Summary of Maximum Criteria Emission Estimates													
Source	PM, lb/hr	PM, ton/yr	PM-10, lb/hr	PM-10, ton/yr	SO_2, lb/hr	SO_2, ton/yr	CO, lb/hr	CO, ton/yr	NOx, lb/hr	NOx, ton/yr	VOC, lb/hr	VOC, ton/yr	Comments
Fluidized Bed Dryer[2]	3.55	15.56	3.55	15.56	0.004	0.02	0.57	2.50	1.10	4.818	4.0E-02	1.8E-01	
#4 Bigelow Boiler	14.00	61.32	13.16	32.74	178.59	413.76	11.45	50.15	30.55	133.809	7.5E-01	3.28	Throughputs and annual hours of operation vary with different sulfur concentrations and fuels. See boiler throughput spreadsheet.
#3 Cleaver Brooks	0.32	1.42	0.32	1.423	0.03	0.11	3.59	15.73	6.08	26.630	2.4E-01	1.0E+00	8,760 hr/yr - NG & Propane
Dryer Stage A	0.059	0.26	0.059	0.258	0.005	0.02	0.650	2.85	0.780	3.416	4.3E-02	1.9E-01	
Dryer Stage B	0.024	0.11	0.024	0.105	0.002	0.01	0.260	1.14	0.310	1.358	1.7E-02	7.4E-02	
Dryer Stage C	0.024	0.11	0.024	0.105	0.002	0.01	0.260	1.14	0.310	1.358	1.7E-02	7.4E-02	
Secondary Dryer (1st vent)	0.002	0.17	0.002	0.169	0.0002	0.001	0.02	0.10	0.03	0.118	1.5E-03	6.6E-03	
Secondary Dryer (2nd vent)	0.002	0.17	0.002	0.17	0.0002	0.001	0.02	0.10	0.03	0.118	1.5E-03	6.6E-03	
Silo Storage A[3]	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage B	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage C	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage D	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage E	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage F	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage G	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage H	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage I	6.40E-02	0.28	6.40E-02	0.28									
Silo Storage J	6.40E-02	0.28	6.40E-02	0.28									
Dehydration Lines Total[4]	14.47	50.0	6.37	22.0									6,912 hr/yr per flaker Emissions divided equally between 17 dehydration lines.
Flaker #4	8.51E-01	2.94	3.75E-01	1.29									
Flaker #3	8.51E-01	2.94	3.75E-01	1.29									
Flaker #2	8.51E-01	2.94	3.75E-01	1.29									
Flaker #1	8.51E-01	2.94	3.75E-01	1.29									
Flaker #8	8.51E-01	2.94	3.75E-01	1.29									
Flaker #7	8.51E-01	2.94	3.75E-01	1.29									
Flaker #6	8.51E-01	2.94	3.75E-01	1.29									
Flaker #5	8.51E-01	2.94	3.75E-01	1.29									
Flaker #10	8.51E-01	2.94	3.75E-01	1.29									
Flaker #9	8.51E-01	2.94	3.75E-01	1.29									
Flaker #12	8.51E-01	2.94	3.75E-01	1.29									
Flaker #11	8.51E-01	2.94	3.75E-01	1.29									
Dryer Stage A	8.51E-01	2.94	3.75E-01	1.29									
Dryer Stage B	8.51E-01	2.94	3.75E-01	1.29									
Dryer Stage C	8.51E-01	2.94	3.75E-01	1.29									
Secondary Dryer (1st vent)	8.51E-01	2.94	3.75E-01	1.29									
Secondary Dryer (2nd vent)	8.51E-01	2.94	3.75E-01	1.29									
Space Heater South	6.11E-02	0.18	6.1E-02	1.8E-01	4.8E-03	1.5E-02	6.7E-01	2.0E+00	8.0E-01	2.4E+00	4.0E-02	1.2E-01	6,048 hours/yr
Space Heater North	6.11E-02	0.18	6.1E-02	1.8E-01	4.8E-03	1.5E-02	6.7E-01	2.0E+00	8.0E-01	2.4E+00	4.0E-02	1.2E-01	6,048 hours/yr
Space Heater East	1.14E-01	0.34	1.1E-01	3.4E-01	9.0E-03	2.7E-02	1.3E+00	3.8E+00	1.5E+00	4.5E+00	8.0E-02	2.4E-01	6,048 hours/yr
Miscellaneous Space Heaters	2.00E-02	0.06	2.0E-02	6.0E-02	1.0E-03	3.0E-03	1.7E-01	5.1E-01	2.0E-01	6.0E-01	1.0E-02	3.0E-02	6,048 hours/yr
Storage Tanks												6.0E-02	
Fugitives		13.00		2.50									
TOTAL	33.35	145.69	24.41	78.60	178.65	413.99	19.61	82.10	42.49	181.62	1.27	5.41	

[1] See following tables for emission calculations for each source and different fuel types.

[2] PM & PM-10 includes both combustion and process emissions.

[3] Silo emissions based on previously accepted emissions by DEQ.

[4] Emissions divided among 17 stacks. Emissions based on previously approved mass balance for PM, and a PM-10/PM ratio of 0.44, based on cereal dryer emissions, AP-42 p. B.1-42.

BOILER # 4 THROUGHPUTS WITH RESPECT TO CHANGING SULFER CONCENTRATIONS

Coal			
Average % Sulfur in Fuel	Annual Hours, hr/yr	Hourly Fuel Consumption, lb/hr*	Annual Fuel Consumption, ton/yr
0.50%	8,760	10796	47,286

*5.4 ton/hr = Capacity of Boiler #4

Residual oil # 6			
% Sulfur in Fuel	Annual Hours, hr/yr	Hourly Fuel Consumption, gal/hr	Annual Fuel Consumption, gal/yr
0.50%	8,760	650	5,694,000
0.75%	6,480	650	4,212,314
1.00%	4,860	650	3,159,236
1.25%	3,888	650	2,527,389
1.50%	3,240	650	2,106,157
1.69%	2,875	650	1,868,750
1.75%	2,776	650	1,804,679

Residual oil # 5			
% Sulfur in Fuel	Annual Hours, hr/yr	Hourly Fuel Consumption, gal/hr	Annual Fuel Consumption, gal/yr
0.50%	8,760	650	5,694,000
0.75%	6,480	650	4,212,314
1.00%	4,860	650	3,159,236
1.25%	3,888	650	2,527,389
1.50%	3,240	650	2,106,157
1.69%	2,875	650	1,868,750
1.75%	2,776	650	1,804,679

Residual oil # 4			
% Sulfur in Fuel	Annual Hours, hr/yr	Hourly Fuel Consumption, gal/hr	Annual Fuel Consumption, gal/yr
0.50%	8,760	650	5,694,000
0.75%	6,783	650	4,408,889
1.00%	5,087	650	3,306,667
1.25%	4,070	650	2,645,333
1.50%	3,391	650	2,204,444
1.69%	2,907	650	1,889,524
1.75%	2,907	650	1,889,524

Diesel # 2			
% Sulfur in Fuel	Annual Hours, hr/yr	Hourly Fuel Consumption, gal/hr	Annual Fuel Consumption, gal/yr
0.50%	8,760	650	5,694,000

#4 Boiler Micronized Coal - Sulfur = 0.5%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.1-3, 1.1-4, 1.1-5 1.1-6 and 1.1-14 9/98)

	Pollutant					
	SO_2	NO_X[a]	CO	PM	PM10	TOC
Emission Factor, lb/ton	35 S	12	0.5	10 A	2.3 A	0.0092
% S in fuel: 0.5						
% Ash in fuel: 9.43						
Maximum ton/hr 5.40						
Maximum hrs/yr 8,760						
Maximum ton/yr 47,286						
Emissions, lb/hr No control	94.47	64.776	2.699	509.0	117.1	0.05
Emissions, ton/yr No control	413.76	283.72	11.82	2229.6	512.8	0.2
Emissions, lb/hr Baghouse Control		25.91		14.0	1.0	
Emissions, ton/yr Baghouse Control		113.49		61.3	4.5	

[a] For the control of NOx emissions, it should be noted that the manufacturer of the coal pulverization system that Idaho Supreme will use has stated that the NOx emissions will be 60% to 70% lower than a conventional pulverized-coal boiler. The theory behind this claim is that the superheated steam used to pulverize the coal aids in driving off the NOx precursors (volatile fuelbound nitrogen) before entering the boiler combustion chamber.

