n. gas fired (W.B.Tuttle-Unit 3) (units in lbs/mm BTU)	0.3655 0.3635 0.3421	0.3570	0.0234	1.69	0.0138	0.0387	0.0223
Power plant boiler - n. gas fired (W.B.Tuttle-Unit 2) (units in lbs/mm BTU)	0.3807 0.3555 0.3555 0.3477	0.3599	0.0330	2.06	0.160	0.445	0.223

a) Data from U.S. EPA files unless otherwise noted.

Table D-3 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO NITROGEN OXIDES[a]

$S = (\text{Max.}-\text{min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Power plant boiler - n. gas fired (W.B.Tuttle-Unit 4) (units in lbs/mm BTU)	0.1373 0.1341 0.1423 0.1417	0.1389	0.0082	2.06	0.00398	0.0287	0.0144
Power plant boiler - n. gas fired (W.B.Tuttle-Unit 4) (units in lbs/mm BTU)	0.1914 0.1806 0.1850 0.2263	0.1958	0.0457	2.06	0.0222	0.113	0.0567
Power plant boiler - n. gas fired (W.B.Tuttle-Unit 4) (units in lbs/mm BTU)	0.2049 0.1846 0.1919 0.2478	0.2073	0.0632	2.06	0.0307	0.148	0.074
Power plant boiler - n. gas fired (W.B.Tuttle-Unit 4) (units in lbs/mm BTU)	0.2293 0.2301 0.2375 0.2969	0.2484	0.0676	2.06	0.0328	0.132	0.066
Power plant boiler - n. gas fired (V. H. Brauning - Unit 3) (units in lbs/mm BTU)	0.18496 0.19780 0.19637	0.19304	0.0128	1.69	0.00757	0.0392	0.0226
Phosphate rock calciner (Test results taken from PEDCo Environmental files) (units in lbs/mm BTU)	140 149 153 126	142	27	2.06	13.1	0.0923	0.0462

a) Data from U.S. EPA files unless otherwise noted.

Table D-3 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO NITROGEN OXIDES[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Power plant boiler n. gas fired (V. H. Brauning - Unit 3) (units in lbs/mm BTU)	0.27880 0.32525 0.28454	0.29619	0.0465	1.69	0.0275	0.0928	0.0536
Power plant boiler n. gas fired (V. H. Brauning - Unit 3)	0.30904 0.35982 0.36454	0.34446	0.0555	1.69	0.0328	0.0952	0.0550
							Average 0.134

a) Data from U.S. EPA files unless otherwise noted.

Table D-4 PRECISION OF SOURCE TEST DATA

RELATIVE TO HYDROCARBONS[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

* Reported lb/hr basis and constant product flow during tests.

Process	Observed* values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Lembo machine - coloring plastic Line PO-1 (Test results taken from PEDCo Environmental files) (units in lb/hr)	85.1 85.8 80.5	83.8	5.3	1.69	3.14	0.0375	0.0217
Lembo machine - coloring plastic Line PO-2 (Test results taken from PEDCo Environmental files) (units in lb/hr)	119 117 122	119	5.0	1.69	2.96	0.0249	0.0144
Lembo machine - coloring plastic Line PL-5 (Test results taken from PEDCo Environmental files) (units in lb/hr)	37.0 39.5 34.2	36.9	5.3	1.69	3.14	0.0851	0.0491
Lembo machine - coloring plastic Line PL-6 (Test results taken from PEDCo Environmental files) (units in lb/hr)	17.7 18.7 19.0	18.5	1.3	1.69	0.769	0.0416	0.0240
Lembo machine - coloring plastic Line PL-7 (Test results taken from PEDCo Environmental files) (units in lb/hr)	21.7 27.6 30.2	26.5	8.5	1.69	5.03	0.190	0.110
#1 calender machine-rolling presses which form plasticizing material into smooth thin sheets (units in lb/hr) (Test results taken from PEDCo-Environmental files)	2.95 3.54	3.25	0.59	1.13	0.522	0.161	0.114

a) Data from U.S. EPA files unless otherwise noted.

Table D-4 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO HYDROCARBONS[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

* Reported lb/hr basis and constant product flow during tests.

Process	Observed* values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Strike-off printers (Test results taken from PEDCo Environmental files) (units in lb/hr)	34.4 31.0	32.7	3.4	1.13	3.01	0.0920	0.0651
C-2 oven 1 (plastic from lembo machine) (Test results taken from PEDCo Environmental files) (units in lb/hr)	3.46 4.31 3.16	3.64	1.15	1.69	0.68	0.187	0.108
Laminating embosser (Test results taken from PEDCo Environmental files) (units in lb/hr)	16.9 17.7	17.3	0.8	1.13	0.708	0.0409	0.0289
Lembo machine - coloring plastic Line PO-4 (Test results taken from PEDCo Environmental files) (units in lb/hr)	56.7 54.5 60.7	57.3	6.2	1.69	3.67	0.0640	0.0369
Sludge incinerator (Fairfax Co., Va.) (units in lb/ton)	0.87 0.63 2.10	1.20	1.47	1.69	0.870	0.725	0.419
Power plant boiler n. gas fired (W. B. Tuttle - Unit 3) (units in lbs/mm BTU)	0.00026 0.00025 0.00247	0.000993	0.00222	1.69	0.00131	1.32	0.762

a) Data from U.S. EPA files unless otherwise noted.

Table D-4 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO HYDROCARBONS[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

* Reported lb/hr basis and constant product flow during tests.

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Line 2 - lacquer spray (Test results taken from PEDCo Environmental files) (units in lb/hr)	1.6 2.2	1.90	0.6	1.13	0.531	0.279	0.147
Line 4 - Lacquer spray (Test results taken from PEDCo Environmental files) (units in lb/hr)	2.6 1.9	2.25	0.7	1.13	0.619	0.275	0.122
Line 4 & 5 - lacquer spray (Test results taken from PEDCo Environmental files) (units in lb/hr)	4.8 5.7	5.25	0.9	1.13	0.796	0.152	0.107
#404 Lacquer spray (Test results taken from PEDCo Environmental files) (units in lb/hr)	19.4 20.7	20.1	1.3	1.13	1.15	0.0572	0.0404
Power plant boiler - n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.00053 0.00822 0.00090 0.00113	0.00270	0.00769	2.06	0.00373	1.38	0.690
Power plant boiler - n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.00004 0.00119 0.00131 0.00109	0.000908	0.00127	2.06	0.000617	0.680	0.340

a) Data from U.S. EPA files unless otherwise noted.

Table D-4 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO HYDROCARBONS[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Power plant boiler n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.00010 0.00644 0.00197 0.00219	0.00268	0.00634	2.06	0.00308	1.15	0.575
Power plant boiler n. gas fired (W. B. Tuttle - #1) (units in lbs/mm BTU)	0.00021 0.00084 0.00084 0.00021	0.000525	0.00063	2.06	0.000306	0.583	0.292
							Average 0.203

a) Data from U.S. EPA files unless otherwise noted.

Table D-5 PRECISION OF SOURCE TEST DATA

RELATIVE TO CARBON MONOXIDE[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Power plant boiler n. gas fired (W. B. Tuttle - #2) (units in lbs/mm BTU)	0.0007 0.0002 0.0005 0.0009	0.000575	0.0007	2.06	0.000340	0.591	0.296
Power plant boiler n. gas fired (W. B. Tuttle - #2) (units in lbs/mm BTU)	0.00121 0.00041 0.00062 0.00103	0.000818	0.00080	2.06	0.000388	0.474	0.237
Power plant boiler n. gas fired (W. B. Tuttle - #2) (units in lbs/mm BTU)	0.00041 0.00062 0.00081 0.00142 0.00104	0.000860	0.00101	2.33	0.000433	0.503	0.225
Power plant boiler n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.0249 0.0027 0.0353 0.0020	0.0162	0.0333	2.06	0.0162	1.00	0.500
Power plant boiler n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.0259 0.0127 0.0006 0.0010	0.0101	0.0253	2.06	0.0123	1.22	0.610
Power plant boiler n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.0010 0.0020 0.0014	0.00110	0.0010	2.06	0.000485	0.441	0.221

a) Data from U.S. EPA files unless otherwise noted.

Table D-5 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO CARBON MONOXIDE[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Power plant boiler n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.0006 0.0020 0.0010 0.0012	0.00120	0.0014	2.06	0.000680	0.567	0.284
Power plant boiler n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.0014 0.0052 0.0012 0.0010	0.00220	0.0042	2.06	0.00204	0.927	0.464
Power plant boiler n. gas fired (W. B. Tuttle - #4) (units in lbs/mm BTU)	0.0028 0.0025 0.0002 0.0014	0.00173	0.0026	2.06	0.00126	0.728	0.364
Power plant boiler n. gas fired (V. H. Braunig - #3) (units in lbs/mm BTU)	0.00046 0.00023	0.000230	0.00046	1.69	0.000272	1.17	0.675
Power plant boiler n. gas fired (V. H. Braunig - #3) (units in lbs/mm BTU)	0.00338 0.00086 0.00064	0.00163	0.00274	1.69	0.00162	0.994	0.574
Power plant boiler n. gas fired (V. H. Braunig - #3) (units in lbs/mm BTU)	0.02519 0.01989 0.00743	0.01750	0.01776	1.69	0.0105	0.600	0.346

a) Data from U.S. EPA files unless otherwise noted.

Table D-5 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO CARBON MONOXIDE[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Catalytic cracker (Plant A_2) (units in lb/hr)	8.0 7.2 8.8	8.00	1.6	1.69	0.947	0.118	0.0681
Lead smelter (blast furnace) (Plant A) (units in lb/ton)	136 80 134	117	56	1.69	33.1	0.283	0.163
Lead smelter (blast furnace) (Plant B) (units in lb/ton)	33 52 188	91.0	155	1.69	91.7	1.01	0.583
Lead smelter (blast furnace) (Plant C) (units lb/ton)	280 133 91	168	189	1.69	112	0.667	0.385
Lead smelter (reverberatory furnace) (Plant G) (units in lb/ton)	30.2 31.4 29.4	30.3	2.0	1.69	1.18	0.0389	0.0225
Lead smelter (reverberatory furnace) (Plant H) (units in lb/ton)	42.5 40.8 36.2	39.83	6.3	1.69	3.73	0.0936	0.0540

a) Data from U.S. EPA files unless otherwise noted.

Table D-5 (continued) PRECISION OF SOURCE TEST DATA

RELATIVE TO CARBON MONOXIDE[a]

$S = (\text{Max.-min.})/d_2$

$\sigma_{\bar{x}} = \frac{S}{\sqrt{n}}$

Process	Observed values	Average, $\bar{x}$	Max.-min.	Factor, d_2	Std. deviation, S	$\frac{S}{\bar{x}}$	$\frac{\sigma_{\bar{x}}}{\bar{x}}$
Basic oxygen furnace (Plant A_2) (units in lb/ton)	140 104 106	117	36	1.69	21.3	0.182	0.105
Basic oxygen furnace (Plant B) (units in lb/ton)	134 124 237	165	113	1.69	66.9	0.405	0.234
							Average 0.321

a) Data from U.S. EPA files unless otherwise noted.

APPENDIX E

CALCULATION OF PRECISION OF LIGHT DUTY GASOLINE VEHICLE EXHAUST EMISSION FACTORS FOR CO, HC, & NO_x

Table E-1 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [X] Light-duty gasoline [ ] Heavy-duty gasoline

Road type: Urban

Pollutant: CO

Avg. speed: 25 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x_i)}{(x_i)^2}$
1	1973	19	2.15	0.00596	1.18	0.00309	0.00222	0.107	0.0000281	0.00245	0.81	0.00295	0.00449	1.9431	0.05709	0.01512
2	1972	19	2.15	0.00596	1.32	0.00517	0.00297	0.151	0.0000477	0.00209	0.81	0.00295	0.00449	3.0675	0.14594	0.01551
3	1971	34	6.88	0.00595	1.38	0.00617	0.00324	0.133	0.0000315	0.00178	0.81	0.00295	0.00449	5.0547	0.39500	0.01546
4	1970	36	7.79	0.00601	1.40	0.00633	0.00323	0.111	0.0000198	0.00161	0.81	0.00295	0.00449	4.5315	0.31500	0.01534
5	1969	39	5.48	0.00360	1.68	0.00220	0.00078	0.112	0.0000177	0.00141	0.81	0.00295	0.00449	5.9440	0.36320	0.01028
6	1968	46	19.6	0.00926	1.58	0.00153	0.00061	0.104	0.0000160	0.00148	0.81	0.00295	0.00449	6.1226	0.59378	0.01584
7	1967	87	23.0	0.00304	1.00	0.0	0.0	0.078	0.0000116	0.00191	0.81	0.00295	0.00449	5.4967	0.28522	0.00944
8	1966	87	19.7	0.00260	1.00	0.0	0.0	0.063	0.0000117	0.00295	0.81	0.00295	0.00449	4.4396	0.19789	0.01004
9	1965	87	20.4	0.00269	1.00	0.0	0.0	0.046	0.0000095	0.00449	0.81	0.00295	0.00449	3.2416	0.12263	0.01167
10	1964	87	25.5	0.00337	1.00	0.0	0.0	0.027	0.0000055	0.00754	0.81	0.00295	0.00449	1.9027	0.05575	0.01540
11	1963	87	29.7	0.00392	1.00	0.0	0.0	0.020	0.0000051	0.01275	0.81	0.00295	0.00449	1.4094	0.04203	0.02116
12	1962	87	43.0	0.00568	1.00	0.0	0.0	0.012	0.0000024	0.01667	0.81	0.00295	0.00449	0.8456	0.01919	0.02684
13	1961 & older	87	16.3	0.002153	1.00	0.0	0.0	0.036	0.0000280	0.02160	0.81	0.00295	0.00449	2.5369	0.18175	0.02824
														$\sum =$ 46.5359	2.77447	

$e_i = c_i d_i m_i s_i$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$e_{co} = 46.54$

$Var(e_{co}) = 2.774$, $\frac{\sigma_{e_{co}}}{e} = 0.0358$

$\sigma_{e_{co}} = 1.666$

Table E-2 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [X] Light-duty gasoline [ ] Heavy-duty gasoline

Road type: Suburban

Pollutant: CO

Avg. speed: 35 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	19	2.15	0.00596	1.18	0.00309	0.00222	0.107	0.0000281	0.00245	0.60	0.00162	0.00449	1.4394	.03133	0.01512
2	1972	19	2.15	0.00596	1.32	0.00517	0.00297	0.151	0.0000477	0.00209	0.60	0.00162	0.00449	2.2722	.08008	0.01551
3	1971	34	6.88	0.00595	1.38	0.00617	0.00324	0.133	0.0000315	0.00178	0.60	0.00162	0.00449	3.7442	.21673	0.01546
4	1970	36	7.79	0.00601	1.40	0.00633	0.00323	0.111	0.0000198	0.00161	0.60	0.00162	0.00449	3.3566	.17283	0.01534
5	1969	39	5.48	0.00360	1.68	0.00220	0.00078	0.112	0.0000177	0.00141	0.60	0.00162	0.00449	4.4029	.19928	0.01028
6	1968	46	19.6	0.00926	1.58	0.00153	0.00061	0.104	0.0000160	0.00148	0.60	0.00162	0.00449	4.5352	.32580	0.01584
7	1967	87	23.0	0.00304	1.00	0.0	0.0	0.078	0.0000116	0.00191	0.60	0.00162	0.00449	4.0716	.15650	0.00944
8	1966	87	19.7	0.00260	1.00	0.0	0.0	0.063	0.0000117	0.00295	0.60	0.00162	0.00449	3.2886	.10858	0.01004
9	1965	87	20.4	0.00269	1.00	0.0	0.0	0.046	0.0000095	0.00449	0.60	0.00162	0.00449	2.4012	.06728	0.01167
10	1964	87	25.5	0.00337	1.00	0.0	0.0	0.027	0.0000055	0.00754	0.60	0.00162	0.00449	1.4094	.03059	0.01540
11	1963	87	29.7	0.00392	1.00	0.0	0.0	0.020	0.0000051	0.01275	0.60	0.00162	0.00449	1.0440	.023063	0.02116
12	1962	87	43.0	0.00568	1.00	0.0	0.0	0.012	0.0000024	0.01667	0.60	0.00162	0.00449	0.6264	.01053	0.02684
13	1961 & older	87	16.3	0.002153	1.00	0.0	0.0	0.036	0.0000280	0.02160	0.60	0.00162	0.00449	1.8792	.09973	0.02824
														$\sum =$ 34.4709	1.52232	

$e_i = c_i d_i m_i s_i$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = \left[Var(e_n)\right]^{1/2}$

$e_{co} = 34.47$

$Var(e_{co}) = 1.522$, $\frac{\sigma_{e_{co}}}{e} = 0.0358$

$\sigma_{e_{co}} = 1.234$

Table E-3 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [X] Light-duty gasoline [ ] Heavy-duty gasoline

Road type Rural

Avg. speed 45 mph

Pollutant CO

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	19	2.15	0.00596	1.18	0.00309	0.00222	0.107	0.0000281	0.00245	0.50	0.00112	0.00449	1.1995	.02175	0.01512
2	1972	19	2.15	0.00596	1.32	0.00517	0.00297	0.151	0.0000477	0.00209	0.50	0.00112	0.00449	1.8935	.05561	0.01551
3	1971	34	6.88	0.00595	1.38	0.00617	0.00324	0.133	0.0000315	0.00178	0.50	0.00112	0.00449	3.1202	.15051	0.01546
4	1970	36	7.79	0.00601	1.40	0.00633	0.00323	0.111	0.0000198	0.00161	0.50	0.00112	0.00449	2.7972	.12002	0.01534
5	1969	39	5.48	0.00360	1.68	0.00220	0.00078	0.112	0.0000177	0.00141	0.50	0.00112	0.00449	3.6691	.13840	0.01028
6	1968	46	19.6	0.00926	1.58	0.00153	0.00061	0.104	0.0000160	0.00148	0.50	0.00112	0.00449	3.7794	.22625	0.01584
7	1967	87	23.0	0.00304	1.00	0.0	0.0	0.078	0.0000116	0.00191	0.50	0.00112	0.00449	3.3930	.10868	0.00944
8	1966	87	19.7	0.00260	1.00	0.0	0.0	0.063	0.0000117	0.00295	0.50	0.00112	0.00449	2.7405	.07540	0.01004
9	1965	87	20.4	0.00269	1.00	0.0	0.0	0.046	0.0000095	0.00449	0.50	0.00112	0.00449	2.0010	.04673	0.01167
10	1964	87	25.5	0.00337	1.00	0.0	0.0	0.027	0.0000055	0.00754	0.50	0.00112	0.00449	1.1745	.02124	0.01540
11	1963	87	29.7	0.00392	1.00	0.0	0.0	0.020	0.0000051	0.01275	0.50	0.00112	0.00449	0.87	.01601	0.02116
12	1962	87	43.0	0.00568	1.00	0.0	0.0	0.012	0.0000024	0.01667	0.50	0.00112	0.00449	0.522	.00731	0.02684
13	1961 & older	87	16.3	0.002153	1.00	0.0	0.0	0.036	0.0000280	0.02160	0.50	0.00112	0.00449	1.566	.06925	0.02824
														$\sum =$ 28.7259	1.05716	

$e_i = c_i d_i m_i s_i$

e_{co} = 28.73

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e_{co})$ = 1.057 , $\frac{\sigma_{e_{co}}}{e}$ = 0.0358

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_{e_{co}}$ = 1.028

Table E-4 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [X] Light-duty gasoline [ ] Heavy-duty gasoline

Road type: Limited Access Pollutant: CO

Avg. speed: 55 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	19	2.15	0.00596	1.18	0.00309	0.00222	0.107	0.0000281	0.00245	0.44	0.000869	0.00449	1.0555	.01684	0.01512
2	1972	19	2.15	0.00596	1.32	0.00517	0.00297	0.151	0.0000477	0.00209	0.44	0.000869	0.00449	1.6663	.04306	0.01551
3	1971	34	6.88	0.00595	1.38	0.00617	0.00324	0.133	0.0000315	0.00178	0.44	0.000869	0.00449	2.7458	.11656	0.01546
4	1970	36	7.79	0.00601	1.40	0.00633	0.00323	0.111	0.0000198	0.00161	0.44	0.000869	0.00449	2.4615	.09295	0.01534
5	1969	39	5.48	0.00360	1.68	0.00220	0.00078	0.112	0.0000177	0.00141	0.44	0.000869	0.00449	3.2288	.10717	0.01028
6	1968	46	19.6	0.00926	1.58	0.00153	0.00061	0.104	0.0000160	0.00148	0.44	0.000869	0.00449	3.3258	.17521	0.01584
7	1967	87	23.0	0.00304	1.00	0.0	0.0	0.078	0.0000116	0.00191	0.44	0.000869	0.00449	2.9858	.08416	0.00944
8	1966	87	19.7	0.00260	1.00	0.0	0.0	0.063	0.0000117	0.00295	0.44	0.000869	0.00449	2.4116	.05839	0.01004
9	1965	87	20.4	0.00269	1.00	0.0	0.0	0.046	0.0000095	0.00449	0.44	0.000869	0.00449	1.7609	.03619	0.01167
10	1964	87	25.5	0.00337	1.00	0.0	0.0	0.027	0.0000055	0.00754	0.44	0.000869	0.00449	1.0336	.01645	0.01540
11	1963	87	29.7	0.00392	1.00	0.0	0.0	0.020	0.0000051	0.01275	0.44	0.000869	0.00449	0.7656	.01240	0.02116
12	1962	87	43.0	0.00568	1.00	0.0	0.0	0.012	0.0000024	0.01667	0.44	0.000869	0.00449	0.4594	.00566	0.02684
13	1961 & older	87	16.3	0.002153	1.00	0.0	0.0	0.036	0.0000280	0.02160	0.44	0.000869	0.00449	1.3781	.05363	0.02824
													$\sum =$	25.2787	.81867	

$e_i = c_i d_i m_i s_i$

$Var\ e_i = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

e_{co} 25.28

$Var(e_{co})$ 0.8187, $\frac{\sigma_{e_{co}}}{e}$ = 0.0358

$\sigma_{e_{co}}$ 0.9048

Table E-5 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [x] Light-duty gasoline [ ] Heavy-duty gasoline

Road type: Urban

Avg. speed: 25 mph

Pollutant: HC

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	2.7	0.0166	0.00228	1.05	0.000662	0.00060	0.107	0.0000281	0.00245	0.87	0.00119	0.00157	0.2639	.0004805	0.0069
2	1972	2.7	0.0166	0.00228	1.10	0.000984	0.00081	0.151	0.0000477	0.00209	0.87	0.00119	0.00157	0.3902	.00103	0.00675
3	1971	2.9	0.0192	0.00228	1.13	0.00134	0.00105	0.133	0.0000315	0.00178	0.87	0.00119	0.00157	0.3792	.00096	0.00668
4	1970	3.6	0.0483	0.00373	1.15	0.00133	0.00100	0.111	0.0000198	0.00161	0.87	0.00119	0.00157	0.3998	.00126	0.00791
5	1969	4.4	0.153	0.00790	1.23	0.000507	0.00034	0.112	0.0000177	0.00141	0.87	0.00119	0.00157	0.5273	.00312	0.01122
6	1968	4.5	0.410	0.01980	1.28	0.000441	0.00027	0.104	0.0000160	0.00148	0.87	0.00119	0.00157	0.5212	.00628	0.02312
7	1967	8.8	0.786	0.01015	1.00	0.0	0.0	0.078	0.0000116	0.00191	0.87	0.00119	0.00157	0.5972	.00486	0.01363
8	1966	8.8	0.672	0.00868	1.00	0.0	0.0	0.063	0.0000117	0.00295	0.87	0.00119	0.00157	0.4823	.00307	0.01320
9	1965	8.8	0.698	0.00901	1.00	0.0	0.0	0.046	0.0000095	0.00449	0.87	0.00119	0.00157	0.3522	.00187	0.01507
10	1964	8.8	0.872	0.01126	1.00	0.0	0.0	0.027	0.0000055	0.00754	0.87	0.00119	0.00157	0.2067	.00087	0.02037
11	1963	8.8	1.015	0.01311	1.00	0.0	0.0	0.020	0.0000051	0.01275	0.87	0.00119	0.00157	0.1531	.00064	0.02743
12	1962	8.8	1.469	0.01897	1.00	0.0	0.0	0.012	0.0000024	0.01667	0.87	0.00119	0.00157	0.0919	.00031	0.03721
13	1961 & older	8.8	0.558	0.0072	1.00	0.0	0.0	0.036	0.0000280	0.02160	0.87	0.00119	0.00157	0.2756	.00231	0.03037
													$\sum =$	4.6406	.02706	

$e_i = c_i d_i m_i s_i$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$e_{HC} = 4.641$

$Var(e_{HC}) = 0.02706$, $\frac{\sigma_{e_{HC}}}{e_{HC}} = 0.035445$

$\sigma_{e_{HC}} = 0.1645$

Table E-6 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [x] Light-duty gasoline [ ] Heavy-duty gasoline

Road type Suburban Pollutant HC

Avg. speed 35 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(e_i)}{(e_i)^2}$
1	1973	2.7	0.0166	0.00228	1.05	0.000662	0.00060	0.107	0.0000281	0.00245	0.68	0.000725	0.00157	0.2063	.00029	0.0069
2	1972	2.7	0.0166	0.00228	1.10	0.000984	0.00081	0.151	0.0000477	0.00209	0.68	0.000725	0.00157	0.3050	.00063	0.00675
3	1971	2.9	0.0192	0.00228	1.13	0.00134	0.00105	0.133	0.0000315	0.00178	0.68	0.000725	0.00157	0.2964	.00059	0.00668
4	1970	3.6	0.0483	0.00373	1.15	0.00133	0.00100	0.111	0.0000198	0.00161	0.68	0.000725	0.00157	0.3125	.00077	0.00791
5	1969	4.4	0.153	0.00790	1.23	0.000507	0.00034	0.112	0.0000177	0.00141	0.68	0.000725	0.00157	0.4122	.00191	0.01122
6	1968	4.5	0.410	0.01980	1.28	0.000441	0.00027	0.104	0.0000160	0.00148	0.68	0.000725	0.00157	0.4073	.00384	0.02312
7	1967	8.8	0.786	0.01015	1.00	0.0	0.0	0.078	0.0000116	0.00191	0.68	0.000725	0.00157	0.4668	.00297	0.01363
8	1966	8.8	0.672	0.00869	1.00	0.0	0.0	0.063	0.0000117	0.00295	0.68	0.000725	0.00157	0.3770	.00188	0.01320
9	1965	8.8	0.698	0.00901	1.00	0.0	0.0	0.046	0.0000095	0.00449	0.68	0.000725	0.00157	0.2753	.00114	0.01507
10	1964	8.8	0.872	0.01126	1.00	0.0	0.0	0.027	0.0000055	0.00754	0.68	0.000725	0.00157	0.1616	.00053	0.02037
11	1963	8.8	1.015	0.01311	1.00	0.0	0.0	0.020	0.0000051	0.01275	0.68	0.000725	0.00157	0.1197	.00039	0.02743
12	1962	8.8	1.469	0.01897	1.00	0.0	0.0	0.012	0.0000024	0.01667	0.68	0.000725	0.00157	0.0718	.00019	0.03721
13	1961 & older	8.8	0.558	0.0072	1.00	0.0	0.0	0.036	0.0000280	0.02160	0.68	0.000725	0.00157	0.2154	.00141	0.03037
													$\sum =$	3.6273	.01654	

$e_i = c_i d_i m_i s_i$

e_{HC} 3.627

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e_{HC})$ 0.01654 , $\frac{\sigma_{e_{HC}}}{e_{HC}}$ = 0.03546

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_{e_{HC}}$ = 0.1286

Table E-7 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [x] Light-duty gasoline [ ] Heavy-duty gasoline

Road type Rural

Avg. speed 45 mph

Pollutant HC

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(e)}{(e)^2}$
1	1973	2.7	0.0166	0.00228	1.05	0.000662	0.00060	0.107	0.0000281	0.00245	0.58	0.000528	0.00157	0.1759	.00021	0.0069
2	1972	2.7	0.0166	0.00228	1.10	0.000984	0.00081	0.151	0.0000477	0.00209	0.58	0.000528	0.00157	0.2601	.00046	0.00675
3	1971	2.9	0.0192	0.00228	1.13	0.00134	0.00105	0.133	0.0000315	0.00178	0.58	0.000528	0.00157	0.2528	.00043	0.00668
4	1970	3.6	0.0483	0.00373	1.15	0.00133	0.00100	0.111	0.0000198	0.00161	0.58	0.000528	0.00157	0.2665	.00056	0.00791
5	1969	4.4	0.153	0.00790	1.23	0.000507	0.00034	0.112	0.0000177	0.00141	0.58	0.000528	0.00157	0.3516	.00139	0.01122
6	1968	4.5	0.410	0.01980	1.28	0.000441	0.00027	0.104	0.0000160	0.00148	0.58	0.000528	0.00157	0.3474	.00279	0.02312
7	1967	8.8	0.786	0.01015	1.00	0.0	0.0	0.078	0.0000116	0.00191	0.58	0.000528	0.00157	0.3981	.00216	0.01363
8	1966	8.8	0.672	0.00868	1.00	0.0	0.0	0.063	0.0000117	0.00295	0.58	0.000528	0.00157	0.3216	.00136	0.01320
9	1965	8.8	0.698	0.00901	1.00	0.0	0.0	0.046	0.0000095	0.00449	0.58	0.000528	0.00157	0.2348	.00083	0.01507
10	1964	8.8	0.872	0.01126	1.00	0.0	0.0	0.027	0.0000055	0.00754	0.58	0.000528	0.00157	0.1378	.00039	0.02037
11	1963	8.8	1.015	0.01311	1.00	0.0	0.0	0.020	0.0000051	0.01275	0.58	0.000528	0.00157	0.1021	.00029	0.02743
12	1962	8.8	1.469	0.01897	1.00	0.0	0.0	0.012	0.0000024	0.01667	0.58	0.000528	0.00157	0.0612	.00014	0.03721
13	1961 & older	8.8	0.558	0.0072	1.00	0.0	0.0	0.036	0.0000280	0.02160	0.58	0.000528	0.00157	0.1837	.00103	0.03037
														$\sum =$	3.0936	0.01204

$e_i = c_i d_i m_i s_i$

$e_{HC} = 3.094$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e_{HC}) = 0.01204$, $\frac{\sigma_{e_{HC}}}{e_{HC}} = 0.03546$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_{e_{HC}} = 0.1097$

Table E-8 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [x] Light-duty gasoline [ ] Heavy-duty gasoline

Road type Limited Access Pollutant HC

Avg. speed 55 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\frac{Var(e_i)}{(e_i)^2}$
1	1973	2.7	0.0166	0.00228	1.05	0.000662	0.00060	0.107	0.0000281	0.00245	0.50	0.000393	0.00157	0.1517	.00016	0.0069
2	1972	2.7	0.0166	0.00228	1.10	0.000984	0.00081	0.151	0.0000477	0.00209	0.50	0.000393	0.00157	0.2242	.00034	0.00675
3	1971	2.9	0.0192	0.00228	1.13	0.00134	0.00105	0.133	0.0000315	0.00178	0.50	0.000393	0.00157	0.2179	.00032	0.00668
4	1970	3.6	0.0483	0.00373	1.15	0.00133	0.00100	0.111	0.0000198	0.00161	0.50	0.000393	0.00157	0.2298	.00042	0.00791
5	1969	4.4	0.153	0.00790	1.23	0.000507	0.00034	0.112	0.0000177	0.00141	0.50	0.000393	0.00157	0.3031	.00103	0.01122
6	1968	4.5	0.410	0.01980	1.28	0.000441	0.00027	0.104	0.0000160	0.00148	0.50	0.000393	0.00157	0.2995	.00207	0.02312
7	1967	8.8	0.786	0.01015	1.00	0.0	0.0	0.078	0.0000116	0.00191	0.50	0.000393	0.00157	0.3432	.00161	0.01363
8	1966	8.8	0.672	0.00868	1.00	0.0	0.0	0.063	0.0000117	0.00295	0.50	0.000393	0.00157	0.2772	.00101	0.01320
9	1965	8.8	0.698	0.00901	1.00	0.0	0.0	0.046	0.0000095	0.00449	0.50	0.000393	0.00157	0.2024	.00062	0.01507
10	1964	8.8	0.872	0.01126	1.00	0.0	0.0	0.027	0.0000055	0.00754	0.50	0.000393	0.00157	0.1188	.00029	0.02037
11	1963	8.8	1.015	0.01311	1.00	0.0	0.0	0.020	0.0000051	0.01275	0.50	0.000393	0.00157	0.0880	.00021	0.02743
12	1962	8.8	1.469	0.01897	1.00	0.0	0.0	0.012	0.0000024	0.01667	0.50	0.000393	0.00157	0.0528	.00010	0.03721
13	1961 & older	8.8	0.558	0.0072	1.00	0.0	0.0	0.036	0.0000280	0.02160	0.50	0.000393	0.00157	0.1584	.00076	0.03037
														$\sum =$ 2.6670	.00894	

$e_i = c_i d_i m_i s_i$

e_{HC} = 2.667

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e_{HC})$ = 0.00894 , $\frac{\sigma_{e_{HC}}}{e_{HC}}$ = 0.03545

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_{e_{HC}}$ = 0.09455

Table E-9 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [X] Light-duty gasoline [ ] Heavy-duty gasoline

Road type Urban

Avg. speed 25 mph

Pollutant NO_x

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(e_i)}{(e_i)^2}$
1	1973	2.3	.00719	0.00136	1.11		0.00141[a]	0.107	0.0000281	0.00245	1.05		0.00303[b]	0.2868	.00068	0.00825
2	1972	4.8	0.0313	0.00136	1.00	0.0	0.0	0.151	0.0000477	0.00209	1.05		0.00303	0.76104	.00375	0.00636
3	1971	4.8	0.0313	0.00136	1.00	0.0	0.0	0.133	0.0000315	0.00178	1.05		0.00303	0.6703	.00277	0.00612
4	1970	5.1	0.0324	0.00125	1.00	0.0	0.0	0.111	0.0000198	0.00161	1.05		0.00303	0.5944	.00208	0.00589
5	1969	5.5	0.0458	0.00151	1.00	0.0	0.0	0.112	0.0000177	0.00141	1.05		0.00303	0.6468	.00249	0.00595
6	1968	4.3	0.0445	0.00241	1.00	0.0	0.0	0.104	0.0000160	0.00148	1.05		0.00303	0.4696	.00153	0.00692
7	1967	3.6	0.0503	0.00388	1.00	0.0	0.0	0.078	0.0000116	0.00191	1.05		0.00303	0.2948	.00077	0.00882
8	1966	3.6	0.0430	0.00332	1.00	0.0	0.0	0.063	0.0000117	0.00295	1.05		0.00303	0.2381	.00053	0.00930
9	1965	3.6	0.0447	0.00345	1.00	0.0	0.0	0.046	0.0000095	0.00449	1.05		0.00303	0.1739	.00033	0.01095
10	1964	3.6	0.0558	0.00431	1.00	0.0	0.0	0.027	0.0000055	0.00754	1.05		0.00303	0.1021	.00015	0.01490
11	1963	3.6	0.0650	0.00502	1.00	0.0	0.0	0.020	0.0000051	0.01275	1.05		0.00303	0.0756	.00012	0.02080
12	1962	3.6	0.0940	0.00725	1.00	0.0	0.0	0.012	0.0000024	0.01667	1.05		0.00303	0.0454	.00005	0.02695
13	1961 & older	3.6	0.0357	0.00275	1.00	0.0	0.0	0.036	0.0000280	0.02160			0.00303	0.1361	.00051	0.02738
													$\sum =$	4.4949	0.01576	

$e_i = c_i d_i m_i s_i$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$e_{NO_x} = 4.495$

$Var(e_{NO_x}) = 0.01576$, $\frac{\sigma_{e_{NO_x}}}{e_{NO_x}} = 0.0279$

$\sigma_{e_{NO_x}} = 0.1255$

[a] The average precision of HC and CO deterioration factors was used.

[b] The average precision of HC and CO speed correction factors was used.

Table E-10 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [x] Light-duty gasoline [ ] Heavy-duty gasoline

Road type Suburban Pollutant NO_x

Avg. speed 35 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(e_i)}{(e_i)^2}$
1	1973	2.3	.00719	0.00136	1.11		0.00141[a]	0.107	0.0000281	0.00245	1.19		0.00303[b]	0.3251	.00087	0.00825
2	1972	4.8	0.0313	0.00136	1.00	0.0	0.0	0.151	0.0000477	0.00209	1.19		0.00303	0.8625	.00482	0.00648
3	1971	4.8	0.0313	0.00136	1.00	0.0	0.0	0.133	0.0000315	0.00178	1.19		0.00303	0.7597	.00356	0.00617
4	1970	5.1	0.0324	0.00125	1.00	0.0	0.0	0.111	0.0000198	0.00161	1.19		0.00303	0.6737	.00267	0.00589
5	1969	5.5	0.0458	0.00151	1.00	0.0	0.0	0.112	0.0000177	0.00141	1.19		0.00303	0.7330	.00320	0.00595
6	1968	4.3	0.0445	0.00241	1.00	0.0	0.0	0.104	0.0000160	0.00148	1.19		0.00303	0.5322	.00196	0.00692
7	1967	3.6	0.0503	0.00388	1.00	0.0	0.0	0.078	0.0000116	0.00191	1.19		0.00303	0.3341	.00098	0.00882
8	1966	3.6	0.0430	0.00332	1.00	0.0	0.0	0.063	0.0000117	0.00295	1.19		0.00303	0.2699	.00068	0.00930
9	1965	3.6	0.0447	0.00345	1.00	0.0	0.0	0.046	0.0000095	0.00449	1.19		0.00303	0.1971	.00042	0.01095
10	1964	3.6	0.0558	0.00433	1.00	0.0	0.0	0.027	0.0000055	0.00754	1.19		0.00303	0.1157	.00020	0.01490
11	1963	3.6	0.0650	0.00502	1.00	0.0	0.0	0.020	0.0000051	0.01275	1.19		0.00303	0.0857	.00015	0.02080
12	1962	3.6	0.0940	0.00725	1.00	0.0	0.0	0.012	0.0000024	0.01667	1.19		0.00303	0.0514	.00007	0.02695
13	1961 & older	3.6	0.0357	0.00275	1.00	0.0	0.0	0.036	0.0000280	0.02160	1.19		0.00303	0.1542	.00065	0.02738
													$\sum =$	5.0943	0.02023	

$e_i = c_i d_i m_i s_i$

$e_{NO_x} = 5.094$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e_{NO_x}) = 0.02023$, $\frac{\sigma_{e_{NO_x}}}{e_{NO_x}} = 0.0279$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_{e_{NO_x}} = 0.1422$

[a] The average precision of HC and CO deterioration factors was used.

[b] The average precision of HC and CO speed correction factors was used.

Table E-11 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [x] Light-duty gasoline [ ] Heavy-duty gasoline

Road type Rural

Avg. speed 45 mph

Pollutant NO_x

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	2.3	.00719	0.00136	1.11		0.00141[a]	0.107	0.0000281	0.00245	1.31		0.00303[b]	0.3578	.00106	0.00825
2	1972	4.8	0.0313	0.00136	1.00	0.0	0.0	0.151	0.0000477	0.00209	1.31		0.00303	0.9495	.00584	0.00648
3	1971	4.8	0.0313	0.00136	1.00	0.0	0.0	0.133	0.0000315	0.00178	1.31		0.00303	0.8363	.00432	0.00617
4	1970	5.1	0.0324	0.00125	1.00	0.0	0.0	0.111	0.0000198	0.00161	1.31		0.00303	0.7416	.00324	0.00589
5	1969	5.5	0.0458	0.00151	1.00	0.0	0.0	0.112	0.0000177	0.00141	1.31		0.00303	0.8070	.00387	0.00595
6	1968	4.3	0.0445	0.00241	1.00	0.0	0.0	0.104	0.0000160	0.00148	1.31		0.00303	0.5858	.00237	0.00692
7	1967	3.6	0.0503	0.00388	1.00	0.0	0.0	0.078	0.0000116	0.00191	1.31		0.00303	0.3678	.00119	0.00882
8	1966	3.6	0.0430	0.00332	1.00	0.0	0.0	0.063	0.0000117	0.00295	1.31		0.00303	0.2971	.00082	0.00930
9	1965	3.6	0.0447	0.00345	1.00	0.0	0.0	0.046	0.0000095	0.00449	1.31		0.00303	0.2169	.00052	0.01095
10	1964	3.6	0.0558	0.00431	1.00	0.0	0.0	0.027	0.0000055	0.00754	1.31		0.00303	0.1273	.00024	0.01490
11	1963	3.6	0.0650	0.00502	1.00	0.0	0.0	0.020	0.0000051	0.01275	1.31		0.00303	0.0943	.00019	0.02080
12	1962	3.6	0.0940	0.00725	1.00	0.0	0.0	0.012	0.0000024	0.01667	1.31		0.00303	0.0566	.00009	0.02695
13	1961 & older	3.6	0.0357	0.00275	1.00	0.0	0.0	0.036	0.0000280	0.02160	1.31		0.00303	0.1698	.00079	0.02738
													$\sum =$	5.6078	0.02454	

$e_i = c_i d_i m_i s_i$

$e_{NO_x} = 5.608$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e_{NO_x}) = 0.02454$, $\frac{\sigma_{e_{NO_x}}}{e_{NO_x}} = 0.0279$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_{e_{NO_x}} = 0.1567$

[a] The average precision of HC and CO deterioration factors was used. [b] The average precision of HC and CO speed correction factors was used.

Table E-12 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [X] Light-duty gasoline [ ] Heavy-duty gasoline

Road type: Limited Access

Pollutant: NO_x

Avg. speed: 55 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	2.3	.00719	0.00136	1.11		0.00141[a]	0.107	0.0000281	0.00245	1.45		0.00303[b]	0.3961	.00129	0.00825
2	1972	4.8	0.0313	0.00136	1.00	0.0	0.0	0.151	0.0000477	0.00209	1.45		0.00303	1.0510	.00716	0.00648
3	1971	4.8	0.0313	0.00136	1.00	0.0	0.0	0.133	0.0000315	0.00178	1.45		0.00303	0.9257	.00529	0.00617
4	1970	5.1	0.0324	0.00125	1.00	0.0	0.0	0.111	0.0000198	0.00161	1.45		0.00303	0.8208	.00397	0.00589
5	1969	5.5	0.0458	0.00151	1.00	0.0	0.0	0.112	0.0000177	0.00141	1.45		0.00303	0.8932	.00475	0.00595
6	1968	4.3	0.0445	0.00241	1.00	0.0	0.0	0.104	0.0000160	0.00148	1.45		0.00303	0.6484	.00291	0.00692
7	1967	3.6	0.0503	0.00388	1.00	0.0	0.0	0.078	0.0000116	0.00191	1.45		0.00303	0.4072	.00146	0.00882
8	1966	3.6	0.0430	0.00332	1.00	0.0	0.0	0.063	0.0000117	0.00295	1.45		0.00303	0.3289	.00101	0.00930
9	1965	3.6	0.0447	0.00345	1.00	0.0	0.0	0.046	0.0000095	0.00449	1.45		0.00303	0.2401	.00063	0.01095
10	1964	3.6	0.0558	0.00431	1.00	0.0	0.0	0.027	0.0000055	0.00754	1.45		0.00303	0.1409	.00030	0.01490
11	1963	3.6	0.0650	0.00502	1.00	0.0	0.0	0.020	0.0000051	0.01275	1.45		0.00303	0.1044	.00023	0.02080
12	1962	3.6	0.0940	0.00725	1.00	0.0	0.0	0.012	0.0000024	0.01667	1.45		0.00303	0.0626	.00011	0.02695
13	1961 & older	3.6	0.0357	0.00275	1.00	0.0	0.0	0.036	0.0000280	0.02160	1.45		0.00303	0.1879	.00097	0.02738
													$\sum =$	6.2072	0.03008	

$e_i = c_i d_i m_i s_i$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$e_{NO_x} = 6.207$

$Var(e_{NO_x}) = 0.03008$, $\frac{\sigma_{e_{NO_x}}}{e_{NO_x}} = 0.0279$

$\sigma_{e_{NO_x}} = 0.1734$

[a] The average precision of HC and CO deterioration factors was used.

[b] The average precision of HC and CO speed correction factors was used.

APPENDIX F

CALCULATION OF PRECISION OF HEAVY DUTY GASOLINE VEHICLE EXHAUST EMISSION FACTORS FOR CO, HC, & NO_x

Table F-1 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: ☐ Light-duty gasoline ☒ Heavy-duty gasoline

Road type: Urban

Pollutant: CO

Avg. speed 25 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i [a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	130	194	0.01147	1.0	0	0	0.107	78×10^{-7}	0.00069	0.81	0.00295	0.00449	11.3	2.13	0.01665
2	1972	130	194	0.01147	1.0	0	0	0.159	174×10^{-7}	0.00069	0.81	0.00295	0.00449	16.7	4.64	0.01665
3	1971	130	194	0.01147	1.0	0	0	0.120	36×10^{-7}	0.00025	0.81	0.00295	0.00449	12.6	2.57	0.01621
4	1970	130	194	0.01147	1.0	0	0	0.112	31×10^{-7}	0.00025	0.81	0.00295	0.00449	11.8	2.26	0.01621
5	1969	140	15.9	0.00081	1.0	0	0	0.095	15×10^{-7}	0.00017	0.81	0.00295	0.00449	10.8	0.638	0.00547
6	1968	140	15.9	0.00081	1.0	0	0	0.086	17×10^{-7}	0.00017	0.81	0.00295	0.00449	9.75	0.520	0.00547
7	1967	140	15.9	0.00081	1.0	0	0	0.062	6×10^{-7}	0.00017	0.81	0.00295	0.00449	7.03	0.270	0.00547
8	1966	140	15.9	0.00081	1.0	0	0	0.052	4×10^{-7}	0.00017	0.81	0.00295	0.00449	5.90	0.190	0.00547
9	1965	140	15.9	0.00081	1.0	0	0	0.037	1×10^{-7}	0.00007	0.81	0.00295	0.00449	4.20	0.0947	0.00537
10	1964	140	15.9	0.00081	1.0	0	0	0.028	0.5×10^{-7}	0.00007	0.81	0.00295	0.00449	3.18	0.0543	0.00537
11	1963	140	15.9	0.00081	1.0	0	0	0.018	0.2×10^{-7}	0.00007	0.81	0.00295	0.00449	2.04	0.0223	0.00537
12	1962	140	15.9	0.00081	1.0	0	0	0.016	0.2×10^{-7}	0.00007	0.81	0.00295	0.00449	1.81	0.0176	0.00537
13	1961 & older	140	15.9	0.00081	1.0	0	0	0.108	8×10^{-7}	0.00007	0.81	0.00295	0.00449	12.20	0.799	0.00537
														$\sum =$	109.30	14.21

$e_i = c_i d_i m_i s_i$ $\qquad e = 109.3$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$ $\qquad Var(e) = 14.21, \quad \frac{\sigma_e}{e} = 0.03449$

$e_n = \sum e_i, \quad Var(e_n) = \sum Var(e_i), \quad \sigma_{e_n} = [Var(e_n)]^{1/2}$ $\qquad \sigma_e = 3.770$

[a] Speed correction factors same as for light-duty gasoline vehicles.

Table F-2 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: ☐ Light-duty gasoline ☒ Heavy-duty gasoline

Road type: Suburban Pollutant: CO

Avg. speed: 35 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i[a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	130	194	0.01147	1.0	0	0	0.107	78×10^{-7}	0.00069	0.60	0.00162	0.00449	8.35	1.16	0.01665
2	1972	130	194	0.01147	1.0	0	0	0.159	174×10^{-7}	0.00069	0.60	0.00162	0.00449	12.40	2.56	0.01665
3	1971	130	194	0.01147	1.0	0	0	0.120	36×10^{-7}	0.00025	0.60	0.00162	0.00449	9.36	1.42	0.01621
4	1970	130	194	0.01147	1.0	0	0	0.112	31×10^{-7}	0.00025	0.60	0.00162	0.00449	8.75	1.24	0.01621
5	1969	140	15.9	0.00081	1.0	0	0	0.095	15×10^{-7}	0.00017	0.60	0.00162	0.00449	7.98	0.348	0.00547
6	1968	140	15.9	0.00081	1.0	0	0	0.086	17×10^{-7}	0.00017	0.60	0.00162	0.00449	7.22	0.285	0.00547
7	1967	140	15.9	0.00081	1.0	0	0	0.062	6×10^{-7}	0.00017	0.60	0.00162	0.00449	5.21	0.148	0.00547
8	1966	140	15.9	0.00081	1.0	0	0	0.052	4×10^{-7}	0.00017	0.60	0.00162	0.00449	4.37	0.104	0.00547
9	1965	140	15.9	0.00081	1.0	0	0	0.037	1×10^{-7}	0.00007	0.60	0.00162	0.00449	3.11	0.0519	0.00537
10	1964	140	15.9	0.00081	1.0	0	0	0.028	0.5×10^{-7}	0.00007	0.60	0.00162	0.00449	2.35	0.0297	0.00537
11	1963	140	15.9	0.00081	1.0	0	0	0.018	0.2×10^{-7}	0.00007	0.60	0.00162	0.00449	1.51	0.0122	0.00537
12	1962	140	15.9	0.00081	1.0	0	0	0.016	0.2×10^{-7}	0.00007	0.60	0.00162	0.00449	1.34	0.00964	0.00537
13	1961 & older	140	15.9	0.00081	1.0	0	0	0.108	8×10^{-7}	0.00007	0.60	0.00162	0.00449	9.07	0.442	0.00537
													$\sum =$	81.00	7.81	

$e_i = c_i d_i m_i s_i$ $e = 81.0$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$ $Var(e) = 7.81$, $\frac{\sigma_e}{e} = 0.03444$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$ $\sigma_e = 2.79$

[a] Speed correction factors same as for light-duty gasoline vehicles.

Table F-3 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [ ] Light-duty gasoline [x] Heavy-duty gasoline

Road type: Rural

Pollutant: CO

Avg. speed: 45 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i [a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(s)}{(s)^2}$
1	1973	130	194	0.01147	1.0	0	0	0.107	78×10^{-7}	0.00069	0.50	0.00112	0.00449	6.96	0.807	0.01665
2	1972	130	194	0.01147	1.0	0	0	0.159	174×10^{-7}	0.00069	0.50	0.00112	0.00449	10.30	1.77	0.01665
3	1971	130	194	0.01147	1.0	0	0	0.120	36×10^{-7}	0.00025	0.50	0.00112	0.00449	7.80	0.986	0.01621
4	1970	130	194	0.01147	1.0	0	0	0.112	31×10^{-7}	0.00025	0.50	0.00112	0.00449	7.28	0.859	0.01621
5	1969	140	15.9	0.00081	1.0	0	0	0.095	15×10^{-7}	0.00017	0.50	0.00112	0.00449	6.65	0.242	0.00547
6	1968	140	15.9	0.00081	1.0	0	0	0.086	17×10^{-7}	0.00017	0.50	0.00112	0.00449	6.02	0.198	0.00547
7	1967	140	15.9	0.00081	1.0	0	0	0.062	6×10^{-7}	0.00017	0.50	0.00112	0.00449	4.34	0.103	0.00547
8	1966	140	15.9	0.00081	1.0	0	0	0.052	4×10^{-7}	0.00017	0.50	0.00112	0.00449	3.64	0.0725	0.00547
9	1965	140	15.9	0.00081	1.0	0	0	0.037	1×10^{-7}	0.00007	0.50	0.00112	0.00449	2.59	0.0360	0.00537
10	1964	140	15.9	0.00081	1.0	0	0	0.028	0.5×10^{-7}	0.00007	0.50	0.00112	0.00449	1.96	0.0206	0.00537
11	1963	140	15.9	0.00081	1.0	0	0	0.018	0.2×10^{-7}	0.00007	0.50	0.00112	0.00449	1.26	0.00853	0.00537
12	1962	140	15.9	0.00081	1.0	0	0	0.016	0.2×10^{-7}	0.00007	0.50	0.00112	0.00449	1.12	0.00674	0.00537
13	1961 & older	140	15.9	0.00081	1.0	0	0	0.108	8×10^{-7}	0.00007	0.50	0.00112	0.00449	7.56	0.307	0.00537
													$\sum =$	67.50	5.42	

$e_i = c_i d_i m_i s_i$ $\qquad e = 67.50$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$ $\qquad Var(e) = 5.42, \quad \frac{\sigma_e}{e} = 0.03452$

$e_n = \sum e_i, \quad Var(e_n) = \sum Var(e_i), \quad \sigma_{e_n} = \left[Var(e_n)\right]^{1/2}$ $\qquad \sigma_e = 2.33$

[a] Speed correction factors same as for light-duty gasoline vehicles.

