APPENDIX 5.1A

Wind Roses and Wind Speed Frequency Tables

Figure 5.1A-1

2003 Annual Wind Rose – Camp Pendleton, California

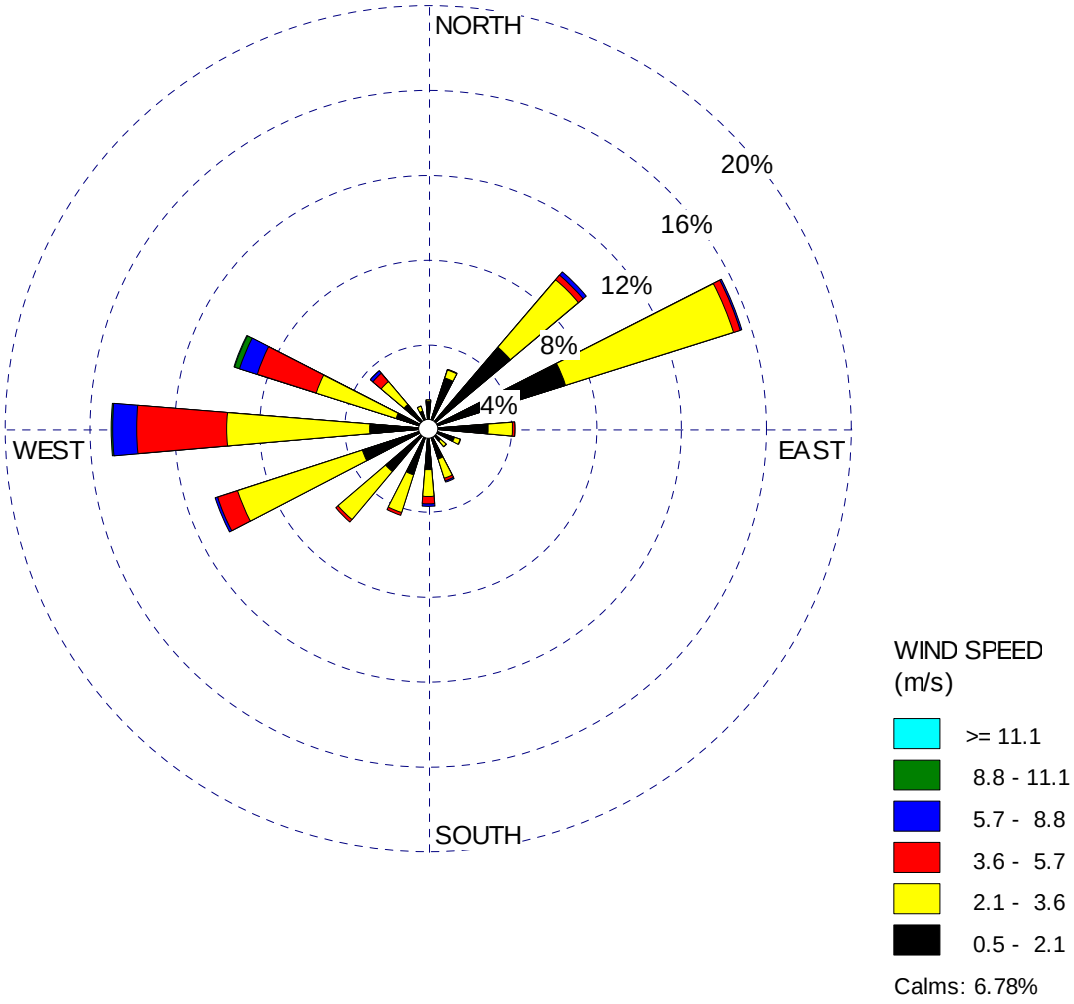


Figure 5.1A-2

2004 Annual Wind Rose – Camp Pendleton, California