#4 Boiler #6 Residual Oil - Sulfur = 1.75%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	9.19S + 3.22 + 1.5	1.04
% S in fuel: 1.75						
Maximum gal/hr 650						
Maximum hrs/yr 2,776						
Maximum gal/yr 1,804,679						
Emissions, lb/hr No control	178.59		30.55	3.25	13.5	0.7
Emissions, ton/yr No control	247.92		42.41	4.51	18.8	0.9

#4 Boiler #6 Residual Oil - Sulfur = 1.69%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	9.19S + 3.22 + 1.5	1.04
% S in fuel: 1.69						
Maximum gal/hr 650						
Maximum hrs/yr 2,875						
Maximum gal/yr 1,868,750						
Emissions, lb/hr No control	172.46		30.55	3.25	13.2	0.7
Emissions, ton/yr No control	247.92		43.92	4.67	18.9	1.0

S = weight % sulfur in fuel

Density lb/gal 8.4234 Based on source test

Total sulfur combustion rate, lb/hr	92.53
Total sulfur combustion rate, lb/yr	266,027

#4 Boiler #6 Residual Oil, Sulfur = 1.50%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	9.19S + 3.22 + 1.5	1.04
% S in fuel: 1.5						
Maximum gal/hr 650						
Maximum hrs/yr 3,240						
Maximum gal/yr 2,106,157						
Emissions, lb/hr No control	153.1		30.55	3.25	12.0	0.7
Emissions, ton/yr No control	248		49.49	5.27	19.5	1.1

S = weight % sulfur in fuel

#4 Boiler #6 Residual Oil, Sulfur = 1.25%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	9.19S + 3.22 + 1.5	1.04
% S in fuel: 1.25						
Maximum gal/hr 650						
Maximum hrs/yr 3,888						
Maximum gal/yr 2,527,389						
Emissions, lb/hr No control	127.5625		30.55	3.25	10.5	0.7
Emissions, ton/yr No control	248		59.39	6.32	20.5	1.3

#4 Boiler #6 Residual Oil, Sulfur = 1.0%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	9.19S + 3.22 + 1.5	1.04
% S in fuel: 1.00						
Maximum gal/hr 650						
Maximum hrs/yr 4,860						
Maximum gal/yr 3,159,236						
Emissions, lb/hr No control	102.05		30.55	3.25	9.0	0.7
Emissions, ton/yr No control	248		74.24	7.90	22.0	1.6

S = weight % sulfur in fuel

#4 Boiler #6 Residual Oil, Sulfur = 0.75%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	9.19S + 3.22 + 1.5	1.04
% S in fuel: 0.75						
Maximum gal/hr 650						
Maximum hrs/yr 6,480						
Maximum gal/yr 4,212,314						
Emissions, lb/hr No control	76.5375		30.55	3.25	7.5	0.7
Emissions, ton/yr No control	248		98.99	10.53	24.5	2.2

S = weight % sulfur in fuel

#4 Boiler #6 Residual Oil, Sulfur = 0.5%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	9.19S + 3.22 + 1.5	1.04
% S in fuel: 0.50						
Maximum gal/hr 650						
Maximum hrs/yr 8,760						
Maximum gal/yr 5,694,000						
Emissions, lb/hr No control	51.025		30.55	3.25	6.1	0.7
Emissions, ton/yr No control	223.49		133.81	14.24	26.5	3.0

S = weight % sulfur in fuel

#4 Boiler #2 Diesel

#4 Boiler #2 Diesel, Sulfur = 0.5%
Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		24	5	3.3	0.252
% S in fuel: 0.5						
Maximum gal/hr 650						
Maximum hrs/yr 8,760						
Maximum gal/yr 5,694,000						
Emissions, lb/hr No control	51.03		15.6	3.25	2.145	0.2
Emissions, ton/yr No control	223.49		68.33	14.24	9.4	0.7

S = weight % sulfur in fuel

#4 Boiler #4 Residual, Sulfur = 1.75%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	150 S		47	5	8.5	1.04
% S in fuel: 1.75						
Maximum gal/hr 650						
Maximum hrs/yr 2,907						
Maximum gal/yr 1,889,524						
Emissions, lb/hr No control	170.63		30.55	3.25	5.525	0.7
Emissions, ton/yr No control	248.0		44.404	4.72	8.0	1.0

#4 Boiler #4 Residual, Sulfur = 1.69%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	150 S		47	5	8.5	1.04
% S in fuel: 1.69						
Maximum gal/hr 650						
Maximum hrs/yr 2,907						
Maximum gal/yr 1,889,524						
Emissions, lb/hr No control	164.78		30.55	3.25	5.525	0.7
Emissions, ton/yr No control	239.5		44.404	4.72	8.0	1.0

#4 Boiler #4 Residual, Sulfur = 1.5%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	150 S		47	5	8.5	1.04
% S in fuel: 1.5						
Maximum gal/hr 650						
Maximum hrs/yr 3,391						
Maximum gal/yr 2,204,444						
Emissions, lb/hr No control	146.25		30.55	3.25	5.525	0.7
Emissions, ton/yr No control	248		51.804	5.51	9.4	1.1

S = weight % sulfur in fuel

#4 Boiler #4 Residual, Sulfur = 1.25%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Table 1.3-1, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	150 S		47	5	8.5	1.04
% S in fuel: 1.25						
Maximum gal/hr 650						
Maximum hrs/yr 4,070						
Maximum gal/yr 2,645,333						
Emissions, lb/hr No control	121.88		30.55	3.25	5.525	0.7
Emissions, ton/yr No control	248		62.17	6.61	11.2	1.4

S = weight % sulfur in fuel

#4 Boiler #4 Residual, Sulfur = 1.0%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	150 S		47	5	8.5	1.04
% S in fuel: 1.0						
Maximum gal/hr 650						
Maximum hrs/yr 5,087						
Maximum gal/yr 3,306,667						
Emissions, lb/hr No control	97.5		30.55	3.25	5.525	0.7
Emissions, ton/yr No control	248		77.71	8.27	14.1	1.7

S = weight % sulfur in fuel

#4 Boiler #4 Residual, Sulfur = 0.75%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	150 S		47	5	8.5	1.04
% S in fuel: 0.75						
Maximum gal/hr 650						
Maximum hrs/yr 6,783						
Maximum gal/yr 4,408,889						
Emissions, lb/hr No control	73.125		30.55	3.25	5.525	0.7
Emissions, ton/yr No control	248		103.61	11.02	18.7	2.3

S = weight % sulfur in fuel

#4 Boiler #4 Residual, Sulfur = 0.5%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	150 S		47	5	8.5	1.04
% S in fuel: 0.5						
Maximum gal/hr 650						
Maximum hrs/yr 8,760						
Maximum gal/yr 5,694,000						
Emissions, lb/hr No control	48.75		30.55	3.25	5.525	0.7
Emissions, ton/yr No control	213.525		133.81	14.24	24.2	3.0

S = weight % sulfur in fuel

#4 Boiler #5 Residual, Sulfur = 1.75%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	11.5	1.04
% S in fuel: 1.75						
Maximum gal/hr 650						
Maximum hrs/yr 2,776						
Maximum gal/yr 1,804,679						
Emissions, lb/hr No control	178.588		30.55	3.25	7.475	0.7
Emissions, ton/yr No control	247.918		42.41	4.51	10.4	0.9

S = weight % sulfur in fuel

#4 Boiler #5 Residual, Sulfur = 1.69%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	11.5	1.04
% S in fuel: 1.69						
Maximum gal/hr 650						
Maximum hrs/yr 2,875						
Maximum gal/yr 1,868,750						
Emissions, lb/hr No control	172.465		30.55	3.25	7.475	0.7
Emissions, ton/yr No control	247.918		43.916	4.67	10.7	1.0