Table F-4 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [ ] Light-duty gasoline [x] Heavy-duty gasoline

Road type Limited Access Pollutant CO

Avg. speed 55 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i *			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	130	194	0.01147	1.0	0	0	0.107	78×10^{-7}	0.00069	0.44	0.000869	0.00449	6.12	0.624	0.01665
2	1972	130	194	0.01147	1.0	0	0	0.159	174×10^{-7}	0.00069	0.44	0.000869	0.00449	9.09	1.38	0.01665
3	1971	130	194	0.01147	1.0	0	0	0.120	36×10^{-7}	0.00025	0.44	0.000869	0.00449	6.86	0.763	0.01621
4	1970	130	194	0.01147	1.0	0	0	0.112	31×10^{-7}	0.00025	0.44	0.000869	0.00449	6.41	0.666	0.01621
5	1969	140	15.9	0.00081	1.0	0	0	0.095	15×10^{-7}	0.00017	0.44	0.000869	0.00449	5.85	0.187	0.00547
6	1968	140	15.9	0.00081	1.0	0	0	0.086	17×10^{-7}	0.00017	0.44	0.000869	0.00449	5.30	0.154	0.00547
7	1967	140	15.9	0.00081	1.0	0	0	0.062	6×10^{-7}	0.00017	0.44	0.000869	0.00449	3.82	0.0798	0.00547
8	1966	140	15.9	0.00081	1.0	0	0	0.052	4×10^{-7}	0.00017	0.44	0.000869	0.00449	3.20	0.0560	0.00547
9	1965	140	15.9	0.00081	1.0	0	0	0.037	1×10^{-7}	0.00007	0.44	0.000869	0.00449	2.28	0.0279	0.00537
10	1964	140	15.9	0.00081	1.0	0	0	0.028	0.5×10^{-7}	0.00007	0.44	0.000869	0.00449	1.72	0.0159	0.00537
11	1963	140	15.9	0.00081	1.0	0	0	0.018	0.2×10^{-7}	0.00007	0.44	0.000869	0.00449	1.11	0.00662	0.00537
12	1962	140	15.9	0.00081	1.0	0	0	0.016	0.2×10^{-7}	0.00007	0.44	0.000869	0.00449	0.986	0.00522	0.00537
13	1961 & older	140	15.9	0.00081	1.0	0	0	0.108	8×10^{-7}	0.00007	0.44	0.000869	0.00449	6.65	0.237	0.00537
														$\sum =$ 59.40	4.20	

$e_i = c_i d_i m_i s_i$ $\qquad e = 59.40$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$ $\qquad Var(e) = 4.20$, $\frac{\sigma_e}{e} = 0.03451$

$e_n = \sum e_i$, $\quad Var(e_n) = \sum Var(e_i)$; $\quad \sigma_{e_n} = \left[Var(e_n)\right]^{1/2}$ $\qquad \sigma_e = 2.05$

* Speed correction factors same as for light-duty gasoline vehicles.

Table F-5 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: ☐ Light-duty gasoline ☒ Heavy-duty gasoline

Road type: Urban

Pollutant: HC

Avg. speed: 25 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i [a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	16	1.21	0.00472	1.00	0.0	0.0	0.107	78×10^{-7}	0.00069	0.87	0.00119	0.00157	1.49	0.0155	0.00698
2	1972	16	1.21	0.00472	1.00	0.0	0.0	0.159	174×10^{-7}	0.00069	0.87	0.00119	0.00157	2.21	0.0341	0.00698
3	1971	16	1.21	0.00472	1.00	0.0	0.0	0.120	36×10^{-7}	0.00025	0.87	0.00119	0.00157	1.67	0.0182	0.00654
4	1970	16	1.21	0.00472	1.00	0.0	0.0	0.112	31×10^{-7}	0.00025	0.87	0.00119	0.00157	1.56	0.0159	0.00654
5	1969	17	0.272	0.00094	1.00	0.0	0.0	0.095	15×10^{-7}	0.00017	0.87	0.00119	0.00157	1.41	0.00533	0.00268
6	1968	17	0.272	0.00094	1.00	0.0	0.0	0.086	17×10^{-7}	0.00017	0.87	0.00119	0.00157	1.27	0.00432	0.00268
7	1967	17	0.272	0.00094	1.00	0.0	0.0	0.062	6×10^{-7}	0.00017	0.87	0.00119	0.00157	0.917	0.00225	0.00268
8	1966	17	0.272	0.00094	1.00	0.0	0.0	0.052	4×10^{-7}	0.00017	0.87	0.00119	0.00157	0.769	0.00158	0.00268
9	1965	17	0.272	0.00094	1.00	0.0	0.0	0.037	1×10^{-7}	0.00007	0.87	0.00119	0.00157	0.547	0.000772	0.00258
10	1964	17	0.272	0.00094	1.00	0.0	0.0	0.028	0.5×10^{-7}	0.00007	0.87	0.00119	0.00157	0.414	0.000442	0.00258
11	1963	17	0.272	0.00094	1.00	0.0	0.0	0.018	0.2×10^{-7}	0.00007	0.87	0.00119	0.00157	0.266	0.000182	0.00258
12	1962	17	0.272	0.00094	1.00	0.0	0.0	0.016	0.2×10^{-7}	0.00007	0.87	0.00119	0.00157	0.237	0.000145	0.00258
13	1961 & older	17	0.272	0.00094	1.00	0.0	0.0	0.108	8×10^{-7}	0.00007	0.87	0.00119	0.00157	1.600	0.006600	0.00258
														$\sum =$ 14.36	0.1053	

$e_i = c_i d_i m_i s_i$ $\qquad e = 14.36$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$ $\qquad Var(e) = 0.1053$, $\frac{\sigma_e}{e} = 0.0226$

$e_n = \sum e_i$, $\quad Var(e_n) = \sum Var(e_i)$, $\quad \sigma_{e_n} = \left[Var(e_n)\right]^{1/2}$ $\qquad \sigma_e = 0.3245$

[a] Speed correction factors same as for light-duty gasoline vehicles.

Table F-6 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type ☐ Light-duty gasoline ☒ Heavy-duty gasoline

Road type Suburban Pollutant HC

Avg. speed 35 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i *			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	16	1.21	0.00472	1.00	0.0	0.0	0.107	78×10^{-7}	0.00069	0.68	0.000725	0.00157	1.16	0.00939	0.00698
2	1972	16	1.21	0.00472	1.00	0.0	0.0	0.159	174×10^{-7}	0.00069	0.68	0.000725	0.00157	1.73	0.0209	0.00698
3	1971	16	1.21	0.00472	1.00	0.0	0.0	0.120	36×10^{-7}	0.00025	0.68	0.000725	0.00157	1.31	0.0112	0.00654
4	1970	16	1.21	0.00472	1.00	0.0	0.0	0.112	31×10^{-7}	0.00025	0.68	0.000725	0.00157	1.22	0.00973	0.00654
5	1969	17	0.272	0.00094	1.00	0.0	0.0	0.095	15×10^{-7}	0.00017	0.68	0.000725	0.00157	1.10	0.00324	0.00268
6	1968	17	0.272	0.00094	1.00	0.0	0.0	0.086	17×10^{-7}	0.00017	0.68	0.000725	0.00157	0.994	0.00265	0.00268
7	1967	17	0.272	0.00094	1.00	0.0	0.0	0.062	6×10^{-7}	0.00017	0.68	0.000725	0.00157	0.717	0.00138	0.00268
8	1966	17	0.272	0.00094	1.00	0.0	0.0	0.052	4×10^{-7}	0.00017	0.68	0.000725	0.00157	0.601	0.000968	0.00268
9	1965	17	0.272	0.00094	1.00	0.0	0.0	0.037	1×10^{-7}	0.00007	0.68	0.000725	0.00157	0.428	0.000473	0.00258
10	1964	17	0.272	0.00094	1.00	0.0	0.0	0.028	0.5×10^{-7}	0.00007	0.68	0.000725	0.00157	0.324	0.000271	0.00258
11	1963	17	0.272	0.00094	1.00	0.0	0.0	0.018	0.2×10^{-7}	0.00007	0.68	0.000725	0.00157	0.208	0.000112	0.00258
12	1962	17	0.272	0.00094	1.00	0.0	0.0	0.016	0.2×10^{-7}	0.00007	0.68	0.000725	0.00157	0.185	0.0000883	0.00258
13	1961 & older	17	0.272	0.00094	1.00	0.0	0.0	0.108	8×10^{-7}	0.00007	0.68	0.000725	0.00157	1.250	0.00403	0.00258
														$\sum =$ 11.23	0.0644	

$e_i = c_i d_i m_i s_i$

$e = 11.23$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e) = 0.0644$, $\frac{\sigma_e}{e} = 0.0226$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_e = 0.254$

* Speed correction factors same as for light-duty gasoline vehicles.

Table F-7 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: ☐ Light-duty gasoline ☒ Heavy-duty gasoline

Road type: Rural

Pollutant: HC

Avg. speed: 45 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i [a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	16	1.21	0.00472	1.00	0.0	0.0	0.107	78×10^{-7}	0.00069	0.58	0.000528	0.00157	0.993	0.00688	0.00698
2	1972	16	1.21	0.00472	1.00	0.0	0.0	0.159	174×10^{-7}	0.00069	0.58	0.000528	0.00157	1.48	0.0153	0.00698
3	1971	16	1.21	0.00472	1.00	0.0	0.0	0.120	36×10^{-7}	0.00025	0.58	0.000528	0.00157	1.11	0.00806	0.00654
4	1970	16	1.21	0.00472	1.00	0.0	0.0	0.112	31×10^{-7}	0.00025	0.58	0.000528	0.00157	1.04	0.00707	0.00654
5	1969	17	0.272	0.00094	1.00	0.0	0.0	0.095	15×10^{-7}	0.00017	0.58	0.000528	0.00157	0.937	0.00235	0.00268
6	1968	17	0.272	0.00094	1.00	0.0	0.0	0.086	17×10^{-7}	0.00017	0.58	0.000528	0.00157	0.848	0.00193	0.00268
7	1967	17	0.272	0.00094	1.00	0.0	0.0	0.062	6×10^{-7}	0.00017	0.58	0.000528	0.00157	0.611	0.00100	0.00268
8	1966	17	0.272	0.00094	1.00	0.0	0.0	0.052	4×10^{-7}	0.00017	0.58	0.000528	0.00157	0.513	0.000705	0.00268
9	1965	17	0.272	0.00094	1.00	0.0	0.0	0.037	1×10^{-7}	0.00007	0.58	0.000528	0.00157	0.365	0.000344	0.00258
10	1964	17	0.272	0.00094	1.00	0.0	0.0	0.028	0.5×10^{-7}	0.00007	0.58	0.000528	0.00157	0.277	0.000198	0.00258
11	1963	17	0.272	0.00094	1.00	0.0	0.0	0.018	0.2×10^{-7}	0.00007	0.58	0.000528	0.00157	0.177	0.0000808	0.00258
12	1962	17	0.272	0.00094	1.00	0.0	0.0	0.016	0.2×10^{-7}	0.00007	0.58	0.000528	0.00157	0.158	0.0000644	0.00258
13	1961 & older	17	0.272	0.00094	1.00	0.0	0.0	0.108	8×10^{-7}	0.00007	0.58	0.000528	0.00157	1.060	0.00290	0.00258
													$\sum =$	9.57	0.0469	

$e_i = c_i d_i m_i s_i$ $\qquad e = 9.57$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$ $\qquad Var(e) = 0.0469, \quad \frac{\sigma_e}{e} = 0.0227$

$e_n = \sum e_i, \quad Var(e_n) = \sum Var(e_i), \quad \sigma_{e_n} = [Var(e_n)]^{1/2}$ $\qquad \sigma_e = 0.217$

[a] Speed correction factors same as for light-duty gasoline vehicles.

Table P-8 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: ☐ Light-duty gasoline ☒ Heavy-duty gasoline

Road type: Limited Access Pollutant: HC

Avg. speed: 55 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i [a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(e_i)}{(e_i)^2}$
1	1973	16	1.21	0.00472	1.00	0.0	0.0	0.107	78×10^{-7}	0.00069	0.50	0.000393	0.00157	0.856	0.00511	0.00698
2	1972	16	1.21	0.00472	1.00	0.0	0.0	0.159	174×10^{-7}	0.00069	0.50	0.000393	0.00157	1.27	0.0113	0.00698
3	1971	16	1.21	0.00472	1.00	0.0	0.0	0.120	36×10^{-7}	0.00025	0.50	0.000393	0.00157	0.960	0.00603	0.00654
4	1970	16	1.21	0.00472	1.00	0.0	0.0	0.112	31×10^{-7}	0.00025	0.50	0.000393	0.00157	0.896	0.00525	0.00654
5	1969	17	0.272	0.00094	1.00	0.0	0.0	0.095	15×10^{-7}	0.00017	0.50	0.000393	0.00157	0.808	0.00175	0.00268
6	1968	17	0.272	0.00094	1.00	0.0	0.0	0.086	17×10^{-7}	0.00017	0.50	0.000393	0.00157	0.731	0.00143	0.00268
7	1967	17	0.272	0.00094	1.00	0.0	0.0	0.062	6×10^{-7}	0.00017	0.50	0.000393	0.00157	0.527	0.000744	0.00268
8	1966	17	0.272	0.00094	1.00	0.0	0.0	0.052	4×10^{-7}	0.00017	0.50	0.000393	0.00157	0.442	0.000524	0.00268
9	1965	17	0.272	0.00094	1.00	0.0	0.0	0.037	1×10^{-7}	0.00007	0.50	0.000393	0.00157	0.315	0.000256	0.00258
10	1964	17	0.272	0.00094	1.00	0.0	0.0	0.028	0.5×10^{-7}	0.00007	0.50	0.000393	0.00157	0.238	0.000146	0.00258
11	1963	17	0.272	0.00094	1.00	0.0	0.0	0.018	0.2×10^{-7}	0.00007	0.50	0.000393	0.00157	0.153	0.0000603	0.00258
12	1962	17	0.272	0.00094	1.00	0.0	0.0	0.016	0.2×10^{-7}	0.00007	0.50	0.000393	0.00157	0.136	0.0000477	0.00258
13	1961 & older	17	0.272	0.00094	1.00	0.0	0.0	0.108	8×10^{-7}	0.00007	0.50	0.000393	0.00157	0.918	0.00217	0.00258
													$\sum =$	8.25	0.0348	

$e_i = c_i d_i m_i s_i$

$e = 8.25$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e) = 0.0348$, $\frac{\sigma_e}{e} = 0.0227$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = \left[Var(e_n)\right]^{1/2}$

$\sigma_e = 0.187$

[a] Speed correction factors same as for light-duty gasoline vehicles.

Table F-9 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [ ] Light-duty gasoline [x] Heavy-duty gasoline

Road type: Urban

Pollutant: NO_x

Avg. speed: 25 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i[a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(e_i)}{(e_i)^2}$
1	1973	9.2	0.510	0.00602	1.00	0.0	0.0	0.107	78×10^{-7}	0.00069	1.05		0.00303[b]	1.03	0.0103	0.00974
2	1972	9.2	0.510	0.00602	1.00	0.0	0.0	0.159	174×10^{-7}	0.00069	1.05		0.00303	1.54	0.0231	0.00974
3	1971	9.2	0.510	0.00602	1.00	0.0	0.0	0.120	36×10^{-7}	0.00025	1.05		0.00303	1.16	0.0125	0.00930
4	1970	9.2	0.510	0.00602	1.00	0.0	0.0	0.112	31×10^{-7}	0.00025	1.05		0.00303	1.08	0.0108	0.00930
5	1969	9.4	0.110	0.00125	1.00	0.0	0.0	0.095	15×10^{-7}	0.00017	1.05		0.00303	0.938	0.00392	0.00445
6	1968	9.4	0.110	0.00125	1.00	0.0	0.0	0.086	17×10^{-7}	0.00017	1.05		0.00303	0.849	0.00321	0.00445
7	1967	9.4	0.10	0.00125	1.00	0.0	0.0	0.062	6×10^{-7}	0.00017	1.05		0.00303	0.612	0.00167	0.00445
8	1966	9.4	0.110	0.00125	1.00	0.0	0.0	0.052	4×10^{-7}	0.00017	1.05		0.00303	0.513	0.00117	0.00445
9	1965	9.4	0.110	0.00125	1.00	0.0	0.0	0.037	1×10^{-7}	0.00007	1.05		0.00303	0.365	0.000580	0.00435
10	1964	9.4	0.110	0.00125	1.00	0.0	0.0	0.028	0.5×10^{-7}	0.00007	1.05		0.00303	0.276	0.000331	0.00435
11	1963	9.4	0.110	0.00125	1.00	0.0	0.0	0.018	0.2×10^{-7}	0.00007	1.05		0.00303	0.178	0.000138	0.00435
12	1962	9.4	0.110	0.00125	1.00	0.0	0.0	0.016	0.2×10^{-7}	0.00007	1.05		0.00303	0.158	0.000109	0.00435
13	1961 & older	9.4	0.110	0.00125	1.00	0.0	0.0	0.108	8×10^{-7}	0.00007	1.05		0.00303	1.070	0.000498	0.00435
													$\sum =$	9.77	0.0728	

$e_i = c_i d_i m_i s_i$ $\qquad e = 9.77$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$ $\qquad Var(e) = 0.0728, \quad \frac{\sigma_e}{e} = 0.0276$

$e_n = \sum e_i, \quad Var(e_n) = \sum Var(e_i), \quad \sigma_{e_n} = [Var(e_n)]^{1/2}$ $\qquad \sigma_e = 0.270$

[a] Speed correction factors same as for light-duty gasoline vehicles.

[b] The average precision of HC and CO speed correction factors was used.

Table F-10 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: ☐ Light-duty gasoline ☒ Heavy-duty gasoline

Road type: Suburban

Pollutant: NO_x

Avg. speed: 35 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i[a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(e_i)}{(e_i)^2}$
1	1973	9.2	0.510	0.00602	1.00	0.0	0.0	0.107	78×10^{-7}	0.00069	1.19		0.00303[b]	1.17	0.0133	0.00974
2	1972	9.2	0.510	0.00602	1.00	0.0	0.0	0.159	174×10^{-7}	0.00069	1.19		0.00303	1.74	0.0295	0.00974
3	1971	9.2	0.510	0.00602	1.00	0.0	0.0	0.120	36×10^{-7}	0.00025	1.19		0.00303	1.31	0.0160	0.00930
4	1970	9.2	0.510	0.00602	1.00	0.0	0.0	0.112	31×10^{-7}	0.00025	1.19		0.00303	1.23	0.0141	0.00930
5	1969	9.4	0.110	0.00125	1.00	0.0	0.0	0.095	15×10^{-7}	0.00017	1.19		0.00303	1.06	0.00500	0.00445
6	1968	9.4	0.110	0.00125	1.00	0.0	0.0	0.086	17×10^{-7}	0.00017	1.19		0.00303	0.962	0.00412	0.00445
7	1967	9.4	0.10	0.00125	1.00	0.0	0.0	0.062	6×10^{-7}	0.00017	1.19		0.00303	0.694	0.00214	0.00445
8	1966	9.4	0.110	0.00125	1.00	0.0	0.0	0.052	4×10^{-7}	0.00017	1.19		0.00303	0.582	0.00151	0.00445
9	1965	9.4	0.110	0.00125	1.00	0.0	0.0	0.037	1×10^{-7}	0.00007	1.19		0.00303	0.414	0.000746	0.00435
10	1964	9.4	0.110	0.00125	1.00	0.0	0.0	0.028	0.5×10^{-7}	0.00007	1.19		0.00303	0.313	0.000426	0.00435
11	1963	9.4	0.110	0.00125	1.00	0.0	0.0	0.018	0.2×10^{-7}	0.00007	1.19		0.00303	0.201	0.000176	0.00435
12	1962	9.4	0.110	0.00125	1.00	0.0	0.0	0.016	0.2×10^{-7}	0.00007	1.19		0.00303	0.179	0.000139	0.00435
13	1961 & older	9.4	0.110	0.00125	1.00	0.0	0.0	0.108	8×10^{-7}	0.00007	1.19		0.00303	1.210	0.000637	0.00435
														$\sum =$	11.070	0.0935

$e_i = c_i d_i m_i s_i$

$e = 11.07$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e) = 0.0935$, $\frac{\sigma_e}{e} = 0.0276$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_e = 0.306$

[a] Speed correction factors same as for light-duty gasoline vehicles.

[b] The average precision of HC and CO speed correction factors was used.

Table F-11 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: [ ] Light-duty gasoline [x] Heavy-duty gasoline

Road type Rural Pollutant NO_x

Avg. speed 45 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i [a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	9.2	0.510	0.00602	1.00	0.0	0.0	0.107	78×10^{-7}	0.00069	1.31		0.00303 [b]	1.29	0.0162	0.00974
2	1972	9.2	0.510	0.00602	1.00	0.0	0.0	0.159	174×10^{-7}	0.00069	1.31		0.00303	1.92	0.0359	0.00974
3	1971	9.2	0.510	0.00602	1.00	0.0	0.0	0.120	36×10^{-7}	0.00025	1.31		0.00303	1.45	0.0196	0.00930
4	1970	9.2	0.510	0.00602	1.00	0.0	0.0	0.112	31×10^{-7}	0.00025	1.31		0.00303	1.35	0.0169	0.00930
5	1969	9.4	0.110	0.00125	1.00	0.0	0.0	0.095	15×10^{-7}	0.00017	1.31		0.00303	1.17	0.00609	0.00445
6	1968	9.4	0.110	0.00125	1.00	0.0	0.0	0.086	17×10^{-7}	0.00017	1.31		0.00303	1.06	0.00500	0.00445
7	1967	9.4	0.10	0.00125	1.00	0.0	0.0	0.062	6×10^{-7}	0.00017	1.31		0.00303	0.763	0.00259	0.00445
8	1966	9.4	0.110	0.00125	1.00	0.0	0.0	0.052	4×10^{-7}	0.00017	1.31		0.00303	0.640	0.00182	0.00445
9	1965	9.4	0.110	0.00125	1.00	0.0	0.0	0.037	1×10^{-7}	0.00007	1.31		0.00303	0.456	0.000905	0.00435
10	1964	9.4	0.110	0.00125	1.00	0.0	0.0	0.028	0.5×10^{-7}	0.00007	1.31		0.00303	0.345	0.000518	0.00435
11	1963	9.4	0.110	0.00125	1.00	0.0	0.0	0.018	0.2×10^{-7}	0.00007	1.31		0.00303	0.222	0.000214	0.00435
12	1962	9.4	0.110	0.00125	1.00	0.0	0.0	0.016	0.2×10^{-7}	0.00007	1.31		0.00303	0.197	0.000169	0.00435
13	1961 & older	9.4	0.110	0.00125	1.00	0.0	0.0	0.108	8×10^{-7}	0.00007	1.31		0.00303	1.330	0.00769	0.00435
													$\sum =$	12.190	0.1136	

$e_i = c_i d_i m_i s_i$ $\qquad e = 12.19$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$ $\qquad Var(e) = 0.1136, \quad \frac{\sigma_e}{e} = 0.0276$

$e_n = \sum e_i, \quad Var(e_n) = \sum Var(e_i), \quad \sigma_{e_n} = \left[Var(e_n)\right]^{1/2}$ $\qquad \sigma_e = 0.3370$

[a] Speed correction factors same as for light-duty gasoline vehicles. [b] The average precision of HC and CO speed correction factors was used.

Table F-12 CALCULATION OF PRECISION OF EXHAUST EMISSION FACTORS

Vehicle type: ☐ Light-duty gasoline ☒ Heavy-duty gasoline

Road type: Limited Access Pollutant: NO_x

Avg. speed: 55 mph

Age	Model year	Emission rate, c_i			Deterioration factor, d_i			Weighted annual travel, m_i			Speed correction factor, s_i [a]			Emission factor, e_i		
		c_i	$Var(c_i)$	$\frac{Var(c_i)}{(c_i)^2}$	d_i	$Var(d_i)$	$\frac{Var(d_i)}{(d_i)^2}$	m_i	$Var(m_i)$	$\frac{Var(m_i)}{(m_i)^2}$	s_i	$Var(s_i)$	$\frac{Var(s_i)}{(s_i)^2}$	e_i	$Var(e_i)$	$\sum \frac{Var(x)}{(x)^2}$
1	1973	9.2	0.510	0.00602	1.00	0.0	0.0	0.107	78×10^{-7}	0.00069	1.45		0.00303 [b]	1.43	0.0199	0.00974
2	1972	9.2	0.510	0.00602	1.00	0.0	0.0	0.159	174×10^{-7}	0.00069	1.45		0.00303	2.12	0.0438	0.00974
3	1971	9.2	0.510	0.00602	1.00	0.0	0.0	0.120	36×10^{-7}	0.00025	1.45		0.00303	1.60	0.0238	0.00930
4	1970	9.2	0.510	0.00602	1.00	0.0	0.0	0.112	31×10^{-7}	0.00025	1.45		0.00303	1.49	0.0206	0.00930
5	1969	9.4	0.110	0.00125	1.00	0.0	0.0	0.095	15×10^{-7}	0.00017	1.45		0.00303	1.29	0.00741	0.00445
6	1968	9.4	0.110	0.00125	1.00	0.0	0.0	0.086	17×10^{-7}	0.00017	1.45		0.00303	1.17	0.00609	0.00445
7	1967	9.4	0.10	0.00125	1.00	0.0	0.0	0.062	6×10^{-7}	0.00017	1.45		0.00303	0.845	0.00318	0.00445
8	1966	9.4	0.110	0.00125	1.00	0.0	0.0	0.052	4×10^{-7}	0.00017	1.45		0.00303	0.709	0.00224	0.00445
9	1965	9.4	0.110	0.00125	1.00	0.0	0.0	0.037	1×10^{-7}	0.00007	1.45		0.00303	0.504	0.00110	0.00435
10	1964	9.4	0.110	0.00125	1.00	0.0	0.0	0.028	0.5×10^{-7}	0.00007	1.45		0.00303	0.382	0.000635	0.00435
11	1963	9.4	0.110	0.00125	1.00	0.0	0.0	0.018	0.2×10^{-7}	0.00007	1.45		0.00303	0.245	0.000261	0.00435
12	1962	9.4	0.110	0.00125	1.00	0.0	0.0	0.016	0.2×10^{-7}	0.00007	1.45		0.00303	0.218	0.000207	0.00435
13	1961 & older	9.4	0.110	0.00125	1.00	0.0	0.0	0.108	8×10^{-7}	0.00007	1.45		0.00303	1.470	0.000940	0.00435
													$\sum =$	13.470	0.13860	

$e_i = c_i d_i m_i s_i$

$e = 13.47$

$Var(e_i) = (e_i)^2 \left[\frac{Var(c_i)}{(c_i)^2} + \frac{Var(d_i)}{(d_i)^2} + \frac{Var(m_i)}{(m_i)^2} + \frac{Var(s_i)}{(s_i)^2} \right]$

$Var(e) = 0.1386$, $\frac{\sigma_e}{e} = 0.0276$

$e_n = \sum e_i$, $Var(e_n) = \sum Var(e_i)$, $\sigma_{e_n} = [Var(e_n)]^{1/2}$

$\sigma_e = 0.3723$

[a] Speed correction factors same as for light-duty gasoline vehicles.

[b] The average precision of HC and CO speed correction factors was used.

APPENDIX G

EMISSION FACTOR PRECISION TABLES

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 01 001 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.211	0.211	0.211
05	0.196	--	0.211	0.211	0.211
06	0.196	--	0.211	0.211	0.211
99	0.196	--	0.211	0.211	0.211
1 01 002 01	0.196	--	0.029	0.549	0.029
02	0.196	--	0.049	0.549	0.049
03	0.196	--	0.211	0.549	0.211
04	0.196	--	0.132	0.549	0.132
05	0.196	--	--	0.549	0.549
06	0.196	--	0.029	0.549	0.029
07	0.196	--	0.049	0.549	0.049
08	0.196	--	0.132	0.549	0.132
09	0.196	--	0.211	0.549	0.211
10	0.196	--	0.549	0.549	0.549
11	0.196	--	0.211	0.549	0.211
12	0.196	--	0.049	0.549	0.049
99	0.196	--	0.211	0.549	0.211
1 01 003 01	0.196	--	--	0.549	0.549
02	0.196	--	--	0.549	0.549
03	0.196	--	--	0.549	0.549

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	003	04	0.196	--	--	0.549	0.549
			05	0.196	--	--	0.549	0.549
			06	0.196	--	--	0.549	0.549
			07	0.196	--	--	0.549	0.549
			08	0.196	--	--	0.549	0.549
			09	0.196	--	--	0.549	0.549
			10	0.196	--	--	0.549	0.549
			11	0.196	--	--	0.549	0.549
			12	0.196	--	--	0.549	0.549
			13	0.196	--	--	0.549	0.549
			14	0.196	--	--	0.549	0.549
			15	0.196	--	--	0.549	0.549
1	01	004	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
1	01	005	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
1	01	006	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
1	01	007	01	0.196	--	--	0.211	0.211
			02	0.196	--	--	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 01 007 03	0.196	--	--	0.211	0.211
1 01 008 01	0.196	--	--	0.549	0.549
1 01 011 02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
1 01 012 01	0.196	--	--	0.549	0.549
02	0.196	--	--	0.549	0.549
03	0.196	--	--	0.549	0.549
1 01 999 97	0.196	--	--	0.549	0.549
98	0.196	--	--	0.549	0.549
99	0.196	--	--	0.549	0.549
1 02 001 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.211	0.211	0.211
05	0.196	--	0.211	0.211	0.211
06	0.196	--	0.211	0.211	0.211
07	0.196	--	0.211	0.211	0.211
99	0.196	--	0.211	0.211	0.211
1 02 002 01	0.196	--	0.029	0.211	0.029
02	0.196	--	0.049	0.211	0.049
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.132	0.211	0.132
05	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	002	06	0.196	--	0.211	0.211	0.211
			07	0.196	--	0.029	0.211	0.029
			08	0.196	--	0.049	0.211	0.049
			09	0.196	--	0.132	0.211	0.132
			10	0.196	--	0.211	0.211	0.211
			11	0.196	--	0.211	0.211	0.211
			12	0.196	--	0.049	0.211	0.049
			13	0.196	--	0.132	0.211	0.132
			14	0.196	--	0.211	0.211	0.211
			99	0.196	--	0.211	0.211	0.211
1	02	003	01	0.196	--	--	0.211	0.211
			02	0.196	--	--	0.211	0.211
			03	0.196	--	--	0.211	0.211
			04	0.196	--	--	0.211	0.211
			05	0.196	--	--	0.211	0.211
			06	0.196	--	--	0.211	0.211
			07	0.196	--	--	0.211	0.211
			08	0.196	--	--	0.211	0.211
			09	0.196	--	--	0.211	0.211
			10	0.196	--	--	0.211	0.211
			11	0.196	--	--	0.211	0.211
			12	0.196	--	--	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	003	13	0.196	--	--	0.211	0.211
			14	0.196	--	--	0.211	0.211
			15	0.196	--	--	0.211	0.211
			16	0.196	--	--	0.211	0.211
1	02	004	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
1	02	005	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
1	02	006	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
1	02	007	01	0.196	--	--	0.211	0.211
			02	0.196	--	--	0.211	0.211
			03	0.196	--	--	0.211	0.211
1	02	008	02	0.196	--	--	0.211	0.211
			03	0.196	--	--	0.211	0.211
1	02	009	02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
1	02	010	02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	011	02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
1	02	999	97	0.196	--	--	0.211	0.211
			98	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
1	03	001	05	0.196	--	0.211	0.211	0.211
			06	0.196	--	0.211	0.211	0.211
			07	0.196	--	--	0.211	0.211
			08	0.196	--	0.211	0.211	0.211
			09	0.196	--	0.211	0.211	0.211
			10	0.196	--	--	0.211	0.211
			99	0.196	--	0.211	0.211	0.211
1	03	002	05	0.196	--	0.029	0.549	0.029
			06	0.196	--	0.049	0.549	0.049
			07	0.196	--	0.211	0.549	0.211
			08	0.196	--	0.211	0.549	0.211
			09	0.196	--	0.132	0.549	0.132
			10	0.196	--	0.211	0.549	0.211
			11	0.196	--	0.211	0.549	0.211
			12	0.196	--	0.211	0.549	0.211
			13	0.196	--	0.549	0.549	0.549
			14	0.196	--	0.211	0.549	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 03 002 99	0.196	--	0.211	0.549	0.211
1 03 003 05	0.196	--	--	0.549	0.549
06	0.196	--	--	0.549	0.549
07	0.196	--	--	0.549	0.549
08	0.196	--	--	0.549	0.549
09	0.196	--	--	0.549	0.549
10	0.196	--	--	0.549	0.549
11	0.196	--	--	0.549	0.549
12	0.196	--	--	0.549	0.549
13	0.196	--	--	0.549	0.549
14	0.196	--	--	0.549	0.549
1 03 004 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
1 03 005 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
1 03 006 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
1 03 009 03	0.196	--	0.211	0.211	0.211
1 03 010 02	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UN'T EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 03 010 03	0.196	--	0.211	0.211	0.211
1 03 999 97	0.196	--	--	0.549	0.549
98	0.196	--	--	0.549	0.549
99	0.196	--	--	0.549	0.549
2 01 001 01	0.196	--	0.211	0.211	0.211
2 01 002 01	0.196	--	--	0.211	0.211
2 01 003 01	0.196	--	0.211	0.211	0.211
2 01 999 97	0.196	--	0.211	0.211	0.211
98	0.196	--	0.211	0.211	0.211
2 02 001 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
2 02 002 01	--	--	--	--	--
02	--	--	--	--	--
2 02 003 01	0.196	--	0.211	0.211	0.211
2 02 004 01	0.196	--	0.211	0.211	0.211
2 02 999 97	--	--	--	--	--
98	0.196	--	--	0.211	0.211
2 03 001 01	0.196	--	0.211	0.211	0.211
2 03 999 97	0.196	--	--	0.211	0.211
98	0.196	--	--	0.211	0.211
2 04 001 01	0.196	--	0.211	0.211	0.211
3 01 001 01	--	--	--	--	--

Table G-1 PRECISION OF UN'T EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 001 99	--	--	--	--	--
3 01 002 01	--	--	--	--	--
02	--	--	--	--	--
3 01 003 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 01 004 01	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 01 .005 01	0.196	--	0.211	0.211	0.211
02	--	--	--	--	--
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.211	0.211	0.211
05	0.196	--	0.211	0.211	0.211
99	0.196	--	--	0.211	0.211
3 01 006 01	0.196	--	0.211	0.211	0.211
99	0.196	--	0.211	0.211	0.211
3 01. 007 01	--	--	--	--	--
99	--	--	--	--	--
3 01 008 01	--	--	--	--	--
02	--	--	--	--	--

Table G-1 PRECISION OF UN'T EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	008	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	0.196	--	--	0.211	0.211
3	01	009	01	0.196	--	0.211	0.211	0.211
			10	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	01	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	01	011	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	0.196	--	0.211	0.211	0.211
			99	--	--	--	--	--
3	01	013	01	--	--	--	--	--
			02	--	--	--	--	--

Table G-1 PRECISION OF UN'T EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	013	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	01	014	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	01	015	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	016	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	017	01	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	017	99	0.196	--	--	0.211	0.211
3	01	018	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			05	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	01	019	03	--	--	--	--	--
3	01	020	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	0.196	--	0.211	0.211	0.211
			99	--	--	--	--	--
3	01	021	01	--	--	--	--	--
			02	0.196	--	0.211	0.211	0.211
			99	--	--	--	--	--
3	01	022	01	0.196	--	--	0.211	0.211
3	01	023	01	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			06	0.196	--	0.211	0.211	0.211
			08	0.196	--	0.211	0.211	0.211
			10	0.196	--	0.211	0.211	0.211
			12	0.196	--	0.211	0.211	0.211
			14	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	023	16	0.196	--	0.211	0.211	0.211
			18	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	01	024	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	--	0.211	0.211
			04	0.196	--	--	0.211	0.211
			05	0.196	--	--	0.211	0.211
			06	0.196	--	--	0.211	0.211
			08	0.196	--	--	0.211	0.211
			10	0.196	--	--	0.211	0.211
			12	0.196	--	--	0.211	0.211
			14	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	01	025	01	0.196	--	--	0.211	0.211
			05	0.196	--	--	0.211	0.211
			10	--	--	--	--	--
			99	0.196	--	--	0.211	0.211
3	01	026	01	0.196	--	--	0.211	0.211
			02	0.196	--	--	0.211	0.211
			03	0.196	--	--	0.211	0.211
			04	0.196	--	--	0.211	0.211
			05	0.196	--	--	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	026	06	0.196	--	--	0.211	0.211
			07	0.196	--	--	0.211	0.211
			08	0.196	--	--	0.211	0.211
			09	0.196	--	--	0.211	0.211
			20	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	01	027	01	--	--	--	--	--
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	--	--	--	--	--
			05	0.196	--	0.211	0.211	0.211
			06	0.196	--	0.211	0.211	0.211
3	01	028	01	0.196	--	0.211	0.211	0.211
			02	--	--	--	--	--
3	01	029	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	030	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	01	031	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	032	01	--	--	--	--	--
			02	--	--	--	--	--

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 032 03	--	--	--	--	--
99	--	--	--	--	--
3 01 033 01	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 01 034 01	0.196	--	--	0.211	0.211
3 01 035 01	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 01 036 01	0.196	--	--	0.211	0.211
02	0.196	--	--	0.211	0.211
3 01 037 01	0.196	--	--	0.211	0.211
02	0.196	--	--	0.211	0.211
3 01 038 01	0.196	--	--	0.211	0.211
3 01 039 01	0.196	--	--	0.211	0.211
3 01 040 01	0.196	--	--	0.211	0.211
3 01 050 01	0.196	--	--	0.211	0.211
3 01 090 99	0.196	--	--	0.211	0.211
3 01 091 01	--	--	--	--	--
3 01 100 01	0.196	--	--	0.211	0.211
3 01 101 01	0.196	--	--	0.211	0.211
3 01 110 01	--	--	--	--	--
3 01 900 99	--	--	--	--	--
3 01 999 99	0.196	--	--	0.211	0.211
3 02 001 01	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	001	99	0.196	--	--	0.211	0.211
3	02	002	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	02	003	01	0.196	--	0.211	0.211	0.211
3	02	004	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			99	0.196	--	0.211	0.211	0.211
3	02	005	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
3	02	006	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	02	007	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	007	05	0.196	--	0.211	0.211	0.211
			06	--	--	--	--	--
			30	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	02	008	01	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	02	009	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	--	--	--	--	--
			98	--	--	--	--	--
			99	0.196	--	--	0.211	0.211
3	02	010	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	--	--	--	--	--
			99	0.196	--	--	0.211	0.211
3	02	011	01	--	--	--	--	--
3	02	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	02	013	01	0.196	--	0.211	0.211	0.211
3	02	014	01	0.196	--	0.211	0.211	0.211
3	02	015	01	0.196	--	--	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 02 015 99	0.196	--	--	0.211	0.211
3 02 016 01	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 02 017 20	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 02 018 99	0.196	--	--	0.211	0.211
3 02 030 01	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 02 999 98	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 03 000 01	0.196	--	0.211	0.211	0.211
3 03 001 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.211	0.211	0.211
05	0.196	--	0.211	0.211	0.211
99	0.196	--	--	0.211	0.211
3 03 002 01	0.196	--	0.211	0.211	0.211
3 03 003 01	0.196	--	--	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.211	0.211	0.211
05	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	003	06	--	--	--	--	--
			99	0.196	--	--	0.211	0.211
3	03	004	01	0.196	--	0.211	0.211	0.211
3	03	005	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			06	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	03	006	01	0.196	--	0.211	0.549	0.211
			02	0.196	--	0.211	0.549	0.211
			03	0.196	--	0.549	0.549	0.549
			04	0.196	--	0.211	0.549	0.211
			05	0.196	--	0.211	0.549	0.211
			10	0.196	--	--	0.549	0.549
			11	--	--	--	--	--
			12	--	--	--	--	--
			99	0.196	--	--	0.549	0.549
3	03	007	01	0.196	--	0.211	0.211	0.211
			02	--	--	--	--	--
3	03	008	01	0.196	--	0.211	0.549	0.211
			02	0.196	--	0.549	0.549	0.549

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	008	03	0.196	--	0.549	0.549	0.549
			04	0.196	--	--	0.549	0.549
			05	0.196	--	0.211	0.549	0.211
			06	0.196	0.200	--	0.549	0.549
			07	--	--	--	--	--
			99	0.196	--	--	0.549	0.549
3	03	009	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	03	010	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	03	011	01	0.196	--	--	0.549	0.549
			02	0.196	--	--	0.549	0.549
			99	0.196	--	--	0.549	0.549
3	03	012	01	0.196	--	--	0.549	0.549
			99	0.196	--	--	0.549	0.549
3	03	013	01	0.196	--	--	0.549	0.549
3	03	014	01	0.196	--	--	0.549	0.549

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	014	02	0.196	--	--	0.549	0.549
			03	0.196	--	--	0.549	0.549
			99	0.196	--	--	0.549	0.549
3	03	030	01	0.196	--	--	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			06	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	03	999	99	0.196	--	--	0.549	0.549
3	04	001	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			10	0.196	--	--	0.211	0.211
			11	0.196	--	--	0.211	0.211
			20	0.196	--	--	0.211	0.211
			50	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	04	002	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	002	04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			06	0.196	--	0.211	0.211	0.211
3	04	002	99	0.196	--	--	0.211	0.211
3	04	003	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			05	0.196	--	--	0.211	0.211
			30	0.196	--	--	0.211	0.211
			40	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	04	004	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			08	--	--	--	--	--
			99	0.196	--	--	0.211	0.211
3	04	005	01	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	04	006	01	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	04	007	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	007	03	0.196	--	0.211	0.211	0.211
			04	--	--	--	--	--
			05	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	04	008	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			06	0.196	--	0.211	0.211	0.211
			07	--	--	--	--	--
			08	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	04	009	01	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	04	010	01	--	--	--	--	--
			99	0.196	--	--	0.211	0.211
3	04	011	01	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	04	020	01	0.196	--	--	0.211	0.211
			02	0.196	--	--	0.211	0.211
			03	0.196	--	--	0.211	0.211
			04	--	--	--	--	--

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 04 020 99	0.196	--	--	0.211	0.211
3 04 050 01	0.196	--	--	0.211	0.211
3 04 999 99	0.196	--	--	0.211	0.211
3 05 001 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.211	0.211	0.211
99	0.196	--	--	0.211	0.211
3 05 002 01	0.196	--	0.123	0.123	0.123
02	0.196	--	0.123	0.123	0.123
99	0.196	--	--	0.123	0.123
3 05 003 01	0.196	--	0.549	0.549	0.549
02	0.196	--	0.549	0.549	0.549
03	0.196	--	0.549	0.549	0.549
04	0.196	--	0.230	0.549	0.230
05	0.196	--	0.204	0.549	0.204
06	0.196	--	0.255	0.549	0.255
99	0.196	--	--	0.549	0.549
3 05 004 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
99	0.196	--	--	0.211	0.211
3 05 005 01	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 005 02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.211	0.211	0.211
05	0.196	--	0.211	0.211	0.211
99	0.196	--	--	0.211	0.211
3 05 006 01	0.196	--	0.206	0.549	0.206
02	0.196	--	0.549	0.549	0.549
03	0.196	--	0.207	0.549	0.207
04	0.196	--	0.207	0.549	0.207
05	0.196	--	0.207	0.549	0.207
99	0.196	--	0.211	0.549	0.211
3 05 007 01	0.196	--	0.236	0.549	0.236
02	0.196	--	0.549	0.549	0.549
03	0.196	--	0.236	0.549	0.236
04	0.196	--	0.236	0.549	0.236
05	0.196	--	0.236	0.549	0.236
99	0.196	--	--	0.549	0.549
3 05 008 01	0.196	--	0.0180	0.549	0.018
02	0.196	--	0.549	0.549	0.549
03	0.196	--	0.549	0.549	0.549
99	0.196	--	--	0.549	0.549
3 05 009 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	05	009	03	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	05	010	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	05	011	01	0.196	--	0.211	0.211	0.211
			20	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	05	012	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	05	013	01	0.196	--	0.211	0.211	0.211
			99	--	--	--	--	--
3	05	014	01	0.196	--	0.211	0.211	0.211
			10	0.196	--	--	0.211	0.211
			11	--	--	--	--	--
			12	--	--	--	--	--
			99	--	--	--	--	--
3	05	015	01	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	05	015	02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	05	016	01	0.196	--	0.549	0.549	0.549
			02	0.196	--	0.549	0.549	0.549
			03	0.196	--	0.549	0.549	0.549
			04	0.196	--	0.263	0.549	0.263
			99	0.196	--	--	0.549	0.549
3	05	017	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			99	--	--	--	--	--
3	05	018	01	0.196	--	0.211	0.211	0.211
			99	--	--	--	--	--
3	05	019	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	05	020	01	0.196	--	0.549	0.549	0.549

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 020 02	0.196	--	0.549	0.549	0.549
03	0.196	--	0.549	0.549	0.549
04	0.196	--	0.549	0.549	0.549
05	0.196	--	0.549	0.549	0.549
06	0.196	--	0.549	0.549	0.549
07	0.196	--	0.549	0.549	0.549
08	0.196	--	--	0.549	0.549
09	0.196	--	--	0.549	0.549
99	0.196	--	--	0.549	0.549
3 05 021 01	0.196	--	--	0.549	0.549
3 05 022 01	0.196	--	--	0.549	0.549
99	0.196	--	--	0.549	0.549
3 05 023 01	0.196	--	--	0.549	0.549
99	0.196	--	--	0.549	0.549
3 05 024 01	0.196	--	--	0.549	0.549
99	0.196	--	--	0.549	0.549
3 05 025 01	0.196	--	0.211	0.211	0.211
99	0.196	--	--	0.211	0.211
3 05 026 01	0.196	--	--	0.549	0.549
99	0.196	--	--	0.549	0.549
3 05 030 99	0.196	--	--	0.549	0.549
3 05 999 99	0.196	--	--	0.549	0.549
3 06 001 01	0.196	--	0.549	0.549	0.549

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 06 001 02	0.196	--	0.549	0.549	0.549
03	0.196	--	0.549	0.549	0.549
04	0.196	--	0.549	0.549	0.549
3 06 002 01	0.196	0.785	0.785	0.785	0.785
3 06 003 01	0.196	0.211	0.211	0.211	0.211
3 06 004 01	--	--	--	--	--
02	--	--	--	--	--
3 06 005 01	--	--	--	--	--
02	--	--	--	--	--
3 06 006 01	--	--	--	--	--
02	--	--	--	--	--
3 06 007 01	--	--	--	--	--
3 06 008 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
3 06 009 01	--	--	--	--	--
99	--	--	--	--	--
3 06 010 01	--	--	--	--	--
3 06 011 01	0.196	--	0.211	0.211	0.211
99	0.196	--	--	0.211	0.211
3 06 012 01	0.196	--	0.211	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	06	999	98	0.196	--	--	0.785	0.785
			99	0.196	--	--	0.785	0.785
3	07	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			06	0.196	--	0.211	0.211	0.211
			07	--	--	--	--	--
			08	0.196	--	0.211	0.211	0.211
			09	--	--	--	--	--
			99	0.196	--	--	0.211	0.211
3	07	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	0.196	--	--	0.211	0.211
			04	0.196	--	--	0.211	0.211
			05	--	--	--	--	--
			06	0.196	--	--	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	07	004	01	--	--	--	--	--
			02	0.196	--	0.211	0.211	0.211
			99	0.196	--	--	0.211	0.211
3	07	005	01	--	--	--	--	--

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 07 005 99	--	--	--	--	--
3 07 006 01	--	--	--	--	--
3 07 007 01	--	--	--	--	--
02	0.196	--	--	0.211	0.211
99	--	--	--	--	--
3 07 008 99	0.196	--	--	0.211	0.211
3 07 009 99	0.196	--	--	0.211	0.211
3 07 010 99	0.196	--	--	0.211	0.211
3 07 020 99	0.196	--	--	0.211	0.211
3 07 999 99	0.196	--	--	0.211	0.211
3 09 001 01	0.196	--	--	0.211	0.211
02	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 09 010 99	0.196	--	--	0.211	0.211
3 09 020 99	--	--	--	--	--
3 09 999 99	0.196	--	--	0.211	0.211
3 20 999 99	--	--	--	--	--
3 30 001 01	0.196	--	--	0.211	0.211
99	0.196	--	--	0.211	0.211
3 30 002 99	0.196	--	--	0.211	0.211
3 30 003 99	0.196	--	--	0.211	0.211
3 90 001 99	--	--	--	0.549	--
3 90 002 01	--	--	--	0.549	--

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	90	002	06	--	--	--	0.549	--
			07	--	--	--	0.549	--
			08	--	--	--	0.549	--
			99	--	--	--	0.549	--
3	90	004	01	--	--	--	0.549	--
			02	--	--	--	0.549	--
			03	--	--	--	0.549	--
			04	--	--	--	0.549	--
			05	--	--	--	0.549	--
			06	--	--	--	0.549	--
			07	--	--	--	0.549	--
			99	--	--	--	0.549	--
3	90	005	01	--	--	--	0.549	--
			02	--	--	--	0.549	--
			03	--	--	--	0.549	--
			04	--	--	--	0.549	--
			05	--	--	--	0.549	--
			06	--	--	--	0.549	--
			07	--	--	--	0.549	--
			99	--	--	--	0.549	--
3	90	006	01	--	--	--	0.549	--
			02	--	--	--	0.549	--
			03	--	--	--	0.549	--

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 90 006 04	--	--	--	0.549	--
05	--	--	--	0.549	--
06	--	--	--	0.549	--
07	--	--	--	0.549	--
99	--	--	--	0.549	--
3 90 007 99	--	--	--	0.549	--
3 90 008 99	--	--	--	0.549	--
3 90 009 99	--	--	--	0.549	--
3 90 999 97	--	--	--	0.549	--
98	--	--	--	0.549	--
99	--	--	--	0.549	--
3 99 999 99	--	--	--	--	--
4 01 001 01	--	--	--	--	--
02	--	--	--	--	--
4 01 002 01	--	--	--	--	--
99	--	--	--	--	--
4 01 999 99	0.196	--	--	0.211	0.211
4 02 001 01	0.196	--	0.211	0.211	0.211
4 02 003 01	0.196	--	0.211	0.211	0.211
4 02 004 01	0.196	--	0.211	0.211	0.211
4 02 005 01	0.196	--	0.211	0.211	0.211
4 02 006 01	0.196	--	0.211	0.211	0.211
4 02 999 99	0.196	--	--	0.211	0.211

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
4	03	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
4	03	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
4	03	999	99	--	--	--	--	--
4	04	001	99	--	--	--	--	--
4	05	001	01	--	--	--	--	--
4	90	999	99	--	--	--	--	--
5	01	001	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
5	01	002	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	--	0.211	0.211
5	01	005	05	0.196	--	0.211	0.211	0.211
			06	0.196	--	--	0.211	0.211
			07	0.196	--	0.211	0.211	0.211
			99	0.196	--	0.211	0.211	0.211
5	01	900	04	--	--	--	--	--
			05	--	--	--	--	--

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
5 01 900 06	--	--	--	--	--
10	--	--	--	--	--
97	--	--	--	--	--
98	--	--	--	--	--
99	--	--	--	--	--
5 02 001 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
03	0.196	--	0.211	0.211	0.211
04	0.196	--	0.211	0.211	0.211
05	0.196	--	0.211	0.211	0.211
5 02 002 01	0.196	--	0.211	0.211	0.211
5 02 003 01	0.196	--	0.211	0.211	0.211
02	0.196	--	0.211	0.211	0.211
5 02 005 05	0.196	--	0.211	0.211	0.211
06	0.196	--	--	0.211	0.211
99	0.196	--	0.211	0.211	0.211
5 02 900 04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
10	--	--	--	--	--
97	--	--	--	--	--
98	--	--	--	--	--
99	--	--	--	--	--

Table G-1 PRECISION OF UNIT EMISSION FACTORS FOR PARTICULATE MATTER

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
5	03	001	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
			04	0.196	--	0.211	0.211	0.211
			05	0.196	--	0.211	0.211	0.211
			06	0.196	--	0.211	0.211	0.211
5	03	002	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
			03	0.196	--	0.211	0.211	0.211
5	03	003	01	0.196	--	0.211	0.211	0.211
			02	0.196	--	0.211	0.211	0.211
5	03	004	01	0.196	--	--	0.211	0.211
5	03	005	06	0.196	--	--	0.211	0.211
			99	0.196	--	0.211	0.211	0.211
5	03	900	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS FOR SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	001	01	0.177	0.146	0.146	0.146	0.146
			02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
			04	0.177	0.146	0.146	0.146	0.146
			05	0.177	0.146	0.146	0.146	0.146
			06	0.177	0.146	0.146	0.146	0.146
			99	0.177	0.146	0.146	0.146	0.146
1	01	002	01	0.177	0.118	0.118	0.254	0.118
			02	0.177	0.105	0.105	0.254	0.105
			03	0.177	0.045	0.045	0.254	0.045
			04	0.177	0.254	0.254	0.254	0.254
			05	0.177	0.254	--	0.254	0.254
			06	0.177	0.118	0.118	0.254	0.118
			07	0.177	0.105	0.105	0.254	0.105
			08	0.177	0.254	0.254	0.254	0.254
			09	0.177	0.146	0.146	0.254	0.146
			10	0.177	0.254	0.254	0.254	0.254
			11	0.177	0.146	0.146	0.254	0.146
			12	0.177	0.105	0.105	0.254	0.105
			99	0.177	0.146	0.146	0.254	0.146
1	01	003	01	0.177	0.102	--	0.254	0.254
			02	0.177	0.102	--	0.254	0.254
			03	0.177	0.102	--	0.254	0.254