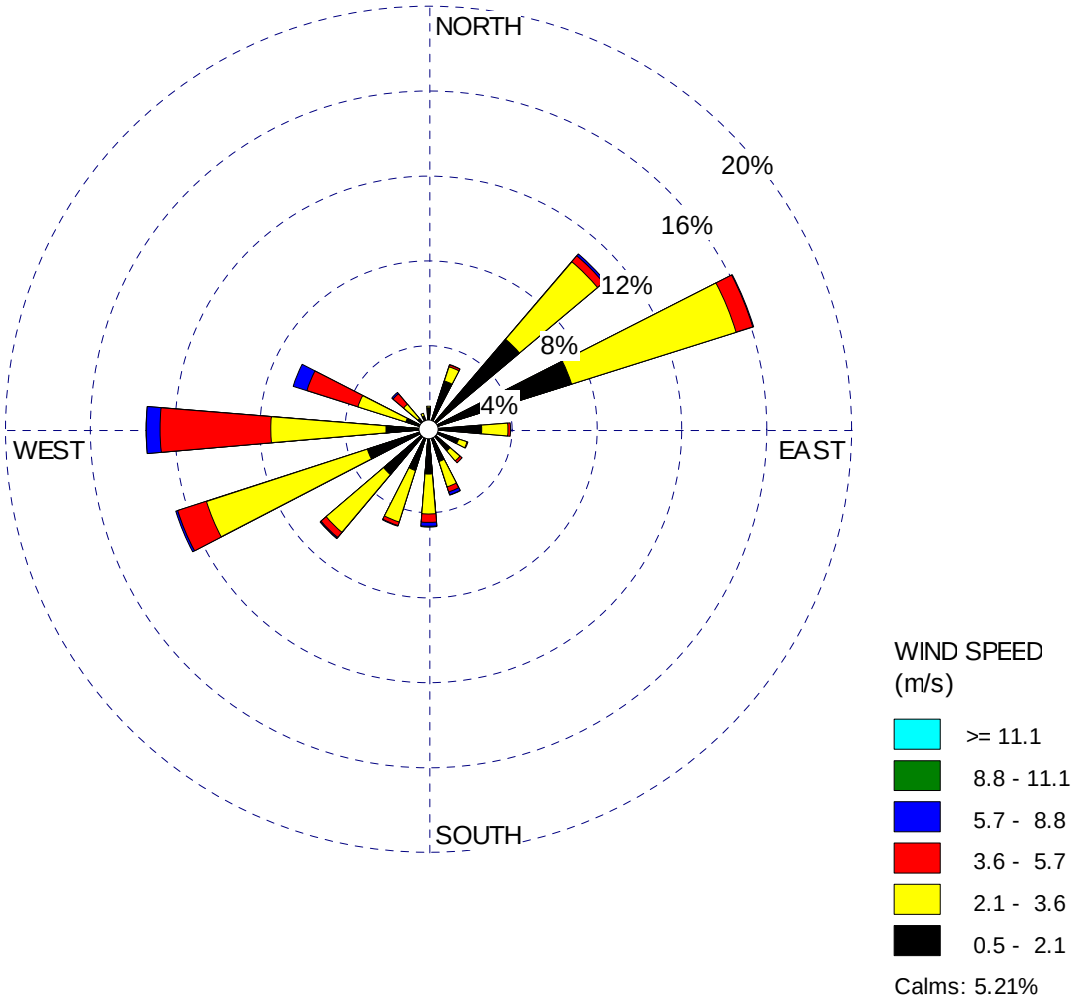


Figure 5.1A-3

2005 Annual Wind Rose – Camp Pendleton, California

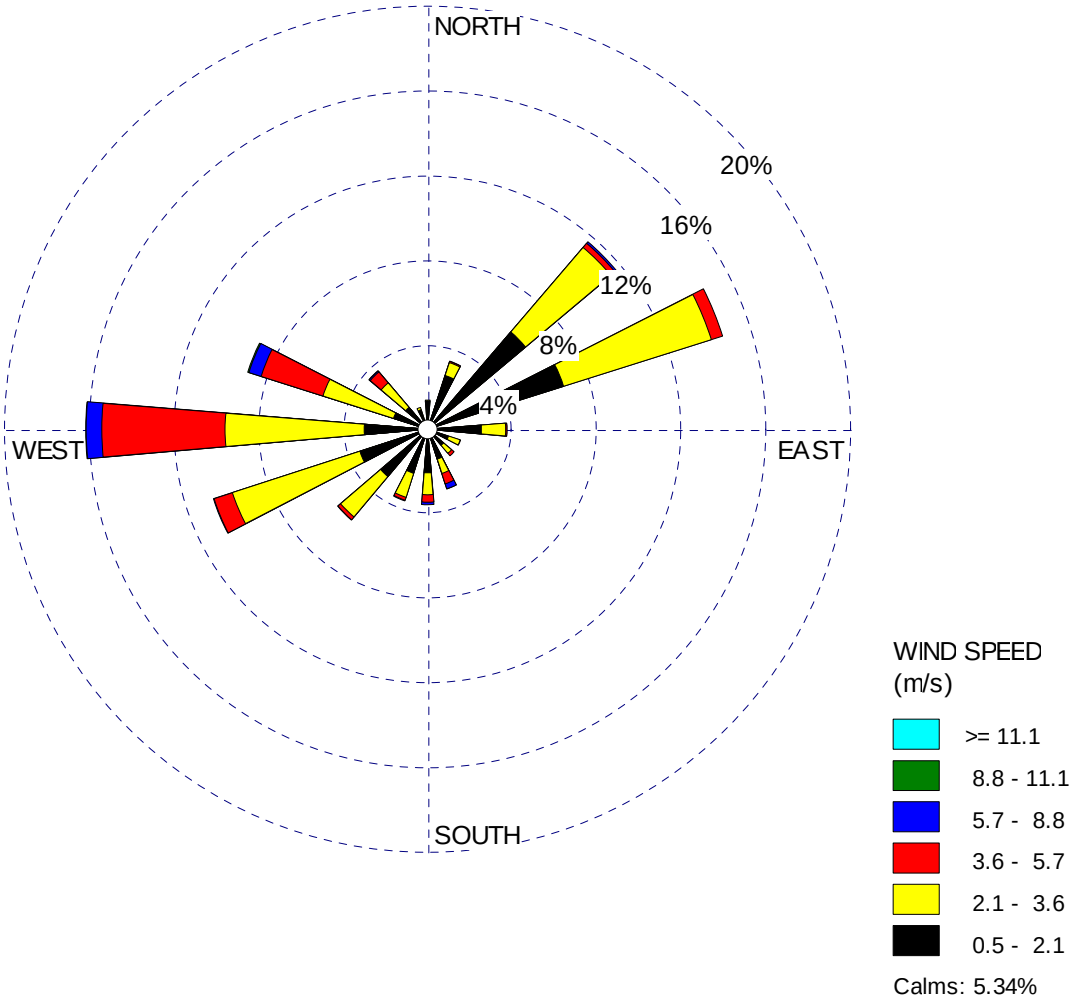


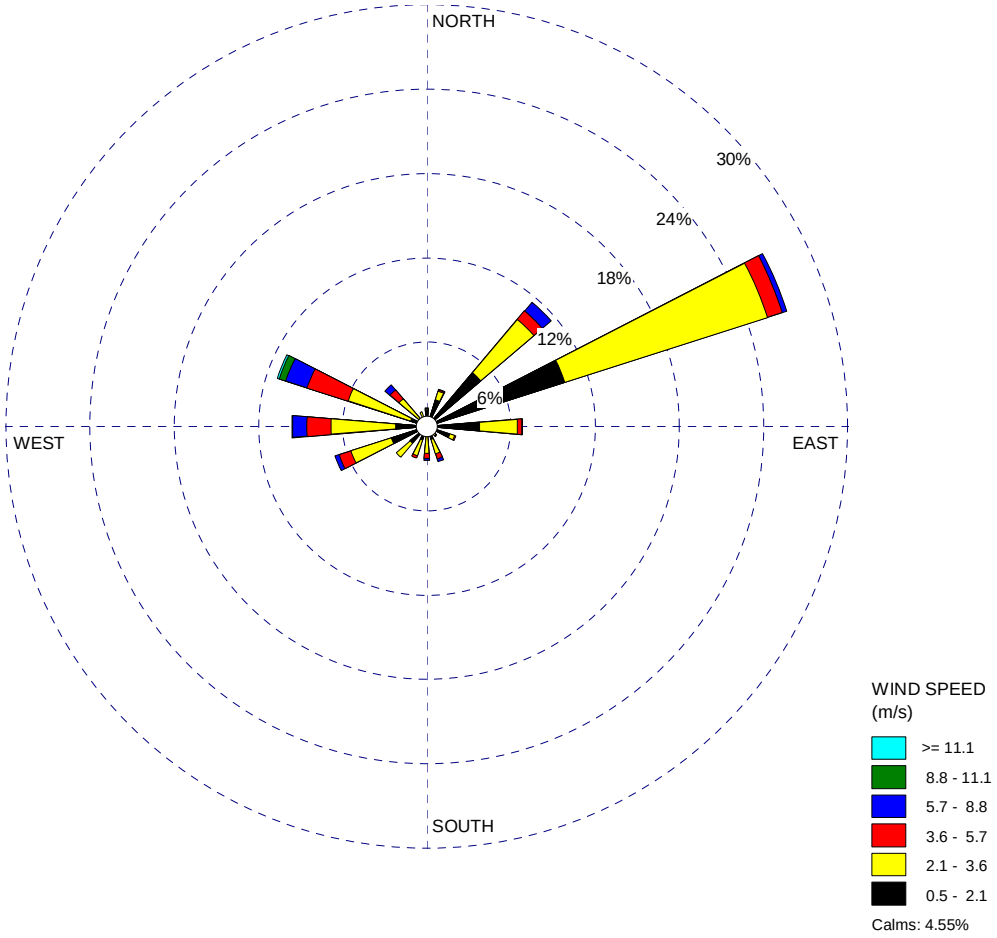
Figure 5.1A-4

WIND ROSE PLOT:

NRG Encina, 1st Quarter, 2003
Jan., 2003 to March., 2003

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2003 **Jan 1 - Mar 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **4.55%**	TOTAL COUNT: **2156 hrs.**	
	AVG. WIND SPEED: **2.58 m/s**	DATE: **8/28/2007**	PROJECT NO.:

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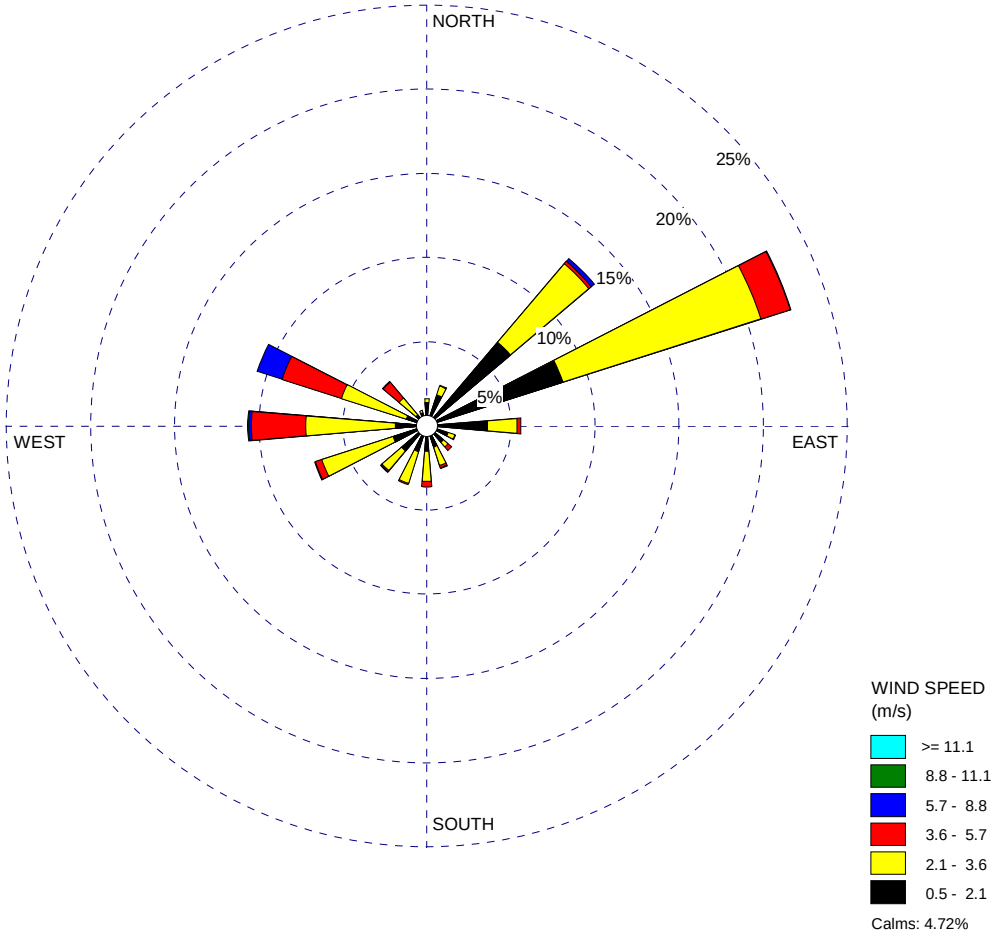
Figure 5.1A-5

WIND ROSE PLOT:

NRG Encina, 1st Quarter, 2004
Jan., 2004 to March, 2004

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2004 **Jan 1 - Mar 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **4.72%**	TOTAL COUNT: **2183 hrs.**	
	AVG. WIND SPEED: **2.40 m/s**	DATE: **8/28/2007**	PROJECT NO.:

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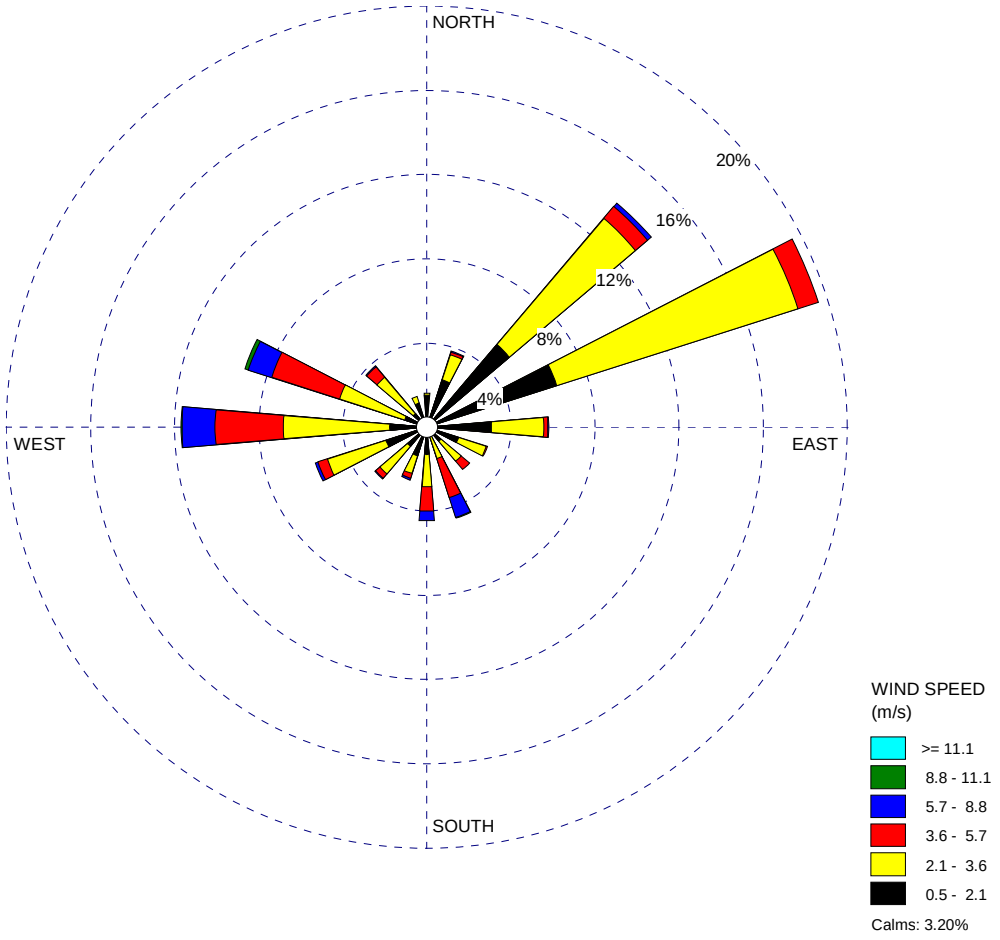
Figure 5.1A-6

WIND ROSE PLOT:

NRG Encina, 1st Quarter, 2005
Jan., 2005 to March, 2005

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2005 **Jan 1 - Mar 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **3.20%**	TOTAL COUNT: **2159 hrs.**	
	AVG. WIND SPEED: **2.69 m/s**	DATE: **8/28/2007**	PROJECT NO.:

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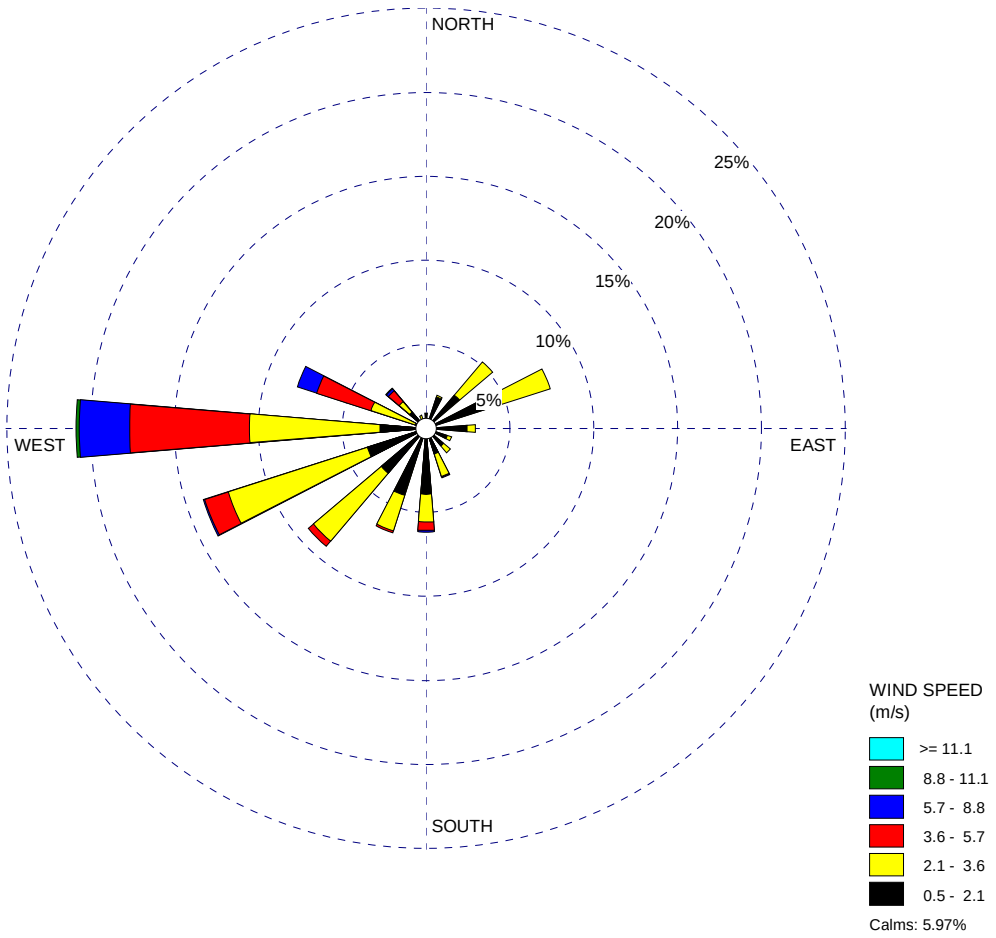
Figure 5.1A-7