S = weight % sulfur in fuel

#4 Boiler #5 Residual, Sulfur = 1.5%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	11.5	1.04
% S in fuel: 1.5						
Maximum gal/hr 650						
Maximum hrs/yr 3,240						
Maximum gal/yr 2,106,157						
Emissions, lb/hr No control	153.1		30.55	3.25	7.475	0.7
Emissions, ton/yr No control	248		49.495	5.27	12.1	1.1

S = weight % sulfur in fuel

#4 Boiler #5 Residual, Sulfur = 1.25%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	11.5	1.04
% S in fuel: 1.25						
Maximum gal/hr 650						
Maximum hrs/yr 3,888						
Maximum gal/yr 2,527,389						
Emissions, lb/hr No control	127.563		30.55	3.25	7.475	0.7
Emissions, ton/yr No control	248		59.394	6.32	14.5	1.3

S = weight % sulfur in fuel

#4 Boiler #5 Residual, Sulfur = 1.0%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	11.5	1.04
% S in fuel: 1.0						
Maximum gal/hr 650						
Maximum hrs/yr 4,860						
Maximum gal/yr 3,159,236						
Emissions, lb/hr No control	102.05		30.55	3.25	7.475	0.7
Emissions, ton/yr No control	248		74.242	7.90	18.2	1.6

S = weight % sulfur in fuel

#4 Boiler #5 Residual, Sulfur = 0.75%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	11.5	1.04
% S in fuel: 0.75						
Maximum gal/hr 650						
Maximum hrs/yr 6,480						
Maximum gal/yr 4,212,314						
Emissions, lb/hr No control	76.538		30.55	3.25	7.475	0.7
Emissions, ton/yr No control	248		98.989	10.53	24.2	2.2

S = weight % sulfur in fuel

#4 Boiler #5 Residual, Sulfur = 0.5%

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	TOC
Emission Factor, lb/1000 gal	157 S		47	5	11.5	1.04
% S in fuel: 0.5						
Maximum gal/hr 650						
Maximum hrs/yr 8,760						
Maximum gal/yr 5,694,000						
Emissions, lb/hr No control	51.025		30.55	3.25	7.475	0.7
Emissions, ton/yr No control	223.49		133.81	14.24	32.7	3.0

S = weight % sulfur in fuel

#4 Boiler Natural Gas

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Tables 1.4-1 (low NOx) and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		140	84	7.6	5.5
Maximum MMscf/hr 0.136319						
Maximum hrs/yr 8,760						
Emissions, lb/hr No control	0.08		19.08	11.45	1.04	0.75
Emissions, ton/yr No control	0.358		83.59	50.15	4.54	3.3

#4 Boiler Propane

Criteria Pollutant Estimates, >100 MMBTU/hr (AP-42, Table 1.5-1, 10/96)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/1,000 gal	0.1 S		19	3.2	0.6	0.5
S = 0.002						
Maximum gal/hr 1,050.00						
Maximum hrs/yr 8,760						
Emissions, lb/hr No control	2.10E-04		19.95	3.36	0.63	0.53
Emissions, ton/yr No control	9.20E-04		87.38	14.72	2.76	2.3

S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1×10^{-5} weight fraction, S =

$(1.1 \times 10^{-5})(4.2\ lb/gal)(78\ gal/hr)(7{,}000\ grain/lb)(100)/(60\ min/hr)/(26{,}000\ ft^3/min)$

$= 0.002\ grains/100\ ft^3$

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 26,000 ft^3/min.

#3 Boiler Natural Gas

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr 0.042745862						
Maximum hrs/yr 8,760						
Emissions, lb/hr No control	0.03		4.27	3.59	0.32	0.24
Emissions, ton/yr No control	0.112		18.72	15.73	1.42	1.0

#3 Boiler Propane

Criteria Pollutant Estimates (AP-42, Tables 1.5-1, 10/96)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/1,000 gal	0.1 S		19	3.2	0.6	0.5
S = 0.002						
Maximum gal/hr 320						
Maximum hrs/yr 8,760						
Emissions, lb/hr No control	6.40E-05		6.08	1.02	0.19	0.16
Emissions, ton/yr No control	0.00028		26.63	4.49	0.84	0.7

S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1×10^{-5} weight fraction, S =

$(1.1 \times 10^{-5})(4.2\ lb/gal)(78\ gal/hr)(7{,}000\ grain/lb)(100)/(60\ min/hr)/(26{,}000\ ft^3/min)$

$= 0.002$ grains/100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 26,000 ft^3/min.

Space Heater South

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.008033106						
Maximum hrs/yr						
6,048						
Emissions, lb/hr No control	0.005		0.80	0.67	0.06	0.04
Emissions, ton/yr No control	0.015		2.43	2.04	0.18	0.1

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	2.77E-09				**0.63**	**0.0859**	**0.018**	**0.023**
42 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1 x 10^{-5} weight fraction.

S = 6.60E-07 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 70,000 ft^3/min.

Space Heater North

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.008033106						
Maximum hrs/yr						
6,048						
Emissions, lb/hr No control	0.00		0.80	0.67	0.06	0.04
Emissions, ton/yr No control	0.015		2.43	2.04	0.18	0.1

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	1.60E-06				**0.63**	**0.0859**	**0.018**	**0.023**
42 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1×10^{-5} weight fraction.

S = 3.80E-04 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 70,000 ft^3/min.

Space Heater East

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.014995131						
Maximum hrs/yr						
6,048						
Emissions, lb/hr No control	0.009		1.50	1.26	0.11	0.08
Emissions, ton/yr No control	0.027		4.53	3.81	0.34	0.25

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	5.69E-06				**0.63**	**0.0859**	**0.018**	**0.023**
79 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1 x 10^{-5} weight fraction.

S = 7.20E-04 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 70,000 ft^3/min.

Miscellaneous Space Heaters
Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.002005842						
Maximum hrs/yr						
6,048						
Emissions, lb/hr No control	0.001		0.20	0.17	0.02	0.01
Emissions, ton/yr No control	0.004		0.61	0.51	0.05	0.03

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	5.69E-06				**0.63**	**0.0859**	**0.018**	**0.023**
79 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1×10^{-5} weight fraction.

S = 7.20E-04 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 70,000 ft^3/min.

National Dryer Stage A

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.00779						
Maximum hrs/yr						
8,760						
Emissions, lb/hr No control	0.005		0.78	0.65	0.06	0.04
Emissions, ton/yr No control	0.02		3.41	2.87	0.26	0.19

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	1.54E-05				**0.63**	**0.0859**	**0.018**	**0.023**
45.2 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1×10^{-5} weight fraction.

S = 3.40E-03 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 8,500 ft^3/min.

National Dryer Stage B

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.003116						
Maximum hrs/yr						
8,760						
Emissions, lb/hr No control	0.002		0.31	0.26	0.02	0.02
Emissions, ton/yr No control	0.008		1.36	1.15	0.10	0.08

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	2.70E-06				**0.252**	**0.0342**	**0.0072**	**0.009**
18 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1 x 10^{-5} weight fraction.

S = 1.50E-03 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 7,500 ft^3/min.

National Dryer Stage C

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.003116						
Maximum hrs/yr						
8,760						
Emissions, lb/hr No control	0.002		0.31	0.26	0.02	0.02
Emissions, ton/yr No control	0.008		1.36	1.15	0.10	0.08

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	2.52E-06				**0.252**	**0.0342**	**0.0072**	**0.009**
18 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1 x 10^{-5} weight fraction.

S = 1.40E-03 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 8,500 ft^3/min.

Secondary Dryer - 1st Vent

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.000536						
Maximum hrs/yr						
8,760						
Emissions, lb/hr No control	0.0002		0.03	0.02	0.002	0.001
Emissions, ton/yr No control	0.0007		0.12	0.10	0.01	0.01

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	1.09E-08				**0.0215**	**0.00295**	**0.00062**	**0.0008**
1.55 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1×10^{-5} weight fraction.

S = 1.40E-04 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 7,000 ft^3/min.

Secondary Dryer - 2nd Vent

Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2		NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr						
0.000536						
Maximum hrs/yr						
8,760						
Emissions, lb/hr No control	0.0002		0.03	0.02	0.002	0.001
Emissions, ton/yr No control	7E-04		0.12	0.10	0.01	0.01

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	1.09E-08				**0.0215**	**0.00295**	**0.00062**	**0.0008**
1.55 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1×10^{-5} weight fraction.