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	003	04	0.177	0.102	--	0.254	0.254
			05	0.177	0.102	--	0.254	0.254
			06	0.177	0.102	--	0.254	0.254
			07	0.177	0.102	--	0.254	0.254
			08	0.177	0.102	--	0.254	0.254
			09	0.177	0.102	--	0.254	0.254
			10	0.177	0.102	--	0.254	0.254
			11	0.107	0.102	--	0.254	0.254
			12	0.177	0.102	--	0.254	0.254
			13	0.177	0.102	--	0.254	0.254
			14	0.177	0.102	--	0.254	0.254
			15	0.177	0.102	--	0.254	0.254
1	01	004	01	0.177	0.027	0.027	0.027	0.027
			02	0.177	0.027	0.027	0.027	0.027
			03	0.177	0.027	0.027	0.027	0.027
1	01	005	01	0.177	0.146	0.146	0.146	0.146
			02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
1	01	006	01	0.177	0.146	0.146	0.146	0.146
			02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
1	01	007	01	0.177	0.051	--	0.146	0.146
			02	0.177	0.051	--	0.146	0.146

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	007	03	0.177	0.051	--	0.146	0.146
1	01	008	01	0.177	0.041	--	0.254	0.254
1	01	011	02	--	--	--	--	--
			03	--	--	--	--	--
1	01	012	01	0.177	0.118	--	0.254	0.254
			02	0.177	0.118	--	0.254	0.254
			03	0.177	0.118	--	0.254	0.254
1	01	999	97	0.177	0.254	--	0.254	0.254
			98	0.177	0.254	--	0.254	0.254
			99	0.177	0.254	--	0.254	0.254
1	02	001	01	0.177	0.146	0.146	0.146	0.146
			02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
			04	0.177	0.146	0.146	0.146	0.146
			05	0.177	0.146	0.146	0.146	0.146
			06	0.177	0.146	0.146	0.146	0.146
			07	0.177	0.146	0.146	0.146	0.146
			99	0.177	0.146	0.146	0.146	0.146
1	02	002	01	0.177	0.188	0.188	0.254	0.188
			02	0.177	0.105	0.105	0.254	0.105
			03	0.177	0.045	0.045	0.254	0.045
			04	0.177	0.254	0.254	0.254	0.254
			05	0.177	0.146	0.146	0.254	0.146

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	002	06	0.177	0.146	0.146	0.254	0.146
			07	0.177	0.188	0.188	0.254	0.188
			08	0.177	0.105	0.105	0.254	0.105
			09	0.177	0.254	0.254	0.254	0.254
			10	0.177	0.146	0.146	0.254	0.146
			11	0.177	0.146	0.146	0.254	0.146
			12	0.177	0.105	0.105	0.254	0.105
			13	0.177	0.254	0.254	0.254	0.254
			14	0.177	0.146	0.146	0.254	0.146
			99	0.177	0.146	0.146	0.254	0.146
1	02	003	01	0.177	0.102	--	0.254	0.254
			02	0.177	0.102	--	0.254	0.254
			03	0.177	0.102	--	0.254	0.254
			04	0.177	0.102	--	0.254	0.254
			05	0.177	0.102	--	0.254	0.254
			06	0.177	0.102	--	0.254	0.254
			07	0.177	0.102	--	0.254	0.254
			08	0.177	0.102	--	0.254	0.254
			09	0.177	0.102	--	0.254	0.254
			10	0.177	0.102	--	0.254	0.254
			11	0.177	0.102	--	0.254	0.254
			12	0.177	0.102	--	0.254	0.254

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	003	13	0.177	0.102	--	0.254	0.254
			14	0.177	0.102	--	0.254	0.254
			15	0.177	0.102	--	0.254	0.254
			16	0.177	0.102	--	0.254	0.254
1	02	004	01	0.177	0.027	0.027	0.027	0.027
			02	0.177	0.027	0.027	0.027	0.027
			03	0.177	0.027	0.027	0.027	0.027
1	02	005	01	0.177	0.146	0.146	0.146	0.146
			02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
1	02	006	01	0.177	0.146	0.146	0.146	0.146
			02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
1	02	007	01	0.177	0.051	--	0.146	0.146
			02	0.177	0.051	--	0.146	0.146
			03	0.177	0.051	--	0.146	0.146
1	02	008	02	0.177	0.041	--	0.254	0.254
			03	0.177	0.041	--	0.254	0.254
1	02	009	02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
1	02	010	02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	011	02	--	--	--	--	--
			03	--	--	--	--	--
1	02	999	97	0.177	0.254	--	0.254	0.254
			98	0.177	0.254	--	0.254	0.254
			99	0.177	0.254	--	0.254	0.254
1	03	001	05	0.177	0.146	0.146	0.146	0.146
			06	0.177	0.146	0.146	0.146	0.146
			07	0.177	0.146	--	0.146	0.146
			08	0.177	0.146	0.146	0.146	0.146
			09	0.177	0.146	0.146	0.146	0.146
			10	0.177	0.146	--	0.146	0.146
			99	0.177	0.146	0.146	0.146	0.146
1	03	002	05	0.177	0.188	0.188	0.254	0.188
			06	0.177	0.105	0.105	0.254	0.105
			07	0.177	0.146	0.146	0.254	0.146
			08	0.177	0.146	0.146	0.254	0.146
			09	0.177	0.254	0.254	0.254	0.254
			10	0.177	0.146	0.146	0.254	0.146
			11	0.177	0.146	0.146	0.254	0.146
			12	0.177	0.146	0.146	0.254	0.146
			13	0.177	0.254	0.254	0.254	0.254
			14	0.177	0.146	0.146	0.254	0.146

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	03	002	99	0.177	0.146	0.146	0.254	0.146
1	03	003	05	0.177	0.102	--	0.254	0.254
			06	0.177	0.102	--	0.254	0.254
			07	0.177	0.102	--	0.254	0.254
			08	0.177	0.102	--	0.254	0.254
			09	0.177	0.102	--	0.254	0.254
			10	0.177	0.102	--	0.254	0.254
			11	0.177	0.102	--	0.254	0.254
			12	0.177	0.102	--	0.254	0.254
			13	0.177	0.102	--	0.254	0.254
			14	0.177	0.102	--	0.254	0.254
1	03	004	01	0.177	0.027	0.027	0.027	0.027
			02	0.177	0.027	0.027	0.027	0.027
			03	0.177	0.027	0.027	0.027	0.027
1	03	005	01	0.177	0.146	0.146	0.146	0.146
			02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
1	03	006	01	0.177	0.146	0.146	0.146	0.146
			02	0.177	0.146	0.146	0.146	0.146
			03	0.177	0.146	0.146	0.146	0.146
1	03	009	03	0.177	0.146	0.146	0.146	0.146
1	03	010	02	0.177	0.146	0.146	0.146	0.146

TABLE G-2 PRECISION OF UN'T EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 03 010 03	0.177	0.146	0.146	0.146	0.146
1 03 999 97	0.177	0.254	--	0.254	0.254
98	0.177	0.254	--	0.254	0.254
99	0.177	0.254	--	0.254	0.254
2 01 001 01	0.177	0.146	0.146	0.146	0.146
2 01 002 01	0.177	0.146	0.146	0.146	0.146
2 01 003 01	0.177	0.146	0.146	0.146	0.146
2 01 999 97	0.177	0.146	0.146	0.146	0.146
98	0.177	0.146	0.146	0.146	0.146
2 02 001 01	0.177	0.146	0.146	0.146	0.146
02	0.177	0.146	0.146	0.146	0.146
2 02 002 01	0.177	0.146	0.146	0.146	0.146
02	0.177	0.146	0.146	0.146	0.146
2 02 003 01	0.177	0.146	0.146	0.146	0.146
2 02 004 01	0.177	0.146	0.146	0.146	0.146
2 02 999 97	0.177	0.146	--	0.146	0.146
98	0.177	0.146	--	0.146	0.146
2 03 001 01	0.177	0.146	0.146	0.146	0.146
2 03 999 97	0.177	0.146	--	0.146	0.146
98	0.177	0.146	--	0.146	0.146
2 04 001 01	0.177	0.146	0.146	0.146	0.146
3 01 001 01	--	--	--	--	--

TABLE G-2 PRECISION OF UN'T EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	001	99	--	--	--	--	--
3	01	002	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	003	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	004	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	005	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	006	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	007	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	008	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-2 PRECISION OF UN'T EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	008	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	009	01	--	--	--	--	--
			10	0.177	--	--	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	01	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	0.177	--	0.146	0.146	0.146
			04	0.177	--	0.146	0.146	0.146
			05	0.177	--	--	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	01	011	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	013	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	013	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	01	014	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	015	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	016	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	017	01	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	017	99	--	---	--	--	--
3	01	018	01	--	--	--	--	--
			02	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	019	03	--	--	--	--	--
3	01	020	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	021	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	022	01	0.177	--	--	0.146	0.146
3	01	023	01	0.177	--	0.146	0.146	0.146
			04	0.177	--	0.146	0.146	0.146
			06	0.177	--	0.146	0.146	0.146
			08	0.177	--	0.146	0.146	0.146
			10	0.177	--	0.146	0.146	0.146
			12	0.177	--	0.146	0.146	0.146
			14	0.177	--	0.146	0.146	0.146

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	023	16	0.177	--	0.146	0.146	0.146
			18	0.177	--	0.146	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	01	024	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			08	--	--	--	--	--
			10	--	--	--	--	--
			12	--	--	--	--	--
			14	--	--	--	--	--
			99	--	--	--	--	--
3	01	025	01	--	--	--	--	--
			05	--	--	--	--	--
			10	--	--	--	--	--
			99	--	--	--	--	--
3	01	026	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	026	06	--	--	--	--	--
			07	--	--	--	--	
			08	--	--	--	--	--
			09	--	--	--	--	--
			20	--	--	--	--	--
			99	--	--	--	--	--
3	01	027	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
3	01	028	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	029	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	030	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	031	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	032	01	0.177	--	0.146	0.146	0.146
			02	0.177	--	0.146	0.146	0.146

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 032 03	0.177	--	0.146	0.146	0.146
99	0.177	--	--	0.146	0.146
3 01 033 01	--	--	--	--	--
99	--	--	--	--	--
3 01 034 01	--	--	--	--	--
3 01 035 01	--	--	--	--	--
99	--	--	--	--	--
3 01 036 01	--	--	--	--	--
02	--	--	--	--	--
3 01 037 01	--	--	--	--	--
02	--	--	--	--	--
3 01 038 01	--	--	--	--	--
3 01 039 01	--	--	--	--	--
3 01 040 01	--	--	--	--	--
3 01 050 01	--	--	--	--	--
3 01 090 99	--	--	--	--	--
3 01 091 01	--	--	--	--	--
3 01 100 01	--	--	--	--	--
3 01 101 01	--	--	--	--	--
3 01 110 01	0.177	--	--	0.146	0.146
3 01 900 99	0.177	--	--	0.146	0.146
3 01 999 99	0.177	--	--	0.146	0.146
3 02 001 01	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 02 001 99	--	--	--	--	--
3 02 002 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 02 003 01	--	--	--	--	--
3 02 004 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 02 005 01	--	--	--	--	
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
3 02 006 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 02 007 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	007	05	--	--	--	--	--
			06	--	--	--	--	--
			30	--	--	--	--	--
			99	--	--	--	--	--
3	02	008	01	--	--	--	--	--
			99	--	--	--	--	--
3	02	009	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--
3	02	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	011	01	--	--	--	--	--
3	02	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	013	01	--	--	--	--	--
3	02	014	01	--	--	--	--	--
3	02	015	01	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	015	99	--	--	--	--	--
3	02	016	01	--	--	--	--	--
			99	--	--	--	--	--
3	02	017	20	--	--	--	--	--
			99	--	--	--	--	--
3	02	018	99	--	--	--	--	--
3	02	030	01	--	--	--	--	--
			99	--	--	--	--	--
3	02	999	98	--	--	--	--	--
			99	--	--	--	--	--
3	03	000	01	--	--	--	--	--
3	03	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	03	002	01	--	--	--	--	--
3	03	003	01	0.177	--	--	0.146	0.146
			02	0.177	--	0.146	0.146	0.146
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	003	06	0.177	--	0.146	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	03	004	01	--	--	--	--	--
3	03	005	01	0.177	--	0.146	0.220	0.146
			02	0.177	--	0.220	0.220	0.220
			03	0.177	--	0.209	0.220	0.209
			04	0.177	--	0.086	0.220	0.086
			05	--	--	--	--	--
			06	--	--	--	--	--
			99	0.177	--	--	0.220	0.220
3	03	006	01	--	--	--	--	---
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			10	--	--	--	--	--
			11	--	--	--	--	--
			12	--	--	--	--	--
			99	--	--	--	--	--
3	03	007	01	--	--	--	--	--
			02	--	--	--	--	--
3	03	008	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	008	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			99	--	--	--	--	--
3	03	009	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	03	010	01	0.177	--	0.146	0.146	0.146
			02	0.177	--	--	0.146	0.146
			03	0.177	--	--	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	03	011	01	--	--	--	--	
			02	--	--	--	--	--
			99	0.177	--	--	0.220	
3	03	012	01	--	--	--	--	--
			99	--	--	--	--	--
3	03	013	01	0.177	--	--	0.220	--
3	03	014	01	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	014	02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	03	030	01	0.177	--	--	0.146	0.146
			02	0.177	--	0.146	0.146	0.146
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			99	--	--	--	--	--
3	03	999	99	0.177	--	--	0.220	0.220
3	04	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			10	--	--	--	--	--
			11	--	--	--	--	--
			20	--	--	--	--	--
			50	--	--	--	--	--
			99	--	--	--	--	--
3	04	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	002	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
3	04	002	99	--	--	--	--	--
3	04	003	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			05	--	--	--	--	--
			30	--	--	--	--	--
			40	--	--	--	--	--
			99	--	--	--	--	--
3	04	004	01	--	--	--	---	--
			02	0.177	--	0.146	0.146	0.146
			03	0.177	--	0.146	0.146	0.146
			04	--	--	--	--	--
			08	0.177	--	--	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	04	005	01	0.177	--	--	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	04	006	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	007	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	007	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	04	008	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	04	009	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	010	01	0.177	--	--	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	04	011	01	--	--	--	--	--
			99	0.177	--	--	0.146	0.146
3	04	020	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 04 020 99	--	--	--	--	--
3 04 050 01	--	--	--	--	--
3 04 999 99	0.177	--	--	0.146	0.146
3 05 001 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 002 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 05 003 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	0.177	--	0.146	0.146	0.146
05	0.177	--	0.146	0.146	0.146
06	0.177	--	0.146	0.146	0.146
99	--	--	--	--	--
3 05 004 01	0.177	--	0.146	0.146	0.146
02	0.177	--	0.146	0.146	0.146
03	--	--	--	--	--
99	0.177	--	--	0.146	0.146
3 05 005 01	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	05	005	02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	05	006	01	0.177	--	0.146	0.146	0.146
			02	--	--	--	--	--
			03	0.177	--	0.146	0.146	0.146
			04	0.177	--	0.146	0.146	0.146
			05	0.177	--	0.146	0.146	0.146
			99	0.177	--	0.146	0.146	0.146
3	05	007	01	0.177	--	0.146	0.146	0.146
			02	--	--	--	--	--
			03	0.177	--	0.146	0.146	0.146
			04	0.177	--	0.146	0.146	0.146
			05	0.177	--	0.146	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	05	008	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	05	009	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 009 03	--	--	--	--	--
99	--	--	--	--	--
3 05 010 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 05 011 01	--	--	--	--	--
20	--	--	--	--	--
99	--	--	--	--	--
3 05 012 01	0.177	--	0.146	0.146	0.146
02	0.177	--	0.146	0.146	0.146
03	0.177	--	0.146	0.146	0.146
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 013 01	--	--	--	--	--
99	--	--	--	--	--
3 05 014 01	--	--	--	--	--
10	--	--	--	--	--
11	--	--	--	--	--
12	--	--	--	--	--
99	--	--	--	--	--
3 05 015 01	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 015 02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 016 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 017 01	0.177	--	0.146	0.146	0.146
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 018 01	--	--	--	--	--
99	--	--	--	--	--
3 05 019 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 020 01	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	05	020	02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			99	--	--	--	--	--
3	05	021	01	--	--	--	--	--
3	05	022	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	023	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	024	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	025	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	026	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	030	99	--	--	--	--	--
3	05	999	99	0.177	--	--	0.146	0.146
3	06	001	01	0.177	0.146	0.146	0.146	0.146

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 06 001 02	0.177	0.146	0.146	0.146	0.146
03	0.177	0.146	0.146	0.146	0.146
04	0.177	0.146	0.146	0.146	0.146
3 06 002 01	0.177	--	0.361	0.361	0.361
3 06 003 01	0.177	--	0.146	0.146	0.146
3 06 004 01	--	--	--	--	--
02	--	--	--	--	--
3 06 005 01	--	--	--	--	--
02	--	--	--	--	--
3 06 006 01	--	--	--	--	--
02	--	--	--	--	--
3 06 007 01	--	--	--	--	--
3 06 008 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
3 06 009 01	0.177	0.361	--	0.361	0.361
99	0.177	0.361	--	0.361	0.361
3 06 010 01	--	--	--	--	--
3 06 011 01	--	--	--	--	--
99	--	--	--	--	--
3 06 012 01	0.177	--	--	0.361	0.361

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emissio factor
3	06	999	98	0.177	--	--	0.361	0.361
			99	0.177	--	--	0.361	0.361
3	07	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	0.177	--	0.146	0.146	0.146
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			99	0.177	--	--	0.146	0.146
3	07	002	01	--	--	--	--	--
			02	0.177	--	--	0.146	0.146
			03	--	--	--	--	--
			04	0.177	--	--	0.146	0.146
			05	--	--	--	--	--
			06	0.177	--	--	0.146	0.146
			99	0.177	--	--	0.146	0.146
3	07	004	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	07	005	01	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 07 005 99	--	--	--	--	--
3 07 006 01	0.177	--	--	0.146	0.146
3 07 007 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 07 008 99	--	--	--	--	--
3 07 009 99	--	--	--	--	--
3 07 010 99	--	--	--	--	--
3 07 020 99	--	--	--	--	--
3 07 999 99	--	--	--	--	--
3 09 001 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 09 010 99	--	--	--	--	--
3 09 020 99	--	--	--	--	--
3 09 999 99	--	--	--	--	--
3 20 999 99	--	--	--	--	--
3 30 001 01	--	--	--	--	--
99	--	--	--	--	--
3 30 002 99	--	--	--	--	--
3 30 003 99	0.177	--	--	0.361	0.361
3 90 001 99	--	--	--	0.254	--
3 90 002 01	--	--	--	0.254	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	90	002	06	--	--	--	0.254	--
			07	--	--	--	0.254	--
			08	--	--	--	0.254	--
			99	--	--	--	0.254	--
3	90	004	01	--	--	--	0.254	--
			02	--	--	--	0.254	--
			03	--	--	--	0.254	--
			04	--	--	--	0.254	--
			05	--	--	--	0.254	--
			06	--	--	--	0.254	--
			07	--	--	--	0.254	--
			99	--	--	--	0.254	--
3	90	005	01	--	--	--	0.254	--
			02	--	--	--	0.254	--
			03	--	--	--	0.254	--
			04	--	--	--	0.254	--
			05	--	--	--	0.254	--
			06	--	--	--	0.254	--
			07	--	--	--	0.254	--
			99	--	--	--	0.254	--
3	90	006	01	--	--	--	0.254	--
			02	--	--	--	0.254	--
			03	--	--	--	0.254	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 90 006 04	--	--	--	0.254	--
05	--	--	--	0.254	--
06	--	--	--	0.254	--
07	--	--	--	0.254	--
99	--	--	--	0.254	--
3 90 007 99	--	--	--	0.254	--
3 90 008 99	--	--	--	0.254	--
3 90 009 99	--	--	--	0.254	--
3 90 999 97	--	--	--	0.254	--
98	--	--	--	0.254	--
99	--	--	--	0.254	--
3 99 999 99	--	--	--	--	--
4 01 001 01	--	--	--	--	--
02	--	--	--	--	--
4 01 002 01	--	--	--	--	--
99	--	--	--	--	--
4 01 999 99	--	--	--	--	--
4 02 001 01	--	--	--	--	--
4 02 003 01	--	--	--	--	--
4 02 004 01	--	--	--	--	--
4 02 005 01	--	--	--	--	--
4 02 006 01	--	--	--	--	--
4 02 999 99	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emissi facto
4	03	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
4	03	002	01	--	--	--	--	--
			02	--	--	--	--	
			03	--	--	--	--	--
			04	--	--	--	--	--
4	03	999	99	--	--	--	--	--
4	04	001	99	--	--	--	--	--
4	05	001	01	--	--	--	--	--
4	90	999	99	--	--	--	--	--
5	01	001	01	0.177	--	0.146	0.146	0.146
			02	0.177	--	0.146	0.146	0.146
5	01	002	01	0.177	--	0.146	0.146	0.146
			02	--	--	--	--	--
			03	0.177	0.156	--	0.146	0.146
5	01	005	05	--	--	--	--	--
			06	0.177	--	--	0.146	0.146
			07	0.177	--	0.146	0.146	0.146
			99	0.177	--	0.146	0.146	0.146
5	01	900	04	--	--	--	--	--
			05	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
5	01	900	06	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--
5	02	001	01	0.177	--	0.146	0.146	0.146
			02	0.177	--	0.146	0.146	0.146
			03	0.177	--	0.146	0.146	0.146
			04	0.177	--	0.146	0.146	0.146
			05	0.177	--	0.146	0.146	0.146
5	02	002	01	--	--	--	--	--
5	02	003	01	0.177	--	0.146	0.146	0.146
			02	0.177	--	0.146	0.146	0.146
5	02	005	05	--	--	--	--	--
			06	0.177	--	--	0.146	0.146
			99	0.177	--	0.146	0.146	0.146
5	02	900	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--

TABLE G-2 PRECISION OF UNIT EMISSION FACTORS SO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
5	03	001	01	0.177	--	0.146	0.146	0.146
			02	0.177	--	0.146	0.146	0.146
			03	0.177	--	0.146	0.146	0.146
			04	0.177	--	0.146	0.146	0.146
			05	0.177	--	0.146	0.146	0.146
			06	0.177	--	0.146	0.146	0.146
5	03	002	01	--	--	--	--	--
			02	0.177	--	0.146	0.146	0.146
			03	--	--	--	--	--
5	03	003	01	--	--	--	--	--
			02	--	--	--	--	--
5	03	004	01	0.177	--	--	0.146	0.146
5	03	005	06	0.177	--	--	0.146	0.146
			99	0.177	--	0.146	0.146	0.146
5	03	900	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	001	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
			03	0.134	--	0.172	0.172	0.172
			04	0.134	--	0.172	0.172	0.172
			05	0.134	--	0.172	0.172	0.172
			06	0.134	--	0.172	0.172	0.172
			99	0.134	--	0.172	0.172	0.172
1	01	002	01	0.134	--	0.057	0.700	0.057
			02	0.134	--	0.057	0.700	0.057
			03	0.134	--	0.467	0.700	0.467
			04	0.134	--	0.700	0.700	0.700
			05	0.134	--	--	0.700	0.700
			06	0.134	--	0.057	0.700	0.057
			07	0.134	--	0.057	0.700	0.057
			08	0.134	--	0.700	0.700	0.700
			09	0.134	--	0.172	0.700	0.172
			10	0.134	--	0.700	0.700	0.700
			11	0.134	--	0.172	0.700	0.172
			12	0.134	--	0.057	0.700	0.057
			99	0.134	--	0.172	0.700	0.172
1	01	003	01	0.134	--	--	0.700	0.700
			02	0.134	--	--	0.700	0.700
			03	0.134	--	--	0.700	0.700

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	003	04	0.134	--	--	0.700	0.700
			05	0.134	--	--	0.700	0.700
			06	0.134	--	--	0.700	0.700
			07	0.134	--	--	0.700	0.700
			08	0.134	--	--	0.700	0.700
			09	0.134	--	--	0.700	0.700
			10	0.134	--	--	0.700	0.700
			11	0.134	--	--	0.700	0.700
			12	0.134	--	--	0.700	0.700
			13	0.134	--	--	0.700	0.700
			14	0.134	--	--	0.700	0.700
			15	0.134	--	--	0.700	0.700
1	01	004	01	0.134	--	0.050	0.050	0.050
			02	0.134	--	0.050	0.050	0.050
			03	0.134	--	0.050	0.050	0.050
1	01	005	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
			03	0.134	--	0.172	0.172	0.172
1	01	006	01	0.134	--	0.048	0.048	0.048
			02	0.134	--	0.048	0.048	0.048
			03	0.134	--	0.048	0.048	0.048
1	01	007	01	0.134	--	--	0.048	0.048
			02	0.134	--	--	0.048	0.048

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	007	03	0.134	--	--	0.048	0.048
1	01	008	01	0.134	--	--	0.700	0.700
1	01	011	02	0.134	--	--	0.700	0.700
			03	0.134	--	--	0.700	0.700
1	01	012	01	0.134	--	--	0.700	0.700
			02	0.134	--	--	0.700	0.700
			03	0.134	--	--	0.700	0.700
1	01	999	97	0.134	--	--	0.700	0.700
			98	0.134	--	--	0.700	0.700
			99	0.134	--	--	0.700	0.700
1	02	001	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
			03	0.134	--	0.172	0.172	0.172
			04	0.134	--	0.172	0.172	0.172
			05	0.134	--	0.172	0.172	0.172
			06	0.134	--	0.172	0.172	0.172
			07	0.134	--	0.172	0.172	0.172
			99	0.134	--	0.172	0.172	0.172
1	02	002	01	0.134	--	0.057	0.700	0.057
			02	0.134	--	0.057	0.700	0.057
			03	0.134	--	0.467	0.700	0.467
			04	0.134	--	0.700	0.700	0.700
			05	0.134	--	0.172	0.700	0.172

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	002	06	0.134	--	0.172	0.700	0.172
			07	0.134	--	0.057	0.700	0.057
			08	0.134	--	0.057	0.700	0.057
			09	0.134	--	0.700	0.700	0.700
			10	0.134	--	0.172	0.700	0.172
			11	0.134	--	0.172	0.700	0.172
			12	0.134	--	0.057	0.700	0.057
			13	0.134	--	0.700	0.700	0.700
			14	0.134	--	0.172	0.700	0.172
			99	0.134	--	0.172	0.700	0.172
1	02	003	01	0.134	--	--	0.700	0.700
			02	0.134	--	--	0.700	0.700
			03	0.134	--	--	0.700	0.700
			04	0.134	--	--	0.700	0.700
			05	0.134	--	--	0.700	0.700
			06	0.134	--	--	0.700	0.700
			07	0.134	--	--	0.700	0.700
			08	0.134	--	--	0.700	0.700
			09	0.134	--	--	0.700	0.700
			10	0.134	--	--	0.700	0.700
			11	0.134	--	--	0.700	0.700
			12	0.134	--	--	0.700	0.700

TABLE G-3 PRECISION OF UN'T EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 02 003 13	0.134	--	--	0.700	0.700
14	0.134	--	--	0.700	0.700
15	0.134	--	--	0.700	0.700
16	0.134	--	--	0.700	0.700
1 02 004 01	0.134	--	0.003	0.003	0.003
02	0.134	--	0.003	0.003	0.003
03	0.134	--	0.003	0.003	0.003
1 02 005 01	0.134	--	0.172	0.172	0.172
02	0.134	--	0.172	0.172	0.172
03	0.134	--	0.172	0.172	0.172
1 02 006 01	0.134	--	0.391	0.391	0.391
02	0.134	--	0.391	0.391	0.391
03	0.134	--	0.391	0.391	0.391
1 02 007 01	0.134	--	--	0.391	0.391
02	0.134	--	--	0.391	0.391
03	0.134	--	--	0.391	0.391
1 02 008 02	0.134	--	--	0.700	0.700
03	0.134	--	--	0.700	0.700
1 02 009 02	0.134	--	0.172	0.172	0.172
03	0.134	--	0.172	0.172	0.172
1 02 010 02	0.134	--	0.172	0.172	0.172
03	0.134	--	0.172	0.172	0.172

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	011	02	0.134	--	--	0.700	0.700
			03	0.134	--	--	0.700	0.700
1	02	999	97	0.134	--	--	0.700	0.700
			98	0.134	--	--	0.700	0.700
			99	0.134	--	--	0.700	0.700
1	03	001	05	0.134	--	0.172	0.172	0.172
			06	0.134	--	0.172	0.172	0.172
			07	0.134	--	--	0.172	0.172
			08	0.134	--	0.172	0.172	0.172
			09	0.134	--	0.172	0.172	0.172
			10	0.134	--	--	0.172	0.172
			99	0.134	--	0.172	0.172	0.172
1	03	002	05	0.134	--	0.057	0.700	0.057
			06	0.134	--	0.057	0.700	0.057
			07	0.134	--	0.172	0.700	0.172
			08	0.134	--	0.172	0.700	0.172
			09	0.134	--	0.700	0.700	0.700
			10	0.134	--	0.172	0.700	0.172
			11	0.134	--	0.172	0.700	0.172
			12	0.134	--	0.172	0.700	0.172
			13	0.134	--	0.700	0.700	0.700
			14	0.134	--	0.172	0.700	0.172

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 03 002 99	0.134	--	0.172	0.700	0.172
1 03 003 05	0.134	--	--	0.700	0.700
06	0.134	--	--	0.700	0.700
07	0.134	--	--	0.700	0.700
08	0.134	--	--	0.700	0.700
09	0.134	--	--	0.700	0.700
10	0.134	--	--	0.700	0.700
11	0.134	--	--	0.700	0.700
12	0.134	--	--	0.700	0.700
13	0.134	--	--	0.700	0.700
14	0.134	--	--	0.700	0.700
1 03 004 01	0.134	--	0.003	0.003	0.003
02	0.134	--	0.003	0.003	0.003
03	0.134	--	0.003	0.003	0.003
1 03 005 01	0.134	--	0.172	0.172	0.172
02	0.134	--	0.172	0.172	0.172
03	0.134	--	0.172	0.172	0.172
1 03 006 01	0.134	--	0.187	0.187	0.187
02	0.134	--	0.187	0.187	0.187
03	0.134	--	0.187	0.187	0.187
1 03 009 03	0.134	--	0.172	0.172	0.172
1 03 010 02	0.134	--	0.172	0.172	0.172

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emissi factor
1 03 010 03	0.134	--	0.172	0.172	0.172
1 03 999 97	0.134	--	--	0.700	0.700
98	0.134	--	--	0.700	0.700
99	0.134	--	--	0.700	0.700
2 01 001 01	0.134	--	0.172	0.172	0.172
2 01 002 01	0.134	--	0.172	0.172	0.172
2 01 003 01	0.134	--	0.172	0.172	0.172
2 01 999 97	0.134	--	0.172	0.172	0.172
98	0.134	--	0.172	0.172	0.172
2 02 001 01	0.134	--	0.172	0.172	0.172
02	0.134	--	0.172	0.172	0.172
2 02 002 01	0.134	--	0.172	0.172	0.172
02	0.134	--	0.172	0.172	0.172
2 02 003 01	0.134	--	0.172	0.172	0.172
2 02 004 01	0.134	--	0.172	0.172	0.172
2 02 999 97	0.134	--	--	0.172	0.172
98	0.134	--	--	0.172	0.172
2 03 001 01	0.134	--	0.172	0.172	0.172
2 03 999 97	0.134	--	--	0.172	0.172
98	0.134	--	--	0.172	0.172
2 04 001 01	0.134	--	0.172	0.172	0.172
3 01 001 01	0.134	--	0.172	0.172	0.172

TABLE G-3 PRECISION OF UN'T EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 001 99	0.134	--	--	0.172	0.172
3 01 002 01	--	--	--	--	--
02	--	--	--	--	--
3 01 003 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 01 004 01	0.134	--	--	0.172	0.172
99	0.134	--	--	0.172	0.172
3 01 005 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 01 006 01	--	--	--	--	--
99	--	--	--	--	--
3 01 007 01	--	--	--	--	--
99	--	--	--	--	--
3 01 008 01	--	--	--	--	--
02	--	--	--	--	--

TABLE G-3 PRECISION OF UN`T EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	008	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	009	01	--	--	--	--	--
			10	0.134	--	--	0.172	0.172
			99	0.134	--	--	0.172	0.172
3	01	010	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
			03	--	--	--	--	--
			04	0.134	--	0.172	0.172	0.172
			05	0.134	--	--	0.172	0.172
			99	0.134	--	--	0.172	0.172
3	01	011	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	013	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	013	03	0.134	--	0.172	0.172	0.172
			04	0.134	--	0.172	0.172	0.172
			05	0.134	--	0.172	0.172	0.172
			06	0.134	--	0.172	0.172	0.172
			07	0.134	--	0.172	0.172	0.172
			08	--	--	--	--	--
			99	0.134	--	--	0.172	0.172
3	01	014	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	015	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	016	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	017	01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	017	99	--	--	--	--	--
3	01	018	01	--	--	--	--	--
			02	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	019	03	--	--	--	--	--
3	01	020	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	021	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	022	01	--	--	--	--	--
3	01	023	01	--	--	--	--	--
			04	--	--	--	--	--
			06	--	--	--	--	--
			08	--	--	--	--	--
			10	--	--	--	--	--
			12	--	--	--	--	--
			14	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 023 16	--	--	--	--	--
18	--	--	--	--	--
99	--	--	--	--	--
3 01 024 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
08	--	--	--	--	--
10	--	--	--	--	--
12	--	--	--	--	--
14	--	--	--	--	--
99	--	--	--	--	--
3 01 025 01	--	--	--	--	--
05	--	--	--	--	--
10	--	--	--	--	--
99	--	--	--	--	--
3 01 026 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	026	06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			20	--	--	--	--	--
			99	--	--	--	--	--
3	01	027	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	0.134	--	0.172	0.172	0.172
			06	0.134	--	0.172	0.172	0.172
3	01	028	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	029	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	030	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	031	01	0.134	--	0.172	0.172	0.172
			99	--	--	--	--	--
3	01	032	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 032 03	--	--	--	--	--
99	--	--	--	--	--
3 01 033 01	--	--	--	--	--
99	--	--	--	--	--
3 01 034 01	--	--	--	--	--
3 01 035 01	--	--	--	--	--
99	--	--	--	--	--
3 01 036 01	--	--	--	--	--
02	--	--	--	--	--
3 01 037 01	--	--	--	--	--
02	--	--	--	--	--
3 01 038 01	--	--	--	--	--
3 01 039 01	--	--	--	--	--
3 01 040 01	--	--	--	--	--
3 01 050 01	--	--	--	--	--
3 01 090 99	0.134	--	--	0.172	0.172
3 01 091 01	0.134	--	--	0.172	0.172
3 01 100 01	0.134	--	--	0.172	0.172
3 01 101 01	0.134	--	--	0.172	0.172
3 01 110 01	0.134	--	--	0.172	0.172
3 01 900 99	--	--	--	--	--
3 01 999 99	0.134	--	--	0.172	0.172
3 02 001 01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emissid factor
3 02 001 99	--	--	--	--	--
3 02 002 01	0.134	--	0.172	0.172	0.172
02	0.134	--	0.172	0.172	0.172
03	0.134	--	--	0.172	0.172
99	0.134	--	--	0.172	0.172
3 02 003 01	--	--	--	--	--
3 02 004 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 02 005 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
3 02 006 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 02 007 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	007	05	--	--	--	--	--
			06	--	--	--	--	--
			30	--	--	--	--	--
			99	--	--	--	--	--
3	02	008	01	--	--	--	--	--
			99	--	--	--	--	--
3	02	009	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--
3	02	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	011	01	--	--	--	--	--
3	02	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	013	01	--	--	--	--	--
3	02	014	01	--	--	--	--	--
3	02	015	01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 02 015 99	--	--	--	--	--
3 02 016 01	--	--	--	--	--
99	--	--	--	--	--
3 02 017 20	--	--	--	--	--
99	--	--	--	--	--
3 02 018 99	--	--	--	--	--
3 02 030 01	--	--	--	--	--
99	--	--	--	--	--
3 02 999 98	--	--	--	--	--
99	--	--	--	--	--
3 03 000 01	--	--	--	--	--
3 03 001 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 03 002 01	--	--	--	--	--
3 03 003 01	0.134	--	--	0.172	0.172
02	0.134	--	0.172	0.172	0.172
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 03 003 06	--	--	--	--	--
99	0.134	--	--	0.172	0.172
3 03 004 01	--	--	--	--	--
3 03 005 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
99	--	--	--	--	--
3 03 006 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
10	--	--	--	--	--
11	--	--	--	--	--
12	--	--	--	--	--
99	--	--	--	--	--
3 03 007 01	--	--	--	--	--
02	--	--	--	--	--
3 03 008 01	--	--	--	--	--
02	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	008	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			99	--	--	--	--	--
3	03	009	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	03	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	03	011	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	03	012	01	--	--	--	--	--
			99	--	--	--	--	--
3	03	013	01	0.134	--	--	0.172	0.172
3	03	014	01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 03 014 02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 03 030 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
99	--	--	--	--	--
3 03 999 99	--	--	--	--	--
3 04 001 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
10	--	--	--	--	--
11	--	--	--	--	--
20	--	--	--	--	--
50	--	--	--	--	--
99	--	--	--	--	--
3 04 002 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	002	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
3	04	002	99	--	--	--	--	--
3	04	003	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			05	--	--	--	--	--
			30	--	--	--	--	--
			40	--	--	--	--	--
			99	--	--	--	--	--
3	04	004	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	04	005	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	006	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	007	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 04 007 03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 04 008 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
07	--	--	--	--	--
08	--	--	--	--	--
99	--	--	--	--	--
3 04 009 01	--	--	--	--	--
99	--	--	--	--	--
3 04 010 01	--	--	--	--	--
99	--	--	--	--	--
3 04 011 01	--	--	--	--	--
99	--	--	--	--	--
3 04 020 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 04 020 99	--	--	--	--	--
3 04 050 01	--	--	--	--	--
3 04 999 99	--	--	--	--	--
3 05 001 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 002 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 05 003 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	0.134	--	0.172	0.172	0.172
05	0.134	--	0.172	0.172	0.172
06	0.134	--	0.172	0.172	0.172
99	--	--	--	--	--
3 05 004 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 05 005 01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	05	005	02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	0.134	--	--	0.172	0.172
			99	--	--	--	--	--
3	05	006	01	0.134	--	0.172	0.172	0.172
			02	--	--	--	--	--
			03	0.134	--	0.172	0.172	0.172
			04	0.134	--	0.172	0.172	0.172
			05	0.134	--	0.172	0.172	0.172
			99	0.134	--	0.172	0.172	0.172
3	05	007	01	0.134	--	0.172	0.172	0.172
			02	--	--	--	--	--
			03	0.134	--	0.172	0.172	0.172
			04	0.134	--	0.172	0.172	0.172
			05	0.134	--	0.172	0.172	0.172
			99	0.134	--	--	0.172	0.172
3	05	008	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	05	009	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 009 03	--	--	--	--	--
99	--	--	--	--	--
3 05 010 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 05 011 01	--	--	--	--	--
20	--	--	--	--	--
99	--	--	--	--	--
3 05 012 01	0.134	--	0.172	0.172	0.172
02	0.134	--	0.172	0.172	0.172
03	0.134	--	0.172	0.172	0.172
04	--	--	--	--	--
05	0.134	--	0.172	0.172	0.172
99	0.134	--	--	0.172	0.172
3 05 013 01	--	--	--	--	--
99	--	--	--	--	--
3 05 014 01	--	--	--	--	--
10	--	--	--	--	--
11	--	--	--	--	--
12	--	--	--	--	--
99	--	--	--	--	--
3 05 015 01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 015 02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 016 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 017 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 018 01	--	--	--	--	--
99	--	--	--	--	--
3 05 019 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 020 01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 020 02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
07	--	--	--	--	--
08	--	--	--	--	--
09	--	--	--	--	--
99	--	--	--	--	--
3 05 021 01	--	--	--	--	--
3 05 022 01	--	--	--	--	--
99	--	--	--	--	--
3 05 023 01	--	--	--	--	--
99	--	--	--	--	--
3 05 024 01	--	--	--	--	--
99	--	--	--	--	--
3 05 025 01	--	--	--	--	--
99	--	--	--	--	--
3 05 026 01	--	--	--	--	--
99	--	--	--	--	--
3 05 030 99	--	--	--	--	--
3 05 999 99	0.134	--	--	0.172	0.172
3 06 001 01	0.134	--	0.700	0.700	0.700

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	06	001	02	0.134	--	0.700	0.700	0.700
			03	0.134	--	0.700	0.700	0.700
			04	0.134	--	0.700	0.700	0.700
3	06	002	01	0.134	--	0.172	0.172	0.172
3	06	003	01	0.134	--	0.172	0.172	0.172
3	06	004	01	--	--	--	--	--
			02	--	--	--	--	--
3	06	005	01	--	--	--	--	--
			02	--	--	--	--	--
3	06	006	01	--	--	--	--	--
			02	--	--	--	--	--
3	06	007	01	--	--	--	--	--
3	06	008	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
3	06	009	01	--	--	--	--	--
			99	--	--	--	--	--
3	06	010	01	--	--	--	--	--
3	06	011	01	--	--	--	--	--
			99	--	--	--	--	--
3	06	012	01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	06	999	98	0.134	--	--	0.700	0.700
			99	--	--	--	--	--
3	07	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			99	--	--	--	--	--
3	07	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			99	--	--	--	--	--
3	07	004	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	07	005	01	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 07 005 99	--	--	--	--	--
3 07 006 01	--	--	--	--	--
3 07 007 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 07 008 99	--	--	--	--	--
3 07 009 99	--	--	--	--	--
3 07 010 99	--	--	--	--	--
3 07 020 99	--	--	--	--	--
3 07 999 99	--	--	--	--	--
3 09 001 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 09 010 99	--	--	--	--	--
3 09 020 99	--	--	--	--	--
3 09 999 99	--	--	--	--	--
3 20 999 99	--	--	--	--	--
3 30 001 01	--	--	--	--	--
99	--	--	--	--	--
3 30 002 99	--	--	--	--	--
3 30 003 99	--	--	--	--	--
3 90 001 99	--	--	--	0.700	--
3 90 002 01	--	--	--	0.700	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	90	002	06	--	--	--	0.700	--
			07	--	--	--	0.700	--
			08	--	--	--	0.700	--
			99	--	--	--	0.700	--
3	90	004	01	--	--	--	0.700	--
			02	--	--	--	0.700	--
			03	--	--	--	0.700	--
			04	--	--	--	0.700	--
			05	--	--	--	0.700	--
			06	--	--	--	0.700	--
			07	--	--	--	0.700	--
			99	--	--	--	0.700	--
3	90	005	01	--	--	--	0.700	--
			02	--	--	--	0.700	--
			03	--	--	--	0.700	--
			04	--	--	--	0.700	--
			05	--	--	--	0.700	--
			06	--	--	--	0.700	--
			07	--	--	--	0.700	--
			99	--	--	--	0.700	--
3	90	006	01	--	--	--	0.700	--
			02	--	--	--	0.700	--
			03	--	--	--	0.700	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 90 006 04	--	--	--	0.700	--
05	--	--	--	0.700	--
06	--	--	--	0.700	--
07	--	--	--	0.700	--
99	--	--	--	0.700	--
3 90 007 99	--	--	--	0.700	--
3 90 008 99	--	--	--	0.700	--
3 90 009 99	--	--	--	0.700	--
3 90 999 97	--	--	--	0.700	--
98	--	--	--	0.700	--
99	--	--	--	0.700	--
3 99 999 99	--	--	--	--	--
4 01 001 01	--	--	--	--	--
02	--	--	--	--	--
4 01 002 01	--	--	--	--	--
99	--	--	--	--	--
4 01 999 99	--	--	--	--	--
4 02 001 01	--	--	--	--	--
4 02 003 01	--	--	--	--	--
4 02 004 01	--	--	--	--	--
4 02 005 01	--	--	--	--	--
4 02 006 01	--	--	--	--	--
4 02 999 99	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
4	03	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
4	03	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
4	03	999	99	--	--	--	--	--
4	04	001	99	--	--	--	--	--
4	05	001	01	--	--	--	--	--
4	90	999	99	--	--	--	--	--
5	01	001	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
5	01	002	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
			03	0.134	--	--	0.172	0.172
5	01	005	05	0.134	--	0.172	0.172	0.172
			06	0.134	--	--	0.172	0.172
			07	0.134	--	0.172	0.172	0.172
			99	0.134	--	0.172	0.172	0.172
5	01	900	04	--	--	--	--	--
			05	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
5	01	900	06	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--
5	02	001	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
			03	0.134	--	0.172	0.172	0.172
			04	0.134	--	0.172	0.172	0.172
			05	0.134	--	0.172	0.172	0.172
5	02	002	01	0.134	--	0.172	0.172	0.172
5	02	003	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
5	02	005	05	0.134	--	0.172	0.172	0.172
			06	0.134	--	--	0.172	0.172
			99	0.134	--	0.172	0.172	0.172
5	02	900	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--

TABLE G-3 PRECISION OF UNIT EMISSION FACTORS NO_x

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
5	03	001	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
			03	0.134	--	0.172	0.172	0.172
			04	0.134	--	0.172	0.172	0.172
			05	0.134	--	0.172	0.172	0.172
			06	0.134	--	0.172	0.172	0.172
5	03	002	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
			03	0.134	--	0.172	0.172	0.172
5	03	003	01	0.134	--	0.172	0.172	0.172
			02	0.134	--	0.172	0.172	0.172
5	03	004	01	0.134	--	--	0.172	0.172
5	03	005	06	0.134	--	--	0.172	0.172
			99	0.134	--	0.172	0.172	0.172
5	03	900	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	001	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
			04	0.203	--	0.237	0.237	0.237
			05	0.203	--	0.237	0.237	0.237
			06	0.203	--	0.237	0.237	0.237
			99	0.203	--	0.237	0.237	0.237
1	01	002	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
			04	0.203	--	0.237	0.237	0.237
			05	0.203	--	--	0.237	0.237
			06	0.203	--	0.237	0.237	0.237
			07	0.203	--	0.237	0.237	0.237
			08	0.203	--	0.237	0.237	0.237
			09	0.203	--	0.237	0.237	0.237
			10	0.203	--	0.237	0.237	0.237
			11	0.203	--	0.237	0.237	0.237
			12	0.203	--	0.237	0.237	0.237
			99	0.203	--	0.237	0.237	0.237
1	01	003	01	0.203	--	--	0.237	0.237
			02	0.203	--	--	0.237	0.237
			03	0.203	--	--	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	003	04	0.203	--	--	0.237	0.237
			05	0.203	--	--	0.237	0.237
			06	0.203	--	--	0.237	0.237
			07	0.203	--	--	0.237	0.237
			08	0.203	--	--	0.237	0.237
			09	0.203	--	--	0.237	0.237
			10	0.203	--	--	0.237	0.237
			11	0.203	--	--	0.237	0.237
			12	0.203	--	--	0.237	0.237
			13	0.203	--	--	0.237	0.237
			14	0.203	--	--	0.237	0.237
			15	0.203	--	--	0.237	0.237
1	01	004	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
1	01	005	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
1	01	006	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
1	01	007	01	0.203	--	--	0.237	0.237
			02	0.203	--	--	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 01 007 03	0.203	--	--	0.237	0.237
1 01 008 01	0.203	--	--	0.237	0.237
1 01 011 02	0.203	--	--	0.237	0.237
03	0.203	--	--	0.237	0.237
1 01 012 01	0.203	--	--	0.237	0.237
02	0.203	--	--	0.237	0.237
03	0.203	--	--	0.237	0.237
1 01 999 97	0.203	--	--	0.237	0.237
98	0.203	--	--	0.237	0.237
99	0.203	--	--	0.237	0.237
1 02 001 01	0.203	--	0.237	0.237	0.237
02	0.203	--	0.237	0.237	0.237
03	0.203	--	0.237	0.237	0.237
04	0.203	--	0.237	0.237	0.237
05	0.203	--	0.237	0.237	0.237
06	0.203	--	0.237	0.237	0.237
07	0.203	--	0.237	0.237	0.237
99	0.203	--	0.237	0.237	0.237
1 02 002 01	0.203	--	0.237	0.237	0.237
02	0.203	--	0.237	0.237	0.237
03	0.203	--	0.237	0.237	0.237
04	0.203	--	0.237	0.237	0.237
05	0.203	--	0.237	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	002	06	0.203	--	0.237	0.237	0.237
			07	0.203	--	0.237	0.237	0.237
			08	0.203	--	0.237	0.237	0.237
			09	0.203	--	0.237	0.237	0.237
			10	0.203	--	0.237	0.237	0.237
			11	0.203	--	0.237	0.237	0.237
			12	0.203	--	0.237	0.237	0.237
			13	0.203	--	0.237	0.237	0.237
			14	0.203	--	0.237	0.237	0.237
			99	0.203	--	0.237	0.237	0.237
1	02	003	01	0.203	--	--	0.237	0.237
			02	0.203	--	--	0.237	0.237
			03	0.203	--	--	0.237	0.237
			04	0.203	--	--	0.237	0.237
			05	0.203	--	--	0.237	0.237
			06	0.203	--	--	0.237	0.237
			07	0.203	--	--	0.237	0.237
			08	0.203	--	--	0.237	0.237
			09	0.203	--	--	0.237	0.237
			10	0.203	--	--	0.237	0.237
			11	0.203	--	--	0.237	0.237
			12	0.203	--	--	0.237	0.237