WIND ROSE PLOT:

NRG Encina, 2nd Quarter, 2003
April, 2003 to June, 2003

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2003 **Apr 1 - Jun 30** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **5.97%**	TOTAL COUNT: **2177 hrs.**	
	AVG. WIND SPEED: **2.54 m/s**	DATE: **8/28/2007**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

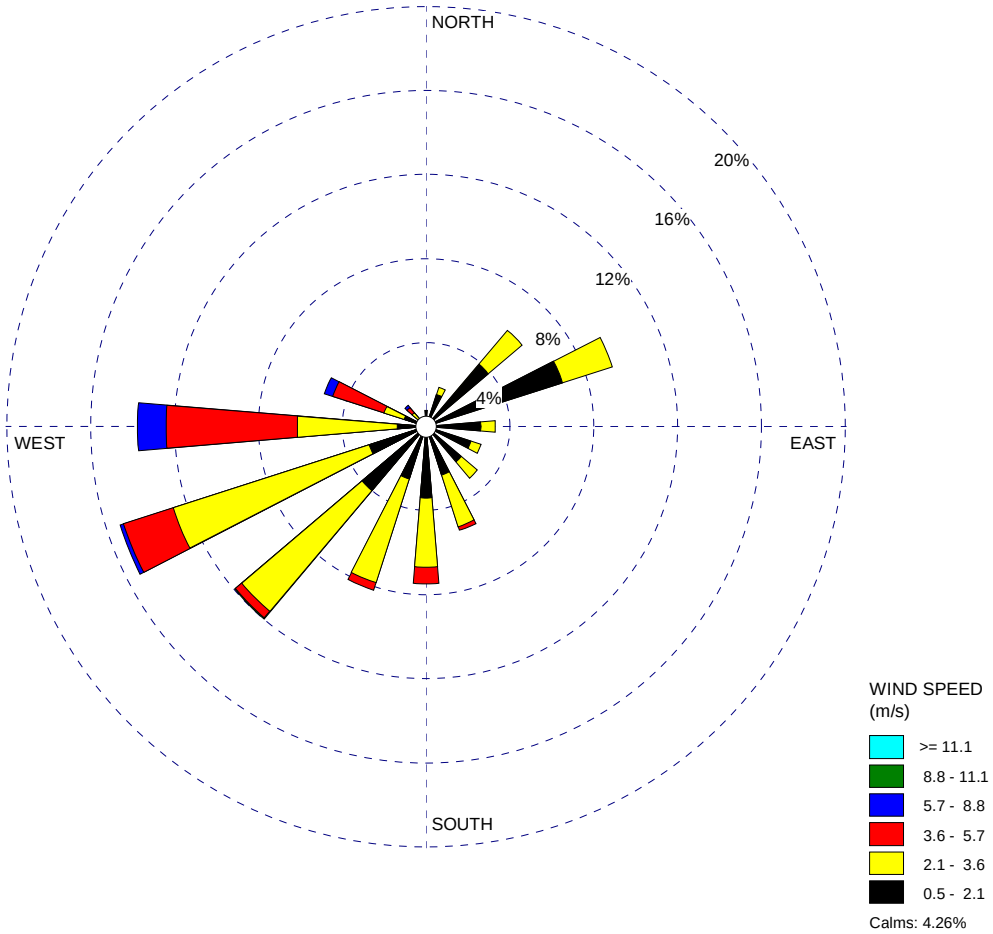
Figure 5.1A-8

WIND ROSE PLOT:

NRG Encina, 2nd Quarter, 2004
April, 2004 to June, 2004

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2004 **Apr 1 - Jun 30** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **4.26%**	TOTAL COUNT: **2184 hrs.**	
	AVG. WIND SPEED: **2.44 m/s**	DATE: **8/28/2007**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