S = 1.40E-04 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 7,000 ft^3/min.

Fluidized Bed Dryer
Criteria Pollutant Estimates, <100 MMBTU/hr (AP-42, Tables 1.4-1 and 1.4-2, 9/98)

	Pollutant					
	SO_2	PM-10	NO_X	CO	PM	VOC
Emission Factor, lb/10^6 scf	0.6		100	84	7.6	5.5
Maximum MMscf/hr 0.006815969						
Maximum hrs/yr 8,760						
Emissions, lb/hr No control	0.0041	0.05	0.68	0.57	0.052	0.037
Emissions, ton/yr No control	0.018	0.227	2.99	2.51	0.227	0.164

Process Emission Factors*			
Emission	Emission Factor	Emission Rate, lb/hr	Emission Rate, TPY
PM	3.5 lb / ton of processed material	3.5	15.33
PM-10	3.5 lb / ton of processed material	3.5	15.33

*See October 25, 2007 letter from Idaho Supreme to DEQ.

Propane								
	SO_2				**NO_X**	**CO**	**PM**	**VOC**
Emission Factor, lb/1,000 gal	0.1	S			14	1.9	0.4	0.5
lb/hr	1.50E-05				**1.1**	**0.15**	**0.031**	**0.04**
78 gph								

Note: S = sulfur fuel content in grains/100 ft^3. At approximately 15 ppm or 1.1×10^{-5} weight fraction.

S = 0.00192 grains / 100 ft^3

Note that the density is 4.2 lb/gal, and the exhaust flow rate is 26,000 ft^3/min.

Idaho Supreme - Boiler #4
Potential to Emit from Micronized Coal Combustion

Boiler firing Configuration:	PC, dry bottom, wall-fired, sub-bituminous, pre-NSPS	
Coal Type:	Subbituminous	
Heat Content:	12,968	Btu/lb
Sulfur Content:	0.5	% by weight
Ash Content:	9.43	% by weight
Boiler Heat Capacity:	140	MMBtu/hr
Coal Combustion Rate:	10,796	lb/hr
	5.40	ton/hr
Coal Combustion Rate:	94,571,252	lb/yr
	47,286	tons/yr

Pollutant	Emission Controls	Control Type	Emission Factor (EF)		EF Units	AP-42 Reference Table	Emissions (lb/hr)	Emissions (lb/yr)	Emissions (tons/yr)	IDAPA 585 ELs	IDAPA 586 ELs	IDAPA 585 Requires Modeling?	IDAPA 586 Requires Modeling?	IDAPA 585 AACC	IDAPA 586 AAC	IDAPA 585 Model Pred Max Impact	IDAPA 586 Model Pred Max Impact	Modeling Shows Compliance?
SO_2	N		35	S	lb/ton	1.1-3	94.5	827,498	413.7									
NO_x	N		12		lb/ton	1.1-3	64.8	567,428	283.7									
CO	N		0.5		lb/ton	1.1-3	2.7	23,643	11.8									
PM[a]	N		10	A	lb/ton	1.1-4	509.0	4,459,035	2,229.5									
PM[b]	Y	Any[c]	0.1		lb/MMBtu	1.1-5	14.0	122,640	61.3									
PM-10	N		2.3	A	lb/ton	1.1-6	117.1	1,025,578	512.8									
PM-2.5	N		0.6	A	lb/ton	1.1-6	30.5	267,542	133.8									
PM-10	Y	BH	0.02	A	lb/ton	1.1-6	1.0180	8,918	4.5									
PM-2.5	Y	BH	0.01	A	lb/ton	1.1-6	0.5090	4,459	2.2									
VOCs	Y	FF	0.00918638		lb/ton	1.1-14	0.0496	434	0.2									
HCl	N		1.2		lb/ton	1.1-15	6.4775	56,743	28.4		0.05		yes		375		5.93	yes
HF	N		0.15		lb/ton	1.1-15	0.8097	7,093	3.5									
POM	N		2.08		lb/10^{12} Btu	1.1-17	0.0003	3	1.28E-03									
Sb	Y	FF	0.000018		lb/ton	1.1-18	0.0001	1	4.26E-04									
As	Y	FF	0.00041		lb/ton	1.1-18	0.0022	19	9.69E-03	1.56E-06		yes		2.30E-04		1.75E-04		yes
Be	Y	FF	0.000021		lb/ton	1.1-18	0.0001	1	4.96E-04	2.85E-05		yes		4.20E-03		8.94E-06		yes
Cd	Y	FF	0.000051		lb/ton	1.1-18	0.0003	2	1.21E-03	3.70E-06		yes		5.60E-04		2.17E-05		yes
Cr	Y	FF	0.00026		lb/ton	1.1-18	0.0014	12	6.15E-03		0.033		no					
Cr (VI)	Y	FF	0.000079		lb/ton	1.1-18	0.0004	4	1.87E-03	5.60E-07		yes		8.30E-05		3.36E-05		yes
Co	Y	FF	0.0001		lb/ton	1.1-18	0.0005	5	2.36E-03		0.0033		no					
Pb	Y	FF	0.00042		lb/ton	1.1-18	0.0023	20	9.93E-03		0.6 t/yr		no					
Mg	Y	FF	0.011		lb/ton	1.1-18	0.0594	520	2.60E-01		0.667		no					
Mn	Y	FF	0.00049		lb/ton	1.1-18	0.0026	23	1.16E-02		0.067		no					
Hg	Y	FF	0.000083		lb/ton	1.1-18	0.0004	4	1.96E-03		0.001		no					
Ni	Y	FF	0.00028		lb/ton	1.1-18	0.0015	13	6.62E-03	2.75E-05		yes		4.20E-03		1.19E-04		yes
Se	Y	FF	0.0013		lb/ton	1.1-18	0.0070	61	3.07E-02	0.013		no						
CH_4	N		0.04		lb/ton	1.1-19	0.2159	1,891	9.46E-01									
TNMOC	N		0.06		lb/ton	1.1-19	0.3239	2,837	1.42E+00									
N_2O	N		0.03		lb/ton	1.1-19	0.1619	1,419	7.09E-01									
$CO_{2\,(high)}$	N		5510		lb/ton	1.1-20	29,742	260,543,800	130,272									
$CO_{2\,(med)}$	N		6040		lb/ton	1.1-20	32,603	285,605,182	142,803									
$CO_{2\,(low)}$	N		6250		lb/ton	1.1-20	33,737	295,535,163	147,768									

[a]Filterable
[b]Condensible
[c]Any type of control without Flue Gas Desulfurization (FGD)
BH = Baghouse
FF = Fabric Filter

Criteria Pollutant emissions well below previously modeled with same stack parameters; previous modeling conservatively shows compliance for new emission rates
TAPs compared to IDAPA ELs
TAPs requiring modeling

TOXIC AIR POLLUTANT CALCULATIONS

TABLE 1. BOILER #4 - NON-CARCINOGENS
FUEL OIL

Pollutant	Emission Factor (lb/1,000 gal)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Antimony	5.25E-03	3.41E-03	1.49E-02	4.30E-04
Barium	2.57E-03	1.67E-03	7.32E-03	2.10E-04
Chromium	8.45E-04	5.49E-04	2.41E-03	6.92E-05
Cobalt	6.02E-03	3.91E-03	1.71E-02	4.93E-04
Copper	1.76E-03	1.14E-03	5.01E-03	1.44E-04
Ethylbenzene	6.36E-05	4.13E-05	1.81E-04	5.21E-06
Fluoride	3.73E-02	2.42E-02	1.06E-01	3.05E-03
Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese	3.00E-03	1.95E-03	8.54E-03	2.46E-04
Mercury*	3.00E-12	4.20E-04	1.84E-03	5.E-05
Moybdenum	7.87E-04	5.12E-04	2.24E-03	6.45E-05
Naphthalene	1.13E-03	7.35E-04	3.22E-03	9.25E-05
Pentane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphorous	9.46E-03	6.15E-03	2.69E-02	7.75E-04
Selenium*	1.50E-11	2.10E-03	9.20E-03	2.6E-04
1,1,1 - Trichlorethane (Methyl Chloroform)	2.36E-04	1.53E-04	6.72E-04	1.9E-05
Toluene	6.20E-03	4.03E-03	1.77E-02	5.08E-04
o-Xylene	1.09E-04	7.09E-05	3.10E-04	8.93E-06
Vanadium	3.18E-02	2.07E-02	9.05E-02	2.60E-03
Zinc	2.91E-02	1.89E-02	8.28E-02	2.38E-03