TABLE G-4 PRECISION OF UN'T EMISSION FACTORS **FOR HC**

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	003	13	0.203	--	--	0.237	0.237
			14	0.203	--	--	0.237	0.237
			15	0.203	--	--	0.237	0.237
			16	0.203	--	--	0.237	0.237
1	02	004	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
1	02	005	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
1	02	006	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
1	02	007	01	0.203	--	--	0.237	0.237
			02	0.203	--	--	0.237	0.237
			03	0.203	--	--	0.237	0.237
1	02	008	02	0.203	--	--	0.237	0.237
			03	0.203	--	--	0.237	0.237
1	02	009	02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
1	02	010	02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	011	02	0.203	--	--	0.237	0.237
			03	0.203	--	--	0.237	0.237
1	02	999	97	0.203	--	--	0.237	0.237
			98	0.203	--	--	0.237	0.237
			99	0.203	--	--	0.237	0.237
1	03	001	05	0.203	--	0.237	0.237	0.237
			06	0.203	--	0.237	0.237	0.237
			07	0.203	--	--	0.237	0.237
			08	0.203	--	0.237	0.237	0.237
			09	0.203	--	0.237	0.237	0.237
			10	0.203	--	--	0.237	0.237
			99	0.203	--	0.237	0.237	0.237
1	03	002	05	0.203	--	0.237	0.237	0.237
			06	0.203	--	0.237	0.237	0.237
			07	0.203	--	0.237	0.237	0.237
			08	0.203	--	0.237	0.237	0.237
			09	0.203	--	0.237	0.237	0.237
			10	0.203	--	0.237	0.237	0.237
			11	0.203	--	0.237	0.237	0.237
			12	0.203	--	0.237	0.237	0.237
			13	0.203	--	0.237	0.237	0.237
			14	0.203	--	0.237	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 03 002 99	0.203	--	0.237	0.237	0.237
1 03 003 05	0.203	--	--	0.237	0.237
06	0.203	--	--	0.237	0.237
07	0.203	--	--	0.237	0.237
08	0.203	--	--	0.237	0.237
09	0.203	--	--	0.237	0.237
10	0.203	--	--	0.237	0.237
11	0.203	--	--	0.237	0.237
12	0.203	--	--	0.237	0.237
13	0.203	--	--	0.237	0.237
14	0.203	--	--	0.237	0.237
1 03 004 01	0.203	--	0.237	0.237	0.237
02	0.203	--	0.237	0.237	0.237
03	0.203	--	0.237	0.237	0.237
1 03 005 01	0.203	--	0.237	0.237	0.237
02	0.203	--	0.237	0.237	0.237
03	0.203	--	0.237	0.237	0.237
1 03 006 01	0.203	--	0.237	0.237	0.237
02	0.203	--	0.237	0.237	0.237
03	0.203	--	0.237	0.237	0.237
1 03 009 03	0.203	--	0.237	0.237	0.237
1 03 010 02	0,203	--	0.237	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 03 010 03	0.203	--	0.237	0.237	0.237
1 03 999 97	0.203	--	--	0.237	0.237
98	0.203	--	--	0.237	0.237
99	0.203	--	--	0.237	0.237
2 01 001 01	--	--	--	--	--
2 01 002 01	--	--	--	--	--
2 01 003 01	0.203	--	0.237	0.237	0.237
2 01 999 97	--	--	--	--	--
98	0.203	0.237	0.237	0.237	0.237
2 02 001 01	--	--	--	--	--
02	0.203	--	0.237	0.237	0.237
2 02 002 01	--	--	--	--	--
02	0.203	--	0.237	0.237	0.237
2 02 003 01	0.203	--	0.237	0.237	0.237
2 02 004 01	0.203	--	0.237	0.237	0.237
2 02 999 97	--	--	--	--	--
98	0.203	--	--	0.237	0.237
2 03 001 01	0.203	--	0.237	0.237	0.237
2 03 999 97	--	--	--	--	--
98	0.203	--	--	0.237	0.237
2 04 001 01	0.203	--	0.237	0.237	0.237
3 01 001 01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	001	99	--	--	--	--	--
3	01	002	01	0.203	--	0.237	0.237	0.237
			02	--	--	--	--	--
3	01	003	01	--	--	--	--	--
			02	0.203	--	0.237	0.237	0.237
			03	--	--	--	--	--
			99	0.203	--	--	0.237	0.237
3	01	004	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	005	01	0.203	--	0.921	0.921	0.921
			02	--	--	--	--	--
			03	0.203	--	0.237	0.237	0.237
			04	0.203	--	0.237	0.237	0.237
			05	0.203	--	--	0.237	0.237
			99	0.203	--	--	0.237	0.237
3	01	006	01	0.203	--	0.237	0.237	0.237
			99	0.203	--	0.237	0.237	0.237
3	01	007	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	008	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-4 PRECISION OF UN'T EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	008	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	009	01	--	--	--	--	--
			10	0.203	--	--	0.921	0.921
			99	0.203	--	--	0.921	0.921
3	01	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	0.203	--	--	0.921	0.921
			99	--	--	--	--	--
3	01	011	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	013	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	013	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	01	014	01	0.203	--	0.237	0.237	0.237
			02	--	--	--	--	--
			99	0.203	--	--	0.237	0.237
3	01	015	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
			05	0.203	--	0.237	0.237	0.237
			99	0.203	--	--	0.237	0.237
3	01	016	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	017	01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	017	99	--	--	--	--	--
3	01	018	01	--	--	--	--	--
			02	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	019	03	0.203	--	0.237	0.237	0.237
3	01	020	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
			04	0.203	--	0.237	0.237	0.237
			05	--	--	--	--	--
			99	0.203	--	--	0.237	0.237
3	01	021	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	022	01	--	--	--	--	--
3	01	023	01	--	--	--	--	--
			04	--	--	--	--	--
			06	--	--	--	--	--
			08	--	--	--	--	--
			10	--	--	--	--	--
			12	--	--	--	--	--
			14	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	023	16	--	--	--	--	--
			18	--	--	--	--	--
			99	--	--	--	--	--
3	01	024	01	0.203	--	0.237	0.237	0.237
			02	--	--	--	--	--
			03	0.203	--	--	0.237	0.237
			04	0.203	--	--	0.237	0.237
			05	0.203	--	--	0.237	0.237
			06	0.203	--	--	0.237	0.237
			08	0.203	--	--	0.237	0.237
			10	0.203	--	--	0.237	0.237
			12	0.203	--	--	0.237	0.237
			14	0.203	--	--	0.237	0.237
			99	0.203	--	--	0.237	0.237
3	01	025	01	--	--	--	--	--
			05	0.203	--	--	0.921	0.921
			10	--	--	--	--	--
			99	0.203	--	--	0.921	0.921
3	01	026	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
			04	0.203	--	0.237	0.237	0.237
			05	0.203	--	0.237	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	026	06	0.203	--	0.237	0.237	0.237
			07	0.203	--	0.237	0.237	0.237
			08	0.203	--	0.237	0.237	0.237
			09	0.203	--	0.237	0.237	0.237
			20	0.203	--	--	0.237	0.237
			99	0.203	--	--	0.237	0.237
3	01	027	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
3	01	028	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	029	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	030	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	031	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	032	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 032 03	--	--	--	--	--
99	--	--	--	--	--
3 01 033 01	0.203	--	--	0.921	0.921
99	0.203	--	--	0.921	0.921
3 01 034 01	--	--	--	--	--
3 01 035 01	--	--	--	--	--
99	--	--	--	--	--
3 01 036 01	--	--	--	--	--
02	--	--	--	--	--
3 01 037 01	--	--	--	--	--
02	--	--	--	--	--
3 01 038 01	--	--	--	--	--
3 01 039 01	--	--	--	--	--
3 01 040 01	--	--	--	--	--
3 01 050 01	0.203	--	--	0.921	0.921
3 01 090 99	--	--	--	--	--
3 01 091 01	0.203	--	--	0.921	0.921
3 01 100 01	0.203	--	--	0.921	0.921
3 01 101 01	--	--	--	--	--
3 01 110 01	--	--	--	--	--
3 01 900 99	--	--	--	--	--
3 01 99 99	0.203	--	--	0.921	0.921
3 02 001 01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	001	99	--	--	--	--	--
3	02	002	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	--	0.237	0.237
			99	0.203	--	--	0.237	0.237
3	02	003	01	--	--	--	--	--
3	02	004	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	005	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
3	02	006	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			99	--	--	--	--	--
3	02	007	01	0.203	--	--	0.237	0.237
			02	0.203	--	--	0.237	0.237
			03	--	--	--	--	--
			04	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	007	05	--	--	--	--	--
			06	--	--	--	--	--
			30	--	--	--	--	--
			99	0.203	--	0.237	0.237	0.237
3	02	008	01	--	--	--	--	--
			99	0.203	--	--	0.237	0.237
3	02	009	01	--	--	--	--	--
			02	0.203	--	--	0.237	0.237
			03	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--
3	02	010	01	--	--	--	--	--
			02	0.203	--	--	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
			99	0.203	--	--	0.237	0.237
3	02	011	01	--	--	--	--	--
3	02	012	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	013	01	0.203	--	0.237	0.237	0.237
3	02	014	01	--	--	--	--	--
3	02	015	01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 02 015 99	--	--	--	--	--
3 02 016 01	--	--	--	--	--
99	--	--	--	--	--
3 02 017 20	0.203	--	--	0.237	0.237
99	0.203	--	--	0.237	0.237
3 02 018 99	--	--	--	--	--
3 02 030 01	--	--	--	--	--
99	--	--	--	--	--
3 02 999 98	0.203	--	--	0.237	0.237
99	0.203	--	--	0.237	0.237
3 03 000 01	--	--	--	--	--
3 03 001 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 03 002 01	--	--	--	--	--
3 03 003 01	0.203	--	--	0.237	0.237
02	0.203	--	0.237	0.237	0.237
03	0.203	--	0.237	0.237	0.237
04	--	--	--	--	--
05	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 03 003 06	--	--	--	--	--
99	0.203	--	--	0.237	0.237
3 03 004 01	0.203	--	0.237	0.237	0.237
3 03 005 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
99	--	--	--	--	--
3 03 006 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
10	--	--	--	--	--
11	--	--	--	--	--
12	--	--	--	--	--
99	--	--	--	--	--
3 03 007 01	--	--	--	--	--
02	--	--	--	--	--
3 03 008 01	--	--	--	--	--
02	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	008	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			99	0.203	--	--	0.237	0.237
3	03	009	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	03	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	03	011	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	03	012	01	--	--	--	--	--
			99	--	--	--	--	--
3	03	013	01	--	--	--	--	--
3	03	014	01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 03 014 02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 03 030 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
99	--	--	--	--	--
3 03 999 99	--	--	--	--	--
3 04 001 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
10	--	--	--	--	--
11	--	--	--	--	--
20	0.203	--	--	0.237	0.237
50	--	--	--	--	--
99	0.203	--	--	0.237	0.237
3 04 002 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	002	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
3	04	002	99	--	--	--	--	--
3	04	003	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			05	--	--	--	--	--
			30	--	--	--	--	--
			40	--	--	--	--	--
			99	0.203	--	--	0.237	0.237
3	04	004	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	04	005	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	006	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	007	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	007	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	04	008	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	04	009	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	010	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	011	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	020	01	--	--	--	--	--
			02	0.203	--	--	0.237	0.237
			03	--	--	--	--	--
			04	0.203	--	--	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	020	99	0.203	--	--	0.237	0.237
3	04	050	01	--	--	--	--	--
3	04	999	99	--	--	--	--	--
3	05	001	01	0.203	--	0.237	0.237	0.237
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			99	--	--	--	--	--
3	05	002	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	05	003	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	0.203	--	0.237	0.237	0.237
			05	0.203	--	0.237	0.237	0.237
			06	0.203	--	0.237	0.237	0.237
			99	--	--	--	--	--
3	05	004	01	--	--	--	--	--
			02	--	--	--	--	--
			03	0.203	--	0.237	0.237	0.237
			99	--	--	--	--	--
3	05	005	01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 005 02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 006 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 007 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 008 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 05 009 01	--	--	--	--	--
02	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 009 03	--	--	--	--	--
99	--	--	--	--	--
3 05 010 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 05 011 01	--	--	--	--	--
20	--	--	--	--	--
99	--	--	--	--	--
3 05 012 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 013 01	--	--	--	--	--
99	--	--	--	--	--
3 05 014 01	--	--	--	--	--
10	--	--	--	--	--
11	--	--	--	--	--
12	--	--	--	--	--
99	--	--	--	--	--
3 05 015 01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 015 02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 016 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 017 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 018 01	--	--	--	--	--
99	--	--	--	--	--
3 05 019 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 020 01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	05	020	02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			99	--	--	--	--	--
3	05	021	01	--	--	--	--	--
3	05	022	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	023	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	024	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	025	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	026	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	030	99	--	--	--	--	--
3	05	999	99	0.203	--	--	0.237	0.237
3	06	001	01	0.203	--	0.237	0.237	0.237

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 06 001 02	0.203	--	0.237	0.237	0.237
03	0.203	--	0.237	0.237	0.237
04	0.203	--	0.237	0.237	0.237
3 06 002 01	0.203	--	0.237	0.237	0.237
3 06 003 01	0.203	--	0.237	0.237	0.237
3 06 004 01	0.203	--	0.237	0.237	0.237
02	0.203	--	0.237	0.237	0.237
3 06 005 01	0.203	--	0.237	0.237	0.237
02	0.203	--	0.237	0.237	0.237
3 06 006 01	--	--	--	--	--
02	0.203	--	0.237	0.237	0.237
3 06 007 01	0.203	--	0.237	0.237	0.237
3 06 008 01	0.203	--	0.237	0.237	0.237
02	0.203	--	0.237	0.237	0.237
03	0.203	--	0.237	0.237	0.237
04	0.203	--	0.237	0.237	0.237
05	0.203	--	0.237	0.237	0.237
3 06 009 01	--	--	--	--	--
99	--	--	--	--	--
3 06 010 01	0.203	--	--	0.237	0.237
3 06 011 01	0.203	--	0.237	0.237	0.237
99	0.203	--	--	0.237	0.237
3 06 012 01	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	06	999	98	0.203	--	--	0.237	0.237
			99	0.203	--	--	0.237	0.237
3	07	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			99	--	--	--	--	--
3	07	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			99	--	--	--	--	--
3	07	004	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	07	005	01	0.203	--	--	0.237	0.237

TABLE G-4 . PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 07 005 99	0.203	--	--	0.237	0.237
3 07 006 01	0.203	--	--	0.237	0.237
3 07 007 01	0.203	--	--	0.237	0.237
02	--	--	--	--	--
99	--	--	--	--	--
3 07 008 99	--	--	--	--	--
3 07 009 99	--	--	--	--	--
3 07 010 99	--	--	--	--	--
3 07 020 99	0.203	--	--	0.237	0.237
3 07 999 99	0.203	--	--	0.237	0.237
3 09 001 01	0.203	--	--	0.237	0.237
02	0.203	--	--	0.237	0.237
99	0.203	--	--	0.237	0.237
3 09 010 99	--	--	--	--	--
3 09 020 99	0.203	--	--	0.237	0.237
3 09 999 99	0.203	--	--	0.237	0.237
3 20 999 99	--	--	--	--	--
3 30 001 01	--	--	--	--	--
99	--	--	--	--	--
3 30 002 99	0.203	--	--	0.921	0.921
3 30 003 99	0.203	--	--	0.921	0.921
3 90 001 99	--	--	--	0.237	--
3 90 002 01	--	--	--	0.237	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	90	002	06	--	--	--	0.237	--
			07	--	--	--	0.237	--
			08	--	--	--	0.237	--
			99	--	--	--	0.237	--
3	90	004	01	--	--	--	0.237	--
			02	--	--	--	0.237	--
			03	--	--	--	0.237	--
			04	--	--	--	0.237	--
			05	--	--	--	0.237	--
			06	--	--	--	0.237	--
			07	--	--	--	0.237	--
			99	--	--	--	0.237	--
3	90	005	01	--	--	--	0.237	--
			02	--	--	--	0.237	--
			03	--	--	--	0.237	--
			04	--	--	--	0.237	--
			05	--	--	--	0.237	--
			06	--	--	--	0.237	--
			07	--	--	--	0.237	--
			99	--	--	--	0.237	--
3	90	006	01	--	--	--	0.237	--
			02	--	--	--	0.237	--
			03	--	--	--	0.237	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 90 006 04	--	--	--	0.237	--
05	--	--	--	0.237	--
06	--	--	--	0.237	--
07	--	--	--	0.237	--
99	--	--	--	0.237	--
3 90 007 99	--	--	--	0.237	--
3 90 008 99	--	--	--	0.237	--
3 90 009 99	--	--	--	0.237	--
3 90 999 97	--	--	--	0.237	--
98	--	--	--	0.237	--
99	--	--	--	0.237	--
3 99 999 99	--	--	--	0.237	--
4 01 001 01	0.203	0.237	0.237	0.237	0.237
02	0.203	0.237	0.237	0.237	0.237
4 01 002 01	0.203	0.000	--	0.237	0.237
99	0.203	0.000	--	0.237	0.237
4 01 999 99	0.203	0.000	--	0.237	0.237
4 02 001 01	0.203	0.921	0.921	0.921	0.921
4 02 003 01	0.203	0.237	0.237	0.237	0.237
4 02 004 01	0.203	0.237	0.237	0.237	0.237
4 02 005 01	0.203	0.237	0.237	0.237	0.237
4 02 006 01	0.203	0.237	0.237	0.237	0.237
4 02 999 99	0.203	0.921	--	0.921	0.921

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
4	03	001	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
			04	0.203	--	0.237	0.237	0.237
4	03	002	01	0.203	--	0.164	0.310	0.164
			02	--	--	--	--	--
			03	0.203	--	0.310	0.310	0.310
			04	--	--	--	--	--
4	03	999	99	0.203	--	--	0.310	0.310
4	04	001	99	0.203	--	--	0.921	0.921
4	05	001	01	0.203	0.000	--	0.921	0.921
4	90	999	99	0.203	--	--	0.921	0.921
5	01	001	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
5	01	002	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	--	0.237	0.237
5	01	005	05	--	--	--	--	--
			06	0.203	--	--	0.237	0.237
			07	0.203	--	0.237	0.237	0.237
			99	0.203	--	0.237	0.237	0.237
5	01	900	04	--	--	--	--	--
			05	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
5	01	900	06	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--
5	02	001	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	--	--	--	--	--
			04	0.203	--	0.237	0.237	0.237
			05	0.203	--	0.237	0.237	0.237
5	02	002	01	0.203	--	0.237	0.237	0.237
5	02	003	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
5	02	005	05	--	--	--	--	--
			06	0.203	--	--	0.237	0.237
			99	0.203	--	0.237	0.237	0.237
5	02	900	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--

TABLE G-4 PRECISION OF UNIT EMISSION FACTORS FOR HC

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
5	03	001	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	--	--	--	--	--
			04	0.203	--	0.237	0.237	0.237
			05	0.203	--	0.237	0.237	0.237
			06	--	--	--	--	--
5	03	002	01	0.203	--	0.237	0.237	0.237
			02	0.203	--	0.237	0.237	0.237
			03	0.203	--	0.237	0.237	0.237
5	03	003	01	0.203	--	0.237	0.237	0.237
			02	--	--	--	--	--
5	03	004	01	0.203	--	--	0.237	0.237
5	03	005	06	0.203	--	--	0.237	0.237
			99	0.203	--	0.237	0.237	0.237
5	03	900	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	001	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
			03	0.321	--	0.357	0.357	0.357
			04	0.321	--	0.357	0.357	0.357
			05	0.321	--	0.357	0.357	0.357
			06	0.321	--	0.357	0.357	0.357
			99	0.321	--	0.357	0.357	0.357
1	01	002	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
			03	0.321	--	0.357	0.357	0.357
			04	0.321	--	0.357	0.357	0.357
			05	0.321	--	--	0.357	0.357
			06	0.321	--	0.357	0.357	0.357
			07	0.321	--	0.357	0.357	0.357
			08	0.321	--	0.357	0.357	0.357
			09	0.321	--	0.357	0.357	0.357
			10	0.321	--	0.357	0.357	0.357
			11	0.321	--	0.357	0.357	0.357
			12	0.321	--	0.357	0.357	0.357
			99	0.321	--	0.357	0.357	0.357
1	01	003	01	0.321	--	--	0.357	0.357
			02	0.321	--	--	0.357	0.357
			03	0.321	--	--	0.357	0.357

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	01	003	04	0.321	--	--	0.357	0.357
			05	0.321	--	--	0.357	0.357
			06	0.321	--	--	0.357	0.357
			07	0.321	--	--	0.357	0.357
			08	0.321	--	--	0.357	0.357
			09	0.321	--	--	0.357	0.357
			10	0.321	--	--	0.357	0.357
			11	0.321	--	--	0.357	0.357
			12	0.321	--	--	0.357	0.357
			13	0.321	--	--	0.357	0.357
			14	0.321	--	--	0.357	0.357
			15	0.321	--	--	0.357	0.357
1	01	004	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
			03	0.321	--	0.357	0.357	0.357
1	01	005	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
			03	0.321	--	0.357	0.357	0.357
1	01	006	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
			03	0.321	--	0.357	0.357	0.357
1	01	007	01	0.321	--	--	0.357	0.357
			02	0.321	--	--	0.357	0.357

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 01 007 03	0.321	--	--	0.357	0.357
1 01 008 01	0.321	--	--	0.357	0.357
1 01 011 02	0.321	--	--	0.357	0.357
03	0.321	--	--	0.357	0.357
1 01 012 01	0.321	--	--	0.357	0.357
02	0.321	--	--	0.357	0.357
03	0.321	--	--	0.357	0.357
1 01 999 97	0.321	--	--	0.357	0.357
98	0.321	--	--	0.357	0.357
99	0.321	--	--	0.357	0.357
1 02 001 01	0.321	--	0.357	0.357	0.357
02	0.321	--	0.357	0.357	0.357
03	0.321	--	0.357	0.357	0.357
04	0.321	--	0.357	0.357	0.357
05	0.321	--	0.357	0.357	0.357
06	0.321	--	0.357	0.357	0.357
07	0.321	--	0.357	0.357	0.357
99	0.321	--	0.357	0.357	0.357
1 02 002 01	0.321	--	0.357	0.357	0.357
02	0.321	--	0.357	0.357	0.357
03	0.321	--	0.357	0.357	0.357
04	0.321	--	0.357	0.357	0.357
05	0.321	--	0.357	0.357	0.357

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	002	06	0.321	--	0.357	0.357	0.357
			07	0.321	--	0.357	0.357	0.357
			08	0.321	--	0.357	0.357	0.357
			09	0.321	--	0.357	0.357	0.357
			10	0.321	--	0.357	0.357	0.357
			11	0.321	--	0.357	0.357	0.357
			12	0.321	--	0.357	0.357	0.357
			13	0.321	--	0.357	0.357	0.357
			14	0.321	--	0.357	0.357	0.357
			99	0.321	--	0.357	0.357	0.357
1	02	003	01	0.321	--	--	0.357	0.357
			02	0.321	--	--	0.357	0.357
			03	0.321	--	--	0.357	0.357
			04	0.321	--	--	0.357	0.357
			05	0.321	--	--	0.357	0.357
			06	0.321	--	--	0.357	0.357
			07	0.321	--	--	0.357	0.357
			08	0.321	--	--	0.357	0.357
			09	0.321	--	--	0.357	0.357
			10	0.321	--	--	0.357	0.357
			11	0.321	--	--	0.357	0.357
			12	0.321	--	--	0.357	0.357

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC			Emission estimate method				
			Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	003 13	0.321	--	--	0.357	0.357
		14	0.321	--	--	0.357	0.357
		15	0.321	--	--	0.357	0.357
		16	0.321	--	--	0.357	0.357
1	02	004 01	0.321	--	0.357	0.357	0.357
		02	0.321	--	0.357	0.357	0.357
		03	0.321	--	0.357	0.357	0.357
1	02	005 01	0.321	--	0.357	0.357	0.357
		02	0.321	--	0.357	0.357	0.357
		03	0.321	--	0.357	0.357	0.357
1	02	006 01	0.321	--	0.357	0.357	0.357
		02	0.321	--	0.357	0.357	0.357
		03	0.321	--	0.357	0.357	0.357
1	02	007 01	0.321	--	--	0.357	0.357
		02	0.321	--	--	0.357	0.357
		03	0.321	--	--	0.357	0.357
1	02	008 02	0.321	--	--	0.357	0.357
		03	0.321	--	--	0.357	0.357
1	02	009 02	0.321	--	0.357	0.357	0.357
		03	0.321	--	0.357	0.357	0.357
1	02	010 02	0.321	--	0.357	0.357	0.357
		03	0.321	--	0.357	0.357	0.357

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	02	011	02	0.321	--	--	0.357	0.357
			03	0.321	--	--	0.357	0.357
1	02	999	97	0.321	--	--	0.357	0.357
			98	0.321	--	--	0.357	0.357
			99	0.321	--	--	0.357	0.357
1	03	001	05	0.321	--	0.357	0.357	0.357
			06	0.321	--	0.357	0.357	0.357
			07	0.321	--	--	0.357	0.357
			08	0.321	--	0.357	0.357	0.357
			09	0.321	--	0.357	0.357	0.357
			10	0.321	--	--	0.357	0.357
			99	0.321	--	0.357	0.357	0.357
1	03	002	05	0.321	--	0.357	0.357	0.357
			06	0.321	--	0.357	0.357	0.357
			07	0.321	--	0.357	0.357	0.357
			08	0.321	--	0.357	0.357	0.357
			09	0.321	--	0.357	0.357	0.357
			10	0.321	--	0.357	0.357	0.357
			11	0.321	--	0.357	0.357	0.357
			12	0.321	--	0.357	0.357	0.357
			13	0.321	--	0.357	0.357	0.357
			14	0.321	--	0.357	0.357	0.357

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
1 03 002 99	0.321	--	0.357	0.357	0.357
1 03 003 05	0.321	--	--	0.357	0.357
06	0.321	--	--	0.357	0.357
07	0.321	--	--	0.357	0.357
08	0.321	--	--	0.357	0.357
09	0.321	--	--	0.357	0.357
10	0.321	--	--	0.357	0.357
11	0.321	--	--	0.357	0.357
12	0.321	--	--	0.357	0.357
13	0.321	--	--	0.357	0.357
14	0.321	--	--	0.357	0.357
1 03 004 01	0.321	--	0.357	0.357	0.357
02	0.321	--	0.357	0.357	0.357
03	0.321	--	0.357	0.357	0.357
1 03 005 01	0.321	--	0.357	0.357	0.357
02	0.321	--	0.357	0.357	0.357
03	0.321	--	0.357	0.357	0.357
1 03 006 01	0.321	--	0.357	0.357	0.357
02	0.321	--	0.357	0.357	0.357
03	0.321	--	0.357	0.357	0.357
1 03 009 03	0.321	--	0.357	0.357	0.357
1 03 010 02	0.321	--	0.357	0.357	0.357

TABLE G-5 PRECISION OF UN'T EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
1	03	010	03	0.321	--	0.357	0.357	0.357
1	03	999	97	0.321	--	--	0.357	0.357
			98	0.321	--	--	0.357	0.357
			99	0.321	--	--	0.357	0.357
2	01	001	01	--	--	--	--	--
2	01	002	01	--	--	--	--	--
2	01	003	01	0.321	--	0.357	0.357	0.357
2	01	999	97	--	--	--	--	--
			98	0.321	--	0.357	0.357	0.357
2	02	001	01	--	--	--	--	--
			02	0.321	--	0.357	0.357	0.357
2	02	002	01	--	--	--	--	--
			02	--	--	--	--	--
2	02	003	01	0.321	--	0.357	0.357	0.357
2	02	004	01	0.321	--	0.357	0.357	0.357
2	02	999	97	--	--	--	--	--
			98	0.321	--	--	0.357	0.357
2	03	001	01	0.321	--	0.357	0.357	0.357
2	03	999	97	--	--	--	--	--
			98	0.321	--	--	0.357	0.357
2	04	001	01	0.321	--	0.357	0.357	0.357
3	01	001	01	--	--	--	--	--

TABLE G-5 PRECISION OF UN'T EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 001 99	--	--	--	--	--
3 01 002 01	--	--	--	--	--
02	--	--	--	--	--
3 01 003 01	0.321	--	0.357	0.357	0.357
02	--	--	--	--	--
03	--	--	--	--	--
99	0.321	--	--	0.357	0.357
3 01 004 01	--	--	--	--	--
99	--	--	--	--	--
3 01 005 01	0.321	--	0.709	0.709	0.709
02	--	--	--	--	--
03	0.321	--	0.564	0.709	0.564
04	0.321	--	0.257	0.709	0.257
05	0.321	--	--	0.709	0.709
99	0.321	--	--	0.709	0.709
3 01 006 01	0.321	--	0.357	0.357	0.357
99	0.321	--	0.357	0.357	0.357
3 01 007 01	0.321	--	--	0.709	0.709
99	0.321	--	--	0.709	0.709
3 01 008 01	0.321	--	--	0.709	0.709
02	0.321	--	--	0.709	0.709

TABLE G-5 PRECISION OF UN'T EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	008	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	009	01	--	--	--	--	--
			10	0.321	--	--	0.709	0.709
			99	0.321	--	--	0.709	0.709
3	01	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	0.321	--	--	0.709	0.709
			99	--	--	--	--	--
3	01	011	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	013	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-5 PRECISION OF UN'T EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	013	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	01	014	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	015	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	01	016	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	01	017	01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 017 99	--	--	--	--	--
3 01 018 01	--	--	--	--	--
02	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 01 019 03	--	--	--	--	--
3 01 020 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 01 021 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 01 022 01	--	--	--	--	--
3 01 023 01	--	--	--	--	--
04	--	--	--	--	--
06	--	--	--	--	--
08	--	--	--	--	--
10	--	--	--	--	--
12	--	--	--	--	--
14	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	023	16	--	--	--	--	--
			18	--	--	--	--	--
			99	--	--	--	--	--
3	01	024	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			08	--	--	--	--	--
			10	--	--	--	--	--
			12	--	--	--	--	--
			14	--	--	--	--	--
			99	--	--	--	--	--
3	01	025	01	--	--	--	--	--
			05	--	--	--	--	--
			10	--	--	--	--	--
			99	--	--	--	--	--
3	01	026	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	01	026	06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			20	--	--	--	--	--
			99	--	--	--	--	--
3	01	027	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
3	01	028	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	029	01	--	--	--	--	--
			02	--	--	--	--	--
3	01	030	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	01	031	01	--	--	--	--	--
			99	--	--	--	--	--
3	01	032	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 01 032 03	--	--	--	--	--
99	--	--	--	--	--
3 01 033 01	--	--	--	--	--
99	--	--	--	--	--
3 01 034 01	--	--	--	--	--
3 01 035 01	--	--	--	--	--
99	--	--	--	--	--
3 01 036 01	--	--	--	--	--
02	--	--	--	--	--
3 01 037 01	--	--	--	--	--
02	--	--	--	--	--
3 01 038 01	--	--	--	--	--
3 01 039 01	--	--	--	--	--
3 01 040 01	--	--	--	--	--
3 01 050 01	--	--	--	--	--
3 01 090 99	--	--	--	--	--
3 01 091 01	--	--	--	--	--
3 01 100 01	--	--	--	--	--
3 01 101 01	--	--	--	--	--
3 01 110 01	--	--	--	--	--
3 01 900 99	--	--	--	--	--
3 01 999 99	0.321	--	--	0.709	0.709
3 02 001 01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS, CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	001	99	--	--	--	--	--
3	02	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	003	01	--	--	--	--	--
3	02	004	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	005	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
3	02	006	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			99	--	--	--	--	--
3	02	007	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	02	007	05	--	--	--	--	--
			06	--	--	--	--	--
			30	--	--	--	--	--
			99	--	--	--	--	--
3	02	008	01	--	--	--	--	--
			99	--	--	--	--	--
3	02	009	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--
3	02	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	011	01	--	--	--	--	--
3	02	012	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	02	013	01	0.321	--	0.357	0.357	0.357
3	02	014	01	--	--	--	--	--
3	02	015	01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 02 015 99	--	--	--	--	--
3 02 016 01	--	--	--	--	--
99	--	--	--	--	--
3 02 017 20	--	--	--	--	--
99	--	--	--	--	--
3 02 018 99	--	--	--	--	--
3 02 030 01	--	--	--	--	--
99	--	--	--	--	--
3 02 999 98	--	--	--	--	--
99	--	--	--	--	--
3 03 000 01	--	--	--	--	--
3 03 001 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 03 002 01	--	--	--	--	--
3 03 003 01	0.321	--	--	0.357	0.357
02	0.321	--	0.357	0.357	0.357
03	0.321	--	0.357	0.357	0.357
04	--	--	--	--	--
05	--	--	--	--	--

Table G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	003	06	--	--	--	--	--
			99	0.321	--	--	0.357	0.357
3	03	004	01	0.321	--	0.357	0.357	0.357
3	03	005	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			99	--	--	--	--	--
3	03	006	01	0.321	--	--	0.709	0.709
			02	0.321	--	--	0.709	0.709
			03	0.321	--	--	0.709	0.709
			04	0.321	--	--	0.709	0.709
			05	0.321	--	--	0.709	0.709
			10	0.321	--	--	0.709	0.709
			11	0.321	--	--	0.709	0.709
			12	0.321	--	--	0.709	0.709
			99	0.321	--	--	0.709	0.709
3	03	007	01	0.321	--	--	0.709	0.709
			02	0.321	--	--	0.709	0.709
3	03	008	01	0.321	--	0.250	0.709	0.250
			02	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	03	008	03	0.321	--	0.709	0.709	0.709
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			99	0.321	--	--	0.709	0.709
3	03	009	01	--	--	--	--	--
			02	--	--	--	--	--
			03	0.321	--	0.357	0.357	0.357
			04	0.321	--	0.357	0.357	0.357
			05	0.321	--	0.357	0.357	0.357
			99	0.321	--	--	0.357	0.357
3	03	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	03	011	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	03	012	01	0.321	--	--	0.709	0.709
			99	0.321	--	--	0.709	0.709
3	03	013	01	--	--	--	--	--
3	03	014	01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 03 014 02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 03 030 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
06	--	--	--	--	--
99	--	--	--	--	--
3 03 999 99	--	--	--	--	--
3 04 001 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
10	--	--	--	--	--
11	--	--	--	--	--
20	--	--	--	--	--
50	--	--	--	--	--
99	--	--	--	--	--
3 04 002 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	002	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
3	04	002	99	--	--	--	--	--
3	04	003	01	0.321	--	0.709	0.709	0.709
			02	--	--	--	--	--
			03	--	--	--	--	--
			05	--	--	--	--	--
			30	--	--	--	--	--
			40	--	--	--	--	--
			99	--	--	--	--	--
3	04	004	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	04	005	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	006	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	007	01	--	--	--	--	--
			02	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	007	03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			99	--	--	--	--	--
3	04	008	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			99	--	--	--	--	--
3	04	009	01	--	--	--	--	--
			99	--	--	--	--	--
3	04	010	01	0.321	--	--	0.709	0.709
			99	0.321	--	--	0.709	0.709
3	04	011	01	0.321	--	--	0.709	0.709
			99	0.321	--	--	0.709	0.709
3	04	020	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	0.321	--	--	0.709	0.709

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	04	020	99	0.321	--	--	0.709	0.709
3	04	050	01	--	--	--	--	--
3	04	999	99	--	--	--	--	--
3	05	001	01	0.321	--	0.357	0.357	0.357
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			99	--	--	--	--	--
3	05	002	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	05	003	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	0.321	--	0.357	0.357	0.357
			05	--	--	--	--	--
			06	0.321	--	0.357	0.357	0.357
			99	--	--	--	--	--
3	05	004	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	05	005	01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 005 02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 006 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 007 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 008 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
99	--	--	--	--	--
3 05 009 01	--	--	--	--	--
02	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	05	009	03	--	--	--	--	--
			99	--	--	--	--	--
3	05	010	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			99	--	--	--	--	--
3	05	011	01	--	--	--	--	--
			20	--	--	--	--	--
			99	--	--	--	--	--
3	05	012	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
			03	0.321	--	0.357	0.357	0.357
			04	--	--	--	--	--
			05	0.321	--	0.357	0.357	0.357
			99	0.321	--	--	0.357	0.357
3	05	013	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	014	01	--	--	--	--	--
			10	--	--	--	--	--
			11	--	--	--	--	--
			12	--	--	--	--	--
			99	--	--	--	--	--
3	05	015	01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 05 015 02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 016 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 017 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
99	--	--	--	--	--
3 05 018 01	--	--	--	--	--
99	--	--	--	--	--
3 05 019 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
99	--	--	--	--	--
3 05 020 01	--	--	--	--	--
	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	05	020	02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			99	--	--	--	--	--
3	05	021	01	--	--	--	--	--
3	05	022	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	023	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	024	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	025	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	026	01	--	--	--	--	--
			99	--	--	--	--	--
3	05	030	99	--	--	--	--	--
3	05	999	99	--	--	--	--	--
3	06	001	01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 06 001 02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
3 06 002 01	0.321	--	0.709	0.709	0.709
3 06 003 01	0.321	--	0.709	0.709	0.709
3 06 004 01	--	--	--	--	--
02	--	--	--	--	--
3 06 005 01	--	--	--	--	--
02	--	--	--	--	--
3 06 006 01	--	--	--	--	--
02	--	--	--	--	--
3 06 007 01	--	--	--	--	--
3 06 008 01	--	--	--	--	--
02	--	--	--	--	--
03	--	--	--	--	--
04	--	--	--	--	--
05	--	--	--	--	--
3 06 009 01	--	--	--	--	--
99	--	--	--	--	--
3 06 010 01	--	--	--	--	--
3 06 011 01	0.321	--	0.357	0.357	0.357
99	0.321	--	--	0.357	0.357
3 06 012 01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	06	999	98	0.321	--	--	0.709	0.709
			99	--	--	--	--	--
3	07	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	0.321	--	0.357	0.357	0.357
			05	--	--	--	--	--
			06	0.321	--	0.357	0.357	0.357
			07	--	--	--	--	--
			08	--	--	--	--	--
			09	--	--	--	--	--
			99	0.321	--	--	0.357	0.357
3	07	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			99	0.321	--	--	0.357	0.357
3	07	004	01	--	--	--	--	--
			02	--	--	--	--	--
			99	--	--	--	--	--
3	07	005	01	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 07 005 99	--	--	--	--	--
3 07 006 01	--	--	--	--	--
3 07 007 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 07 008 99	--	--	--	--	--
3 07 009 99	--	--	--	--	--
3 07 010 99	--	--	--	--	--
3 07 020 99	--	--	--	--	--
3 07 999 99	--	--	--	--	--
3 09 001 01	--	--	--	--	--
02	--	--	--	--	--
99	--	--	--	--	--
3 09 010 99	--	--	--	--	--
3 09 020 99	--	--	--	--	--
3 09 999 99	--	--	--	--	--
3 20 999 99	--	--	--	--	--
3 30 001 01	--	--	--	--	--
99	--	--	--	--	--
3 30 002 99	--	--	--	--	--
3 30 003 99	--	--	--	--	--
3 90 001 99	--	--	--	0.357	--
3 90 002 01	--	--	--	0.357	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
3	90	002	06	--	--	--	0.357	--
			07	--	--	--	0.357	--
			08	--	--	--	0.357	--
			99	--	--	--	0.357	--
3	90	004	01	--	--	--	0.357	--
			02	--	--	--	0.357	--
			03	--	--	--	0.357	--
			04	--	--	--	0.357	--
			05	--	--	--	0.357	--
			06	--	--	--	0.357	--
			07	--	--	--	0.357	--
			99	--	--	--	0.357	--
3	90	005	01	--	--	--	0.357	--
			02	--	--	--	0.357	--
			03	--	--	--	0.357	--
			04	--	--	--	0.357	--
			05	--	--	--	0.357	--
			06	--	--	--	0.357	--
			07	--	--	--	0.357	--
			99	--	--	--	0.357	--
3	90	006	01	--	--	--	0.357	--
			02	--	--	--	0.357	--
			03	--	--	--	0.357	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC	Emission estimate method				
	Source test	Material balance	NEDS emission factor	Guess	State emission factor
3 90 006 04	--	--	--	0.357	--
05	--	--	--	0.357	--
06	--	--	--	0.357	--
07	--	--	--	0.357	--
99	--	--	--	0.357	--
3 90 007 99	--	--	--	0.357	--
3 90 008 99	--	--	--	0.357	--
3 90 009 99	--	--	--	0.357	--
3 90 999 97	--	--	--	0.357	--
98	--	--	--	0.357	--
99	--	--	--	0.357	--
3 99 999 99	--	--	--	--	--
4 01 001 01	--	--	--	--	--
02	--	--	--	--	--
4 01 002 01	--	--	--	--	--
99	--	--	--	--	--
4 01 999 99	--	--	--	--	--
4 02 001 01	--	--	--	--	--
4 02 003 01	--	--	--	--	--
4 02 004 01	--	--	--	--	--
4 02 005 01	--	--	--	--	--
4 02 006 01	--	--	--	--	--
4 02 999 99	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
4	03	001	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
4	03	002	01	--	--	--	--	--
			02	--	--	--	--	--
			03	--	--	--	--	--
			04	--	--	--	--	--
4	03	999	99	--	--	--	--	--
4	04	001	99	--	--	--	--	--
4	05	001	01	--	--	--	--	--
4	90	999	99	--	--	--	--	--
5	01	001	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
5	01	002	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
			03	0.321	--	--	0.357	0.357
5	01	005	05	--	--	--	--	--
			06	0.321	--	--	0.357	0.357
			07	0.321	--	0.357	0.357	0.357
			99	0.321	--	0.357	0.357	0.357
5	01	900	04	--	--	--	--	--
			05	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC			Emission estimate method				
			Source test	Material balance	NEDS emission factor	Guess	State emission factor
5 03	001	01	0.321	--	0.357	0.357	0.357
		02	0.321	--	0.357	0.357	0.357
		03	--	--	--	--	--
		04	0.321	--	0.357	0.357	0.357
		05	0.321	--	0.357	0.357	0.357
		06	--	--	--	--	--
5 03	002	01	0.321	--	0.357	0.357	0.357
		02	0.321	--	0.357	0.357	0.357
		03	0.321	--	0.357	0.357	0.357
5 03	003	01	0.321	--	0.357	0.357	0.357
		02	--	--	--	--	--
5 03	004	01	0.321	--	--	0.357	0.357
5 03	005	06	0.321	--	--	0.357	0.357
		99	0.321	--	0.357	0.357	0.357
5 03	900	04	--	--	--	--	--
		05	--	--	--	--	--
		06	--	--	--	--	--
		07	--	--	--	--	--
		10	--	--	--	--	--
		97	--	--	--	--	--
		98	--	--	--	--	--
		99	--	--	--	--	--

TABLE G-5 PRECISION OF UNIT EMISSION FACTORS CO

Source classification code, SCC				Emission estimate method				
				Source test	Material balance	NEDS emission factor	Guess	State emission factor
5	01	900	06	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--
5	02	001	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
			03	--	--	--	--	--
			04	0.321	--	0.357	0.357	0.357
			05	0.321	--	0.357	0.357	0.357
5	02	002	01	0.321	--	0.357	0.357	0.357
5	02	003	01	0.321	--	0.357	0.357	0.357
			02	0.321	--	0.357	0.357	0.357
5	02	005	05	--	--	--	--	--
			06	0.321	--	--	0.357	0.357
			99	0.321	--	0.357	0.357	0.357
5	02	900	04	--	--	--	--	--
			05	--	--	--	--	--
			06	--	--	--	--	--
			10	--	--	--	--	--
			97	--	--	--	--	--
			98	--	--	--	--	--
			99	--	--	--	--	--

APPENDIX H

TYPICAL VALUES FOR AVERAGE SCC PROCESSES

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
1 01 001 01		0.09	0.02					
02		0.09	0.02					
03		0.09	0.02					
04		0.09	0.02					
05		0.09	0.02					
06		0.09	0.02					
99		0.09	0.02					
1 01 002 01		0.09	0.02					
02		0.09	0.02					
03		0.09	0.02					
04		0.09	0.02					
05		0.09	0.02					
06		0.09	0.02					
07		0.09	0.02					
08		0.09	0.02					
09		0.09	0.02					
10		0.09	0.02					
11		0.09	0.02					
12		0.09	0.02					
99		0.09	0.02					
1 01 003 01								
02								
03								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
1	01	003	04								
			05								
			06								
			07								
			08								
			09								
			10								
			11								
			12								
			13								
			14								
			15								
1	01	004	01								
			02								
			03								
1	01	005	01								
			02								
			03								
1	01	006	01								
			02								
			03								
1	01	007	01								
			02								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
1	01	007	03								
1	01	008	01								
1	01	011	02								
			03								
1	01	012	01								
			02								
			03								
1	01	999	97								
			98								
			99								
1	02	001	01		0.09	0.02					
			02		0.09	0.02					
			03		0.09	0.02					
			04		0.09	0.02					
			05		0.09	0.02					
			06		0.09	0.02					
			07		0.09	0.02					
			99		0.09	0.02					
1	02	002	01		0.09	0.02					
			02		0.09	0.02					
			03		0.09	0.02					
			04		0.09	0.02					
			05		0.09	0.02					

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
1	02	002	06		0.09	0.02					
			07		0.09	0.02					
			08		0.09	0.02					
			09		0.09	0.02					
			10		0.09	0.02					
			11		0.09	0.02					
			12		0.09	0.02					
			13		0.09	0.02					
			14		0.09	0.02					
			99		0.09	0.02					
1	02	003	01								
			02								
			03								
			04								
			05								
			06								
			07								
			08								
			09								
			10								
			11								
			12								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
1 02 003 13								
14								
15								
16								
1 02 004 01								
02								
03								
1 02 005 01								
02								
03								
1 02 006 01								
02								
03								
1 02 007 01								
02								
03								
1 02 008 02								
03								
1 02 009 02								
03								
1 02 010 02								
03								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
1 02 011 02								
03								
1 02 999 97								
98								
99								
1 03 001 05		0.09	0.02					
06		0.09	0.02					
07		0.09	0.02					
08		0.09	0.02					
09		0.09	0.02					
10		0.09	0.02					
99		0.09	0.02					
1 03 002 05		0.09	0.02					
06		0.09	0.02					
07		0.09	0.02					
08		0.09	0.02					
09		0.09	0.02					
10		0.09	0.02					
11		0.09	0.02					
12		0.09	0.02					
13		0.09	0.02					
14		0.09	0.02					

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
1 03 002 99		0.09	0.02					
1 03 003 05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
1 03 004 01								
02								
03								
1 03 005 01								
02								
03								
1 03 006 01								
02								
03								
1 03 009 03								
1 03 010 02								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
1 03 010 03								
1 03 999 97								
98								
99								
2 01 001 01								
2 01 002 01								
2 01 003 01								
2 01 999 97								
98								
2 02 001 01								
02								
2 02 002 01								
02								
2 02 003 01								
2 02 004 01								
2 02 999 97								
98								
2 03 001 01								
2 03 999 97								
98								
2 04 001 01								
3 01 001 01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 01 001 99								
3 01 002 01								
02								
3 01 003 01								
02								
03								
99								
3 01 004 01								
99								
3 01 005 01								
02								
03								
04								
05								
99								
3 01 006 01								
99								
3 01 007 01								
99								
3 01 008 01								
02								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	01	008	03								
			04								
			05								
			99								
3	01	009	01								
			10								
			99								
3	01	010	01								
			02								
			03								
			04								
			05								
			99								
3	01	011	01								
			02								
			99								
3	01	012	01								
			02								
			03								
			99								
3	01	013	01								
			02								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 01 013 03								
04								
05								
06								
07								
08								
99								
3 01 014 01								
02								
99								
3 01 015 01								
02								
03								
05								
99								
3 01 016 01								
02								
03								
99								
3 01 017 01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	01	017	99								
3	01	018	01								
			02								
			05								
			99								
3	01	019	03								
3	01	020	01								
			02								
			03								
			04								
			05								
			99								
3	01	021	01								
			02								
			99								
3	01	022	01								
3	01	023	01								
			04								
			06								
			08								
			10								
			12								
			14								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	01	023	16								
			18								
			99								
3	01	024	01								
			02								
			03								
			04								
			05								
			06								
			08								
			10								
			12								
			14								
			99								
3	01	025	01								
			05								
			10								
			99								
3	01	026	01								
			02								
			03								
			04								
			05								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	01	026	06								
			07								
			08								
			09								
			20								
			99								
3	01	027	01								
			02								
			03								
			04								
			05								
			06								
3	01	028	01								
			02								
3	01	029	01								
			02								
3	01	030	01								
			02								
			99								
3	01	031	01								
			99								
3	01	032	01								
			02								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 01 032 03								
99								
3 01 033 01								
99								
3 01 034 01								
3 01 035 01								
99								
3 01 036 01								
02								
3 01 037 01								
02								
3 01 038 01								
3 01 039 01								
3 01 040 01								
3 01 050 01								
3 01 090 99								
3 01 091 01								
3 01 100 01								
3 01 101 01								
3 01 110 01								
3 01 900 99								
3 01 999 99								
3 02 001 01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	02	001	99								
3	02	002	01								
			02								
			03								
			99								
3	02	003	01								
3	02	004	01								
			02								
			03								
			99								
3	02	005	01								
			02								
			03								
			04								
3	02	006	01								
			02								
			03								
			04								
			99								
3	02	007	01								
			02								
			03								
			04								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	02	007	05								
			06								
			30								
			99								
3	02	008	01								
			99								
3	02	009	01								
			02								
			03								
			98								
			99								
3	02	010	01								
			02								
			03								
			99								
3	02	011	01								
3	02	012	01								
			02								
			03								
			99								
3	02	013	01								
3	02	014	01								
3	02	015	01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	02	015	99								
3	02	016	01								
			99								
3	02	017	20								
			99								
3	02	018	99								
3	02	030	01								
			99								
3	02	999	98								
			99								
3	03	000	01								
3	03	001	01								
			02								
			03								
			04								
			05								
			99								
3	03	002	01								
3	03	003	01								
			02								
			03								
			04								
			05								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 03 003 06								
99								
3 03 004 01								
3 03 005 01								
02								
03								
04								
05								
06								
99								
3 03 006 01								
02								
03								
04								
05								
10								
11								
12								
99								
3 03 007 01								
02								
3 03 008 01								
02								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	03	008	03								
			04								
			05								
			06								
			07								
			99								
3	03	009	01								
			02								
			03								
			04								
			05								
			99								
3	03	010	01								
			02								
			03								
			99								
3	03	011	01								
			02								
			99								
3	03	012	01								
			99								
3	03	013	01								
3	03	014	01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 03 014 02								
03								
99								
3 03 030 01								
02								
03								
04								
05								
06								
99								
3 03 999 99								
3 04 001 01								
02								
03								
04								
10								
11								
20								
50								
99								
3 04 002 01								
02								
03								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 04 002 04								
05								
06								
3 04 002 99								
3 04 003 01								
02								
03								
05								
30								
40								
99								
3 04 004 01								
02								
03								
04								
08								
99								
3 04 005 01								
99								
3 04 006 01								
99								
3 04 007 01								
02								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	04	007	03								
			04								
			05								
			99								
3	04	008	01								
			02								
			03								
			04								
			05								
			06								
			07								
			08								
			99								
3	04	009	01								
			99								
3	04	010	01								
			99								
3	04	011	01								
			99								
3	04	020	01								
			02								
			03								
			04								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 04 020 99								
3 04 050 01								
3 04 999 99								
3 05 001 01								
02								
03								
04								
99								
3 05 002 01								
02								
99								
3 05 003 01								
02								
03								
04								
05								
06								
99								
3 05 004 01								
02								
03								
99								
3 05 005 01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 05 005 02								
03								
04								
05								
99								
3 05 006 01								
02								
03								
04								
05								
99								
3 05 007 01								
02								
03								
04								
05								
99								
3 05 008 01								
02								
03								
99								
3 05 009 01								
02								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 05 009 03								
99								
3 05 010 01								
02								
03								
99								
3 05 011 01								
20								
99								
3 05 012 01								
02								
03								
04								
05								
99								
3 05 013 01								
99								
3 05 014 01								
10								
11								
12								
99								
3 05 015 01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 05 015 02								
03								
04								
99								
3 05 016 01								
02								
03								
04								
99								
3 05 017 01								
02								
03								
04								
05								
99								
3 05 018 01								
99								
3 05 019 01								
02								
03								
04								
99								
3 05 020 01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 05 020 02								
03								
04								
05								
06								
07								
08								
09								
99								
3 05 021 01								
3 05 022 01								
99								
3 05 023 01								
99								
3 05 024 01								
99								
3 05 025 01								
99								
3 05 026 01								
99								
3 05 030 99								
3 05 999 99								
3 06 001 01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 06 001 02								
03								
04								
3 06 002 01								
3 06 003 01								
3 06 004 01								
02								
3 06 005 01								
02								
3 06 006 01								
02								
3 06 007 01								
3 06 008 01								
02								
03								
04								
05								
3 06 009 01								
99								
3 06 010 01								
3 06 011 01								
99								
3 06 012 01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	06	999	98								
			99								
3	07	001	01								
			02								
			03								
			04								
			05								
			06								
			07								
			08								
			09								
			99								
3	07	002	01								
			02								
			03								
			04								
			05								
			06								
			99								
3	07	004	01								
			02								
			99								
3	07	005	01								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 07 005 99								
3 07 006 01								
3 07 007 01								
02								
99								
3 07 008 99								
3 07 009 99								
3 07 010 99								
3 07 020 99								
3 07 999 99								
3 09 001 01								
02								
99								
3 09 010 99								
3 09 020 99								
3 09 999 99								
3 20 999 99								
3 30 001 01								
99								
3 30 002 99								
3 30 003 99								
3 90 001 99		0.09	0.02					
3 90 002 01		0.09	0.02					

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3	90	002	06		0.09	0.02					
			07		0.09	0.02					
			08		0.09	0.02					
			99		0.09	0.02					
3	90	004	01								
			02								
			03								
			04								
			05								
			06								
			07								
			99								
3	90	005	01								
			02								
			03								
			04								
			05								
			06								
			07								
			99								
3	90	006	01								
			02								
			03								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
3 90 006 04								
05								
06								
07								
99								
3 90 007 99								
3 90 008 99								
3 90 009 99								
3 90 999 97								
98								
99								
3 99 999 99								
4 01 001 01								
02								
4 01 002 01								
99								
4 01 999 99								
4 02 001 01								
4 02 003 01								
4 02 004 01								
4 02 005 01								
4 02 006 01								
4 02 999 99								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
4	03	001	01								
			02								
			03								
			04								
4	03	002	01								
			02								
			03								
			04								
4	03	999	99								
4	04	001	99								
4	05	001	01								
4	90	999	99								
5	01	001	01								
			02								
5	01	002	01								
			02								
			03								
5	01	005	05								
			06								
			07								
			99								
5	01	900	04								
			05								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC	Typical thruput	Typical ash and sulfur content		Typical control efficiency				
		Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
5 01 900 06								
10								
97								
98								
99								
5 02 001 01								
02								
03								
04								
05								
5 02 002 01								
5 02 003 01								
02								
5 02 005 05								
06								
99								
5 02 900 04								
05								
06								
10								
97								
98								
99								

a) All values are zero unless otherwise noted.

Table H-1 TYPICAL VALUES FOR AVERAGE SCC PROCESSES[a]

Source classification code SCC				Typical thruput	Typical ash and sulfur content		Typical control efficiency				
					Ash	Sulfur	Part.	SO_x	NO_x	HC	CO
5	03	001	01								
			02								
			03								
			04								
			05								
			06								
5	03	002	01								
			02								
			03								
5	03	003	01								
			02								
5	03	004	01								
5	03	005	06								
			99								
5	03	900	04								
			05								
			06								
			07								
			10								
			97								
			98								
			99.								

a) All values are zero unless otherwise noted.