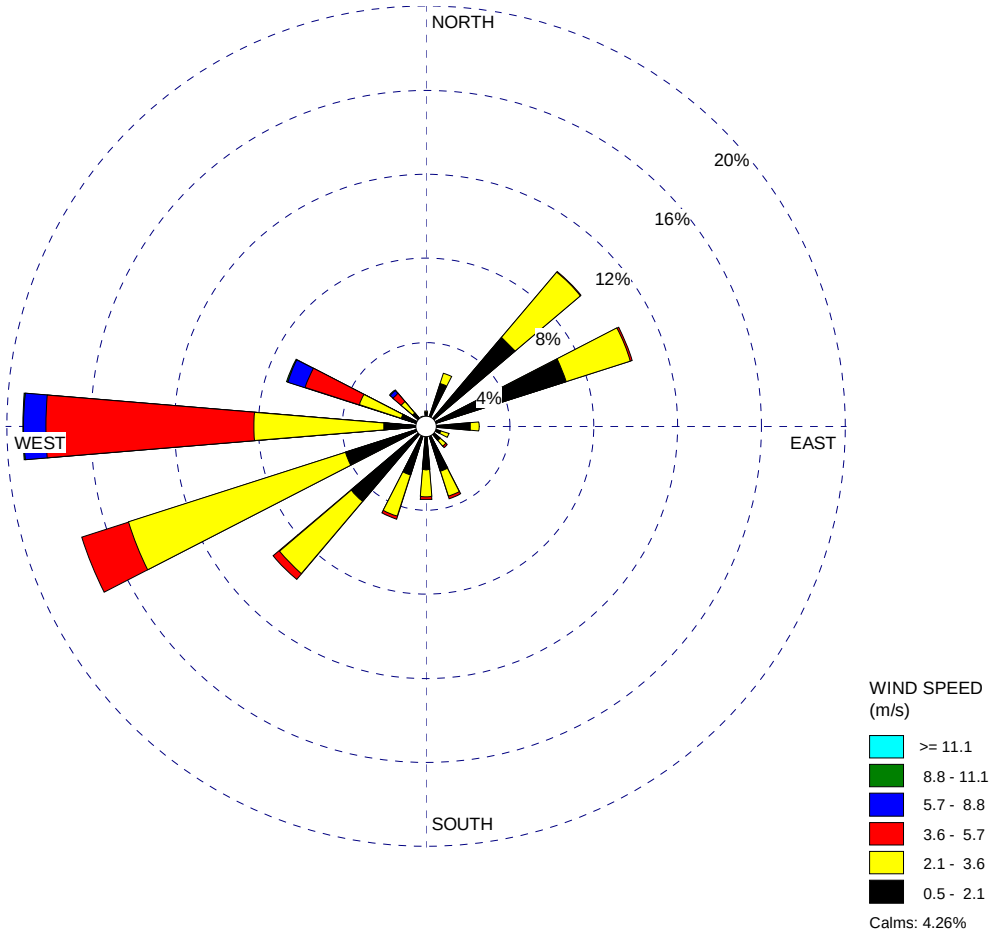
Figure 5.1A-9

WIND ROSE PLOT:

NRG Encina, 2nd Quarter, 2005
April, 2005 to June, 2005

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2005 **Apr 1 - Jun 30** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **4.26%**	TOTAL COUNT: **2184 hrs.**	
	AVG. WIND SPEED: **2.51 m/s**	DATE: **8/28/2007**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