TABLE 2. BOILER #4 - CARCINOGENS
FUEL OIL

Pollutant	Emission Factor (lb/1,000 gal)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Arsenic	1.32E-03	8.58E-04	3.76E-03	1.08E-04
Benzene	2.14E-04	1.39E-04	6.09E-04	1.75E-05
Beryllium*	3.00E-12	4.20E-04	1.84E-03	5.29E-05
Cadmium*	3.00E-12	4.20E-04	1.84E-03	5.29E-05
Chromium VI	2.48E-04	1.61E-04	7.06E-04	2.03E-05
Formaldehyde	3.30E-02	2.15E-02	9.40E-02	2.70E-03
Nickel	8.45E-02	5.49E-02	2.41E-01	6.92E-03
Benzo(a)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benz(a)anthracene	4.01E-06	2.61E-06	1.14E-05	3.28E-07
Benzo(b)fluoranthene	1.48E-06	9.62E-07	4.21E-06	1.21E-07
Benzo(k)fluoranthene	1.48E-06	9.62E-07	4.21E-06	1.21E-07
Chrysene	2.38E-06	1.55E-06	6.78E-06	1.95E-07
Dibenzo(a,h)anthracene	1.67E-06	1.09E-06	4.75E-06	1.37E-07
Indeno(1,2,3-cd)pyrene	2.14E-06	1.39E-06	6.09E-06	1.75E-07
Total PAHs	1.3E-05	8.55E-06	3.75E-05	1.08E-06

*Emissions based on #2 diesel oil (lb/10^{12} Btu) EFs and a maximum boiler capacity of 140 MMBtu. All other toxics emissions based on fuel oil EFs (lb/10^3 gal).

lotes: Emission estimates represent maximum emissions based on burning #2, #4, #5, or #6 fuel oil, and based on AP-42 Tables 1.3-9 1.3-10, and 1.3-11.

Emissions based on boiler operating with maximum fuel usage of 650 gal/hour for both residual and diesel fuels.

TPY emissions based on 8,760 hours of operation for residual and diesel fuel oil.

TABLE 3. BOILER #4 - NON-CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Antimony	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Barium	4.4E-03	6.0E-04	2.6E-03	7.6E-05
Chromium	1.4E-03	1.9E-04	8.4E-04	2.4E-05
Cobalt	8.4E-05	1.1E-05	5.0E-05	1.4E-06
Copper	8.5E-04	1.2E-04	5.1E-04	1.5E-05
Ethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fluoride	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hexane	1.8E+00	2.5E-01	1.1E+00	3.1E-02
Manganese	3.8E-04	5.2E-05	2.3E-04	6.5E-06
Mercury	2.6E-04	3.5E-05	1.6E-04	4.5E-06
Molybdenum	1.1E-03	1.5E-04	6.6E-04	1.9E-05
Naphthalene	6.1E-04	8.3E-05	3.6E-04	1.0E-05
Pentane	2.6E+00	3.5E-01	1.6E+00	4.5E-02
Phosphorous	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Selenium	2.4E-05	3.3E-06	1.4E-05	4.1E-07
1,1,1 - Trichlorethane (Methyl Chloroform)	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Toluene	3.4E-03	4.6E-04	2.0E-03	5.8E-05
o-Xylene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Vanadium, V_2O_5 Respirable Dust and fume	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Zinc	2.9E-02	4.0E-03	1.7E-02	5.0E-04

TABLE 4. BOILER #4 - CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Arsenic	2.0E-04	2.7E-05	1.2E-04	3.4E-06
Benzene	2.1E-03	2.9E-04	1.3E-03	3.6E-05
Beryllium	1.2E-05	1.6E-06	7.2E-06	2.1E-07
Cadmium	1.1E-03	1.5E-04	6.6E-04	1.9E-05
Chromium VI	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Formaldehyde	7.5E-02	1.0E-02	4.5E-02	1.3E-03
Nickel	2.1E-03	2.9E-04	1.3E-03	3.6E-05
Benzo(a)pyrene	1.2E-06	1.6E-07	7.2E-07	2.1E-08
Benz(a)anthracene	1.8E-06	2.5E-07	1.1E-06	3.1E-08
Benzo(b)fluoranthene	1.8E-06	2.5E-07	1.1E-06	3.1E-08
Benzo(k)fluoranthene	1.8E-06	2.5E-07	1.1E-06	3.1E-08
Chrysene	1.8E-06	2.5E-07	1.1E-06	3.1E-08
Dibenzo(a,h)anthracene	1.2E-06	1.6E-07	7.2E-07	2.1E-08
Indeno(1,2,3-cd)pyrene	1.8E-06	2.5E-07	1.1E-06	3.1E-08
Total PAHs	1.1E-05	1.6E-06	6.8E-06	2.0E-07

Notes: Emissions based on boiler operating at maximum rate of 140 MMBTU/hr.
Assumed 1,027 BTU/scf heat content of natural gas.
Emissions based on 8,760 hours of operation.

TOXIC AIR POLLUTANT CALCULATIONS

TABLE 1. BOILER #3 - NON-CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Antimony	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Barium	4.4E-03	1.8E-04	8.1E-04	2.3E-05
Chromium	1.4E-03	5.9E-05	2.6E-04	7.4E-06
Cobalt	8.4E-05	3.5E-06	1.5E-05	4.4E-07
Copper	8.5E-04	3.6E-05	1.6E-04	4.5E-06
Ethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fluoride	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hexane	1.8E+00	7.5E-02	3.3E-01	9.5E-03
Manganese	3.8E-04	1.6E-05	7.0E-05	2.0E-06
Mercury	2.6E-04	1.1E-05	4.8E-05	1.4E-06
Molybdenum	1.1E-03	4.6E-05	2.0E-04	5.8E-06
Naphthalene	6.1E-04	2.6E-05	1.1E-04	3.2E-06
Pentane	2.6E+00	1.1E-01	4.8E-01	1.4E-02
Phosphorous	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Selenium	2.4E-05	1.0E-06	4.4E-06	1.3E-07
1,1,1 - Trichlorethane (Methyl Chloroform)	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Toluene	3.4E-03	1.4E-04	6.2E-04	1.8E-05
o-Xylene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Vanadium, V_2O_5 Respirable Dust and fume	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Zinc	2.9E-02	1.2E-03	5.3E-03	1.5E-04

TABLE 2. BOILER #3 - CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Arsenic	2.0E-04	8.4E-06	3.7E-05	1.1E-06
Benzene	2.1E-03	8.8E-05	3.9E-04	1.1E-05
Beryllium	1.2E-05	5.0E-07	2.2E-06	6.3E-08
Cadmium	1.1E-03	4.6E-05	2.0E-04	5.8E-06
Chromium VI	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Formaldehyde	7.5E-02	3.1E-03	1.4E-02	4.0E-04
Nickel	2.1E-03	8.8E-05	3.9E-04	1.1E-05
Benzo(a)pyrene	1.2E-06	5.0E-08	2.2E-07	6.3E-09
Benz(a)anthracene	1.8E-06	7.5E-08	3.3E-07	9.5E-09
Benzo(b)fluoranthene	1.8E-06	7.5E-08	3.3E-07	9.5E-09
Benzo(k)fluoranthene	1.8E-06	7.5E-08	3.3E-07	9.5E-09
Chrysene	1.8E-06	7.5E-08	3.3E-07	9.5E-09
Dibenzo(a,h)anthracene	1.2E-06	5.0E-08	2.2E-07	6.3E-09
Indeno(1,2,3-cd)pyrene	1.8E-06	7.5E-08	3.3E-07	9.5E-09
Total PAHs	1.1E-05	4.8E-07	2.1E-06	6.0E-08

Notes: Emissions based on boiler operating at maximum rate of 43.03 MMBTU/hr.
Assumed 1,027 BTU/scf heat content of natural gas.
Emissions based on 8,760 hours of operation.