APPENDIX I

POINT SOURCE DATA USED TO DEVELOP PRECISION OF EMISSION FACTORS

APPENDIX I

POINT SOURCE DATA USED TO DEVELOP PRECISION OF EMISSION FACTORS

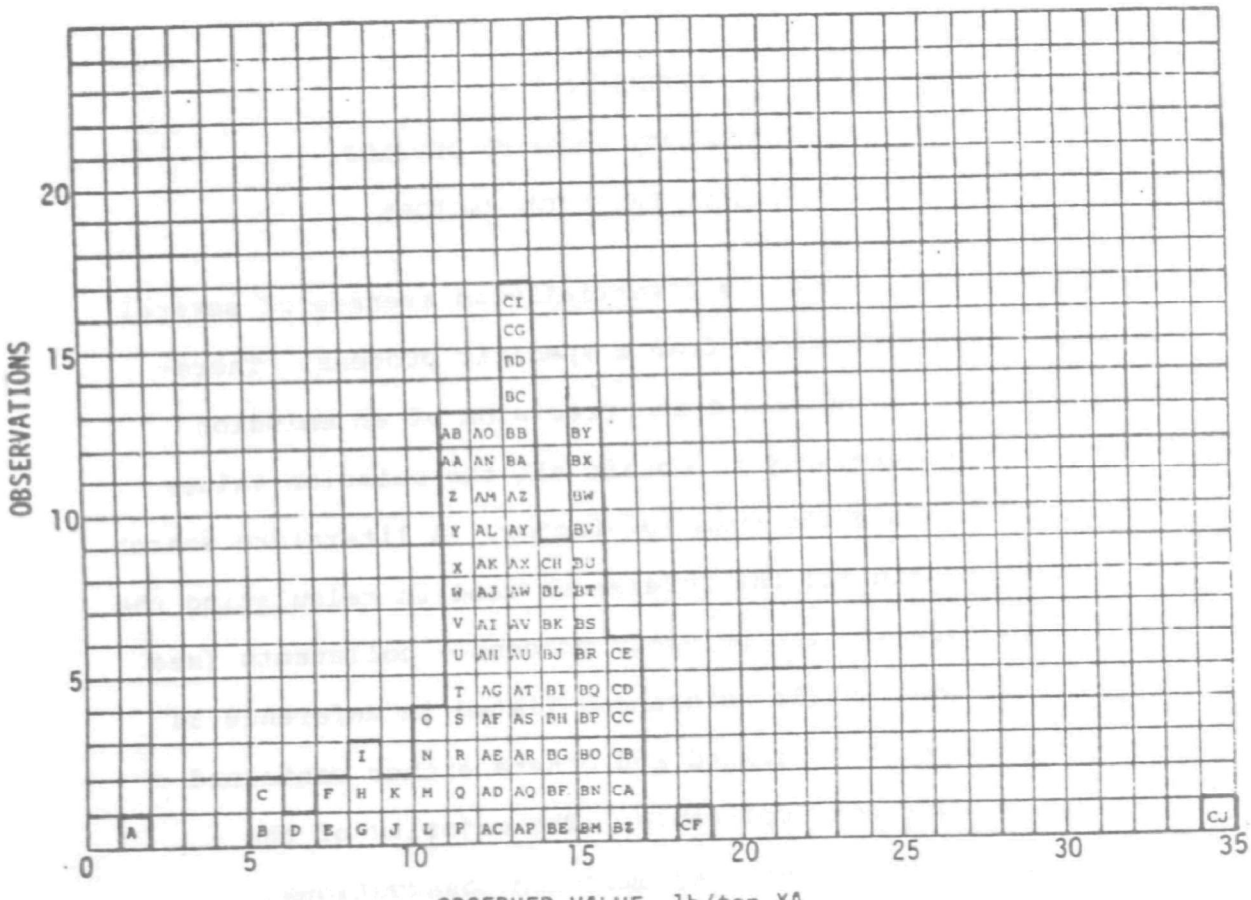
An emission factor is essentially an average of several observations of emissions from a specific process. Therefore, in order to calculate the precision of an emission factor, it was necessary to obtain all the emission values used in calculating the emission factor. A literature search was made to obtain all the references used in calculating the emission factors for the priority process - pollutants (see Table 2.1). Some of the references listed in Reference 30 (AP-42) could not be obtained and others either contained no values or were not applicable. The majority of the references, however, contained emission observations.

This appendix lists all obtainable emission observations that were used in calculating the emission factors for the priority process - pollutants, the reference from which these values were obtained, the references that were not available, and the references that either had no emission values or values that were not applicable. A graphical presentation is also given for each priority emission factor showing the distribution of the various applicable observations.

Emission Factor 13A lb/ton

Pollutant Particulate from Pulverized wet bottom, boiler (Bituminous coal)

AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	1.5 A
B	1	5.5 A
C	1	5.5 A
D	1	6.5 A
E	1	7.5 A
F	1	7.5 A
G	1	8.5 A
H	1	8.5 A

Emission Factor 13A lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
I	1	8.5 A
J	1	9.5 A
K	1	9.5 A
L	1	10.5 A
M	1	10.5 A
N	1	10.5 A
O	1	10.5 A
P	1	11.5 A
Q	1	11.5 A
R	1	11.5 A
S	1	11.5 A
T	1	11.5 A
U	1	11.5 A
V	1	11.5 A
W	1	11.5 A
X	1	11.5 A
Y	1	11.5 A
Z	1	11.5 A
AA	1	11.5 A
AB	1	12.0 A
AC	1	12.5 A
AD	1	12.5 A
AE	1	12.5 A
AF	1	12.5 A

Emission Factor 13A lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
AG	1	12.5 A
AH	1	12.5 A
AI	1	12.5 A
AJ	1	12.5 A
AK	1	12.5 A
AL	1	12.5 A
AM	1	12.5 A
AN	1	12.5 A
AO	1	13.0 A
AP	1	13.5 A
AQ	1	13.5 A
AR	1	13.5 A
AS	1	13.5 A
AT	1	13.5 A
AU	1	13.5 A
AV	1	13.5 A
AW	1	13.5 A
AX	1	13.5 A
AY	1	13.5 A
AZ	1	13.5 A
BA	1	13.5 A
BB	1	13.5 A
BC	1	13.5 A
BD	1	14.0 A
BE	1	14.5 A

Emission Factor 13A lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
BF	1	14.5 A
BG	1	14.5 A
BH	1	14.5 A
BI	1	14.5 A
BJ	1	14.5 A
BK	1	14.5 A
BL	1	15.0 A
BM	1	15.5 A
BN	1	15.5 A
BO	1	15.5 A
BP	1	15.5 A
BQ	1	15.5 A
BR	1	15.5 A
BS	1	15.5 A
BT	1	15.5 A
BU	1	15.5 A
BV	1	15.5 A
BW	1	15.5 A
BX	1	15.5 A
BY	1	15.5 A
BZ	1	16.5 A
CA	1	16.5 A
CB	1	16.5 A
CC	1	16.5 A

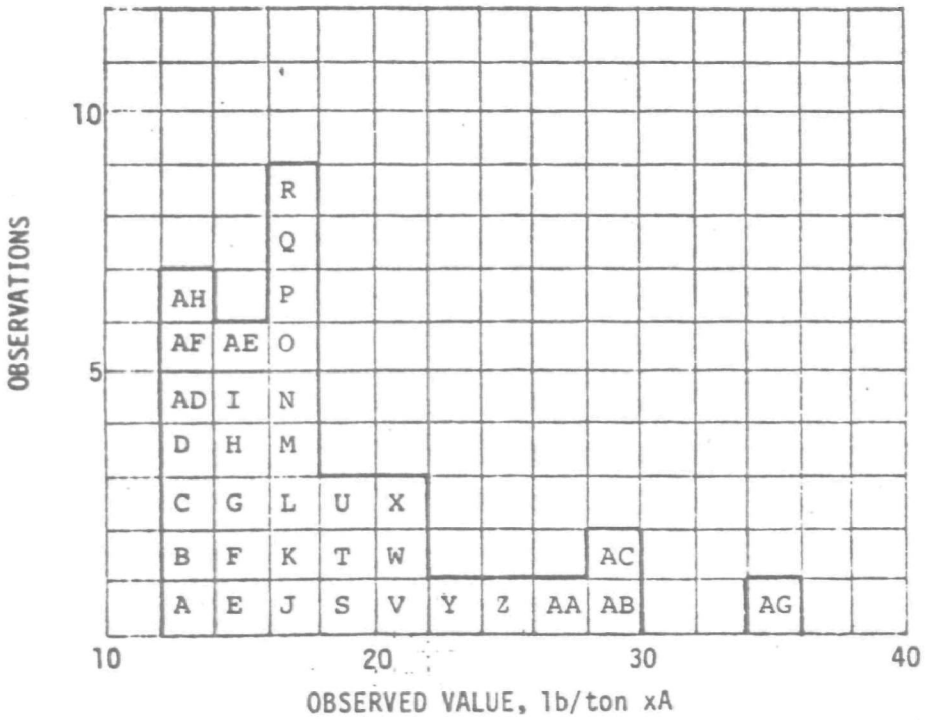
Emission Factor 13A lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
CD	1	16.5 A
CE	1	16.5 A
CF	1	18.5 A
	3	70-240 (No ash content given)
	4	factors for general category of "electrical generation" only
CG	5	13.7 A
CH	5	14.5 A
CI	5	14.0 A
CJ	6	No definite emission factors
	7	14.0 A emission factors are not a function of ash content; also, dry and slag units not distinguished from one another.

Emission Factor 17A lb/ton

Pollutant Particulate from pulverized dry bottom boiler (Bituminous coal)

AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	12.5 A
B	1	12.5 A
C	1	12.5 A
D	1	13.5 A
E	1	14.5 A
F	1	14.5 A
G	1	15.5 A
H	1	15.5 A

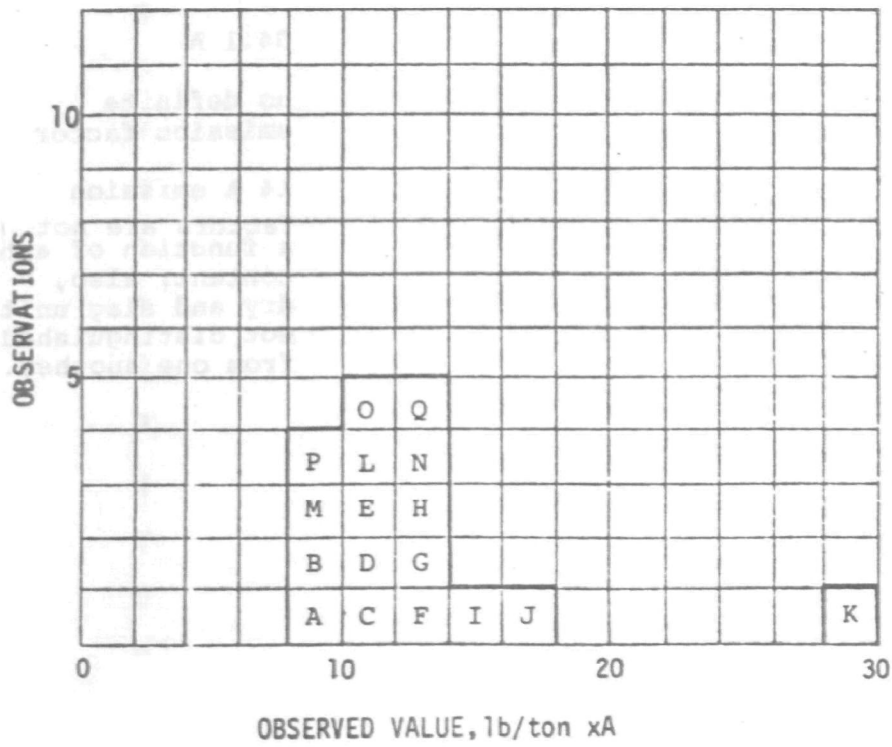
Emission Factor 17A lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
I	1	15.5 A
J	1	16.5 A
K	1	16.5 A
L	1	16.5 A
M	1	16.5 A
N	1	17.5 A
O	1	17.5 A
P	1	17.5 A
Q	1	17.5 A
R	1	18.0 A
S	1	18.5 A
T	1	18.5 A
U	1	19.5 A
V	1	20.5 A
W	1	20.5 A
X	1	21.5 A
Y	1	22.5 A
Z	1	25.5 A
AA	1	26.5 A
AB	1	28.5 A
AC	1	29.5 A
	3	70-240 (No ash content given)
	4	factor for general category of "electric generation only

Emission Factor 17A lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
AD	5	13.7 A
AE	5	14.5 A
AF	5	14.0 A
AG	5	34.1 A
	6	no definite emission factor
AH	7	14 A emission factors are not a function of ash content; also, dry and slag units not distinguished from one another.

Emission Factor 13A lb/ton (W/O fly-ash
(10-100) MM BTU/HR rein)
Pollutant Particulate from spreader stoker (Bituminous Coal)
AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	9.5 A
B	1	9.5 A
C	1	10.5 A
D	1	12.0 A
E	1	12.0 A
F	1	12.5 A
G	1	13.5 A
H	1	14.0 A

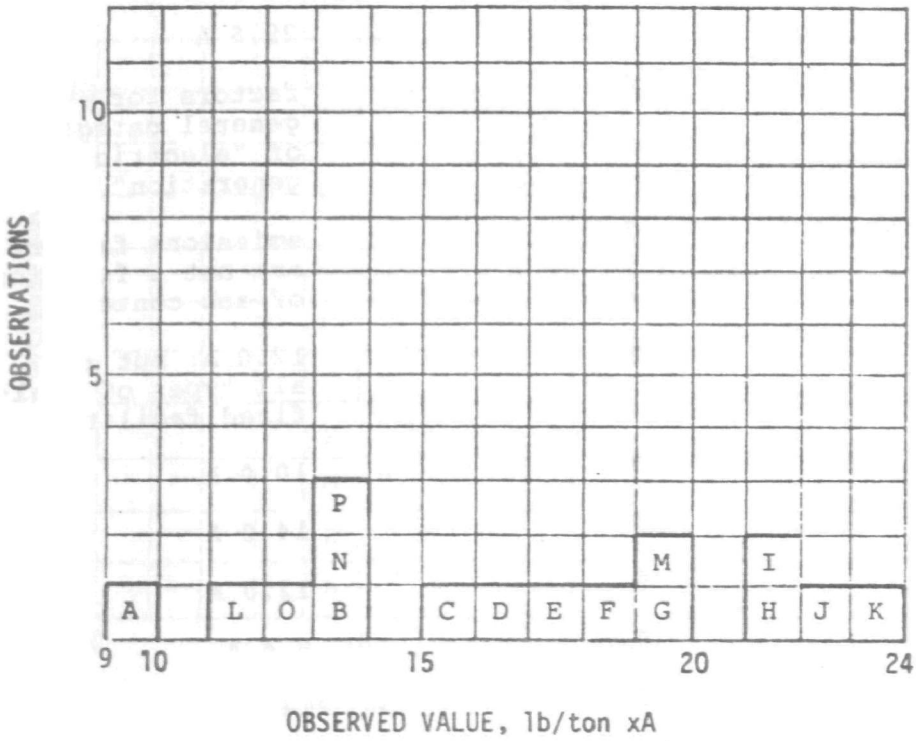
Emission Factor 13A lb/ton (continued)
(W/O fly-ash reinjection)

Observation	AP-42 Ref. No.	Observed Value
I	1	14.5 A
J	1	18.0 A
K	1	29.6 A
	4	factors for general category of "electric generation" only
	7	emissions factors are not a function of ash content
L	8	12.0 A; but for all types of coal-fired facilities
M	9	10.0 A
N	9	14.0 A
O	9	12.0 A
P	9	9.4 A
Q	9	12.4 A

Emission Factor 20 lb/ton (with fly-ash rein)

Pollutant (10-100) MM BTU/HR Particulate from spreader stoker (Bituminous Coal)

AP-42 Pg. No. 1.1-4

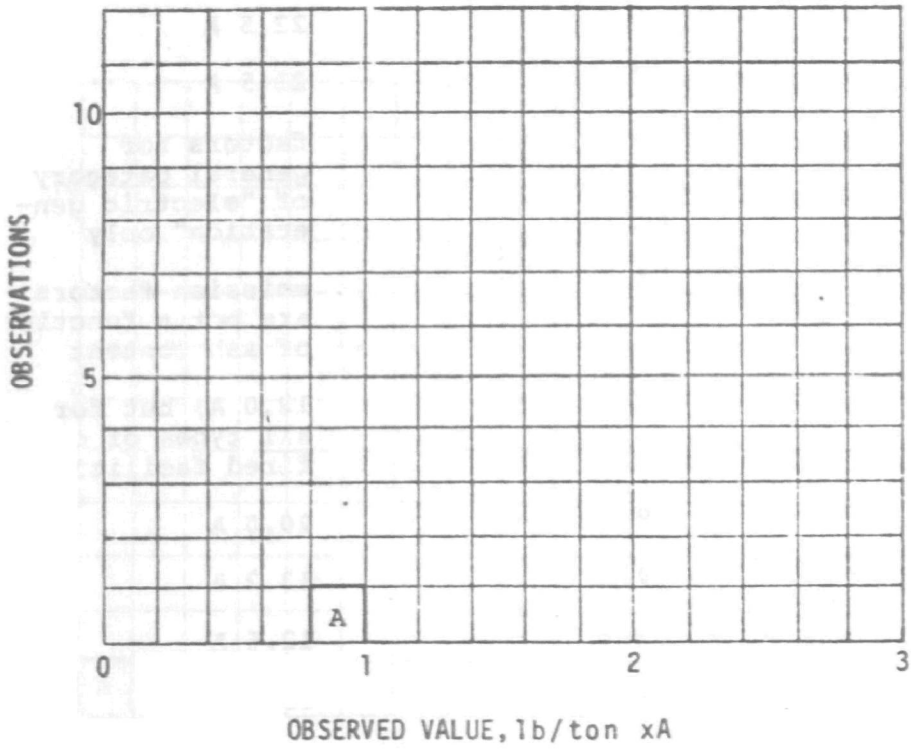


Observation	AP-42 Ref. No.	Observed Value
A	1	9.5 A
B	1	13.5 A
C	1	15.5 A
D	1	16.5 A
E	1	18.0 A
F	1	18.5 A
G	1	19.5 A
H	1	21.5 A

Emission Factor 20 lb/ton (continued)
(with fly-ash reinjection

Observation	AP-42 Ref. No.	Observed Value
I	1	22.0 A
J	1	22.5 A
K	1	23.5 A
	4	factors for general category of "electric generation" only
	7	emission factors are not a function of ash content
L	8	12.0 A; but for all types of coal fired facilities
M	9	20.0 A
N	9	13.2 A
O	9	12.6 A
P	9	13.2 A

Emission Factor 2A lb/ton
$<10 \times 10^6$ BTU/HR
Pollutant Particulate from spreader stoker (Bituminous Coal)
AP-42 Pg. No. 1.1-4

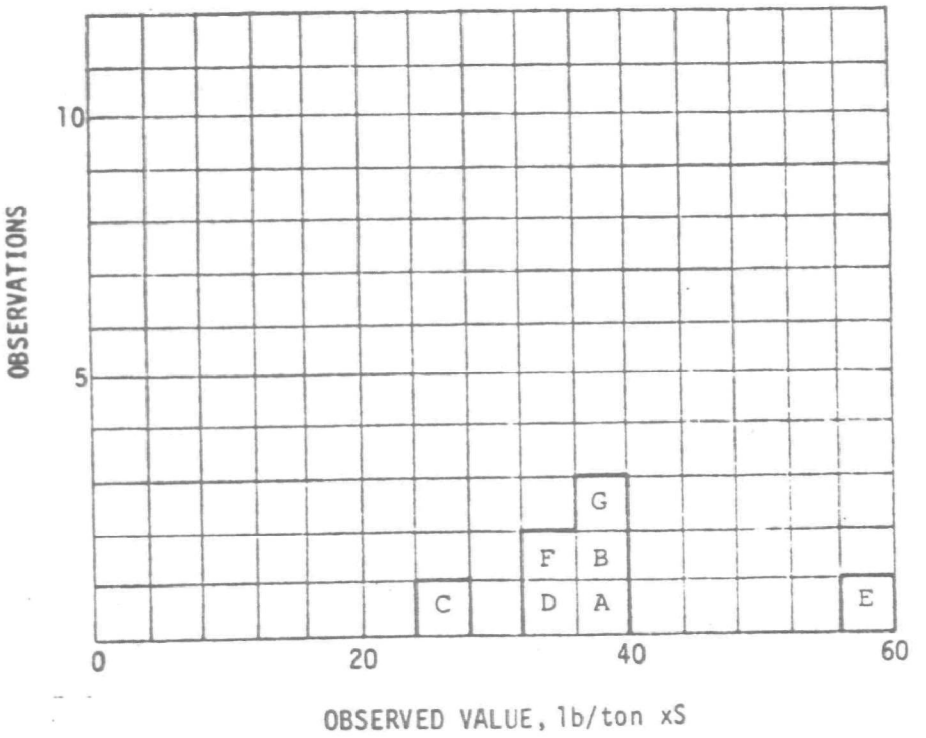


Observation	AP-42 Ref. No.	Observed Value
	7	Emission factor not shown as function of ash content
A	9	1A
	10	reference not available

Emission Factor 38 S lb/ton

Pollutant SO_x from pulverized wet bottom, boiler (Bituminous Coal)

AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	38S; 95% of S goes to SO_x
B	3	(14-62) S; avg. = 38S
	4	emission factor not a function of sulfur content
C	5	24.5 S
D	5	35.3 S
E	5	56.9 S

Emission Factor 38 S lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
F	5	36.6 S
G	6	38.7 S; but for all units
	7	deals only with dry bottom.

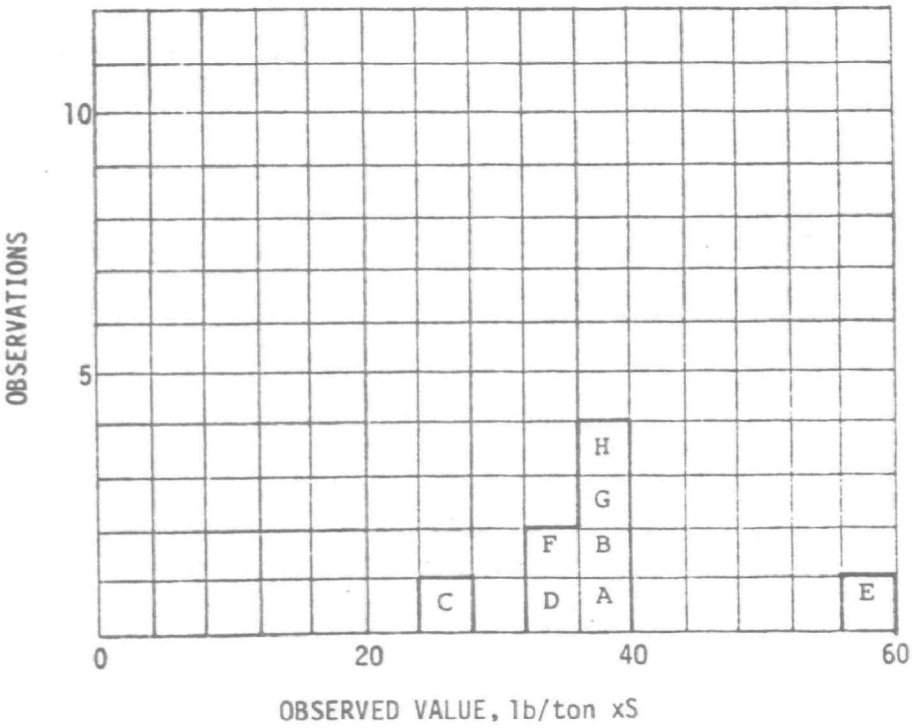
$$S = (\text{max.} - \text{min.})/d_2 = (56.9 - 24.5)/2.70 = 12.00$$

$$\bar{X} = \frac{306.0}{8} = 38.25$$

Emission Factor 38 S lb/ton

Pollutant SO_x from pulverized dry bottom boiler (Bituminous coal)

AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	38S ; 95% of S goes to SO_x
B	3	(14-62) S; avg = 38S
	4	emission factor not a function of sulfur content
C	5	24.5S
D	5	35.3S
E	5	56.9S

Emission Factor 38S lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
F	5	36.6S
G	5	38.7S; but for all units
H	5	38.3S

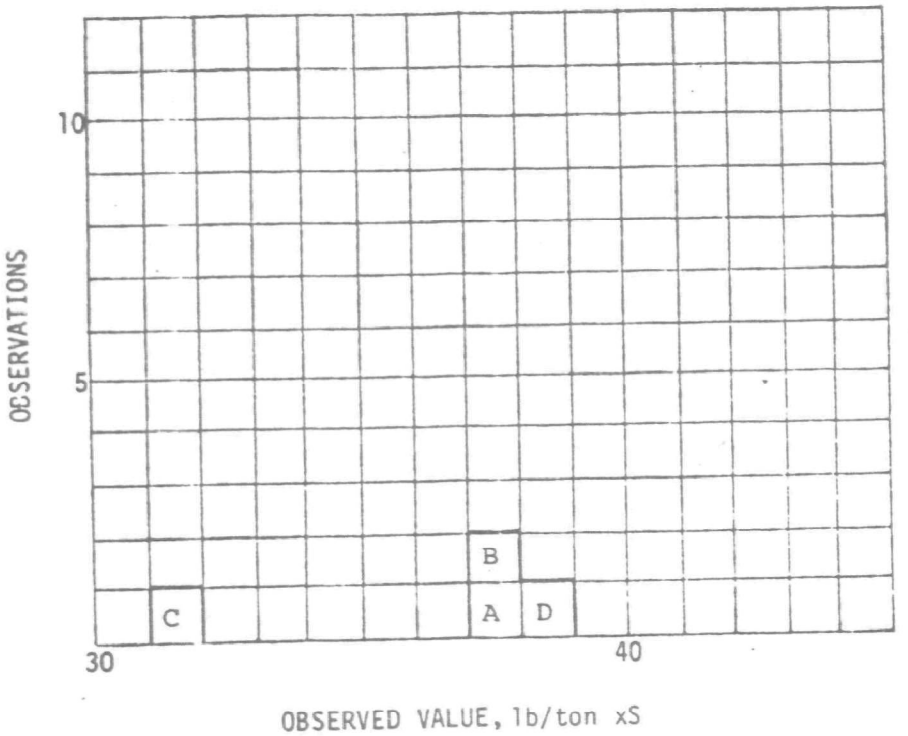
$S = (\text{max.} - \text{min.})/d_2 = (56.9 - 24.5)/2.85 = 11.37$

$\bar{X} = \frac{344.3}{9} = 38.26$

Emission Factor 38S lb/ton

Pollutant SO_x from cyclone boiler (Bituminous Coal)

AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	38S; 95% of S goes to SO_x
B	3	(14-62)S; avg = 38S
	4	emission factor not a function of sulfur content
C	5	31.9S
D	6	38.7S

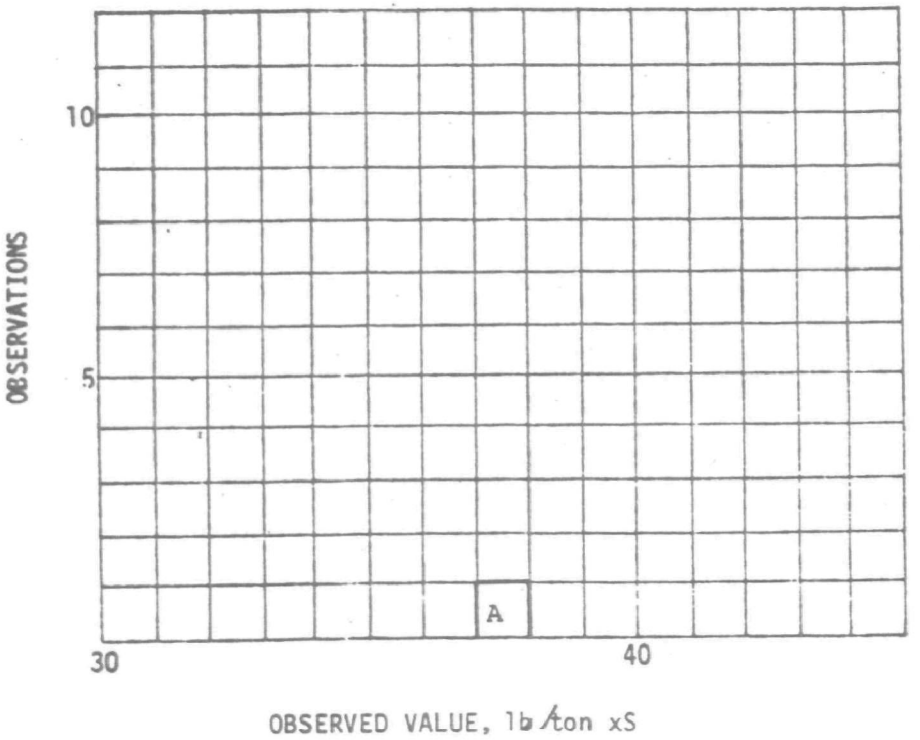
Emission Factor 38S lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
	7	none investigated

$$S = (\text{max.} - \text{min.})/d_2 = (38.7-31.9)/2.06 = 3.3$$

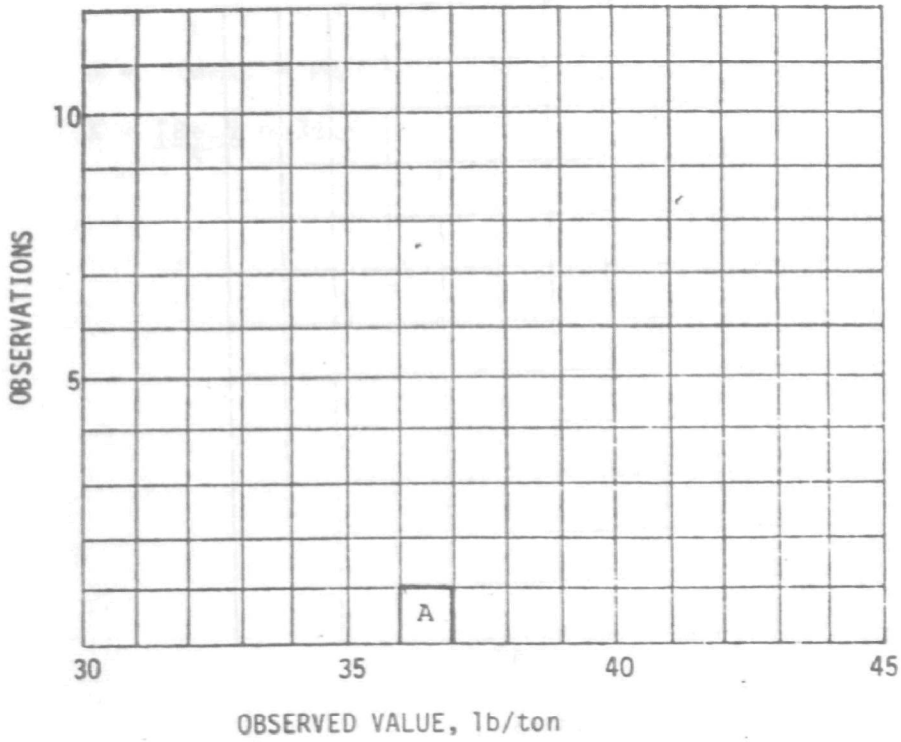
$$\bar{X} = \frac{184.6}{5} = 36.92\ S$$

Emission Factor 38S lb/ton
10-100 MM BTU/HR
Pollutant SO_x from spreader stokers
(Bituminous Coal)
AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	38S
	4	given emission factor not a function of sulfur content

Emission Factor 38S lb/ton
10MM BTU/HR SO_x from
Pollutant spreader stoker boiler
(Bituminous Coal)
AP-42 Pg. No. 1.1-3

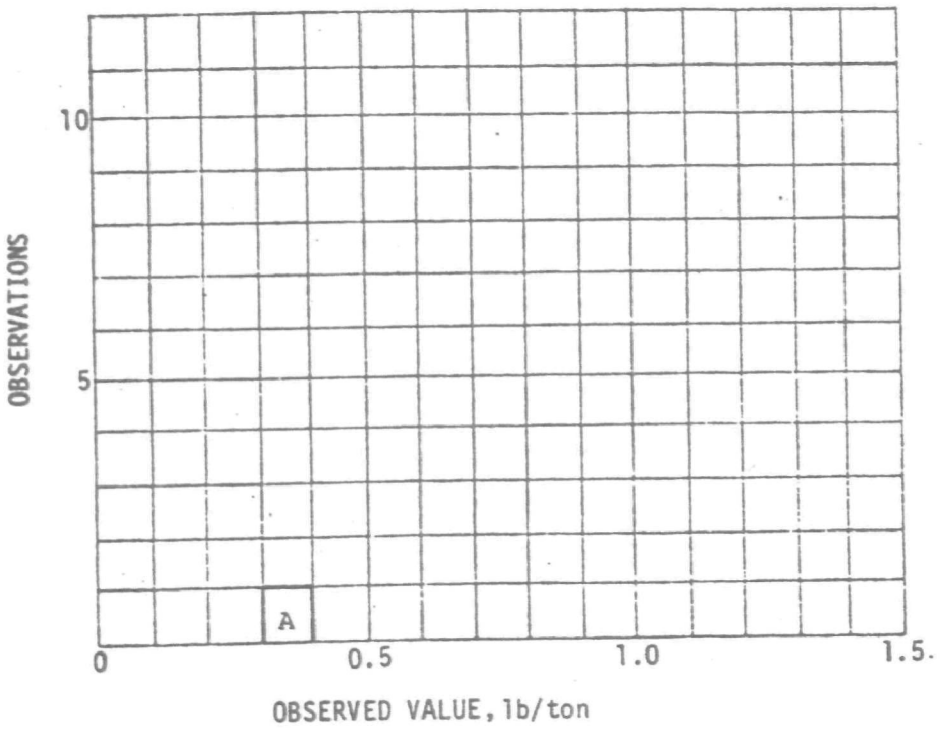


Observation	AP-42 Ref. No.	Observed Value
	7	none
A	9	36.8 S
	10	reference not available

Emission Factor 6 lb/ton

Pollutant (<10 MM Btu/Hr NO_x from) spreader stoker boiler (Bituminous Coal)

AP-42 Pg. No. 1.1-3

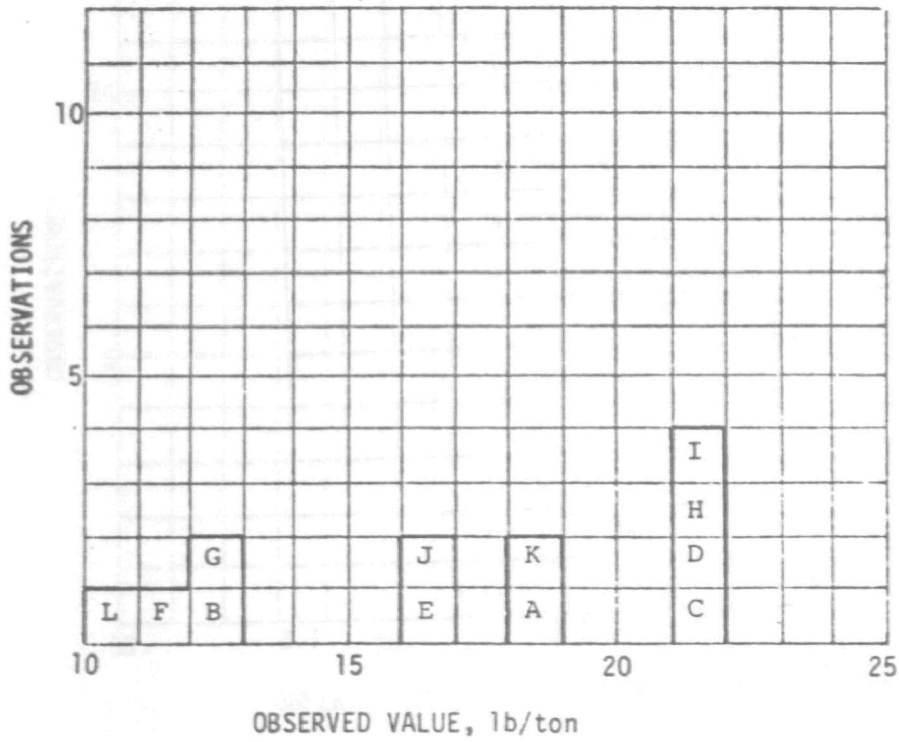


Observation	AP-42 Ref. No.	Observed Value
	7	none
A	9	0.4
	10	reference not available

Emission Factor 18 lb/ton

Pollutant NO_x from pulverized, dry bottom, boiler (Bituminous coal)

AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	18.33 spreader stroke
B	1	12.90 vertical
C	1	21.58 corner
D	1	21.19 front wall
E	1	16.12 horizontal
F	3	(3-20); avg. 11.15
	4	type of coal not specified

Emission Factor 18 lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
G	5	12.09 vertical
H	5	21.58 corner
I	5	21.19 front wall
J	5	16.12 horizontal
K	5	18.33 spreader
	6	(4.1-60)[b]
L	7	11.0

$S = (\text{max.}-\text{min})/d_2 = (21.58-11.0)/3.258 = 3.25^c$

$\bar{X} = \frac{212.62}{13} = 16.36^c$

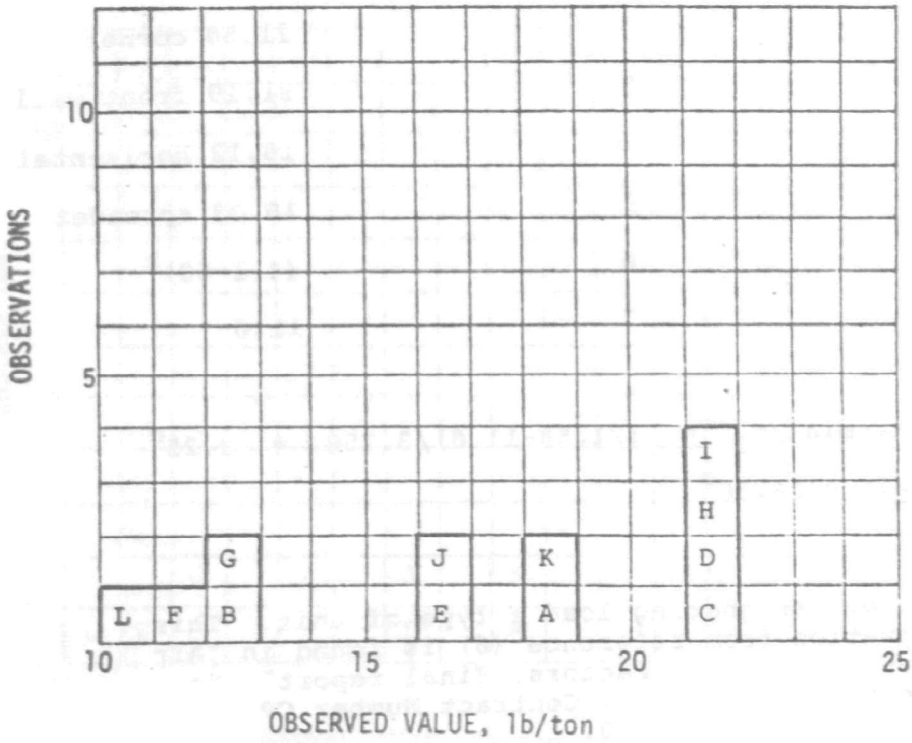
b) Data not designating load a type of unit. This observation from reference (6) is found in "Air Pollutant Emission Factors, Final report" Resources Research, Inc. Contract Number CPA 22-69-119, April, 1970.

c) In calculating the standard deviation and the mean, the observation from reference (6) is not used since the load and unit type are not known.

Emission Factor 30 lb/ton

Pollutant NO_x from pulverized, wet botton, boiler (Bituminous coal)

AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	12.09 vertical
B	1	21.58 corner
C	1	21.19 front wall
D	1	16.12 horizontal
E	1	18.33 spreader
F	3	(3-20) avg. 11.5
	4	type of coal not specified
G	5	12.09 vertical

Emission Factor 30 lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
H	5	21.58 corner
I	5	21.19 front wall
J	5	16.12 horizontal
K	5	18.33 spreader
	6	inadequate material
L	7	11.0

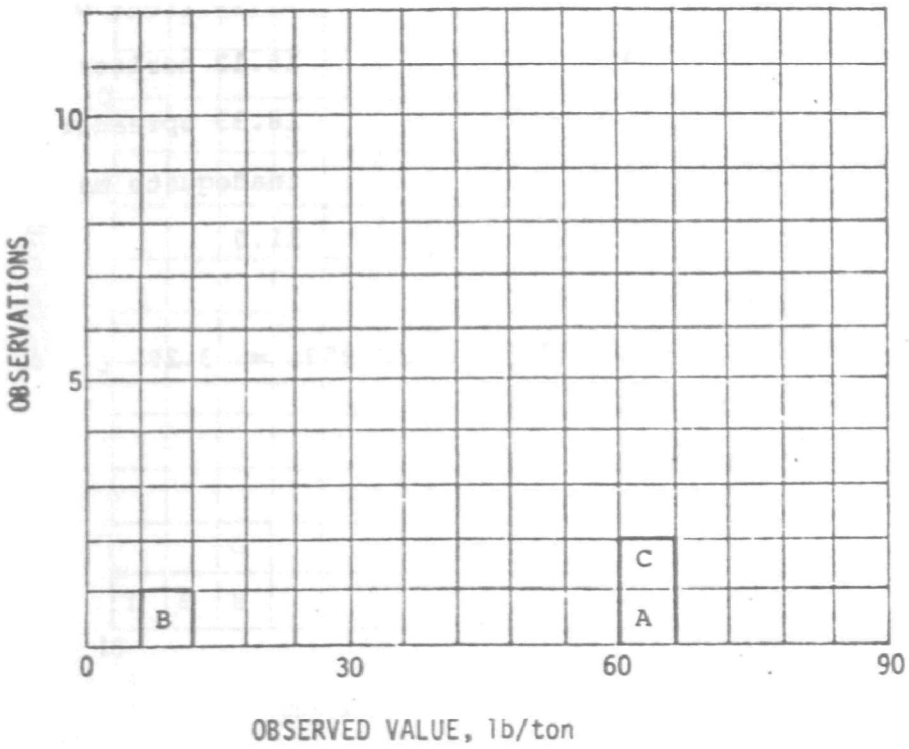
$S = (\text{max.}-\text{min.})/d_2 = (21.58-11.0)/3.258 = 3.25$

$\bar{X} = \frac{212.62}{13} = 16.36$

Emission Factor 55 lb/ton

Pollutant NO_x ~~from cyclone boiler~~ (Bituminous Coal)

AP-42 Pg. No. 1.1-4



Observation	AP-42 Ref. No.	Observed Value
A	1	61.1
B	3	(3.20); avg. = 11.5
	4	type of coal not specified
C	5	61.1
	6	(4.1-60)[b]
	7	does not apply

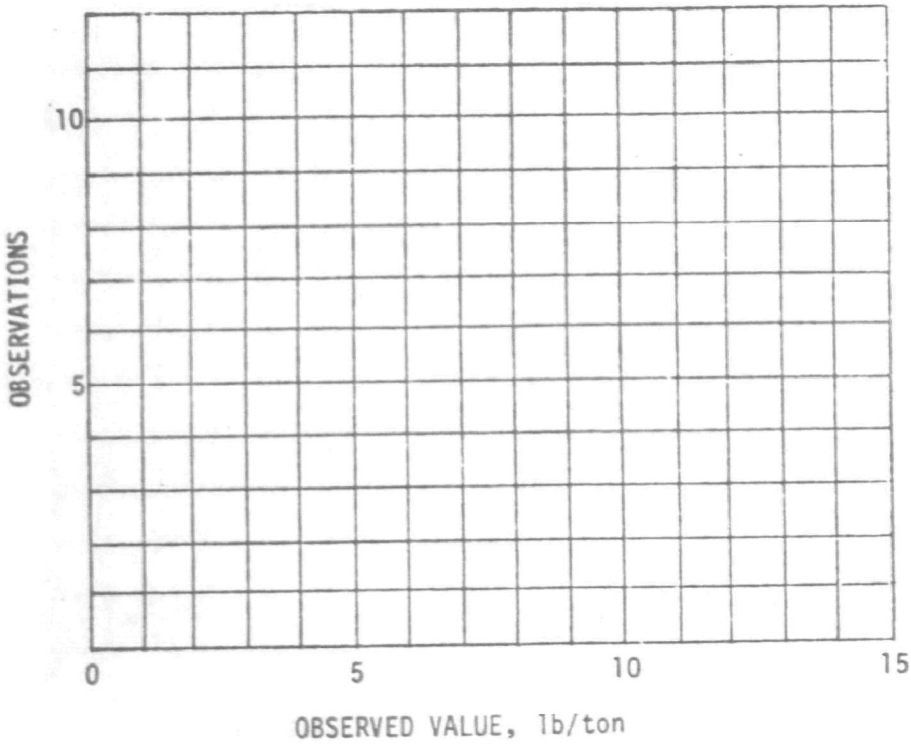
$S = (max.-min)/d_2 = (61.1-11.5)/1.69 = 29.35$

Emission Factor 55 lb/ton (continued)

$$\bar{X} = \frac{145.2}{4} = 36.3$$

b) Data not designating load or type of unit. This data from reference (6) has been taken from "Air Pollutant Emission Factors Final Report " Contract Number CPA 22-69-119.

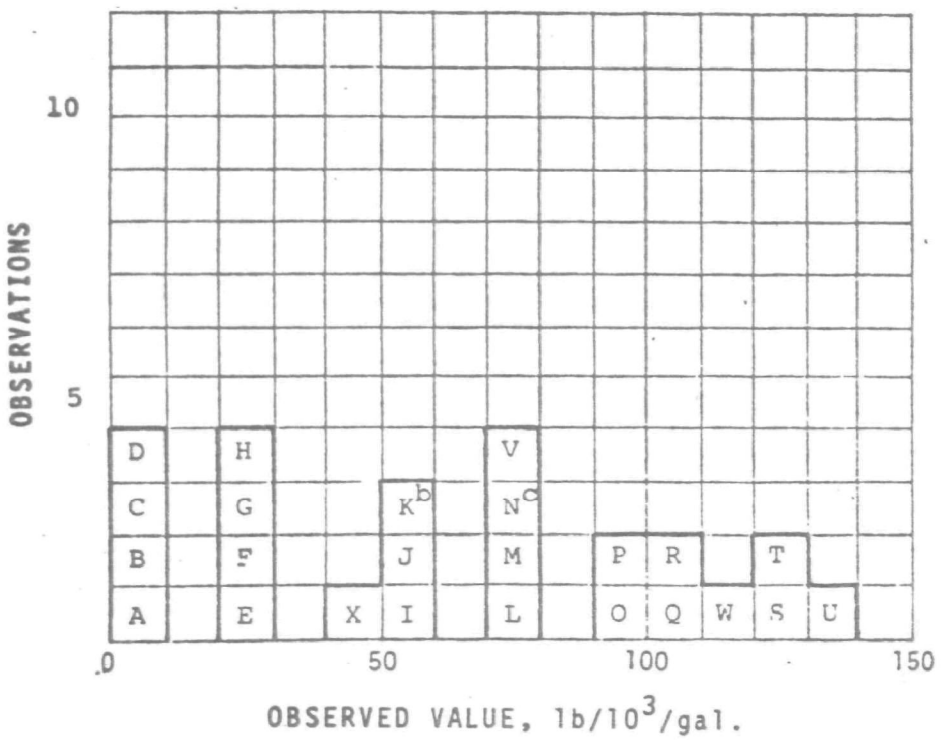
Emission Factor 15 lb/ton
(10-100) MM BTU/HR NO_x
Pollutant from spreader stoker
boiler (Bituminous Coal)
AP-42 Pg. No. 1.1-3



Observation	AP-42 Ref. No.	Observed Value
	1	none
	4	none
	7	none
	8	none
	9	none

Industrial & Commercial
Emission Factor (40 to 80) lb/10^3gal
Pollutant NO_x from residual oil combustion

AP-42 Pg. No. 1.3-2



Observation	AP-42 Ref. No.	Observed Value
A	2	8.2
B	2	8.2
C	2	8.2
D	2	8.2
E	2	24.6
F	2	24.6
G	2	24.6
H	2	24.6

Emission Factor (40 to 80) lb/10^3gal (continued)

Observation	AP-42 Ref. No.	Observed Value
I	2	57.4
J	2	57.4
K	2	57.4[b]
L	2	73.8
M	2	73.8
N	2	73.8[c]
O	2	90.2
P	2	90.2
Q	2	106.6
R	2	106.6
S	2	123.0
T	2	123.0
U	2	139.4
V	3	80.0
	4	not specific
	5	ref. not available
	6	not applicable
	9	distillate oil only
	10	distillate oil only
	12	ref. not available
	13	ref. not available
W	15	118.0
X	15	41.0
	16	not stated

$\Sigma x^2 = 1.8223395 \times 10^9$

$\bar{X} - 72.05$

b) represents 50 tests on small sources.