TOXIC AIR POLLUTANTS CALCULATIONS

TABLE 1. FLUID BED DRYER - NON-CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Antimony	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Barium	4.4E-03	3.0E-05	1.3E-04	3.8E-06
Chromium	1.4E-03	9.5E-06	4.2E-05	1.2E-06
Cobalt	8.4E-05	5.7E-07	2.5E-06	7.2E-08
Copper	8.5E-04	5.8E-06	2.5E-05	7.3E-07
Ethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fluoride	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hexane	1.8E+00	1.2E-02	5.4E-02	1.5E-03
Manganese	3.8E-04	2.6E-06	1.1E-05	3.3E-07
Mercury	2.6E-04	1.8E-06	7.8E-06	2.2E-07
Molybdenum	1.1E-03	7.5E-06	3.3E-05	9.4E-07
Naphthalene	6.1E-04	4.2E-06	1.8E-05	5.2E-07
Pentane	2.6E+00	1.8E-02	7.8E-02	2.2E-03
Phosphorous	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Selenium	2.4E-05	1.6E-07	7.2E-07	2.1E-08
1,1,1 - Trichlorethane (Methyl Chloroform)	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Toluene	3.4E-03	2.3E-05	1.0E-04	2.9E-06
o-Xylene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Vanadium, V_2O_5 Respirable Dust and fume	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Zinc	2.9E-02	2.0E-04	8.7E-04	2.5E-05

TABLE 2. FLUID BED DRYER - CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Arsenic	2.00E-04	1.4E-06	6.0E-06	1.7E-07
Benzene	2.1E-03	1.4E-05	6.3E-05	1.8E-06
Beryllium	1.20E-05	8.2E-08	3.6E-07	1.0E-08
Cadmium	1.10E-03	7.5E-06	3.3E-05	9.4E-07
Chromium VI	0.00E+00	0.0E+00	0.0E+00	0.0E+00
Formaldehyde	7.5E-02	5.1E-04	2.2E-03	6.4E-05
Nickel	2.1E-03	1.4E-05	6.3E-05	1.8E-06
Benzo(a)pyrene	1.2E-06	8.2E-09	3.6E-08	1.0E-09
Benz(a)anthracene	1.8E-06	1.2E-08	5.4E-08	1.5E-09
Benzo(b)fluoranthene	1.8E-06	1.2E-08	5.4E-08	1.5E-09
Benzo(k)fluoranthene	1.8E-06	1.2E-08	5.4E-08	1.5E-09
Chrysene	1.8E-06	1.2E-08	5.4E-08	1.5E-09
Dibenzo(a,h)anthracene	1.2E-06	8.2E-09	3.6E-08	1.0E-09
Indeno(1,2,3-cd)pyrene	1.8E-06	1.2E-08	5.4E-08	1.5E-09
Total PAHs	1.1E-05	7.8E-08	3.4E-07	9.8E-09

Notes: Emissions based on two Maxon burners each operating at maximum rate of 3.5 MMBTU/hr.
Assumed 1,027 BTU/scf heat content of natural gas.
Emissions based on 8,760 hours of operation.

TOXIC AIR POLLUTANT CALCULATIONS

TABLE 1. DRYERS A, B, & C - NON-CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions Dryer A (lb/hr)	Emissions Dryer B (lb/hr)	Emissions Dryer C (lb/hr)	Dryer A Emissions (grams/sec)	Dryer B Emissions (grams/sec)	Dryer C Emissions (grams/sec)	Emissions (T/yr) All Dryers
Antimony	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Barium	4.4E-03	3.4E-05	1.4E-05	1.4E-05	4.3E-06	1.7E-06	1.7E-06	2.7E-04
Chromium	1.4E-03	1.1E-05	4.4E-06	4.4E-06	1.4E-06	5.5E-07	5.5E-07	8.6E-05
Cobalt	8.4E-05	6.5E-07	2.6E-07	2.6E-07	8.2E-08	3.3E-08	3.3E-08	5.2E-06
Copper	8.5E-04	6.6E-06	2.6E-06	2.6E-06	8.3E-07	3.3E-07	3.3E-07	5.2E-05
Ethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fluoride	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hexane	1.8E+00	1.4E-02	5.6E-03	5.6E-03	1.8E-03	7.1E-04	7.1E-04	1.1E-01
Manganese	3.8E-04	3.0E-06	1.2E-06	1.2E-06	3.7E-07	1.5E-07	1.5E-07	2.3E-05
Mercury	2.6E-04	2.0E-06	8.1E-07	8.1E-07	2.6E-07	1.0E-07	1.0E-07	1.6E-05
Molybdenum	1.1E-03	8.6E-06	3.4E-06	3.4E-06	1.1E-06	4.3E-07	4.3E-07	6.8E-05
Naphthalene	6.1E-04	4.8E-06	1.9E-06	1.9E-06	6.0E-07	2.4E-07	2.4E-07	3.7E-05
Pentane	2.6E+00	2.0E-02	8.1E-03	8.1E-03	2.6E-03	1.0E-03	1.0E-03	1.6E-01
Phosphorous	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Selenium	2.4E-05	1.9E-07	7.5E-08	7.5E-08	2.4E-08	9.4E-09	9.4E-09	1.5E-06
1,1,1 - Trichlorethane (Methyl Chloroform)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Toluene	3.4E-03	2.6E-05	1.1E-05	1.1E-05	3.3E-06	1.3E-06	1.3E-06	2.1E-04
o-Xylene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Vanadium, V_2O_5 Respirable Dust and fume	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Zinc	2.9E-02	2.3E-04	9.0E-05	9.0E-05	2.8E-05	1.1E-05	1.1E-05	1.8E-03

TABLE 2. DRYERS A, B, & C - CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions Dryer A (lb/hr)	Emissions Dryer B (lb/hr)	Emissions Dryer C (lb/hr)	Dryer A Emissions (grams/sec)	Dryer B Emissions (grams/sec)	Dryer C Emissions (grams/sec)	Emissions (T/yr) All Dryers
Arsenic	2.0E-04	1.6E-06	6.2E-07	6.2E-07	2.0E-07	7.9E-08	7.9E-08	1.2E-05
Benzene	2.1E-03	1.6E-05	6.5E-06	6.5E-06	2.1E-06	8.2E-07	8.2E-07	1.3E-04
Beryllium	1.2E-05	9.3E-08	3.7E-08	3.7E-08	1.2E-08	4.7E-09	4.7E-09	7.4E-07
Cadmium	1.1E-03	8.6E-06	3.4E-06	3.4E-06	1.1E-06	4.3E-07	4.3E-07	6.8E-05
Chromium VI	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Formaldehyde	7.5E-02	5.8E-04	2.3E-04	2.3E-04	7.4E-05	2.9E-05	2.9E-05	4.6E-03
Nickel	2.1E-03	1.6E-05	6.5E-06	6.5E-06	2.1E-06	8.2E-07	8.2E-07	1.3E-04
Benzo(a)pyrene	1.2E-06	9.3E-09	3.7E-09	3.7E-09	1.2E-09	4.7E-10	4.7E-10	7.4E-08
Benz(a)anthracene	1.8E-06	1.4E-08	5.6E-09	5.6E-09	1.8E-09	7.1E-10	7.1E-10	1.1E-07
Benzo(b)fluoranthene	1.8E-06	1.4E-08	5.6E-09	5.6E-09	1.8E-09	7.1E-10	7.1E-10	1.1E-07
Benzo(k)fluoranthene	1.8E-06	1.4E-08	5.6E-09	5.6E-09	1.8E-09	7.1E-10	7.1E-10	1.1E-07
Chrysene	1.8E-06	1.4E-08	5.6E-09	5.6E-09	1.8E-09	7.1E-10	7.1E-10	1.1E-07
Dibenzo(a,h)anthracene	1.2E-06	9.3E-09	3.7E-09	3.7E-09	1.2E-09	4.7E-10	4.7E-10	7.4E-08
Indeno(1,2,3-cd)pyrene	1.8E-06	1.4E-08	5.6E-09	5.6E-09	1.8E-09	7.1E-10	7.1E-10	1.1E-07
Total PAHs	1.1E-05	8.9E-08	3.6E-08	3.6E-08	1.1E-08	4.5E-09	4.5E-09	7.0E-07

Notes: Emissions based on Dryer A operating at 8 MMBTU/hr, Dryer B operating at 3.2 MMBTU/hr, and Dryer C operating at 3.2 MMBTU/hr.
Assumed 1,027 BTU/scf heat content of natural gas.
Emissions based on 8,760 hours of operation for each dryer.

TOXIC AIR POLLUTANT CALCULATIONS

TABLE 1. SPACE HEATERS N, E, & S - NON-CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions SH South (lb/hr)	Emissions SH North (lb/hr)	Emissions SH East (lb/hr)	Emissions SH South (grams/sec)	Emissions SH North (grams/sec)	Emissions SH East (grams/sec)	Emissions (T/yr) All Dryers
Antimony	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Barium	4.4E-03	3.5E-05	3.5E-05	6.6E-05	4.5E-06	4.5E-06	8.3E-06	4.1E-04
Chromium	1.4E-03	1.1E-05	1.1E-05	2.1E-05	1.4E-06	1.4E-06	2.6E-06	1.3E-04
Cobalt	8.4E-05	6.7E-07	6.7E-07	1.3E-06	8.5E-08	8.5E-08	1.6E-07	7.9E-06
Copper	8.5E-04	6.8E-06	6.8E-06	1.3E-05	8.6E-07	8.6E-07	1.6E-06	8.0E-05
Ethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fluoride	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hexane	1.8E+00	1.4E-02	1.4E-02	2.7E-02	1.8E-03	1.8E-03	3.4E-03	1.7E-01
Manganese	3.8E-04	3.1E-06	3.1E-06	5.7E-06	3.8E-07	3.8E-07	7.2E-07	3.6E-05
Mercury	2.6E-04	2.1E-06	2.1E-06	3.9E-06	2.6E-07	2.6E-07	4.9E-07	2.4E-05
Molybdenum	1.1E-03	8.8E-06	8.8E-06	1.6E-05	1.1E-06	1.1E-06	2.1E-06	1.0E-04
Naphthalene	6.1E-04	4.9E-06	4.9E-06	9.1E-06	6.2E-07	6.2E-07	1.2E-06	5.7E-05
Pentane	2.6E+00	2.1E-02	2.1E-02	3.9E-02	2.6E-03	2.6E-03	4.9E-03	2.4E-01
Phosphorous	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Selenium	2.4E-05	1.9E-07	1.9E-07	3.6E-07	2.4E-08	2.4E-08	4.5E-08	2.3E-06
1,1,1 - Trichlorethane (Methyl Chloroform)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Toluene	3.4E-03	2.7E-05	2.7E-05	5.1E-05	3.4E-06	3.4E-06	6.4E-06	3.2E-04
o-Xylene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Vanadium, V_2O_5 Respirable Dust and fume	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Zinc	2.9E-02	2.3E-04	2.3E-04	4.3E-04	2.9E-05	2.9E-05	5.5E-05	2.7E-03

TABLE 2. SPACE HEATERS N, E, & S - CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions SH South (lb/hr)	Emissions SH North (lb/hr)	Emissions SH East (lb/hr)	Emissions SH South (grams/sec)	Emissions SH North (grams/sec)	Emissions SH East (grams/sec)	Emissions (T/yr) All Dryers
Arsenic	2.0E-04	1.6E-06	1.6E-06	3.0E-06	2.0E-07	2.0E-07	3.8E-07	1.9E-05
Benzene	2.1E-03	1.7E-05	1.7E-05	3.1E-05	2.1E-06	2.1E-06	4.0E-06	2.0E-04
Beryllium	1.2E-05	9.6E-08	9.6E-08	1.8E-07	1.2E-08	1.2E-08	2.3E-08	1.1E-06
Cadmium	1.1E-03	8.8E-06	8.8E-06	1.6E-05	1.1E-06	1.1E-06	2.1E-06	1.0E-04
Chromium VI	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Formaldehyde	7.5E-02	6.0E-04	6.0E-04	1.1E-03	7.6E-05	7.6E-05	1.4E-04	7.0E-03
Nickel	2.1E-03	1.7E-05	1.7E-05	3.1E-05	2.1E-06	2.1E-06	4.0E-06	2.0E-04
Benzo(a)pyrene	1.2E-06	9.6E-09	9.6E-09	1.8E-08	1.2E-09	1.2E-09	2.3E-09	1.1E-07
Benz(a)anthracene	1.8E-06	1.4E-08	1.4E-08	2.7E-08	1.8E-09	1.8E-09	3.4E-09	1.7E-07
Benzo(b)fluoranthene	1.8E-06	1.4E-08	1.4E-08	2.7E-08	1.8E-09	1.8E-09	3.4E-09	1.7E-07
Benzo(k)fluoranthene	1.8E-06	1.4E-08	1.4E-08	2.7E-08	1.8E-09	1.8E-09	3.4E-09	1.7E-07
Chrysene	1.8E-06	1.4E-08	1.4E-08	2.7E-08	1.8E-09	1.8E-09	3.4E-09	1.7E-07
Dibenzo(a,h)anthracene	1.2E-06	9.6E-09	9.6E-09	1.8E-08	1.2E-09	1.2E-09	2.3E-09	1.1E-07
Indeno(1,2,3-cd)pyrene	1.8E-06	1.4E-08	1.4E-08	2.7E-08	1.8E-09	1.8E-09	3.4E-09	1.7E-07
Total PAHs	1.1E-05	9.2E-08	9.2E-08	1.7E-07	1.2E-08	1.2E-08	2.2E-08	1.1E-06

Notes: Emissions based on north and south space heaters operating at 8.25 MMBTU/hr, and east space heater operating at 15.4 MMBTu/hr.
Assumed 1,027 BTU/scf heat content of natural gas.
Emissions based on 6,048 hours of operation for each dryer.

TOXIC AIR POLLUTANT CALCULATIONS

TABLE 1. MISC. SPACE HEATERS - NON-CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Antimony	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Barium	4.4E-03	8.6E-06	2.6E-05	1.1E-06
Chromium	1.4E-03	2.7E-06	8.2E-06	3.4E-07
Cobalt	8.4E-05	1.6E-07	4.9E-07	2.1E-08
Copper	8.5E-04	1.7E-06	5.0E-06	2.1E-07
Ethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fluoride	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hexane	1.8E+00	3.5E-03	1.1E-02	4.4E-04
Manganese	3.8E-04	7.4E-07	2.2E-06	9.3E-08
Mercury	2.6E-04	5.1E-07	1.5E-06	6.4E-08
Molybdenum	1.1E-03	2.1E-06	6.5E-06	2.7E-07
Naphthalene	6.1E-04	1.2E-06	3.6E-06	1.5E-07
Pentane	2.6E+00	5.1E-03	1.5E-02	6.4E-04
Phosphorous	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Selenium	2.4E-05	4.7E-08	1.4E-07	5.9E-09
1,1,1 - Trichlorethane (Methyl Chloroform)	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Toluene	3.4E-03	6.6E-06	2.0E-05	8.3E-07
o-Xylene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Vanadium, V_2O_5 Respirable Dust and fume	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Zinc	2.9E-02	5.6E-05	1.7E-04	7.1E-06

TABLE 2. MISC. SPACE HEATERS - CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Arsenic	2.0E-04	3.9E-07	1.2E-06	4.9E-08
Benzene	2.1E-03	4.1E-06	1.2E-05	5.2E-07
Beryllium	1.2E-05	2.3E-08	7.1E-08	2.9E-09
Cadmium	1.1E-03	2.1E-06	6.5E-06	2.7E-07
Chromium VI	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Formaldehyde	7.5E-02	1.5E-04	4.4E-04	1.8E-05
Nickel	2.1E-03	4.1E-06	1.2E-05	5.2E-07
Benzo(a)pyrene	1.2E-06	2.3E-09	7.1E-09	2.9E-10
Benz(a)anthracene	1.8E-06	3.5E-09	1.1E-08	4.4E-10
Benzo(b)fluoranthene	1.8E-06	3.5E-09	1.1E-08	4.4E-10
Benzo(k)fluoranthene	1.8E-06	3.5E-09	1.1E-08	4.4E-10
Chrysene	1.8E-06	3.5E-09	1.1E-08	4.4E-10
Dibenzo(a,h)anthracene	1.2E-06	2.3E-09	7.1E-09	2.9E-10
Indeno(1,2,3-cd)pyrene	1.8E-06	3.5E-09	1.1E-08	4.4E-10
Total PAHs	1.1E-05	2.2E-08	6.7E-08	2.8E-09

Notes: Emissions based on heaters operating at an aggregate maximum rate of 2 MMBTU/hr.
Assumed 1,027 BTU/scf heat content of natural gas.
Emissions based on 6,048 hours of operation for each dryer.