Emission Factor (40 to 80) lb/10^3 gal (continued)

$S_{\bar{X}}$ = 5.07

P = 0.00289

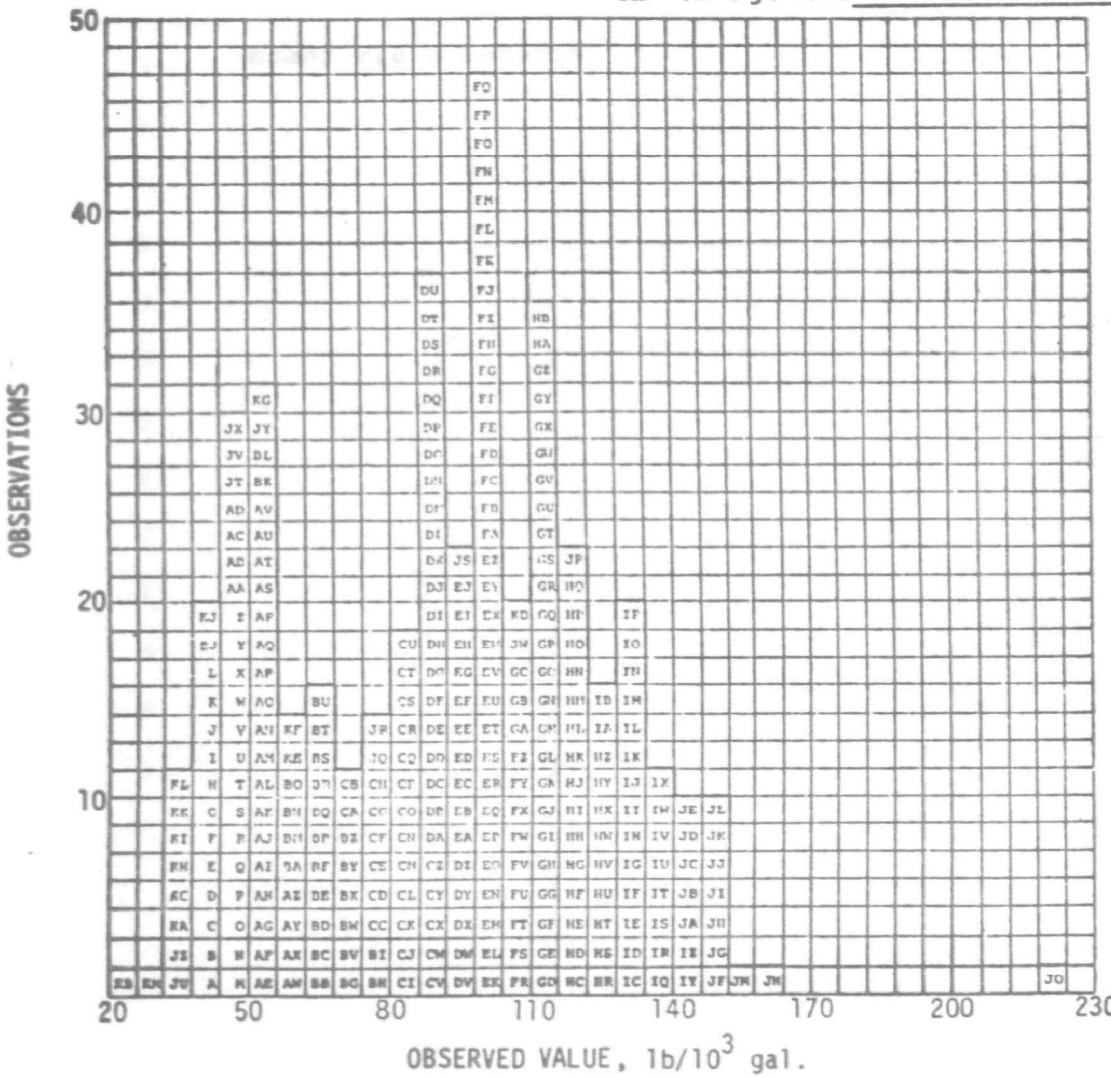
c) represents 519 tests

Power Plant

Emission Factor 105 $lb/10^3$ gal

Pollutant NO_x from Residual Oil Combustion

AP-42 Pg. No. 1.3-2



Observation	AP-42 Ref. No.	Observed Value
A	2	39.4
B	2	39.4
C	2	43.34
D	2	43.34
E	2	43.34
F	2	43.34
G	2	43.34

Emission Factor 105 lb/10^3gal (continued)

Observation	AP-42 Ref. No.	Observed Value
H	2	43.34
I	2	43.34
J	2	43.34
K	2	43.34
L	2	43.34
M	2	47.28
N	2	47.28
O	2	47.28
P	2	47.28
Q	2	47.28
R	2	47.28
S	2	47.28
T	2	47.28
U	2	47.28
V	2	47.28
W	2	47.28
X	2	47.28
Y	2	47.28
Z	2	47.28
AA	2	47.28
AB	2	47.28
AC	2	47.28
AD	2	47.28
AE	2	51.22
AF	2	51.22

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
AG	2	51.22
AH	2	51.22
AI	2	51.22
AJ	2	51.22
AK	2	51.22
AL	2	51.22
AM	2	51.22
AN	2	51.22
AO	2	55.16
AP	2	55.16
AQ	2	55.16
AR	2	55.16
AS	2	55.16
AT	2	55.16
AU	2	55.16
AV	2	55.16
AW	2	59.10
AX	2	59.10
AY	2	59.10
AZ	2	59.10
BA	2	59.10
BB	2	63.04
BC	2	63.04
BD	2	65.01

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
BE	2	66.98
BF	2	66.98
BG	2	70.92
BH	2	74.86
BI	2	78.80
BJ	2	39.40
BK	2	55.16
BL	2	55.16
BM	2	59.10
BN	2	59.10
BO	2	59.10
BP	2	66.98
BQ	2	66.98
BR	2	66.98
BS	2	66.98
BT	2	66.98
BU	2	66.98
BV	2	70.92
BW	2	70.92
BX	2	70.92
BY	2	70.92
BZ	2	70.92
CA	2	70.92
CB	2	70.92

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
CC	2	78.80
CD	2	78.80
CE	2	78.80
CF	2	78.80
CG	2	78.80
CH	2	78.80
CI	2	82.74
CJ	2	82.74
CK	2	82.74
CL	2	82.74
CM	2	82.74
CN	2	82.74
CO	2	82.74
CP	2	82.74
CQ	2	82.74
CR	2	82.74
CS	2	82.74
CT	2	82.74
CU	2	82.74
CV	2	86.68
CW	2	86.68
CX	2	86.68
CY	2	86.68
CZ	2	86.68
DA	2	86.68
DB	2	86.68

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
DC	2	86.68
DD	2	86.68
DE	2	86.68
DF	2	86.68
DG	2	86.68
DH	2	86.68
DI	2	86.68
DJ	2	86.68
DK	2	90.62
DL	2	90.62
DM	2	90.62
DN	2	90.62
DO	2	90.62
DP	2	90.62
DQ	2	90.62
DR	2	90.62
DS	2	90.62
DT	2	90.62
DU	2	90.62
DV	2	94.56
DW	2	94.56
DX	2	94.56
DY	2	94.56
DZ	2	94.56
EA	2	94.56

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
EB	2	94.56
EC	2	94.56
ED	2	94.56
EE	2	94.56
EF	2	94.56
EG	2	94.56
EH	2	94.56
EI	2	94.56
EJ	2	94.56
EK	2	98.50
EL	2	98.50
EM	2	98.50
EN	2	98.50
EO	2	98.50
EP	2	98.50
EQ	2	98.50
ER	2	98.50
ES	2	98.50
ET	2	98.50
EU	2	98.50
EV	2	98.50
EW	2	102.44
EX	2	102.44
EY	2	102.44

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
EZ	2	102.44
FA	2	102.44
FB	2	102.44
FC	2	102.44
FD	2	102.44
FE	2	102.44
FF	2	102.44
FG	2	102.44
FH	2	102.44
FI	2	102.44
FJ	2	102.44
FK	2	102.44
FL	2	102.44
FM	2	102.44
FN	2	102.44
FO	2	102.44
FP	2	102.44
FQ	2	102.44
FR	2	106.38
FS	2	106.38
FT	2	106.38
FU	2	106.38
FV	2	106.38
FW	2	106.38
FX	2	106.38

Emission Factor 105' lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
FY	2	106.38
FZ	2	106.38
GA	2	106.38
GB	2	106.38
GC	2	106.38
GD	2	110.32
GE	2	110.32
GF	2	110.32
GG	2	110.32
GH	2	110.32
GI	2	110.32
GJ	2	110.32
GK	2	110.32
GL	2	110.32
GM	2	110.32
GN	2	110.32
GO	2	110.32
GP	2	110.32
GQ	2	110.32
GR	2	110.32[b]
GS	2	114.26
GT	2	114.26
GU	2	114.26
GV	2	114.26
GW	2	114.26

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
GX	2	114.26
GY	2	114.26
GZ	2	114.26
HA	2	114.26
HB	2	114.26
HC	2	118.20
HD	2	118.20
HE	2	118.20
HF	2	118.20
HG	2	118.20
HH	2	118.20
HI	2	118.20
HJ	2	118.20
HK	2	118.20
HL	2	118.20
HM	2	118.20
HN	2	118.20
HO	2	118.20
HP	2	118.20
HQ	2	118.20
HR	2	126.08
HS	2	126.08
HT	2	126.08
HU	2	126.08
HV	2	126.08

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
HW	2	126.08
HX	2	126.08
HY	2	126.08
HZ	2	126.08
IA	2	126.08
IB	2	126.08
IC	2	130.02
ID	2	130.02
IE	2	130.02
IF	2	130.02
IG	2	130.02
IH	2	130.02
II	2	130.02
IJ	2	133.96
IK	2	133.96
IL	2	133.96
IM	2	133.96
IN	2	133.96
IO	2	133.96
IP	2	133.96
IQ	2	137.90
IR	2	137.90
IS	2	137.90
IT	2	137.90

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
IU	2	137.90
IV	2	137.90
IW	2	137.90
IX	2	137.90[c]
IY	2	141.84
IZ	2	141.84
JA	2	141.84
JB	2	145.78
JC	2	145.78
JD	2	145.78
JE	2	145.78
JF	2	149.72
JG	2	149.72
JH	2	149.72
JI	2	149.72
JJ	2	149.72
JK	2	149.72
JL	2	149.72
JM	2	153.66
JN	2	161.54
JO	2	220.64
JP	3	119.00
	4	not specific
	5	ref. not available

Emission Factor 105 lb/10^3 gal (continued)

Observation	AP-42 Ref. NO.	Observed Value
	6	does not deal with power plant
	9	does not deal with power plant
	10	does not deal with power plant
	12	ref. not available
	13	ref. not available
JQ	15[d]	76.0
JR	15[d]	75.0
JS	15[d]	94.0
JT	15[d]	48.0
JU	15[d]	33.0
JV	15[d]	49.0
JW	15[d]	109.0
JX	16	47.8
JY	16	53.9
JZ	16	34.8
KA	16	33.9
KB	16	20.9
KC	16	33.0
KD	16	104.3
KE	16	59.1
KF	16	59.1
KG	16	50.4
KH	16	32.2
KI	16	37.4
KJ	16	40.0

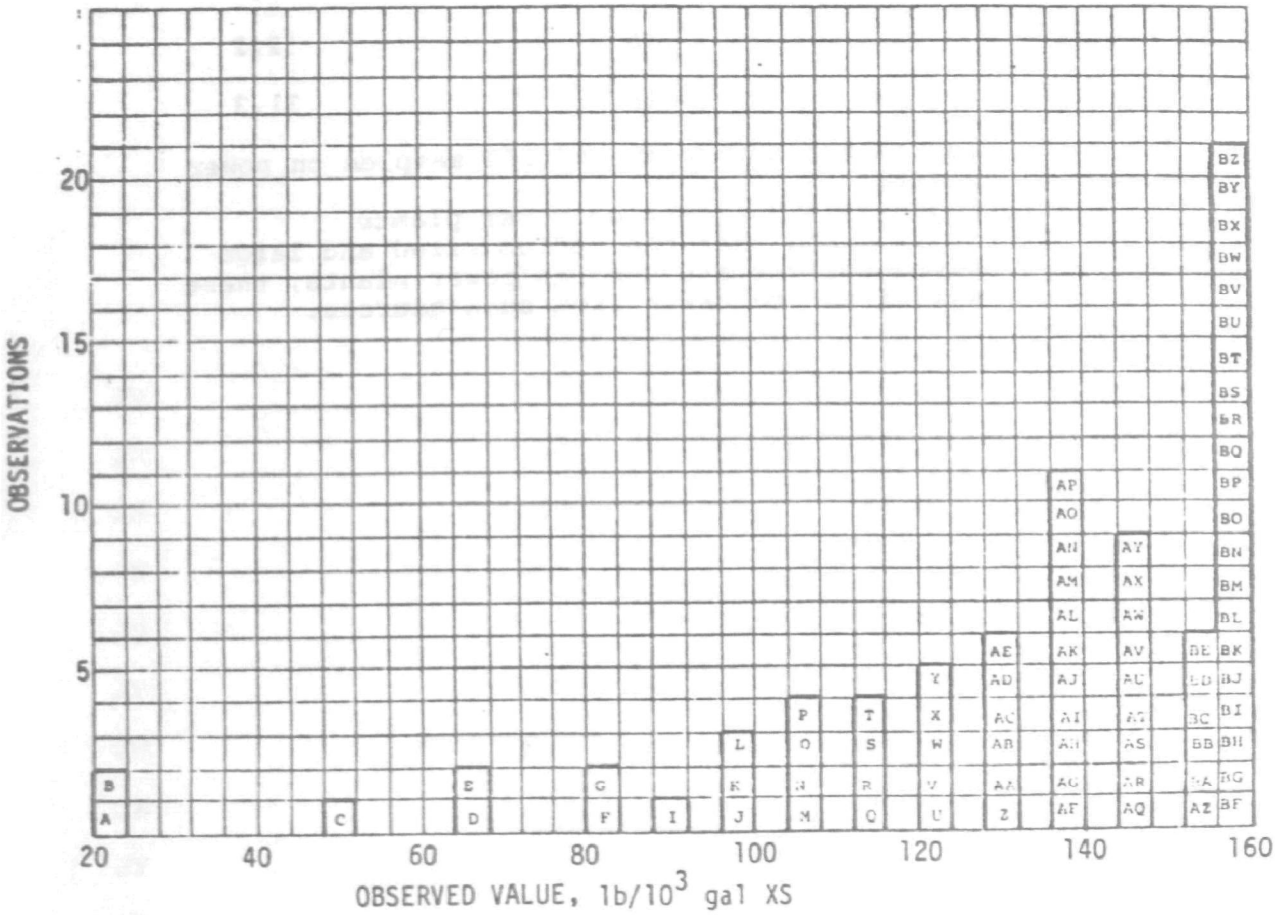
Emission Factor 105 $lb/10^3$ gal (continued)

Observation	AP-42 Ref. No.	Observed Value
KK	16	34.8
KL	16	32.2
KM	16	31.3

b) represents 130 tests and 554 samples on power plants
c) represents 50 tests on power plants
d) considering that the medium sized and large sized boilers are used in power plants, these emissions are taken from such sources.

Power Plant or Industrial & Commerical SO
Emission Factor 157S lb/10^3 gal
Pollutant SO_x from Residual Oil Combustion

AP-42 Pg. No. 1.3-2



Observation	AP-42 Ref. No.	Observed Value
A	2	20.49 S
B	2	20.49 S
C	2	51.22 S
D	2	66.98 S
E	2	66.98 S
F	2	82.74 S
G	2	82.74 S
H	2	90.62 S

Emission Factor 157S lb/10^3gal (continued)

Observation	AP-42 Ref. No.	Observed Value
I	2	90.62 S
J	2	98.50 S
K	2	98.50 S
L	2	98.50 S
M	2	106.38 S
N	2	106.38 S
O	2	106.38 S
P	2	106.38 S
Q	2	114.26 S
R	2	114.26 S
S	2	114.26 S
T	2	114.26 S
U	2	122.14 S
V	2	122.14 S
W	2	122.14 S
X	2	122.14 S
Y	2	122.14 S
Z	2	130.02 S
AA	2	130.02 S
AB	2	130.02 S
AC	2	130.02 S
AD	2	130.02 S
AE	2	130.02 S
AF	2	137.90 S
AG	2	137.90 S
AH	2	137.90 S

Emission Factor 157S · lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
AI	2	137.90 S
AJ	2	137.90 S
AK	2	137.90 S
AL	2	137.90 S
AM	2	137.90 S
AN	2	137.90 S
AO	2	137.90 S
AP	2	137.90 S
AQ	2	145.78 S
AR	2	145.78 S
AS	2	145.78 S
AT	2	145.78 S
AU	3	145.78 S
AV	2	145.78 S
AW	2	145.78 S
AX	2	145.78 S
AY	2	145.78 S
AZ	2	153.66 S
BA	2	153.66 S
BB	2	153.66 S
BC	2	153.66 S
BD	2	153.66 S
BE	2	153.66 S
BF	2	157.60 S
BG	2	157.60 S

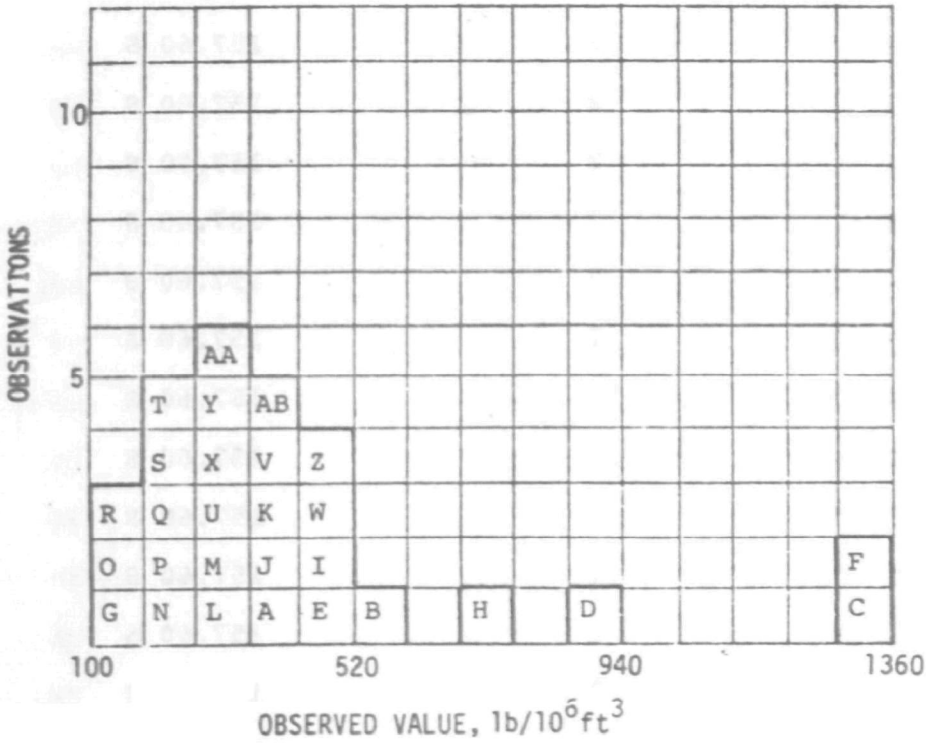
Emission Factor 157S lb/10^3 gal (continued)

Observation	AP-42 Ref. No.	Observed Value
BH	2	157.60 S
BI	2	157.60 S
BJ	2	157.60 S
BK	2	157.60 S
BL	2	157.60 S
BM	2	157.60 S
BN	2	157.60 S
BO	2	157.60 S
BP	2	157.60 S
BQ	2	157.60 S
BR	2	157.60 S
BS	2	157.60 S
BT	2	157.60 S
BU	2	157.60 S
BV	2	157.60 S
BW	2	157.60 S
BX	2	157.60 S
BY	2	157.60 S
BZ	2	157.60 S

Emission Factor POWER PLANT 600 lb/10^6 ft^3

Pollutant NO_x from Natural Gas Combustion

AP-42 Pg. No. 1.4-2



Observation	AP-42 Ref. No.	Observed Value
	2	ref. not available
A	3	390.0
	4	none
B	9	535.0
C	9	1360.0
D	9	920.0
E	9	460.0
F	9	1290.0

Emission Factor 600 lb/10^6 ft^3 (continued)

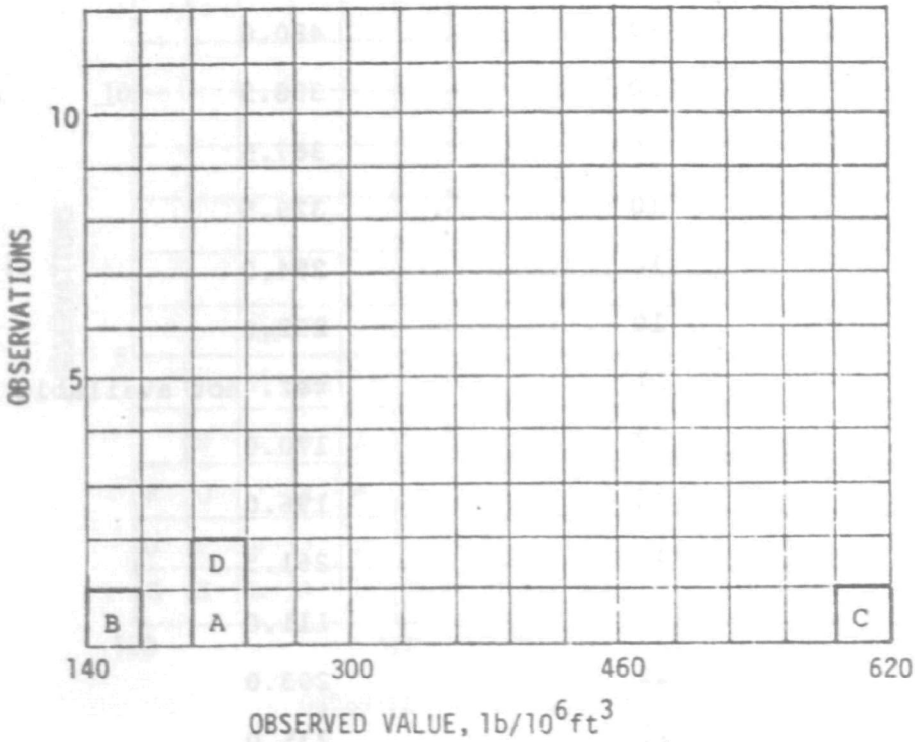
Observation	AP-42 Ref. No.	Observed Value
G	9	100.0
H	9	715.0
I	10	480.0
J	10	388.5
K	10	367.5
L	10	325.5
M	10	294.0
N	10	252.0
	11	ref. not available
O	12	170.0
P	12	196.0
Q	12	261.5
R	12	111.0
S	12	203.0
T	12	235.0
U	12	327.0
V	12	385.5
W	12	444.5
X	12	287.6
Y	12	274.6
Z	12	444.5
AA	12	326.9
AB	12	392.2

Industrial Process Boiler

Emission Factor (120 to 230) $lb/10^6 ft^3$

Pollutant NO_x from natural gas combustion

AP-42 Pg. No. 1.4-2



Observation	AP-42 Ref. No.	Observed Value
	2	None
A	3	214
B	4	141.8
C	9	620
	10	none
	11	ref. not available
	12	none
	13	none

Industrial Process Boiler

Emission Factor (120 to 230) (continued)

$lb/10^6 ft^3$

Observation	AP-42 Ref. No.	Observed Value
D	9	210

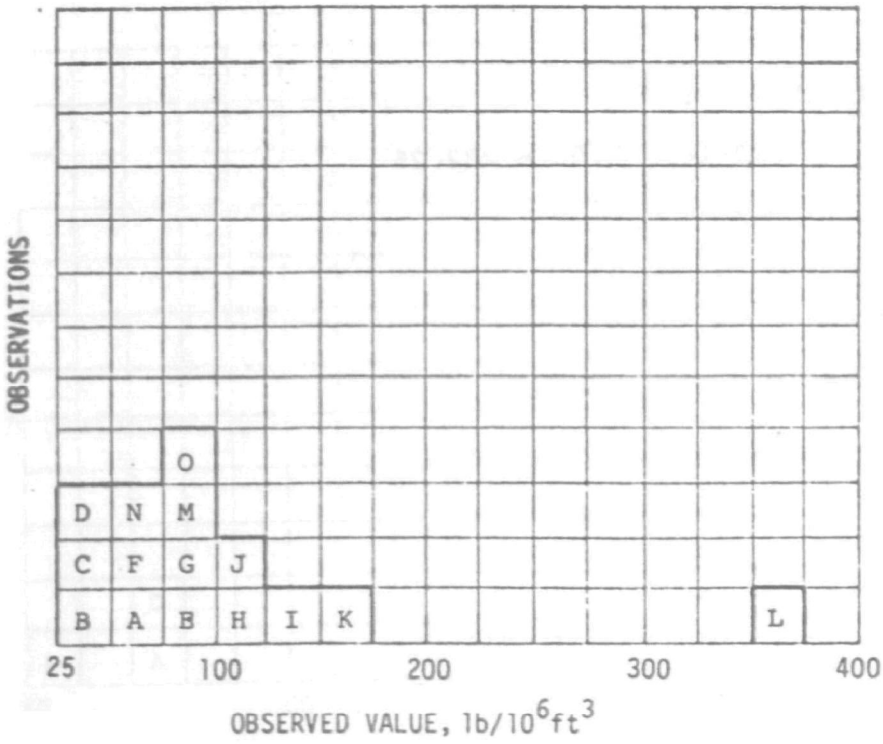
$\bar{X}$ = 296.45 $lb/10^6$ ft^3

Std. Dev. = (620-142)/2.05 = 232.25

Emission Factor 80 to 120 $lb/10^6 ft^3$

Pollutant NO_x from Natural Gas Combustion

AP-42 Pg. No. 1.4-2



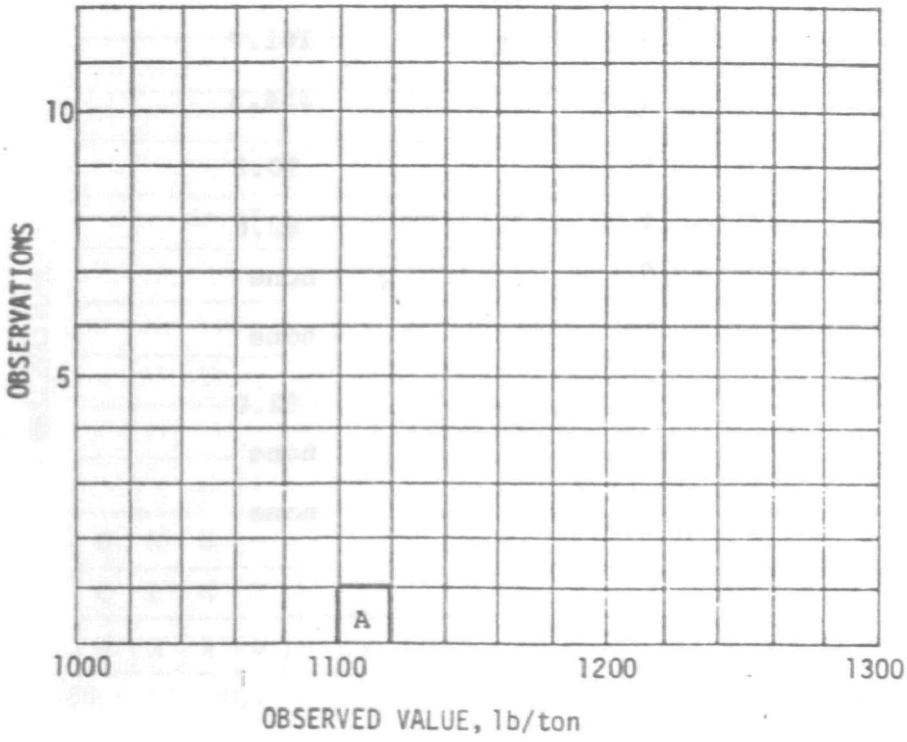
Observation	AP-42 Ref. No.	Observed Value
A	2	62.01
B	2	26.87
C	2	41.34
D	2	41.34
E	2	82.69
F	2	62.01
G	2	82.69
H	2	124.02

Emission Factor 80 to 120 $lb/10^6 ft^3$ (continued)

Observation	AP-42 Ref. No.	Observed Value
I	2	144.70
J	3	116.00
K	4	161.7
L	4	354.4
M	4	90.8
N	4	62.0
	9	none
	10	none
O	11	82.0
	12	none
	13	none

Emission Factor 1120 lbs/ton

Pollutant HydroCarbon (paint)
surface coating
AP-42 Pg. No. 4.2-1

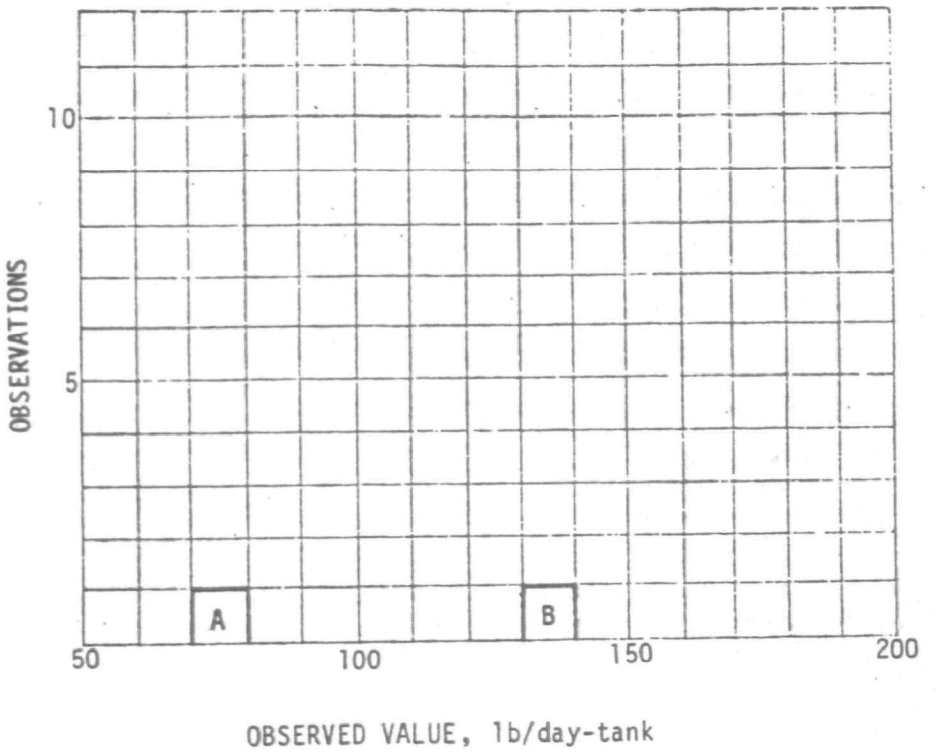


Observation	AP-42 Ref. No.	Observed Value
A	1	1120.0 lbs/ton

Emission Factor 100 (30 to 160) lb/day-tank

Pollutant ~~HC from Petroleum Storage~~ Floating Roof (Crude Oil ~~Breathing~~)

AP-42 Pg. No. 4.3-1

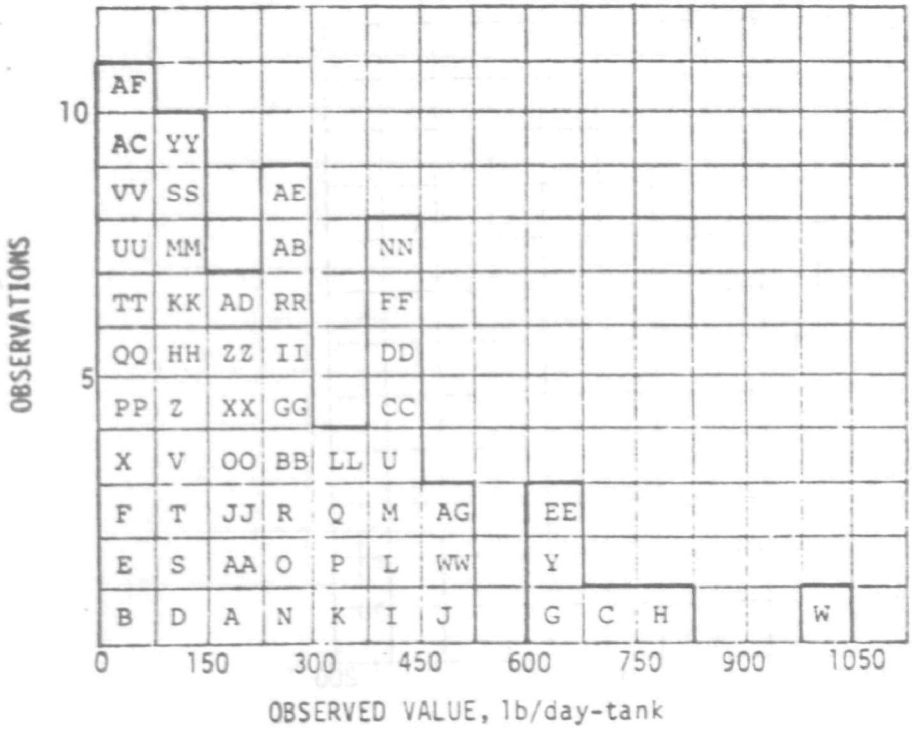


Observation	AP-42 Ref. No.	Observed Value
A	3	80.0
B	3	133.0

Emission Factor 140 (40-210) lb/day Tank

Pollutant HC from Petroleum Storage Floating Roof (Gasoline or Petroleum prods)

AP-42 Pg. No. 4.3-1



Observation	AP-42 Ref. No.	Observed Value
A	3	197.0
B	3	65.0
C	3	743.0
D	3	111.0
E	3	60.0
F	3	21.0
G	3	612.0
H	3	809.0

Emission Factor 140 (40-210) lb/day-(continued)
Tank

Observation	AP-42 Ref. No.	Observed Value
I	3	439.0
J	3	504.0
K	3	329.0
L	3	430.0
M	3	402.0
N	3	300.0
O	3	246.0
P	3	363.0
Q	3	351.0
R	3	262.0
S	3	145.0
T	3	145.0
U	3	377.0
V	3	121.0
W	3	1149.0
X	3	36.0
Y	3	628.0
Z	3	62.0
AA	3	176.0
BB	3	270.0
CC	3	413.0
DD	3	388.0
EE	3	642.0
FF	3	412.0
GG	3	271.0

Emission Factor 140 (40-210) lb/day/Tank (continued)

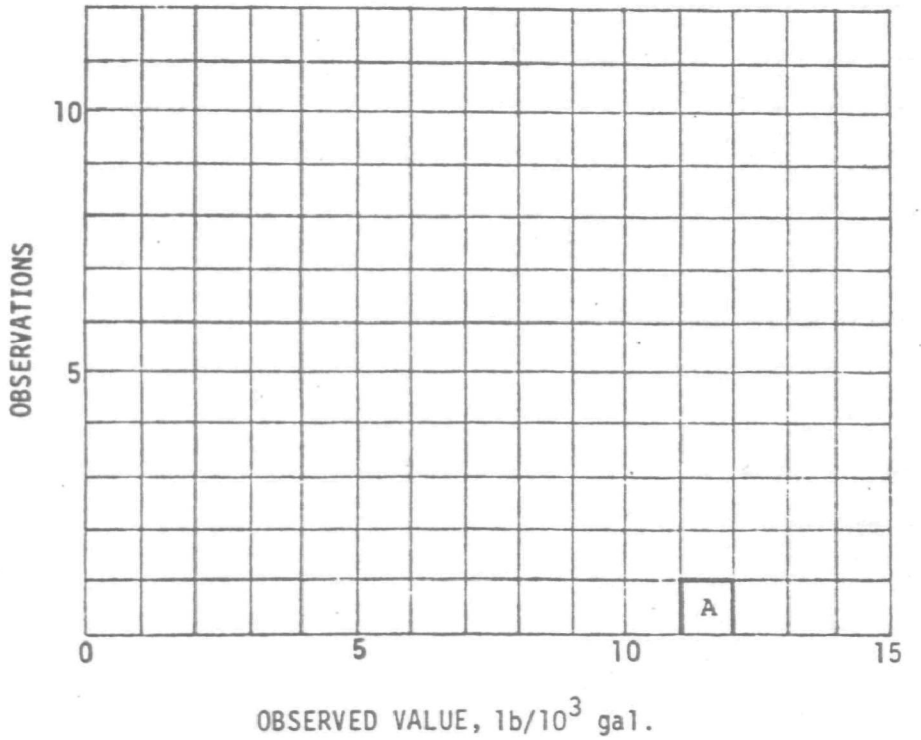
Observation	AP-42 Ref. No.	Observed Value
HH	3	90.0
II	3	285.0
JJ	3	158.0
KK	3	80.0
LL	3	323.0
MM	3	104.0
NN	3	426.0
OO	3	214.0
PP	3	0.0
QQ	3	0.0
RR	3	267.0
SS	3	148.0
TT	3	57.0
UU	3	0.0
VV	3	0.0
WW	3	377.0
XX	3	195.0
YY	3	132.0
ZZ	3	212.0
AB	3	233.0
AC	3	0.0
AD	3	181.0
AE	3	266.0
AF	3	0.0
AG	3	499.0

Filling Service Statior

Emission Factor Tank Splash Fill
12lb/10^3 gal

Pollutant HC Evaporation Losses from
Gasoline Marketing

AP-42 Pg. No. 4.4-2



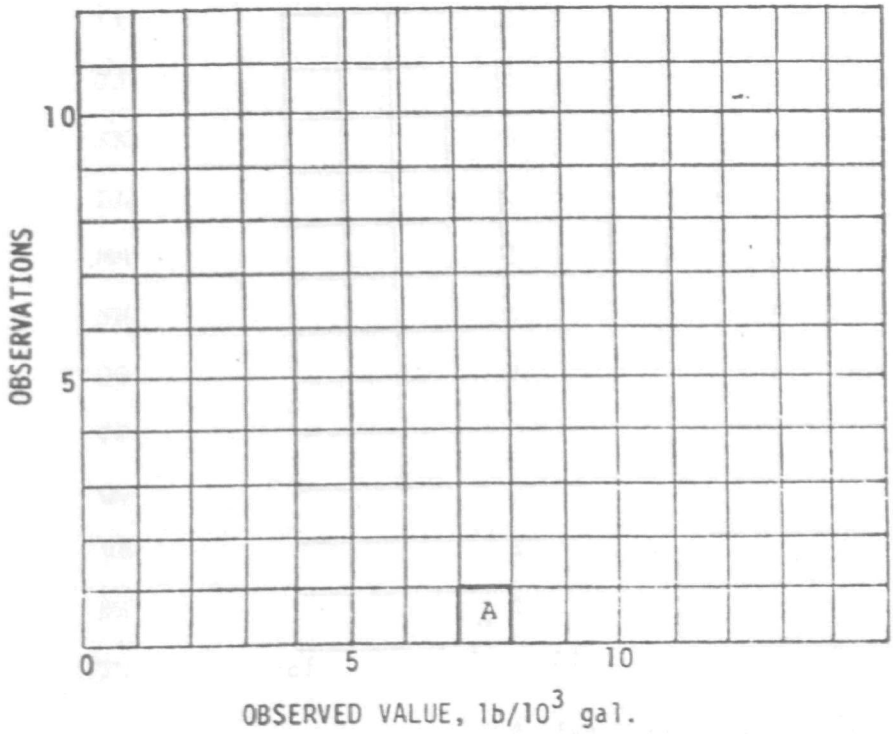
Observation	AP-42 Ref. No.	Observed Value
A	1	11.5

Filling Service Statio

Emission Factor Tank Submerged Fill
7 lb/10^3 gal

Pollutant HC Evaporation Losses from Gasoline

AP-42 Pg. No. 4.4

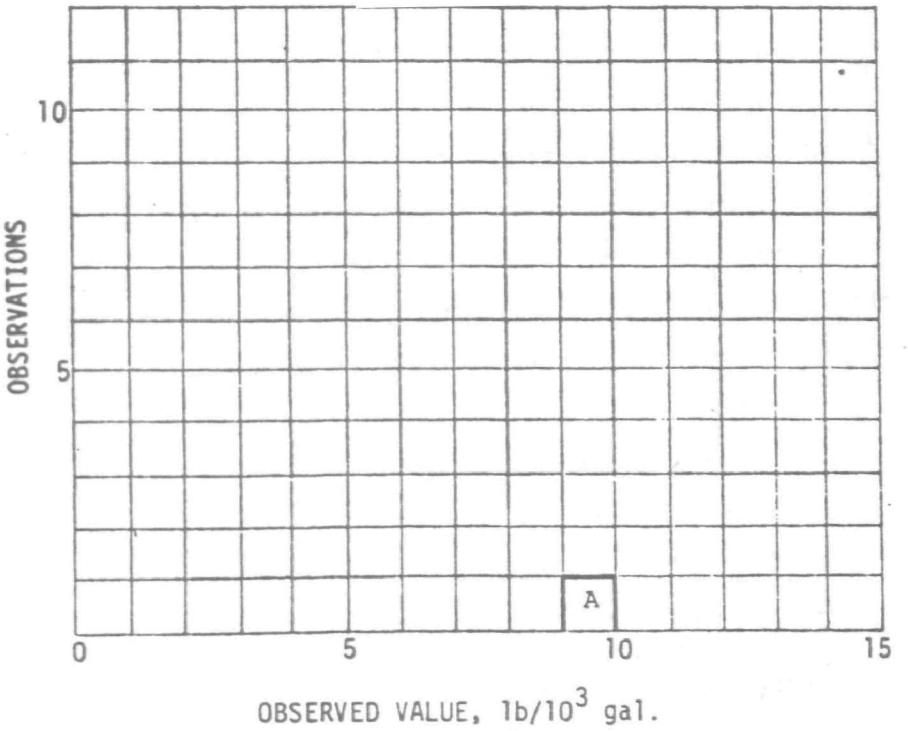


Observation	AP-42 Ref. No.	Observed Value
A	1	7.3

Emission Factor Filling ServiceStatio Tanks 50% Splash Fill & 50% Submerged Fill ~~9 lb/10^3 gal~~

Pollutant HC Evaporation Losses from Gasoline Marketing

AP-42 Pg. No. 4.4-2

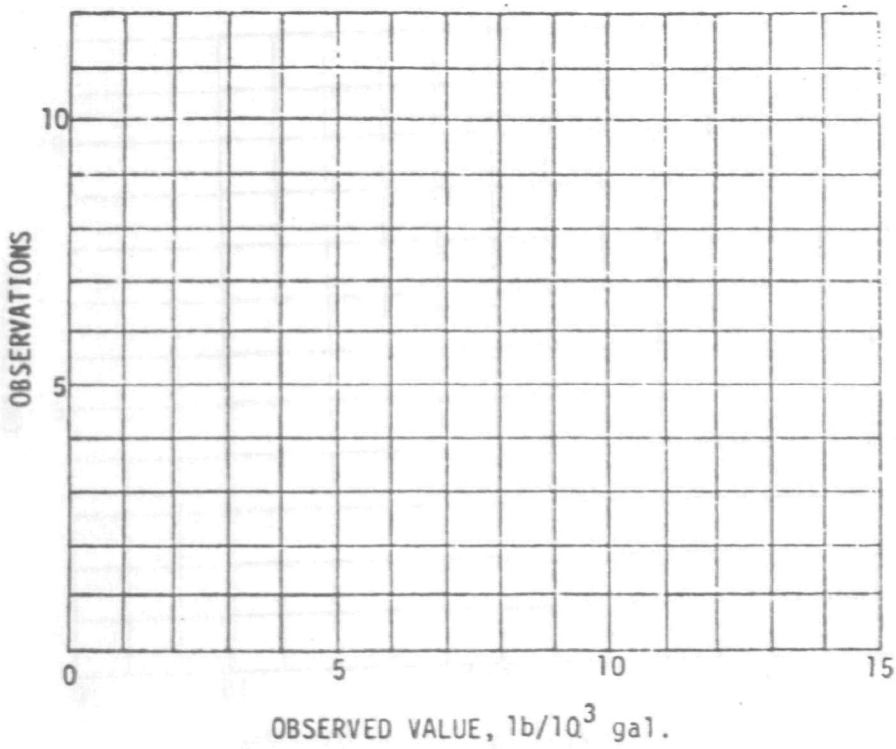


Observation	AP-42 Ref. No.	Observed Value
A	1	9.4

Emission Factor Filling Automobile Tanks 12 lb/10^3 gal

Pollutant HC Evaporation losses from Gasoline Marketing

AP-42 Pg. No. 4.4-2

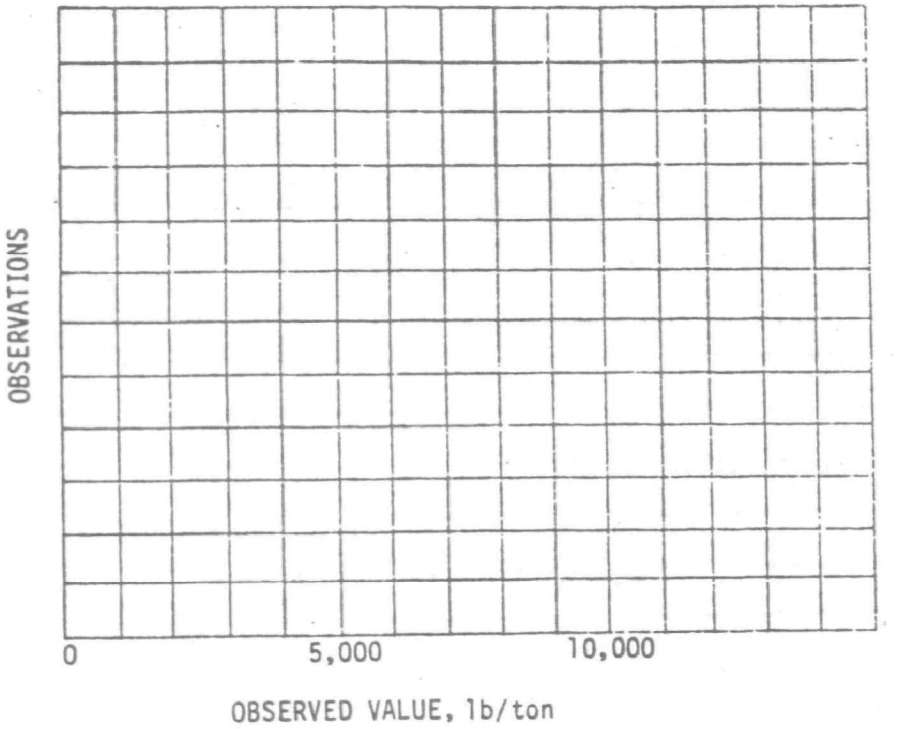


Observation	AP-42 Ref. No.	Observed Value
	2	ref. not available
	3	ref. not available

Emission Factor 11,500 lb/ton as Methane

Pollutant HC from Channel Process Carbon Black

AP-42 Pg. No. 5.3-2

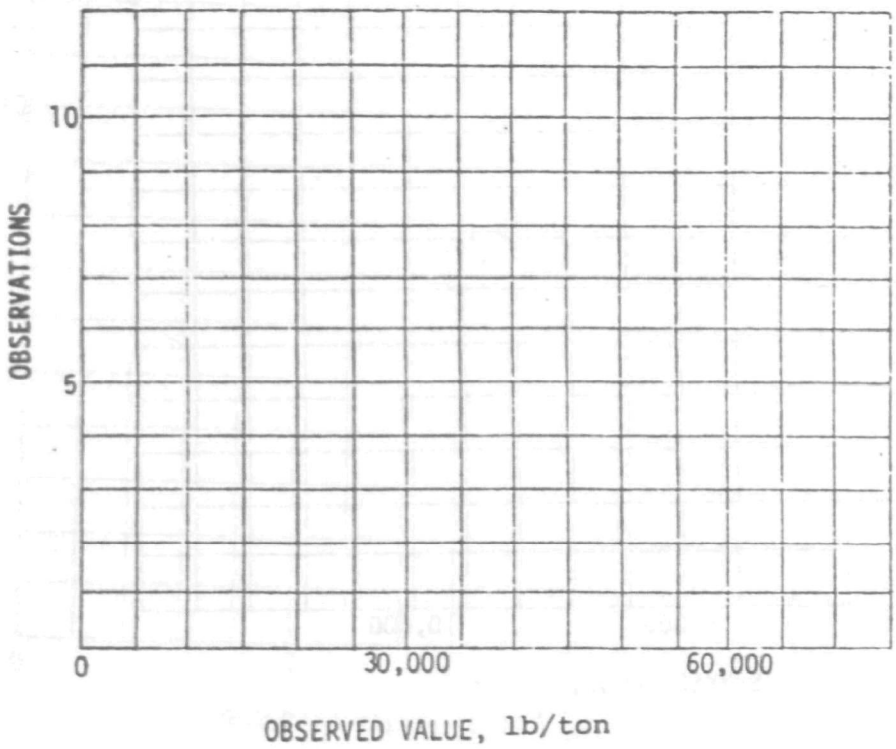


Observation	AP-42 Ref. No.	Observed Value
	2	none
	3	none
	5	none
	6	none

Emission Factor 33,500 lb/ton

Pollutant CO from Channel Process for Carbon Black Production

AP-42 Pg. No. 5.3-1

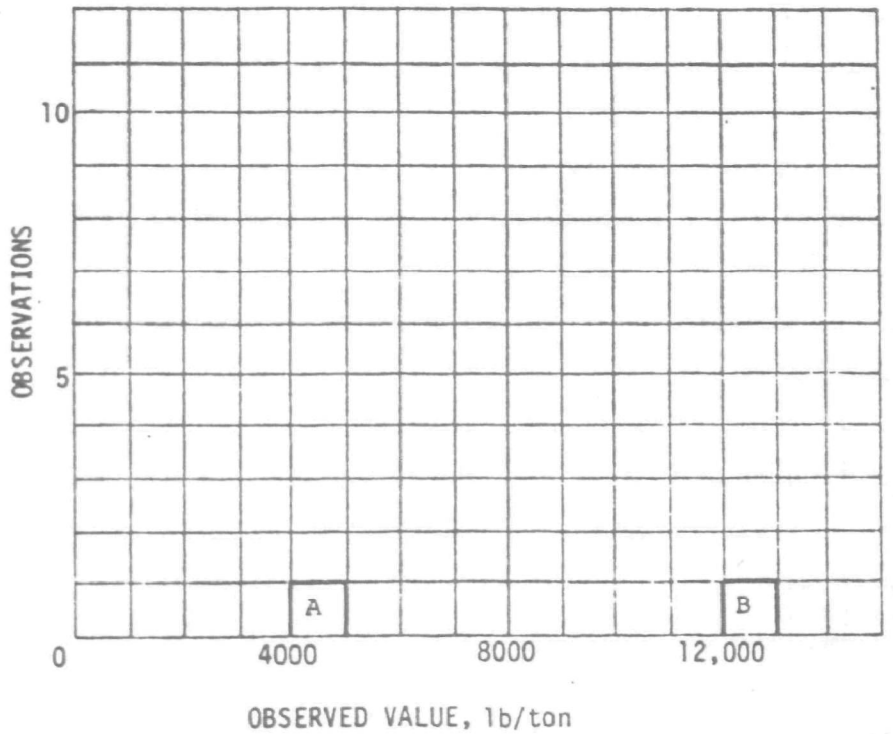


Observation	AP-42 Ref. No.	Observed Value
	2	none
	3	none
	5	none
	6	none

Emission Factor 5,300 lb/ton

Pollutant Carbon Black-CO from Gas Furnace

AP-42 Pg. No. 5.3-2

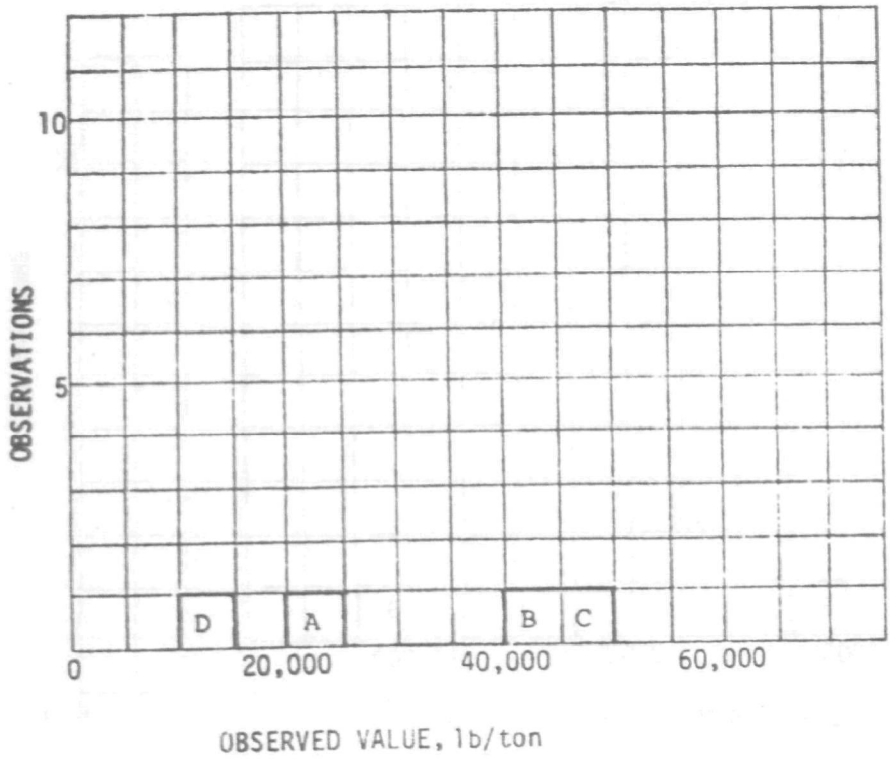


Observation	AP-42 Ref. No.	Observed Value
A	2	4744.3
B	2	12542.9
	3	none
	5	none
	6	none

Emission Factor 4,500 lb/ton

Pollutant Carbon Black-CO from Oil Furnace

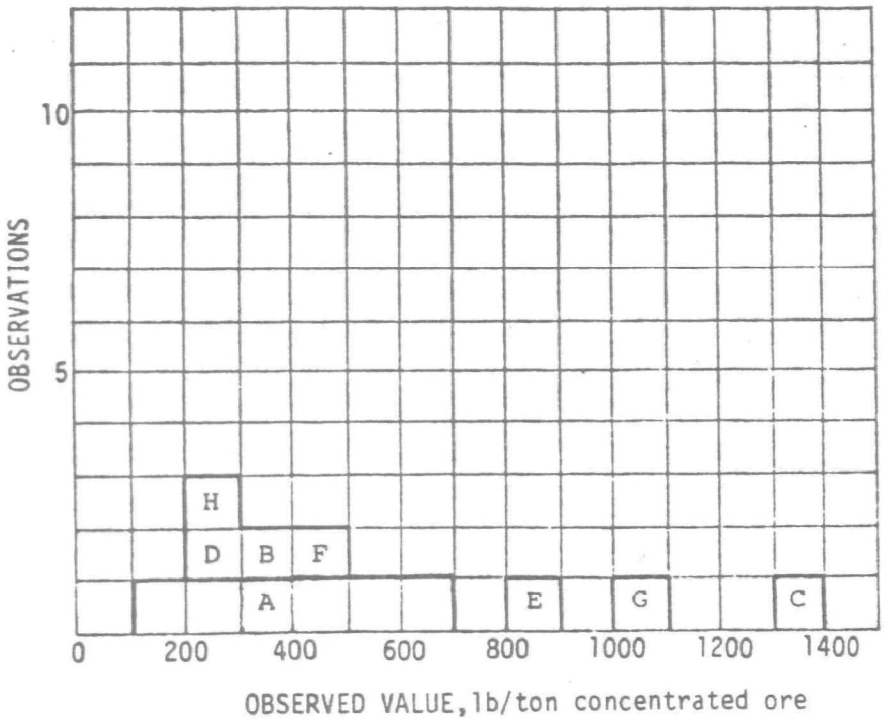
AP-42 Pg. No. 5.3-2



Observation	AP-42 Ref. No.	Observed Value
A	2	22700.0
B	2	44900.0
C	2	47000.0
D	2	13170.0
	3	none
	5	none
	6	none

Emission Factor 60 lb/ton
Copper Smelting
Pollutant SO_2 from Roasting

AP-42 Pg. No. 7.3-2

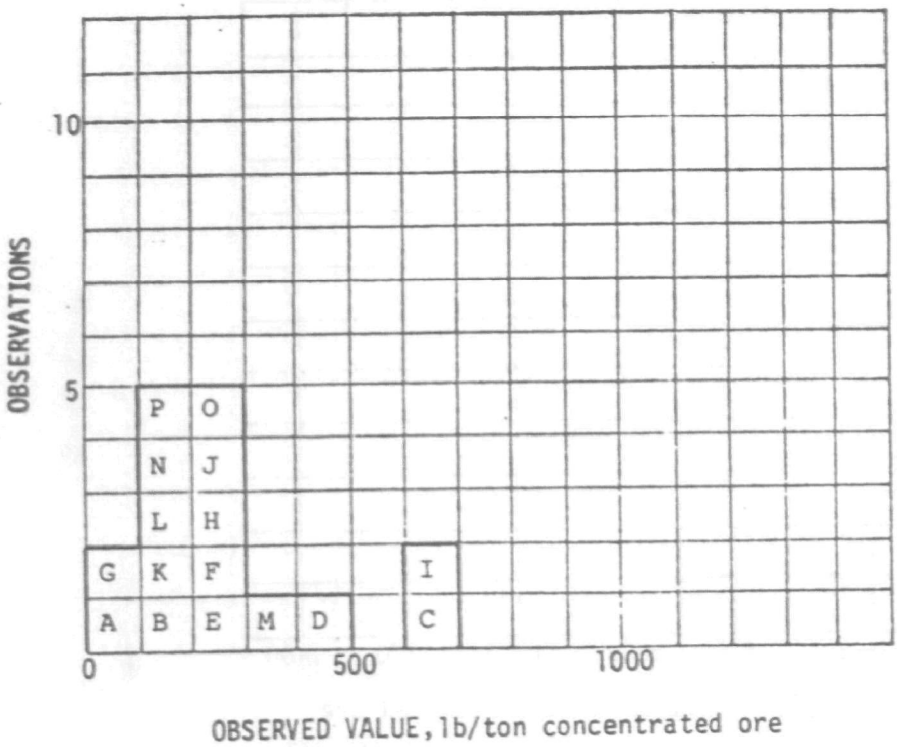


Observation	AP-42 Ref. No.	Observed Value
A	2	151.0 to 604.0
B	4	373.0
C	4	1328.0
D	4	255.0
E	4	805.0
F	4	439.0
G	4	1010.0
H	4	254.0

Emission Factor 320 lb/ton

Pollutant Copper Smelting SO_2 from Smelting Reverberatory Furnace

AP-42 Pg. No. 7.3-2



Observation	AP-42 Ref. No.	Observed Value
	2	none
A	4	82.0
B	4	126.0
C	4	688.0
D	4	459.0
E	4	244.0
F	4	238.0
G	4	44.0