TOXIC AIR POLLUTANT CALCULATIONS

TABLE 1. SECONDARY DRYER - NON-CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Antimony	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Barium	4.4E-03	2.4E-06	1.0E-05	3.0E-07
Chromium	1.4E-03	7.5E-07	3.3E-06	9.4E-08
Cobalt	8.4E-05	4.5E-08	2.0E-07	5.7E-09
Copper	8.5E-04	4.6E-07	2.0E-06	5.7E-08
Ethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fluoride	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hexane	1.8E+00	9.6E-04	4.2E-03	1.2E-04
Manganese	3.8E-04	2.0E-07	8.9E-07	2.6E-08
Mercury	2.6E-04	1.4E-07	6.1E-07	1.8E-08
Molybdenum	1.1E-03	5.9E-07	2.6E-06	7.4E-08
Naphthalene	6.1E-04	3.3E-07	1.4E-06	4.1E-08
Pentane	2.6E+00	1.4E-03	6.1E-03	1.8E-04
Phosphorous	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Selenium	2.4E-05	1.3E-08	5.6E-08	1.6E-09
1,1,1 - Trichlorethane (Methyl Chloroform)	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Toluene	3.4E-03	1.8E-06	8.0E-06	2.3E-07
o-Xylene	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Vanadium, V_2O_5 Respirable Dust and fume	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Zinc	2.9E-02	1.6E-05	6.8E-05	2.0E-06

TABLE 2. SECONDARY DRYER - CARCINOGENS
NATURAL GAS

Pollutant	Emission Factor (lb/1,000,000 scf)	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (grams/sec)
Arsenic	2.0E-04	1.1E-07	4.7E-07	1.3E-08
Benzene	2.1E-03	1.1E-06	4.9E-06	1.4E-07
Beryllium	1.2E-05	6.4E-09	2.8E-08	8.1E-10
Cadmium	1.1E-03	5.9E-07	2.6E-06	7.4E-08
Chromium VI	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Formaldehyde	7.5E-02	4.0E-05	1.8E-04	5.1E-06
Nickel	2.1E-03	1.1E-06	4.9E-06	1.4E-07
Benzo(a)pyrene	1.2E-06	6.4E-10	2.8E-09	8.1E-11
Benz(a)anthracene	1.8E-06	9.6E-10	4.2E-09	1.2E-10
Benzo(b)fluoranthene	1.8E-06	9.6E-10	4.2E-09	1.2E-10
Benzo(k)fluoranthene	1.8E-06	9.6E-10	4.2E-09	1.2E-10
Chrysene	1.8E-06	9.6E-10	4.2E-09	1.2E-10
Dibenzo(a,h)anthracene	1.2E-06	6.4E-10	2.8E-09	8.1E-11
Indeno(1,2,3-cd)pyrene	1.8E-06	9.6E-10	4.2E-09	1.2E-10
Total PAHs	1.1E-05	6.1E-09	2.7E-08	7.7E-10

Notes: Emissions based on dryer operating at a maximum rate of 0.55 MMBTU/hr.
Assumed 1,027 BTU/scf heat content of natural gas.
Emissions based on 8,760 hours of operation for each dryer.

SUMMARY OF TOXIC AIR POLLUTANT EMISSIONS

TABLE 1. NON-CARCINOGENS

Pollutant	Max. Hourly Emissions (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Emissions (tons/yr)
Antimony	3.4E-03	3.3E-02	N	1.5E-02
Barium	2.1E-03	3.3E-02	N	9.0E-03
Chromium	6.8E-04	3.3E-02	N	2.9E-03
Cobalt	3.9E-03	3.3E-03	Y	1.7E-02
Copper	1.2E-03	6.7E-02	N	5.3E-03
Ethylbenzene	4.1E-05	2.9E+01	N	1.8E-04
Fluoride	2.4E-02	1.7E-01	N	1.1E-01
Hexane	4.2E-01	1.2E+01	N	1.8E+00
Manganese	2.0E-03	3.3E-01	N	8.7E-03
Mercury	4.5E-04	3.0E-03	N	1.9E-03
Molybdenum	6.2E-04	6.7E-01	N	2.7E-03
Naphthalene	7.9E-04	3.3E+00	N	3.4E-03
Pentane	6.0E-01	1.2E+02	N	2.5E+00
Phosphorous	6.1E-03	7.0E-03	N	2.7E-02
Selenium	2.1E-03	1.3E-02	N	9.2E-03
1,1,1 - Trichlorethane (Methyl Chloroform)	1.5E-04	1.3E+02	N	6.7E-04
Toluene	4.4E-03	2.5E+01	N	1.9E-02
o-Xylene	7.1E-05	2.9E+01	N	3.1E-04
Vanadium, V_2O_5 Respirable Dust and fume	2.1E-02	3.0E-03	Y	9.1E-02
Zinc	2.2E-02	6.7E-01	N	9.4E-02

TABLE 2. CARCINOGENS

Pollutant	Max. Hourly Emissions (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Emissions (tons/yr)
Arsenic	8.8E-04	1.5E-06	Y	3.8E-03
Benzene	4.9E-04	8.0E-04	N	2.5E-03
Beryllium	4.2E-04	2.8E-05	Y	2.1E-03
Cadmium	5.3E-04	3.7E-06	Y	2.1E-03
Chromium VI	1.6E-04	5.6E-07	Y	8.6E-04
Formaldehyde	2.9E-02	5.1E-04	Y	1.1E-01
Nickel	5.5E-02	2.7E-05	Y	2.4E-01
Benzo(a)pyrene	2.8E-07	2.0E-06	N	3.3E-01
Benz(a)anthracene	2.8E-06	NA	NA	8.2E-05
Benzo(b)fluoranthene	1.1E-06	NA	NA	5.2E-05
Benzo(k)fluoranthene	1.1E-06	NA	NA	2.1E-04
Chrysene	1.7E-06	NA	NA	1.2E-04
Dibenzo(a,h)anthracene	1.2E-06	NA	NA	4.8E-01
Indeno(1,2,3-cd)pyrene	1.6E-06	NA	NA	6.4E-06
Total PAHs	9.7E-06	2.0E-06	Y	4.4E-05

HAPs Inventory

Pollutant	Emissions (tons/yr)
Arsenic	3.80E-03

Benzene	2.47E-03
Beryllium	2.10E-03
Cadmium	2.07E-03
Ethylbenzene	1.8E-04
Formaldehyde	1.08E-01
Chromium	3.80E-03
Lead	2.25E-01
Mercury	1.9E-03
1,1,1 - Trichlorethane (Methyl Chloroform)	6.7E-04
Naphthalene	3.4E-03
Nickel	2.41E-01
Xylene	3.1E-04
Selenium	9.2E-03
Toluene	1.9E-02
POM	3.95E-02
Dichlorobenzene	5.37E-01
Phosphorous	2.69E-02
Hexane	1.75E+00
Total	**2.98E+00**

Note: Emission Factors for lead, POM, dichlorobenzene and hexane are as follows (i.e., for those HAPs not listed above):		
Lead	1.51E-03	lb/1,000 gal
	5.00E-04	lb/MMscf
POM	6.06E-05	lb/1,000 gal
	8.82E-05	lb/MMscf
Dichlorobenzene	1.20E-03	lb/MMscf