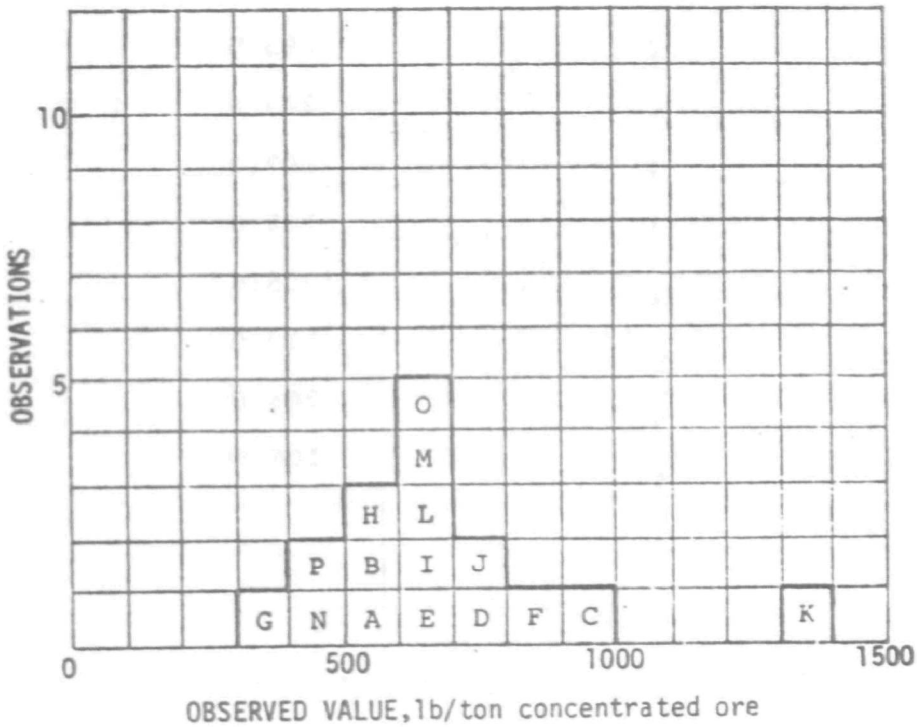
Emission Factor 320 lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
H	4	231.0
I	4	693.0
J	4	263.0
K	4	107.0
L	4	125.0
M	4	355.0
N	4	113.0
O	4	206.0
P	4	106.0

Emission Factor 870 lb/ton

Pollutant Copper Smelting SO_2 from Converter

AP-42 Pg. No. 7.3-2



Observation	AP-42 Ref. No.	Observed Value
	2	none
A	4	568.0
B	4	585.0
C	4	918.0
D	4	800.0
E	4	656.0
F	4	875.0
G	4	351.0

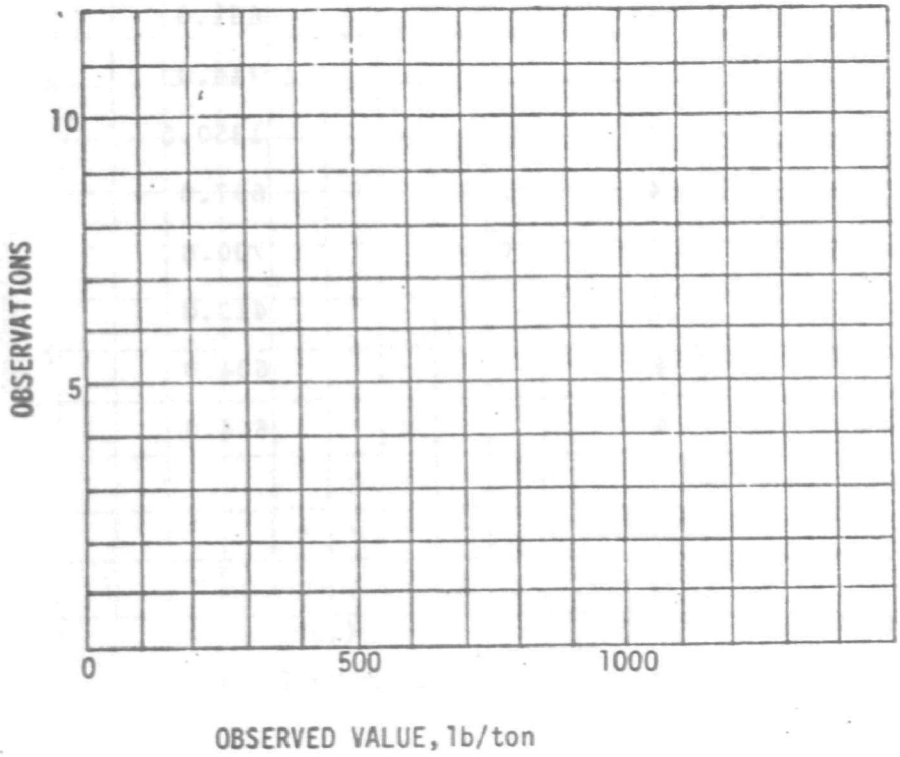
Emission Factor 870 lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
H	4	596.0
I	4	661.0
J	4	744.0
K	4	1350.0
L	4	697.0
M	4	700.0
N	4	413.0
O	4	684.0
P	4	414.0

Emission Factor 565 lb/ton

Pollutant Particulate from Ferroalloy Production 90% FeSi

AP-42 Pg. No. 7.4-2

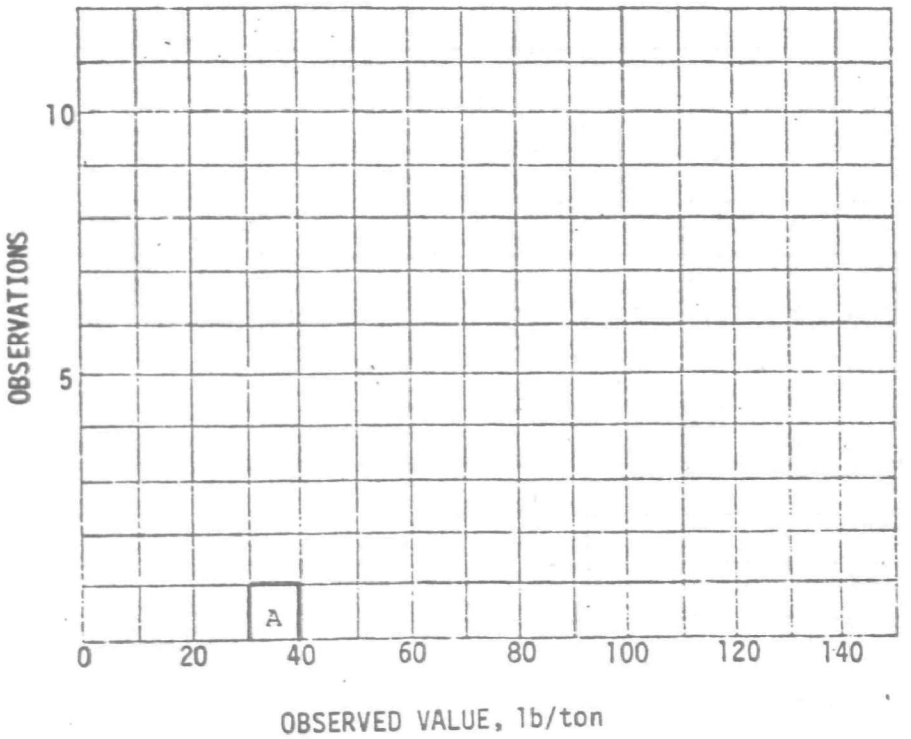


Observation	AP-42 Ref. No.	Observed Value
	4	ref. not available

Emission Factor 40 lb/ton

Pollutant Particulate from Iron Production Blast Furnace-AGLCHG

AP-42 Pg. No. 7.5-6

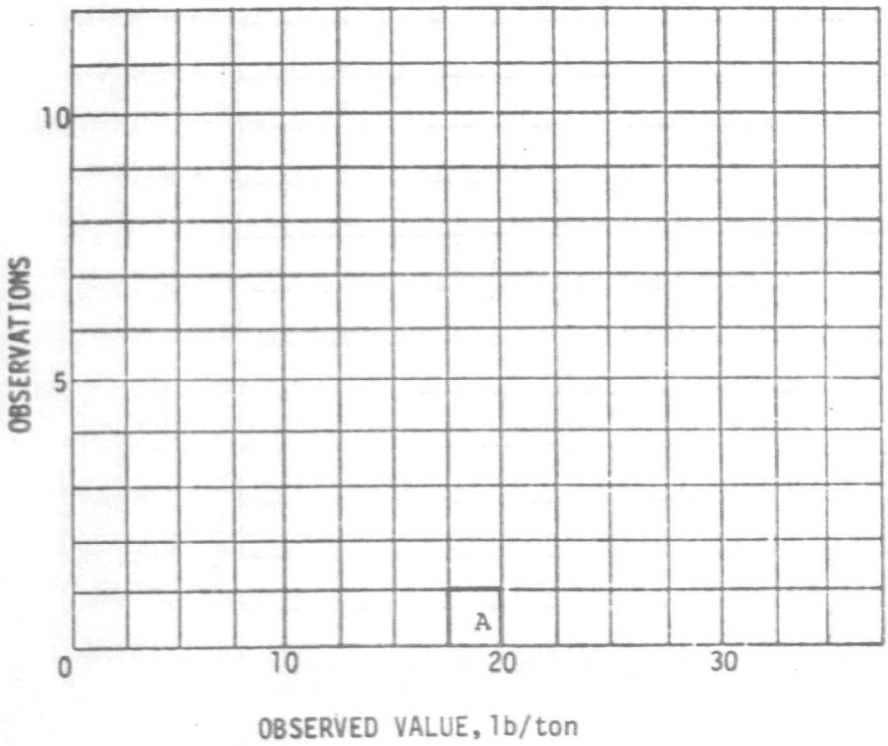


Observation	AP-42 Ref. No.	Observed Value
	2	none
A	3	40
	5	none

Emission Factor 20 lb/ton

Pollutant Particulate from Iron Production-Sintering (Windbox)

AP-42 Pg. No. 7.5-6

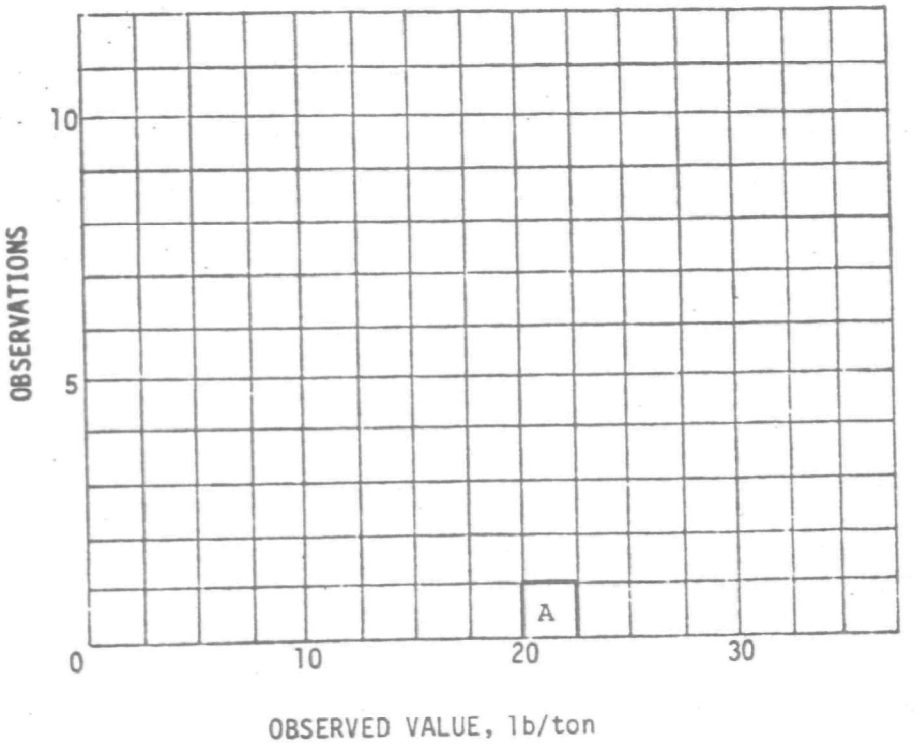


Observation	AP-42 Ref. No.	Observed Value
A	3	20.0

Emission Factor 22 lb/ton

Pollutant Particulate from Iron Production Sintering (Discharge)

AP-42 Pg. No. 7.5-6

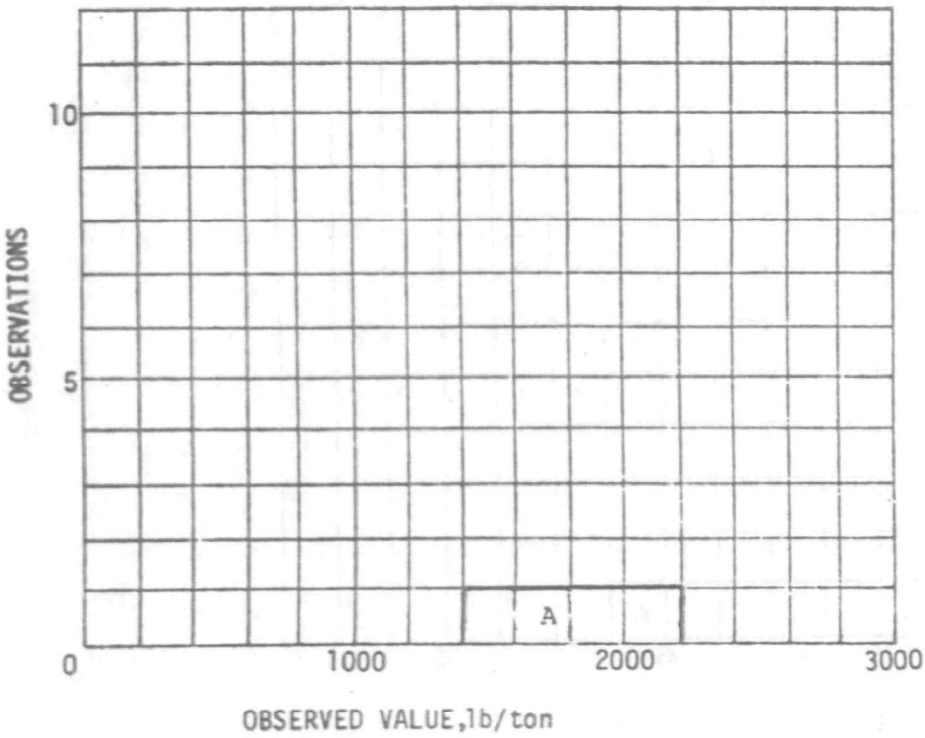


Observation	AP-42 Ref. No.	Observed Value
A	3	22.0

Emission Factor 1750(1400 to 2100) lb/ton

Pollutant CO from Iron Production Blast Furnace-Ore Charge

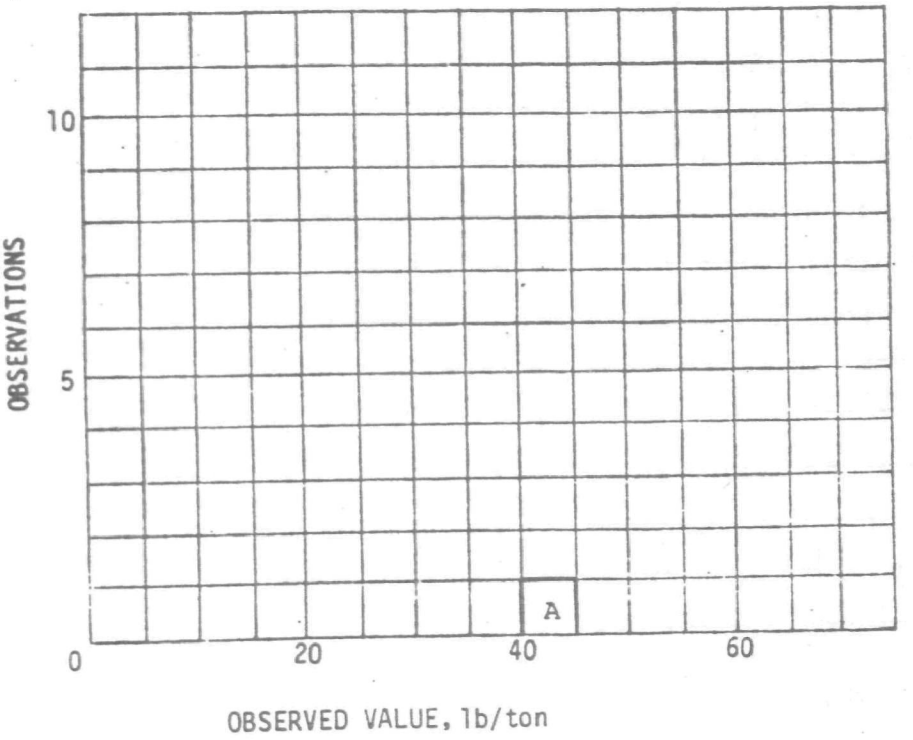
AP-42 Pg. No. 7.5-6



Observation	AP-42 Ref. No.	Observed Value
	2	none
A	3	1400.0 - 2100.0
	5	none

Emission Factor 44 lb/ton
CO from Iron Production
Pollutant Sintering (Discharge)

AP-42 Pg. No. 7.5-6

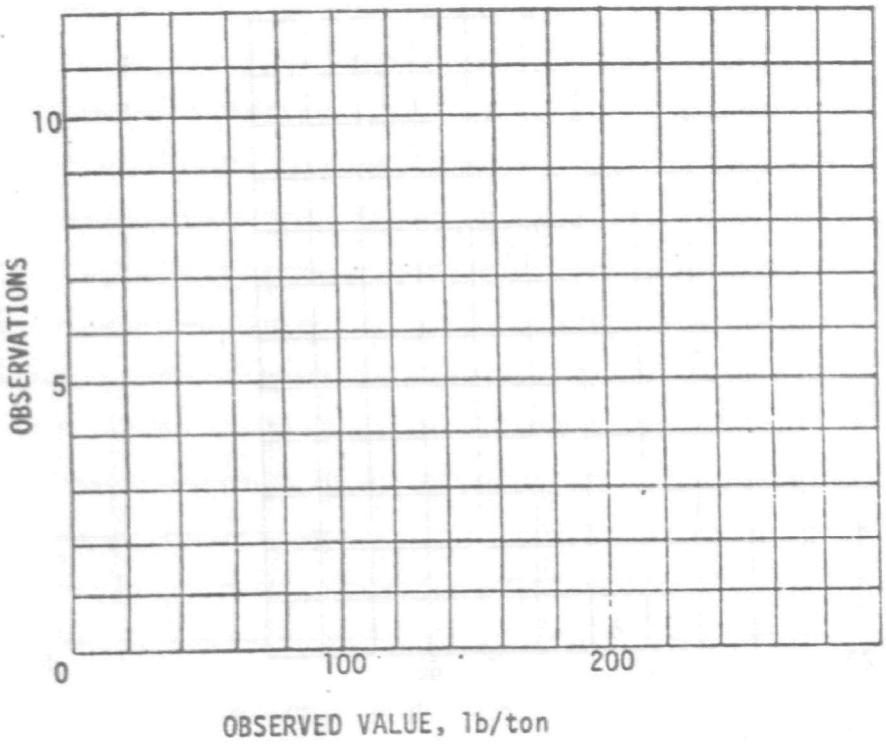


Observation	AP-42 Ref. No.	Observed Value
A	3	44.0

Emission Factor 145

Pollutant CO from Cupola at Gray Iron Foundry

AP-42 Pg. No. 7.10-1

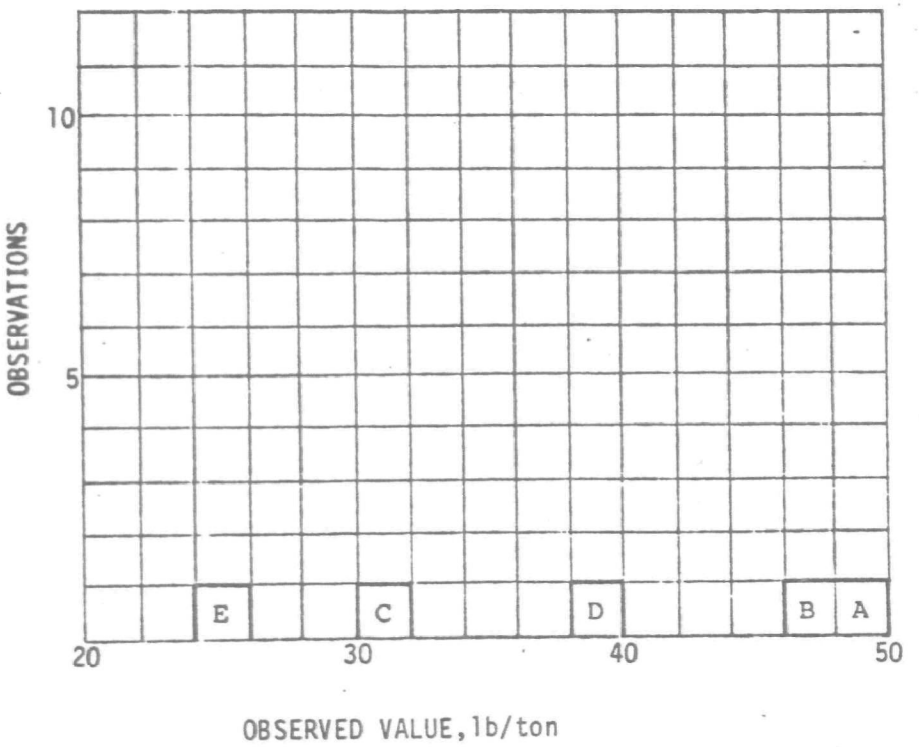


Observation	AP-42 Ref. No.	Observed Value
	6	ref. not available

Emission Factor 45 lb/ton

Pollutant Particulate from Asphaltic Concrete Plant

AP-42 Pg. No. 8.1-5



Observation	AP-42 Ref. No.	Observed Value
A	1	50
	2	none
B	5	47.8
C		31.3
	6	none
	7	none
D	8	40
	9	ref. not available

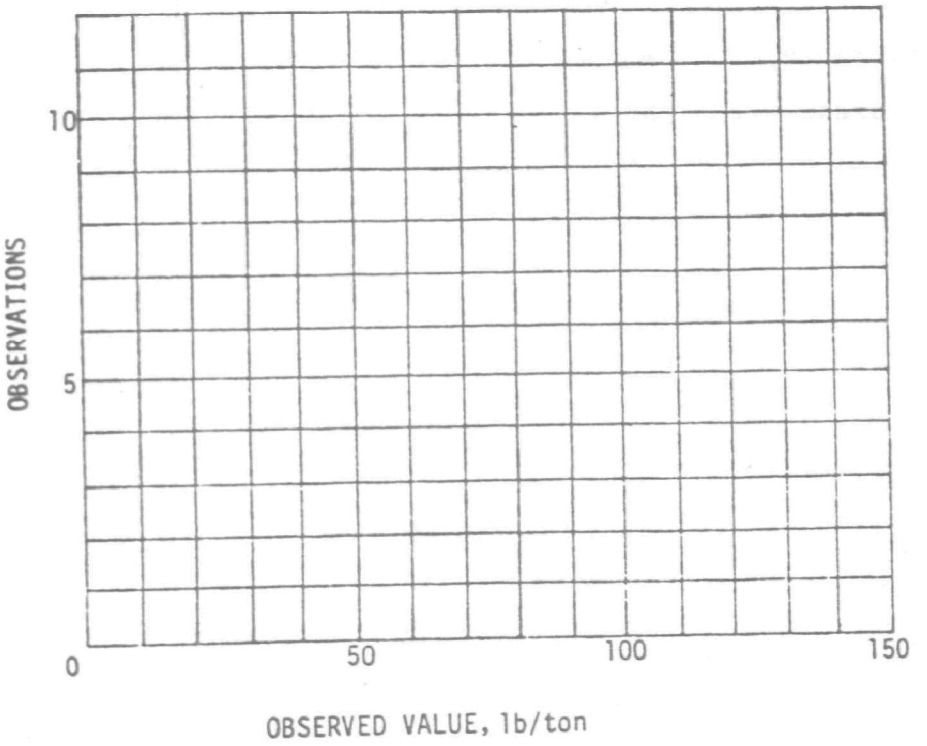
Emission Factor 45 lb/ton - (continued)

Observation	AP-42 Ref. No.	Observed Value
E	10	25

Emission Factor 96 lb/ton

Pollutant Brick Manufacturing-Particulate from Raw Mat'l. Handling (Dryers, Grinders)

AP-42 Pg. No. 8.3-3



Observation	AP-42 Ref. No.	Observed Value
	1[a]	none
	2[a]	ref. not available
	3[a]	ref. not available
	4[a]	none
	5[a]	none
	6[a]	ref. not available
	2[b]	none
	3[b]	ref. not available

Emission Factor 96 lb/ton (continued)

Observation	AP-42 Ref. No.	Observed Value
	4[b]	none
	5[b]	none

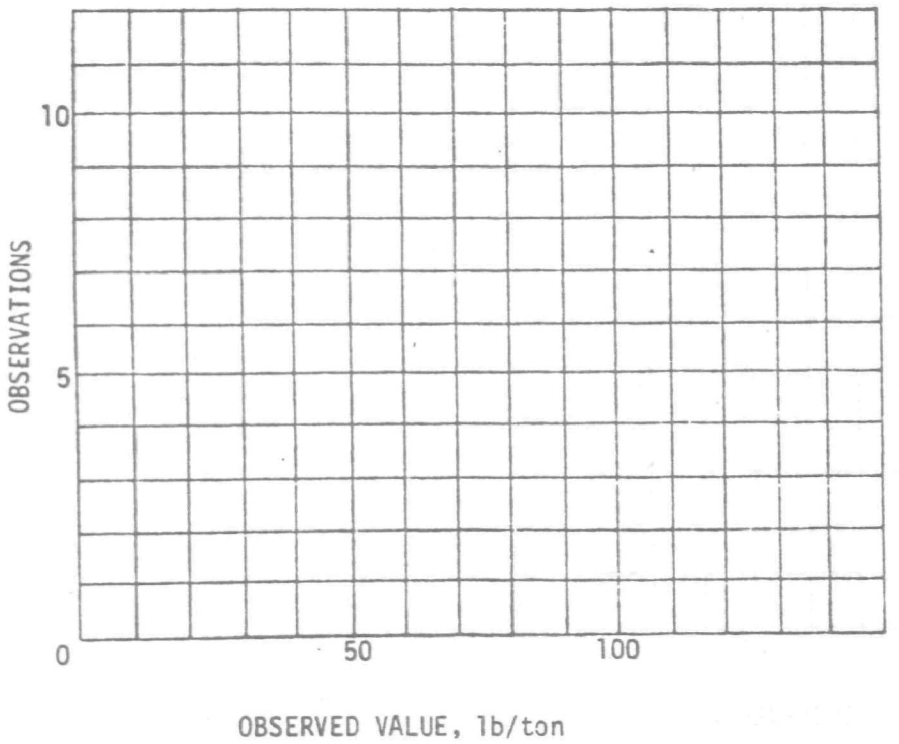
a) This reference from Section 8.6.

b) This reference from Section 8.7.

Emission Factor 34 lb/ton

Pollutant Brick Manufacturing Particulate from Raw Mat'l. Handling (Storage)

AP-42 Pg. No. 8.3-3



Observation	AP-42 Ref. No.	Observed Value
	1[a]	none
	2[a]	ref. not availabl
	2[b]	none
	3[b]	ref. not availabl
	4[b]	none
	5[b]	none

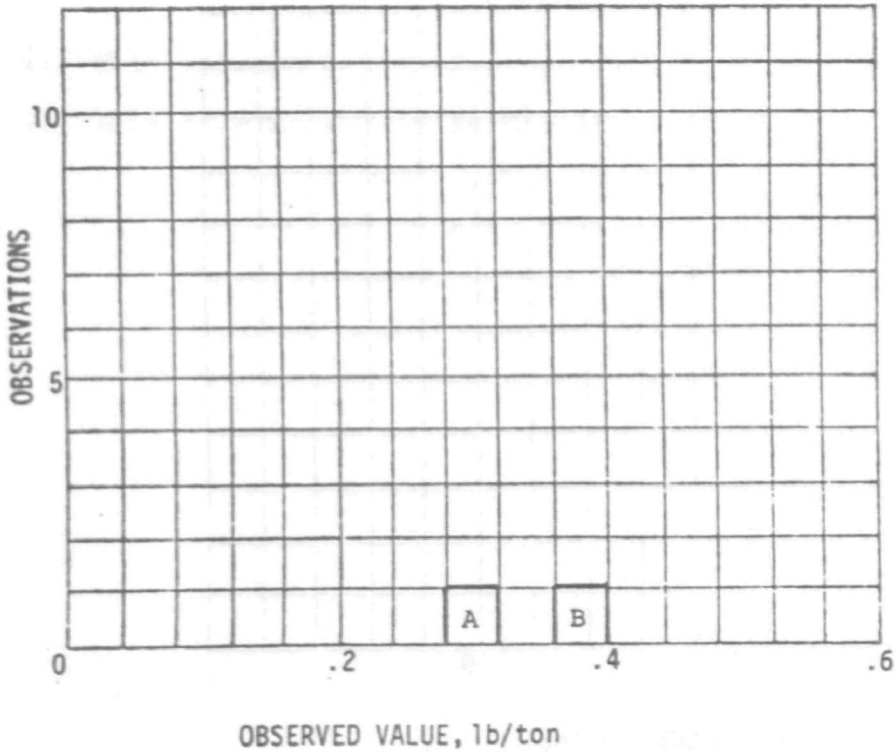
a) Reference in Section 8.6.

b) Reference in Section 8.7.

Emission Factor 0.04 lb/ton

Pollutant Particulate from Gas Fired Tunnel Kiln at Brick Mfg.

AP-42 Pg. No. 8.3-1



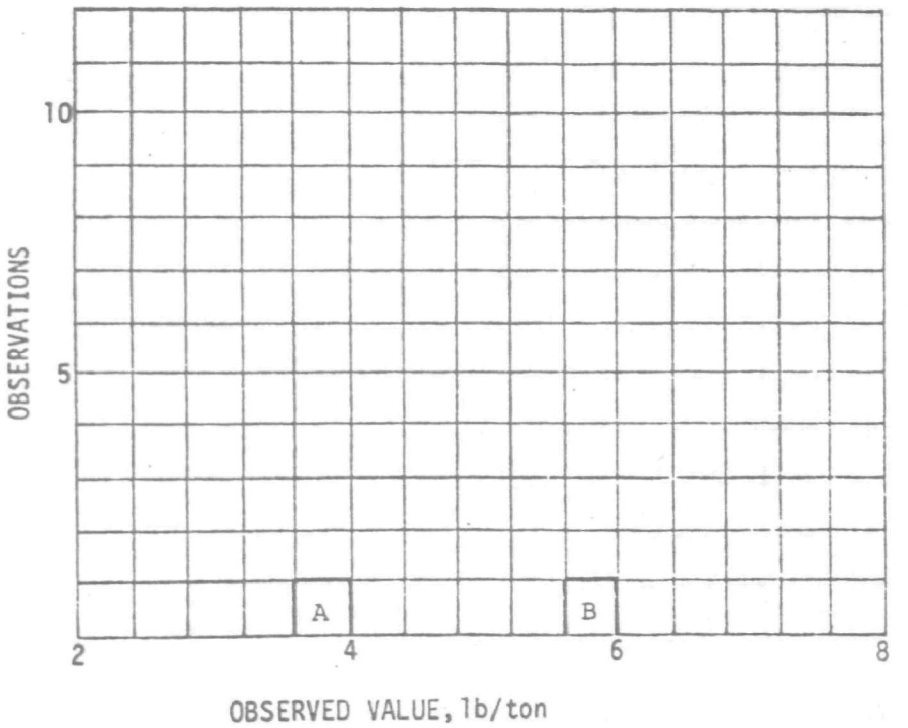
Observation	AP-42 Ref. No.	Observed Value
	1	none
A	5[a]	.03
B	5[a]	.04

a) Reference 5 and fuel combustion emission factor included to obtain observed values.

Emission Factor 0.6 lb/ton

Pollutant Particulate from Oil-Fired Tunnel Kiln at Brick Mfg.

AP-42 Pg. No. 8.3-1



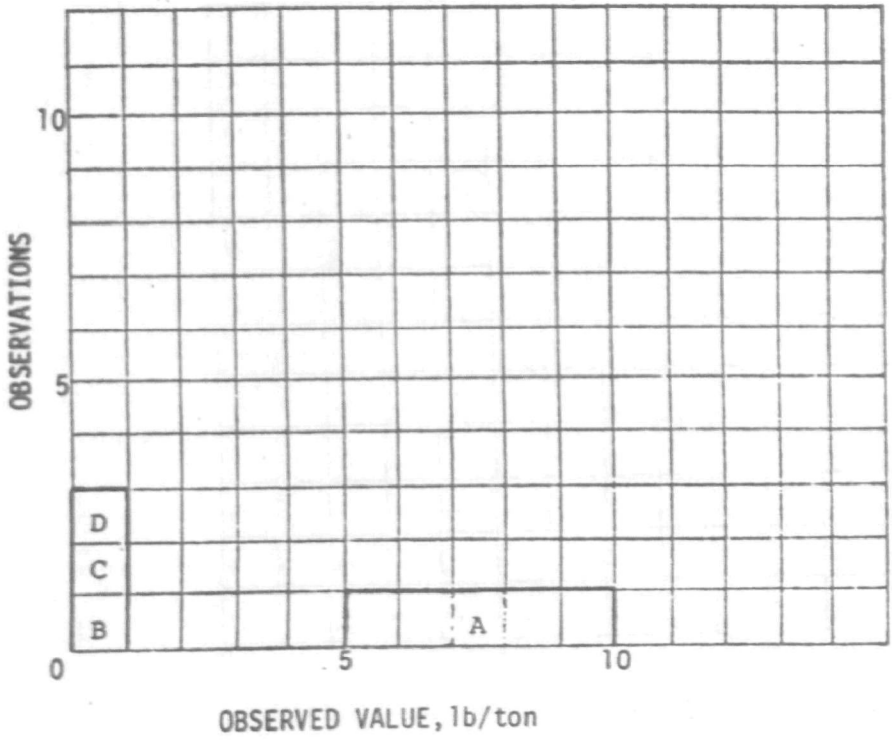
Observation	AP-42 Ref. No.	Observed Value
	1	none
A	5[a]	.37
B	5[a]	.6

a) Reference 5 and emission factor from fuel combustion.

Emission Factor 1.0 A

Pollutant Particulate from Coal-Fired Tunnel Kiln at Brick Mfg.

AP-42 Pg. No. 8.3-1



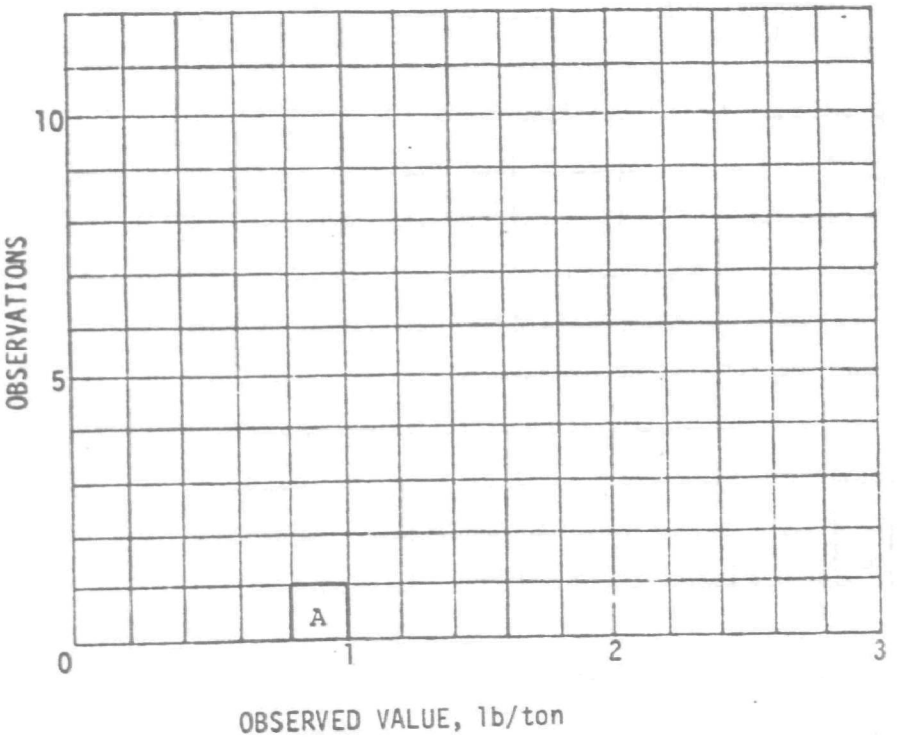
Observation	AP-42 Ref. No.	Observed Value
A	1	5A-10A avg= 7.5A
B	5[a]	.22A
C	5[a]	.28A
D	5[a]	.38A

a) Reference 5 and emission factor from fuel combustion

Emission Factor 0.11 lb/ton

Pollutant Brick Manufacturing-Particulate from Periodic Kilns (Gas-Fired)

AP-42 Pg. No. 8.3-1



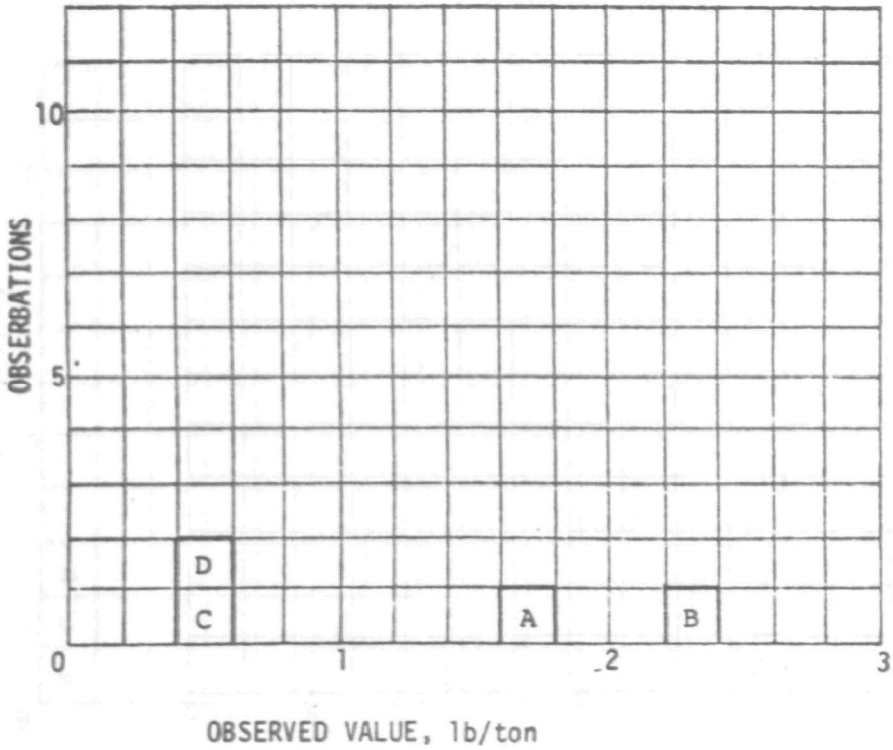
Observation	AP-42 Ref. No.	Observed Value
	1	none
A	5[a]	0.1

a) Reference 5 and emission factor for fuel combustion.

Emission Factor 0.9 lb/ton

Pollutant Brick Manufacturing-Particulate from Periodic Kilns (Oil-Fired)

AP-42 Pg. No. 8.3-3



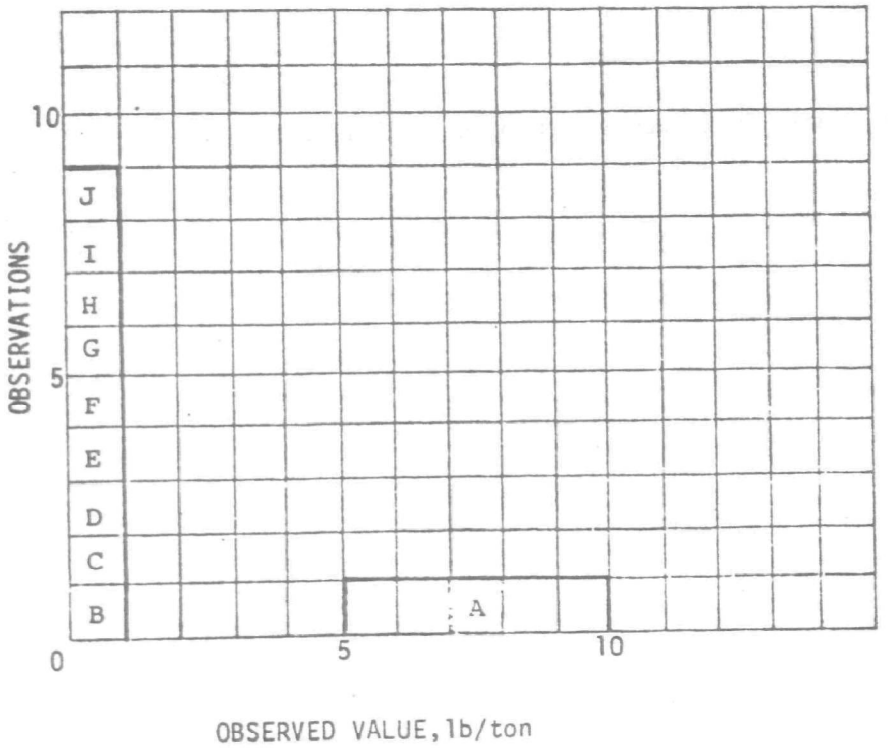
Observation	AP-42 Ref. No.	Observed Value
	1	none
A	5[a]	1.8
B	5[a]	2.3
C	5[a]	.6
D	5[a]	.5

a) Reference 5 and emission factor for fuel combustion.

Emission Factor 1.6A lb/ton

Pollutant Brick Manufacturing Particulate from Periodic Kilns (Coal Fired)

AP-42 Pg. No. 8.3-3



Observation	AP-42 Ref. No.	Observed Value
A	1	5.0A - 10.0A
B	5[a]	0.67A
C	5[a]	0.45A
D	5[a]	0.37A
E	5[a]	0.46A
F	5[a]	0.92A
G	5[a]	0.65A
H	5[a]	0.77A

Emission Factor 1.6A lb/ton (continued)

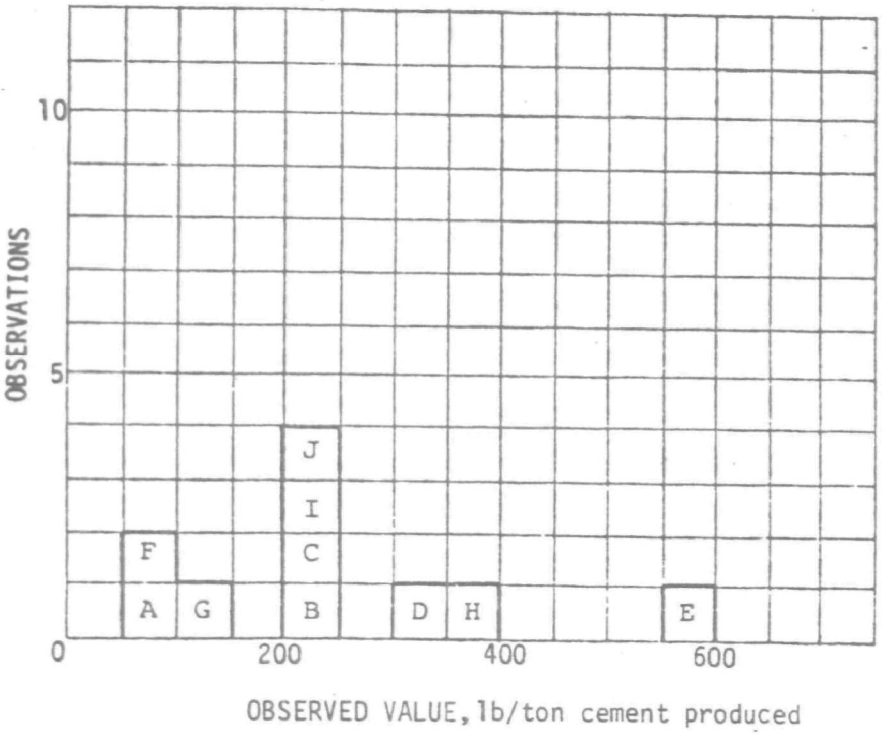
Observation	AP-42 Ref. No.	Observed Value
I	5[a]	0.54A
J	5[a]	0.55A

a) Reference 5 and fuel combustion emission factors.

Emission Factor 245 lbs/ton Cement ~~Produced~~

Pollutant Particulate from Kilns in ~~Cement Plant (Dry-Process)~~

AP-42 Pg. No. 8.6-3



Observation	AP-42 Ref. No.	Observed Value
A	1	93.6
B	1	203.0
C	1	232.2
D	1	332.9
E	1	567.1
F	1	77.0
G	1	121.1
H	1	364.6

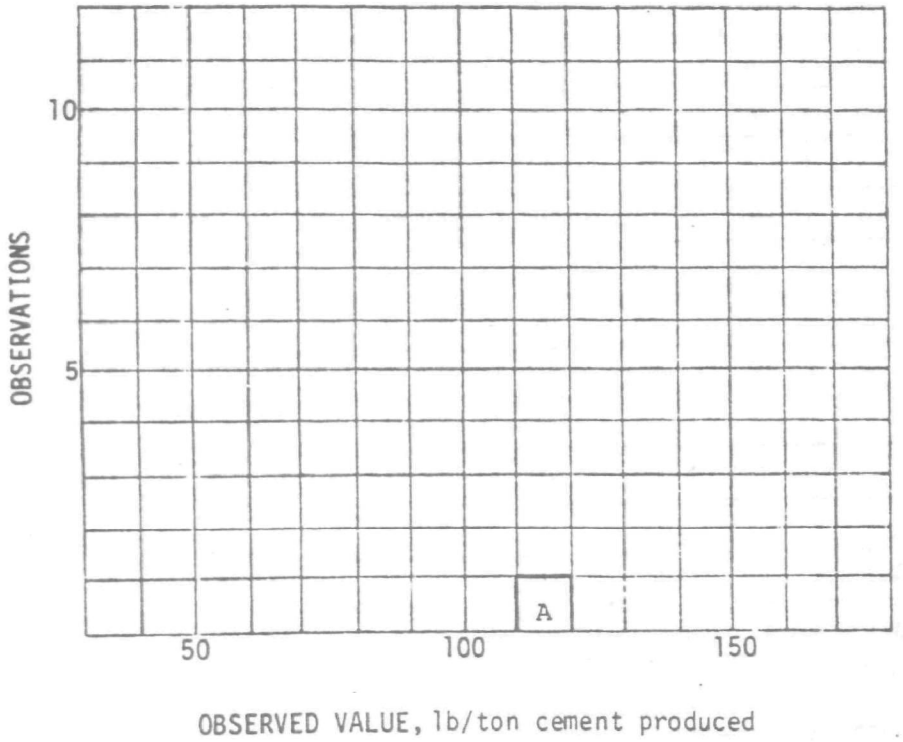
Emission Factor 245 lbs/ton cement produced (continued)

Observation	AP-42 Ref. No.	Observed Value
I	1	211.4
J	2	239.4

Emission Factor 96 lb/ton Cement Produced

Pollutant Particulate from Dryers, Grinders, Etc. in Cement Plant (Dry Process)

AP-42 Pg. No. 8.6-3

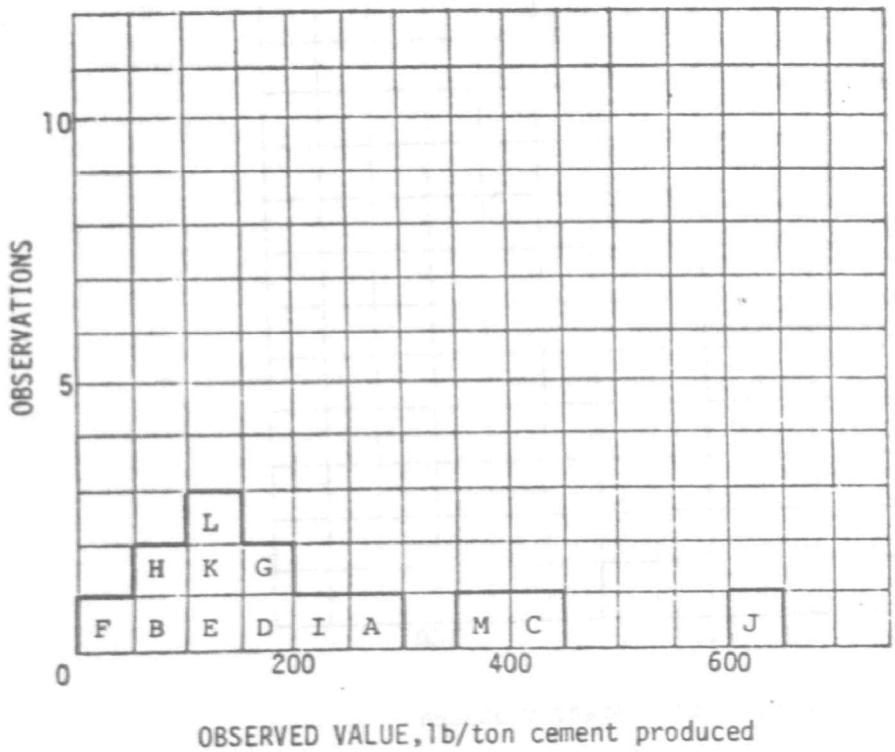


Observation	AP-42 Ref. No.	Observed Value
	1	none
A	2	112.0

Emission Factor 228 lb/ton Cement ~~Produced~~

Pollutant Particulate from Kilns of ~~Cement Plant (Wet Process)~~

AP-42 Pg. No. 8.6-3



Observation	AP-42 Ref. No.	Observed Value
A	1	277.7
B	1	80.4
C	1	418.3
D	1	178.4
E	1	109.2
F	1	35.5
G	1	192.3
H	1	96.4

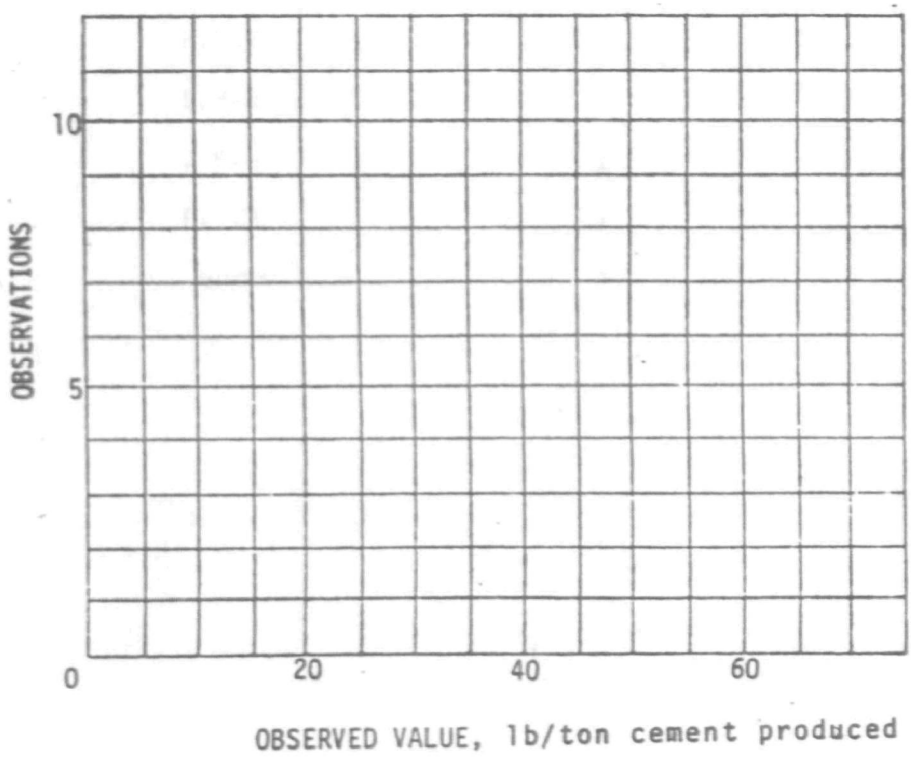
Emission Factor 228 lb/ton Cement Produced (continued)

Observation	AP-42 Ref. No.	Observed Value
I	1	228.3
J	1	629.1
K	1	146.1
L	1	149.2
M	1	357.1
	2	none

Emission Factor 32 lb/ton

Pollutant Particulate from Dryers, Grinders, Etc. at Cement Plant (Wet Process)

AP-42 Pg. No. 8.6-3

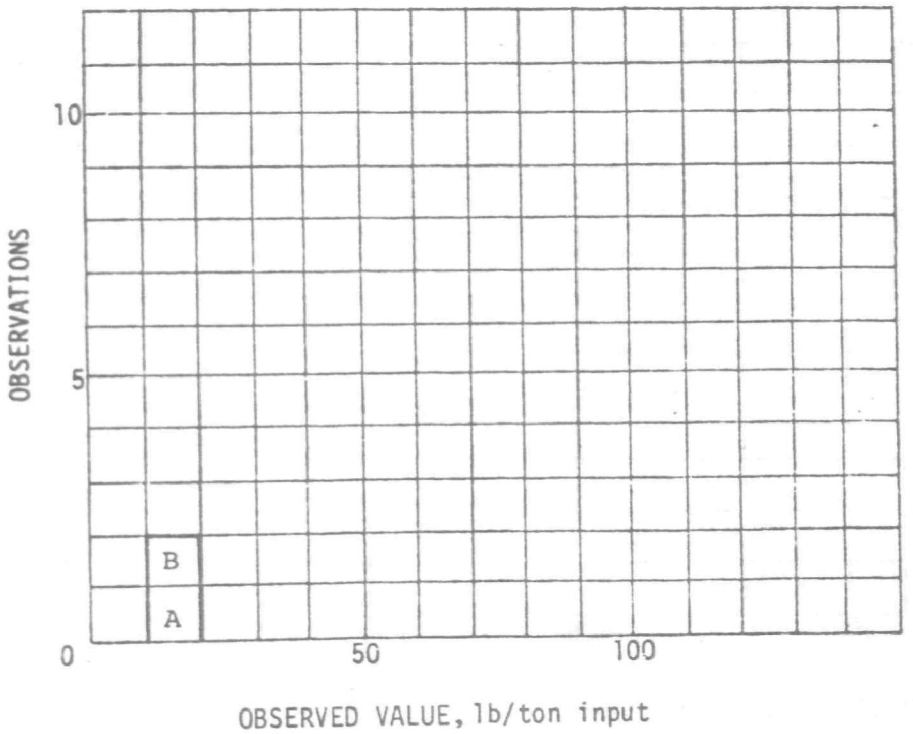


Observation	AP-42 Ref. No.	Observed Value
	1	none
	2	none

Emission Factor 70 lb/ton

Pollutant Ceramic/Clay Mfg. - Particulate Emissions from Drying

AP-42 Pg. No. 8.7-1

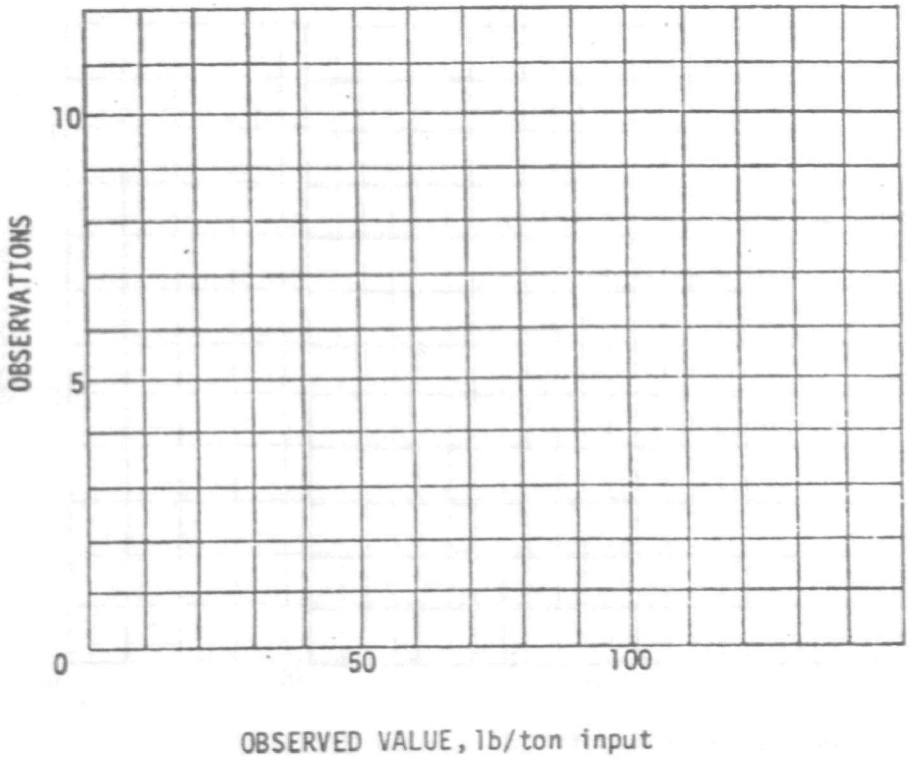


Observation	AP-42 Ref. No.	Observed Value
	2	none
	3	ref. not available
	4	16.8
	5	17.3

Emission Factor 76 lb/ton

Pollutant Ceramic/Clay Mfg. -Particulate Emissions from Grinding

AP-42 Pg. No. 8.7-1

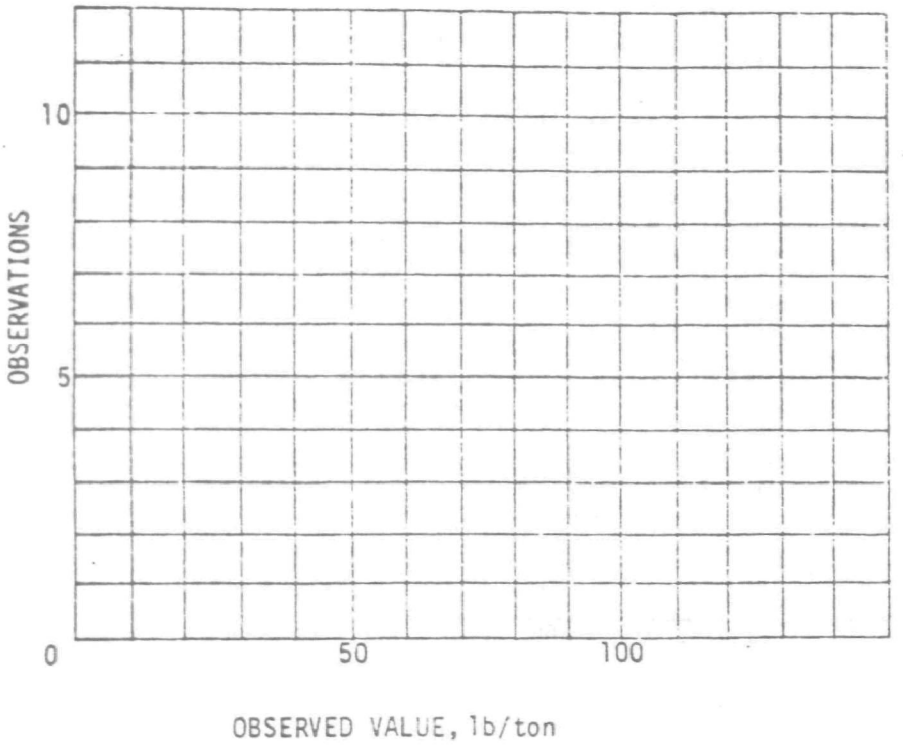


Observation	AP-42 Ref. No.	Observed Value
	2	none

Emission Factor 34 lb/ton

Pollutant Particulate from Storage for Ceramic Clay Mfg.

AP-42 Pg. No. 8.7-1

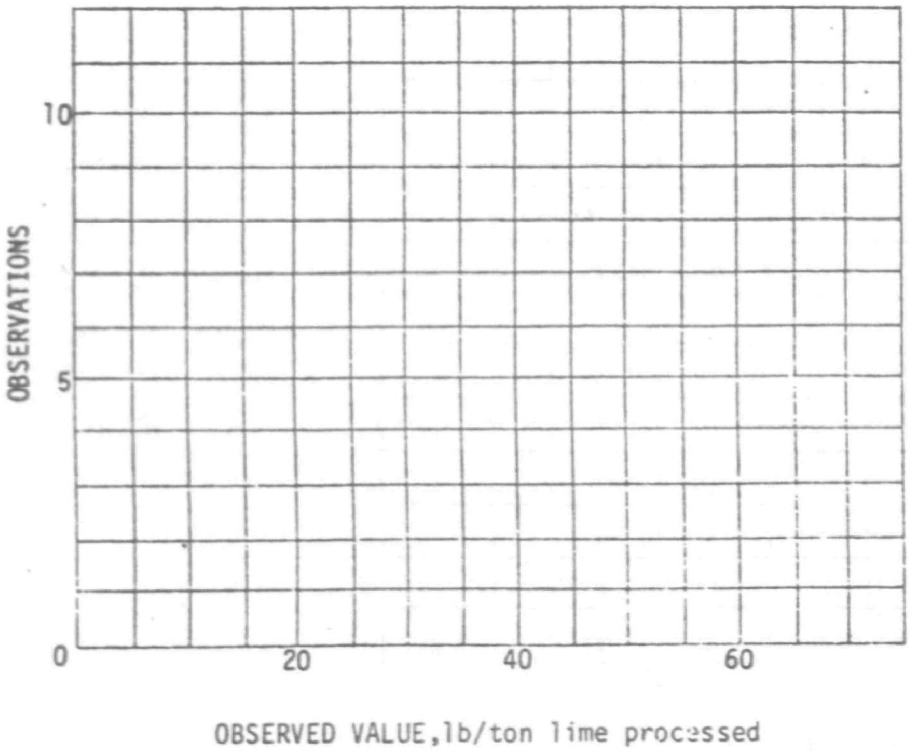


Observation	AP-42 Ref. No.	Observed Value
	2	none
	3	ref. not available
	4	none
	5	none

Emission Factor 31 lb/ton

Pollutant Particulate from Primary Crushing at Lime Mfg.

AP-42 Pg. No. 8.15-1

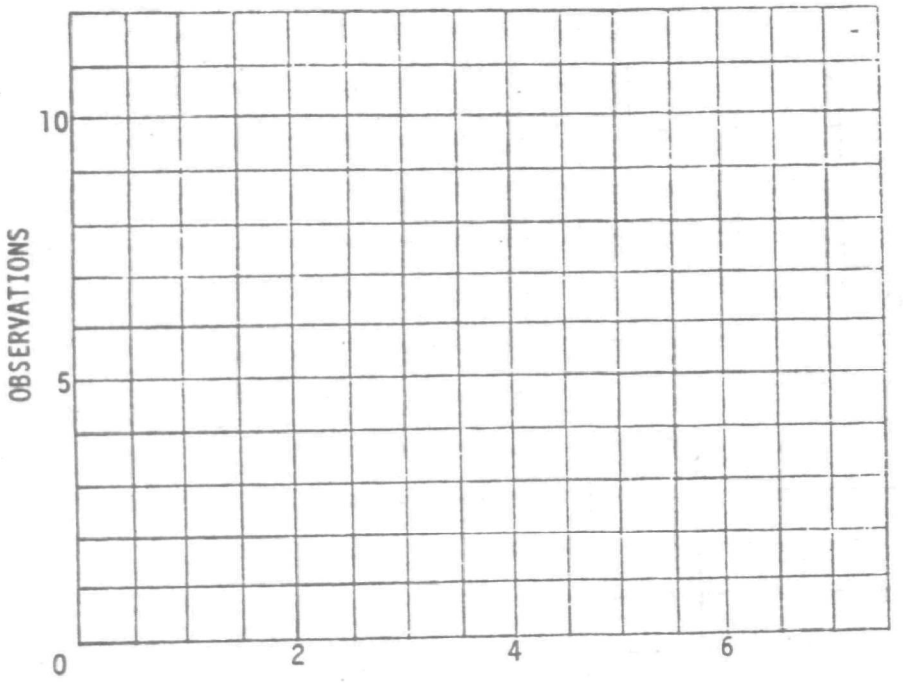


Observation	AP-42 Ref. No.	Observed Value
	3	ref. not available

Emission Factor 2 lb/ton

Pollutant Particulate from Secondary Crushing at Lime Mfg.

AP-42 Pg. No. 8.15-1

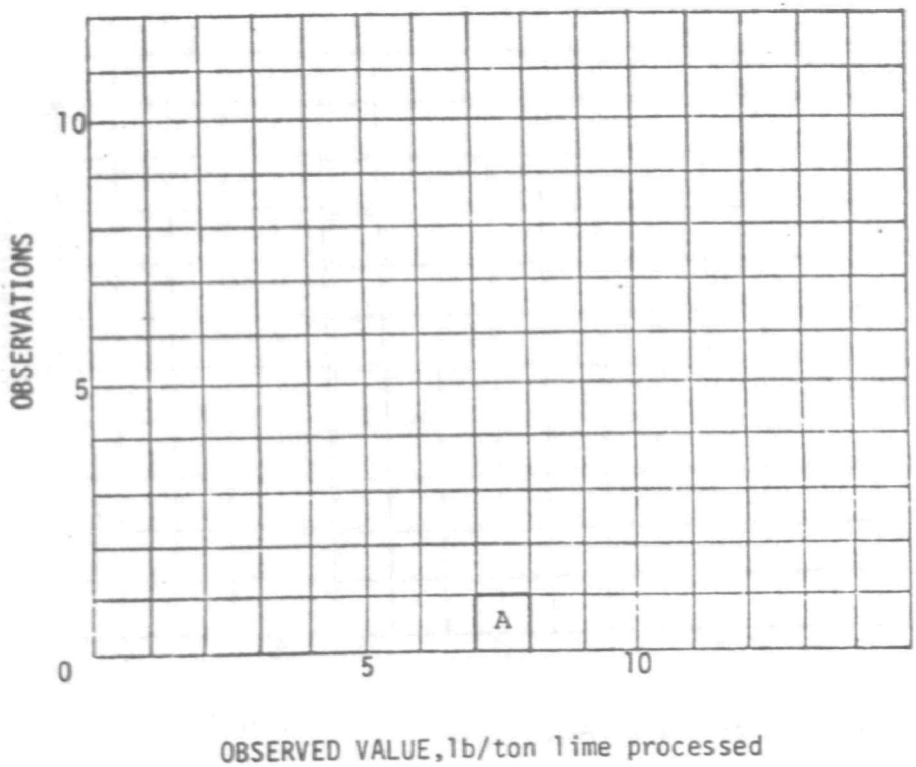


Observation	AP-42 Ref. No.	Observed Value
	3	ref. not available

Emission Factor 8 lb/ton

Pollutant Particulate from Vertical Kiln at Lime Mfg.

AP-42 Pg. No. 8.15-1

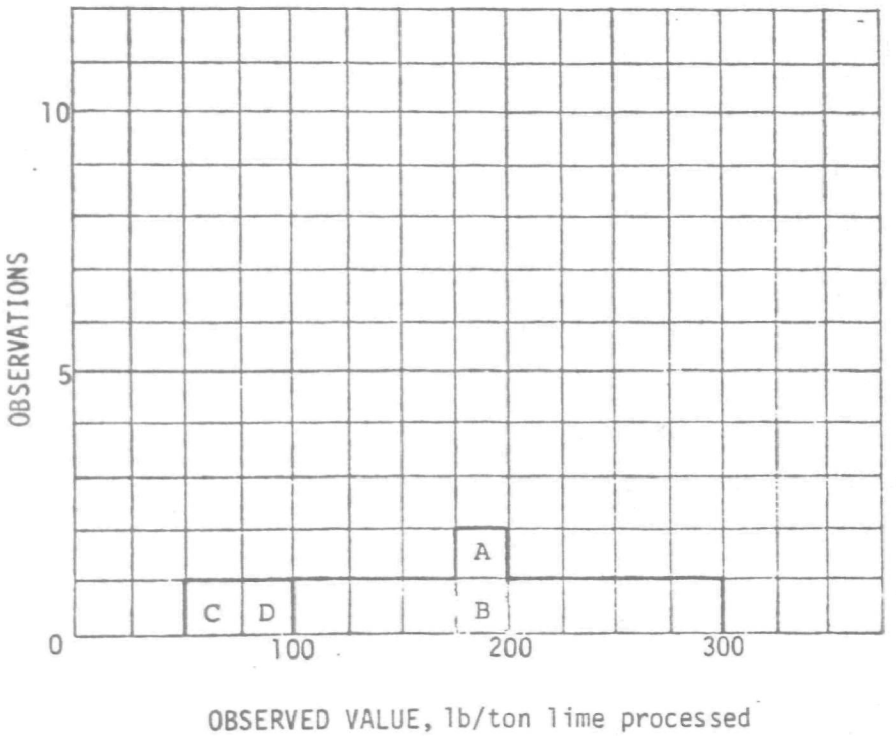


Observation	AP-42 Ref. No.	Observed Value
A	2	7.4
	4	ref. not available
	5	none

Emission Factor 200 lb/ton

Pollutant ~~Particulate from Rotary~~ Kiln at Lime Mfg.

AP-42 Pg. No. 8.15-1

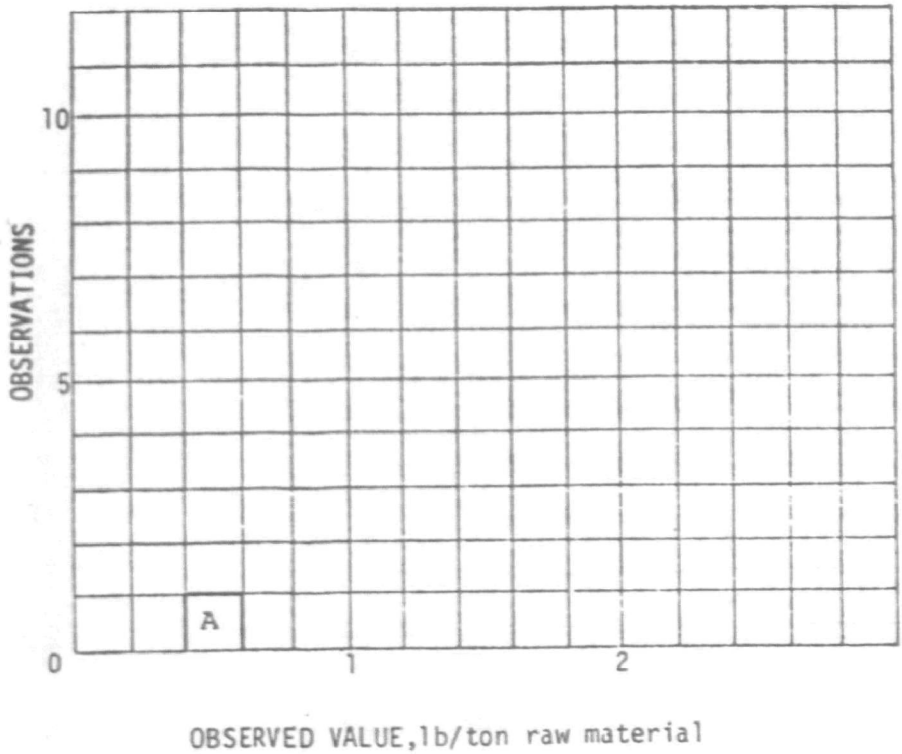


Observation	AP-42 Ref. No.	Observed Value
A	2	180.0
B	2	100.0 to 300.0
	4	ref. not available
C	5	55.5
D	5	99.0

Emission Factor 0.5 lb/ton

Pollutant Particulate from Primary Crushing at Stone Quarries

AP-42 Pg. No. 8.20-2

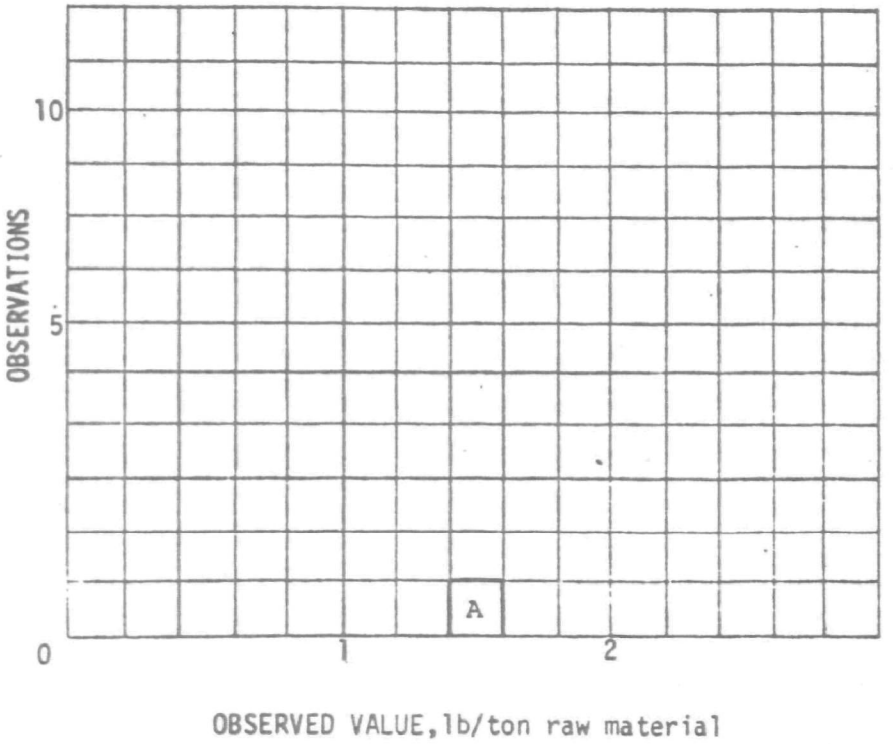


Observation	AP-42 Ref. No.	Observed Value
A	3	0.5

Emission Factor 1.5 lb/ton

Pollutant Particulate from Secondary Crushing at Stone Quarries

AP-42 Pg. No. 8-20-2

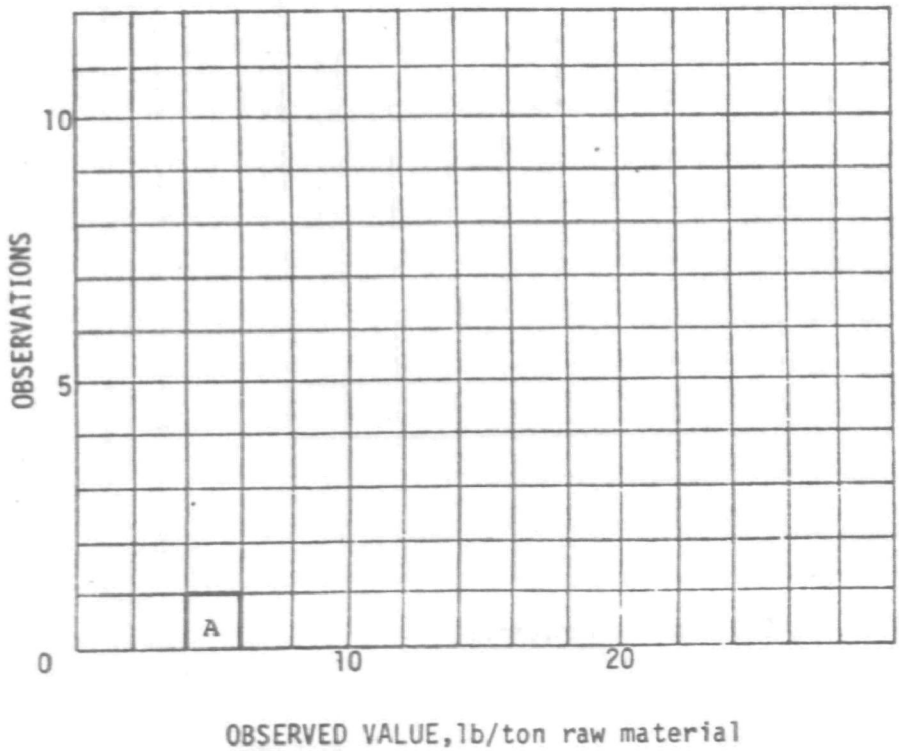


Observation	AP-42 Ref. No.	Observed Value
A	3	1.5

Emission Factor 6 lb/ton

Pollutant Particulate from Tertiary Crushing at Stone Quarries

AP-42 Pg. No. 8.20-2

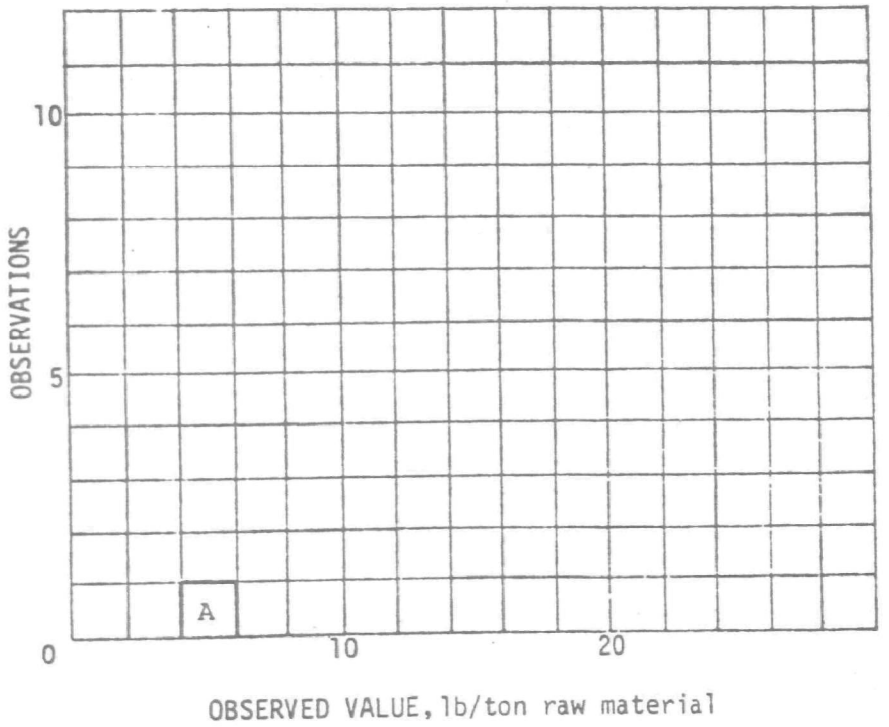


Observation	AP-42 Ref. No.	Observed Value
A	3	6.0

Emission Factor 5 lb/ton

Pollutant Particulate from Recrushing and Screening at Stone Quarries

AP-42 Pg. No. 8.20-2

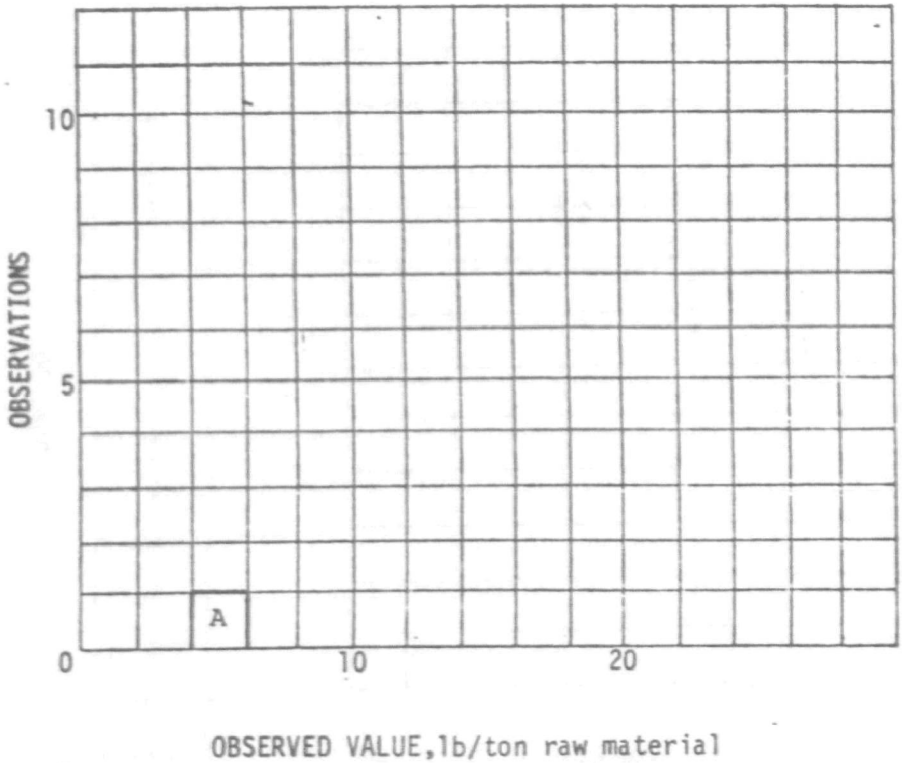


Observation	AP-42 Ref. No.	Observed Value
A	3	5.3

Emission Factor 6 lb/ton

Pollutant Particulate from Fines Mill at Stone Quarries

AP-42 Pg. No. 8.20-2

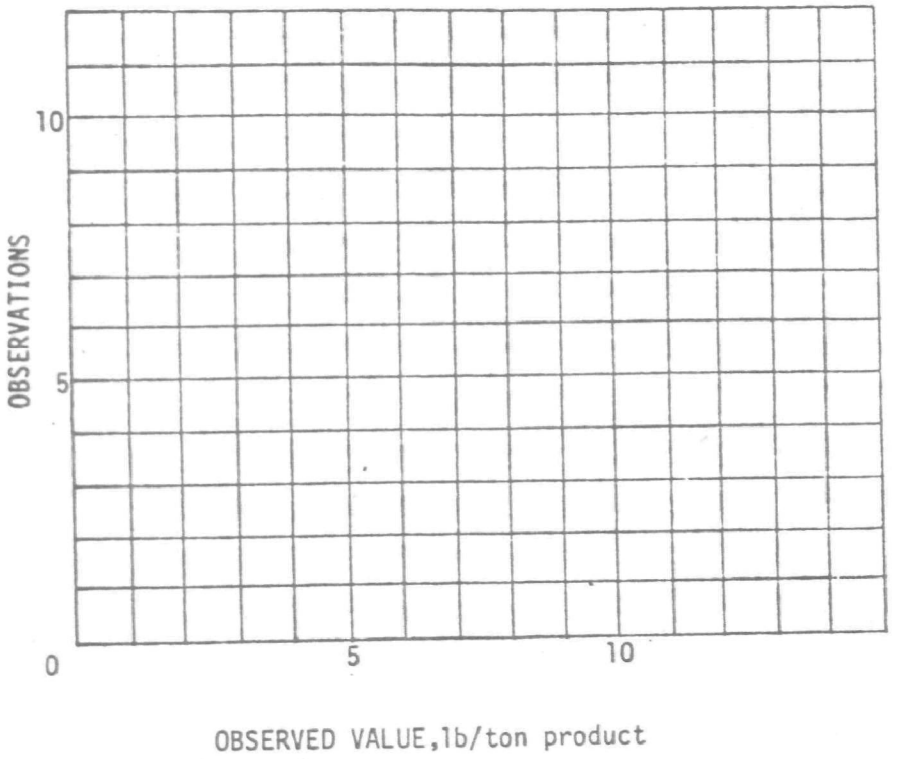


Observation	AP-42 Ref. No.	Observed Value
A	3	5.9

Emission Factor 2 lb/ton

Pollutant Particulate from Screening Conveying and Handling at Stone Quarries

AP-42 Pg. No. 8.20-2

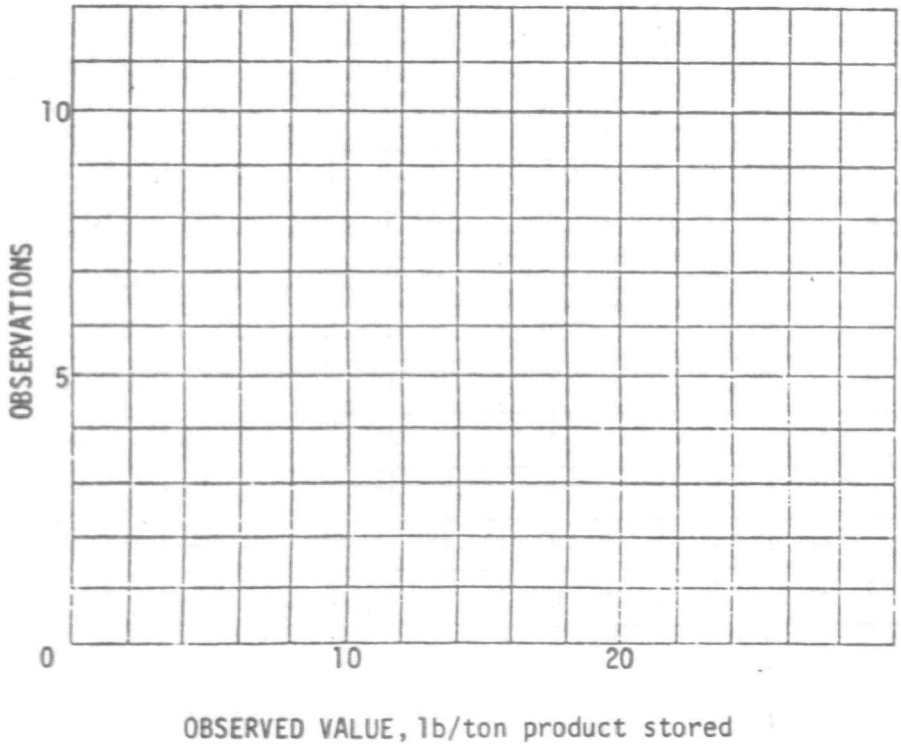


Observation	AP-42 Ref. No.	Observed Value
	4	none

Emission Factor 10 lb/ton

Pollutant Particulate from Storage Pile Losses at Stone Quarries

AP-42 Pg. No. 8.20-2

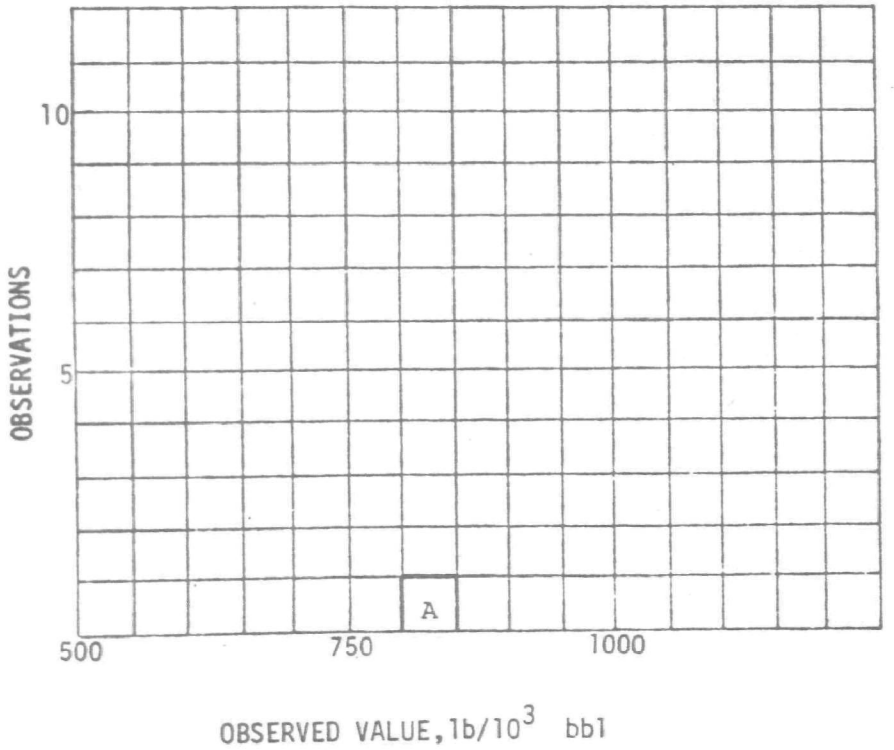


Observation	AP-42 Ref. No.	Observed Value
	5	none

Emission Factor 840 lb/10^3 BBL Oil Burned

Pollutant Particulate from Process Heater-Petroleum Industry

AP-42 Pg. No. 9.1-3

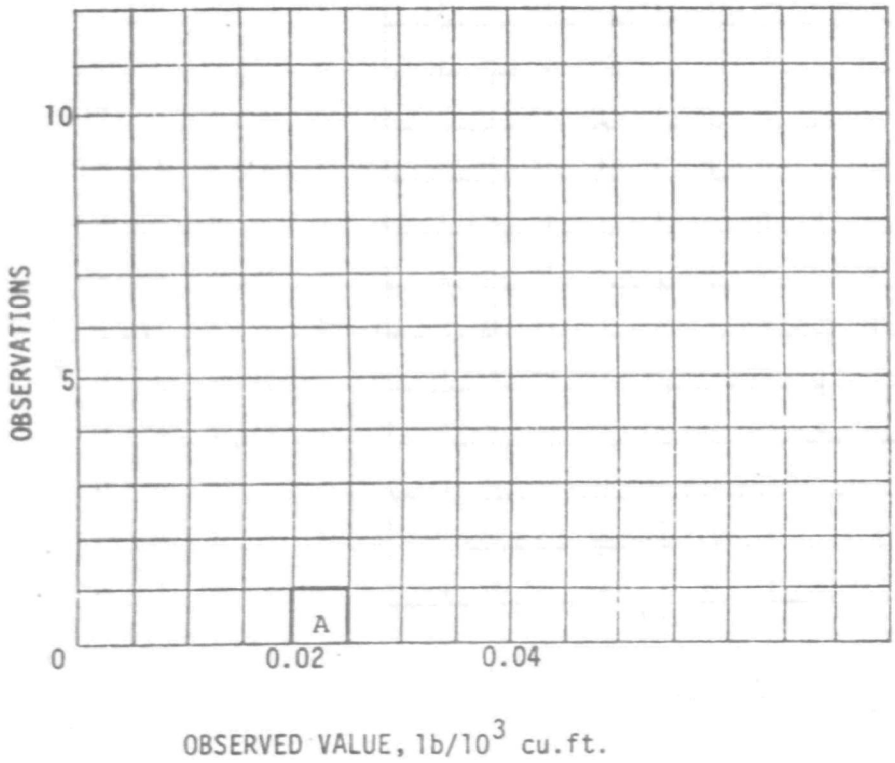


Observation	AP-42 Ref. No.	Observed Value
A	1	840.0

Emission Factor .02 lb/10^3 Ft^3 Gas Burned

Pollutant Particulate from Process Heater-Petroleum Industry

AP-42 Pg. No. 9.1-3



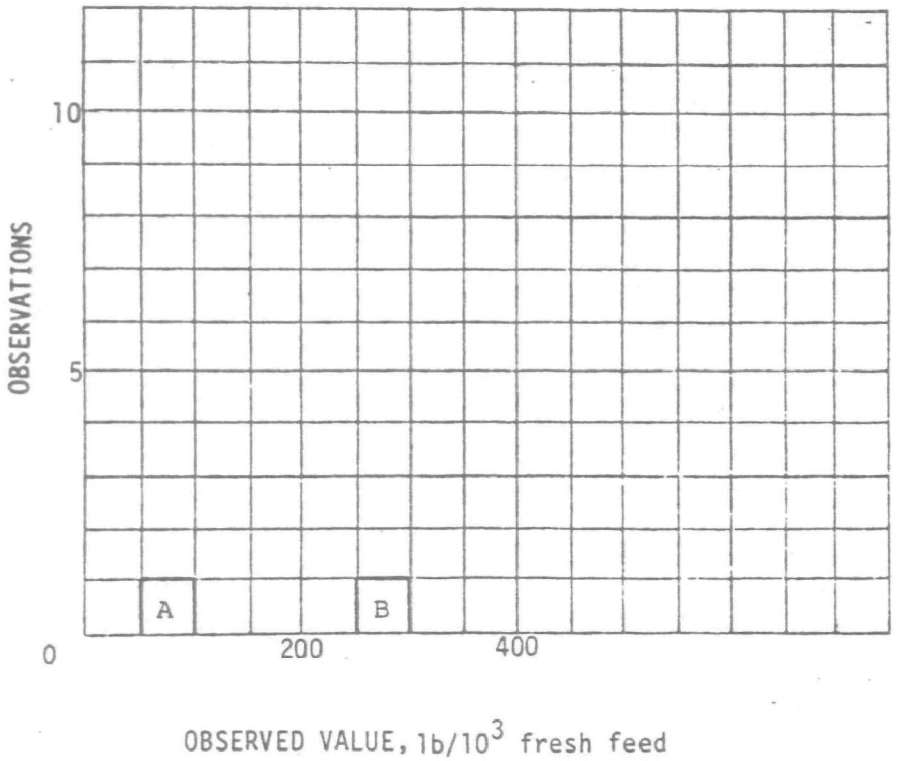
Observation	AP-42 Ref. No.	Observed Value
A	1	0.021

242 (93 to 340)

Emission Factor lb/10^3 BBL Fresh Feed

Pollutant Particulate from Fluid Catalytic Cracking Units Petroleum Ind.

AP-42 Pg. No. 9.1-8



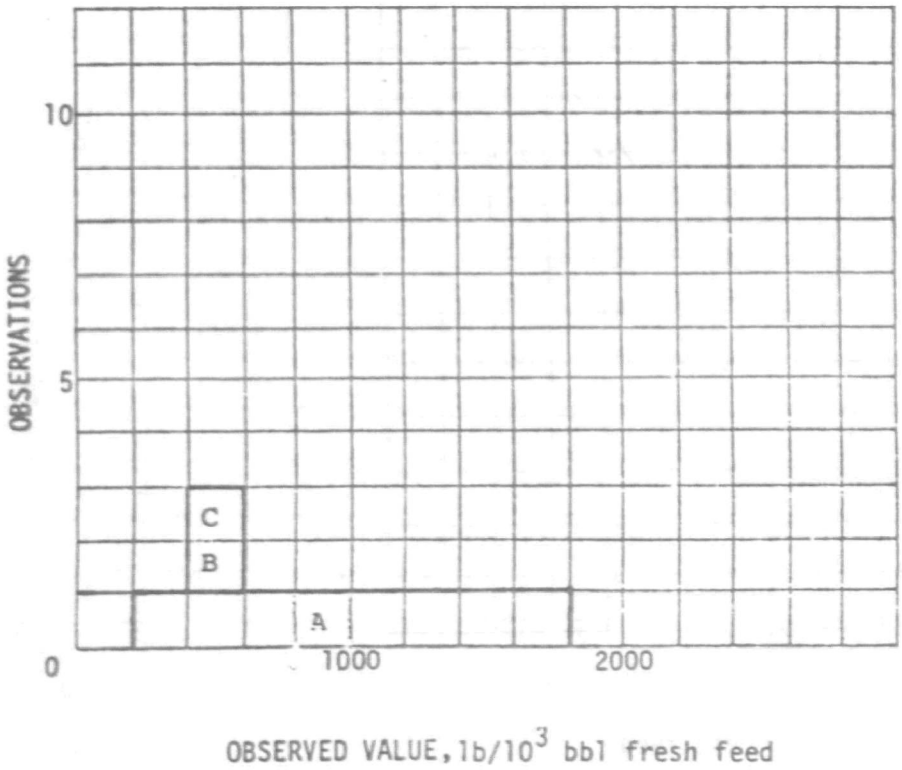
Observation	AP-42 Ref. No.	Observed Value
A	1	61.5
	2	ref. not available
B	3	270.9
	4	ref. not available
	5	none
	6	none

493(313 to 525)

Emission Factor lb/10^3 -BBL Fresh Feed

Pollutant SO_x from Fluid Catalytic Cracking Units-Petroleum Units

AP-42 Pg. No. 9.1-8

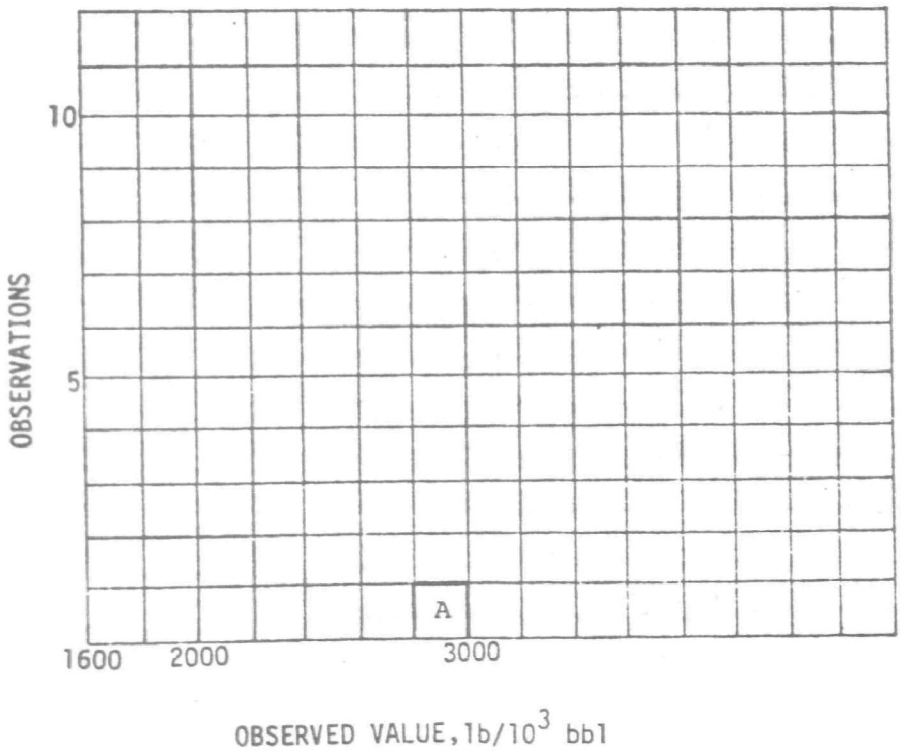


Observation	AP-42 Ref. No.	Observed Value
A	1	231.9 to 1649.2
B	1	525.6
	2	ref. not available
	3	none
	4	ref. not available
C	5	538.4
	6	ref. not available

Emission Factor 2900 lb/10^3 BBL Oil Burned

Pollutant NO_x from Process Heater-Petroleum Industry

AP-42 Pg. No. 9.1-8

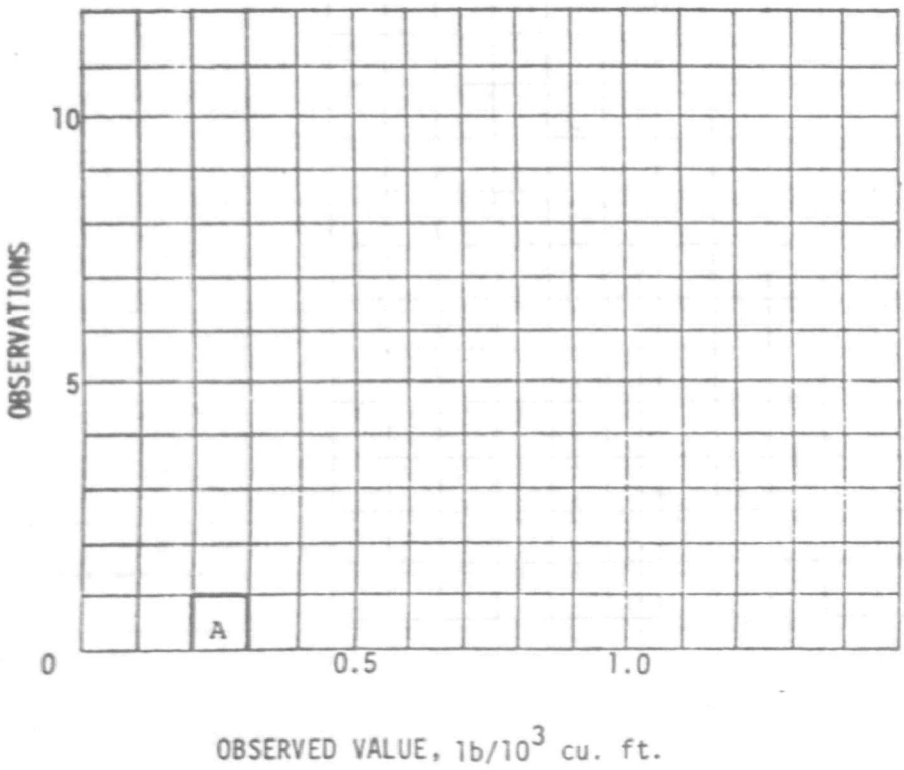


Observation	AP-42 Ref. No.	Observed Value
A	1	2856.0

Emission Factor 0.23 lb/10^3 Ft^3 Gas Burned

Pollutant NO_x from Process Heater-Petroleum Industry

AP-42 Pg. No. 9.1-8

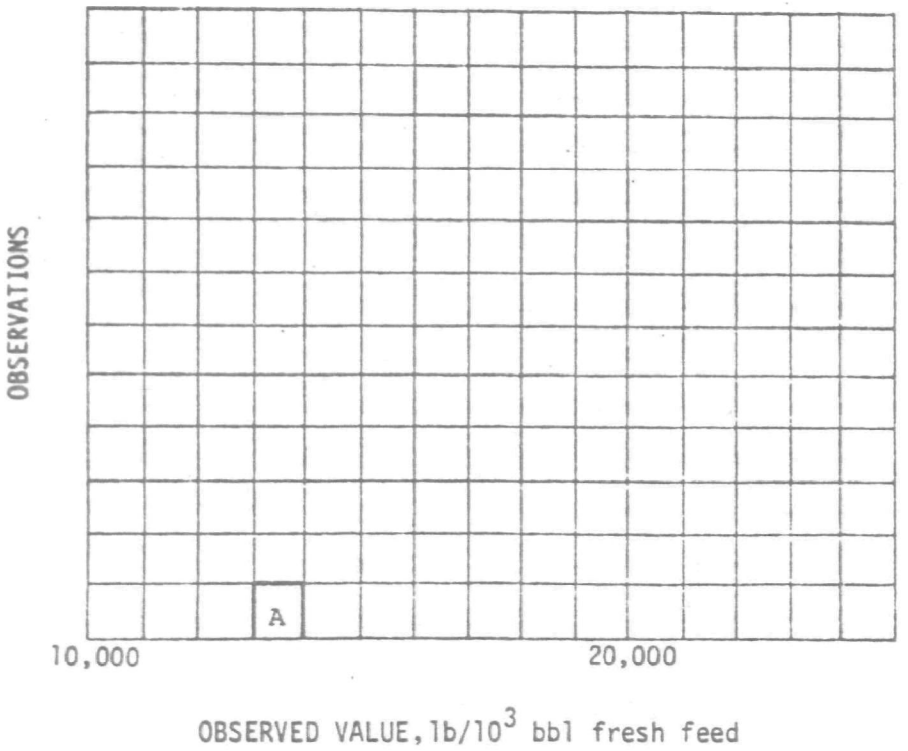


Observation	AP-42 Ref. No.	Observed Value
A	1	0.23

Emission Factor 13,700 lb/10^3 BBL Fresh Feed

Pollutant CO from Fluid Catalytic Cracking Units-Petroleum Ind.

AP-42 Pg. No. 9.1-8

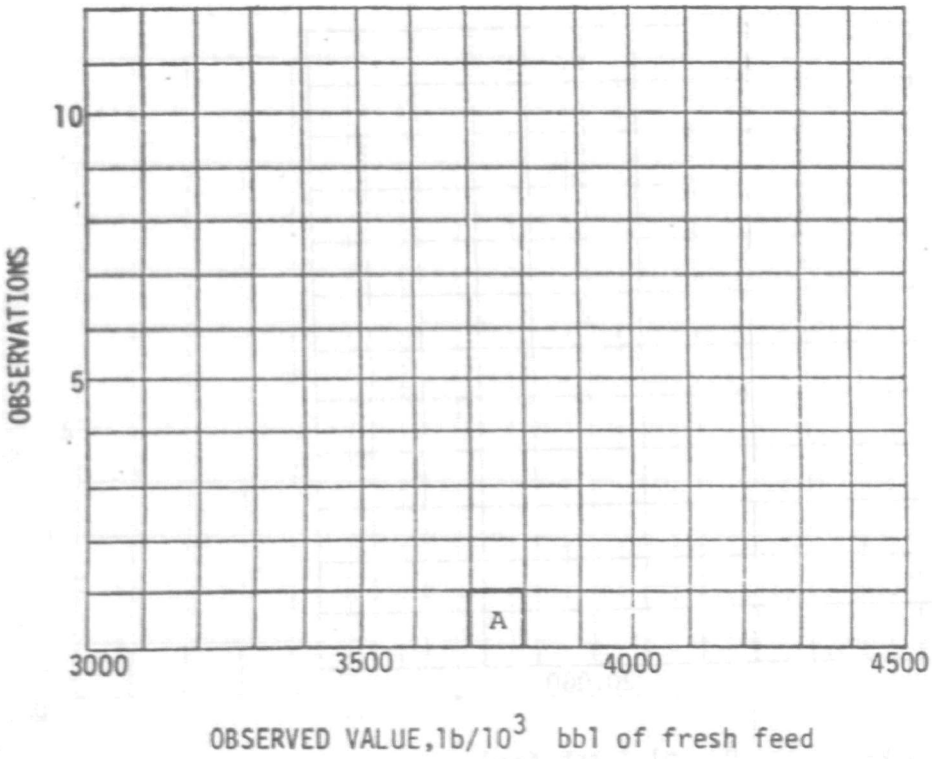


Observation	AP-42 Ref. No.	Observed Value
A	1	13700.0
	2	ref. not available
	3	none
	4	ref. not available
	5	none
	6	none

Emission Factor 3,800 lb/10^3 BBL Fresh Feed

Pollutant CO from Moving Bed Catalytic Cracking Units-Petroleum Ind

AP-42 Pg. No. 9.1-8



Observation	AP-42 Ref. No.	Observed Value
A	1	3770.0

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO. EPA-450/3-75-082-b	2.	3. RECIPIENT'S ACCESSION NO.
4. TITLE AND SUBTITLE Source Inventory and Emission Factor Analysis Volume II - Appendices		5. REPORT DATE September 1974
		6. PERFORMING ORGANIZATION CODE
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15. SUPPLEMENTARY NOTES

16. ABSTRACT

Volume I describes a Source Inventory and Emission Factor Analysis (SIEFA), a program designed to determine the precision of emission inventories. Through application of the SIEFA program, users of the data generated in an emission inventory will have at hand not only the values derived from emission calculations but a definition of their quality; that is, a statement of the statistical precision of each value and the precision of the overall emission inventory. Throughout this report these words have the following meaning:

Precision - A measure of variability, due to unknown factors which affect a measurement made on similar elements from a population. This variability is assumed to be random.

Accuracy - The degree to which data are biased.

The precision values generated herein are not actually "true" precision, but rather the best estimate of precision that could be obtained.

Volume II contains the Appendices to Volume I.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Source Inventory Emission Factor Precision Accuracy Area Source Point Source NEDS		

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