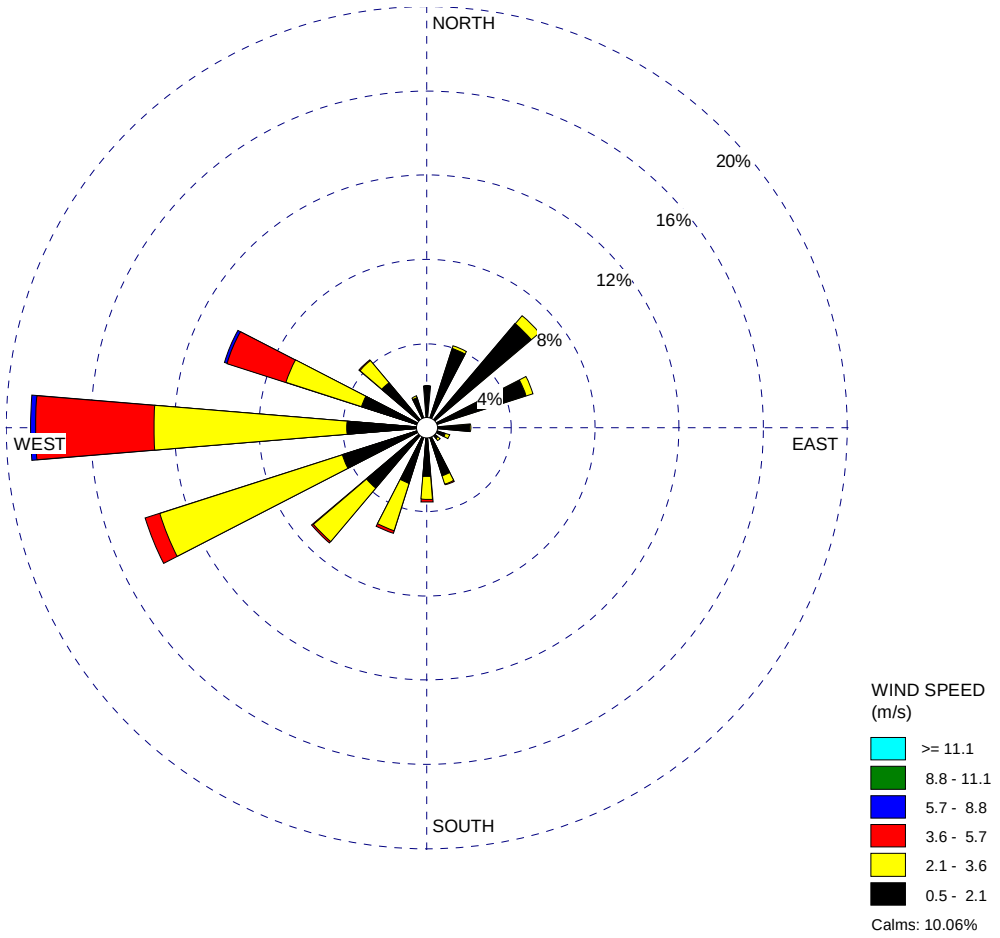
Figure 5.1A-10

WIND ROSE PLOT:

NRG Encina, 3rd Quarter, 2003
July, 2003 to Sept., 2003

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2003 **Jul 1 - Sep 30** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **10.06%**	TOTAL COUNT: **2207 hrs.**	
	AVG. WIND SPEED: **1.97 m/s**	DATE: **8/28/2007**	PROJECT NO.:

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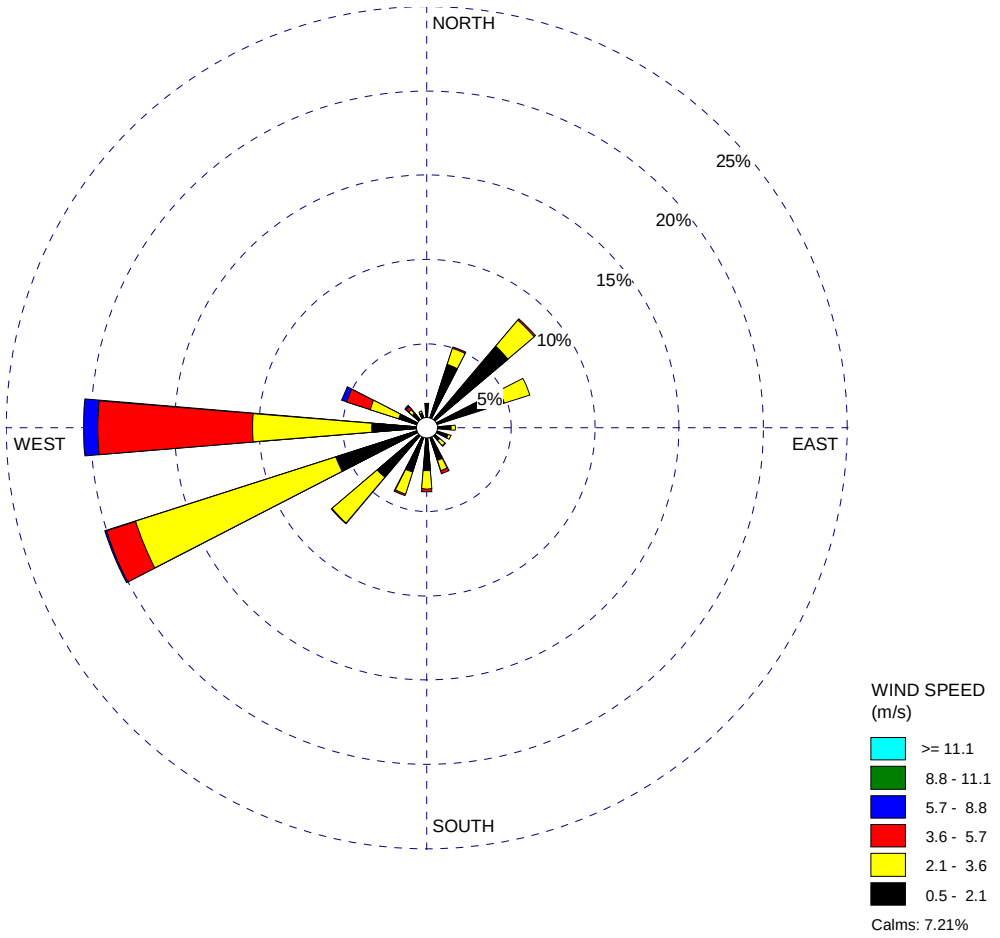
Figure 5.1A-11

WIND ROSE PLOT:

NRG Encina, 3nd Quarter, 2004
July, 2004 to Sept., 2004

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2004 **Jul 1 - Sep 30** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **7.21%**	TOTAL COUNT: **2204 hrs.**	
	AVG. WIND SPEED: **2.24 m/s**	DATE: **8/28/2007**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

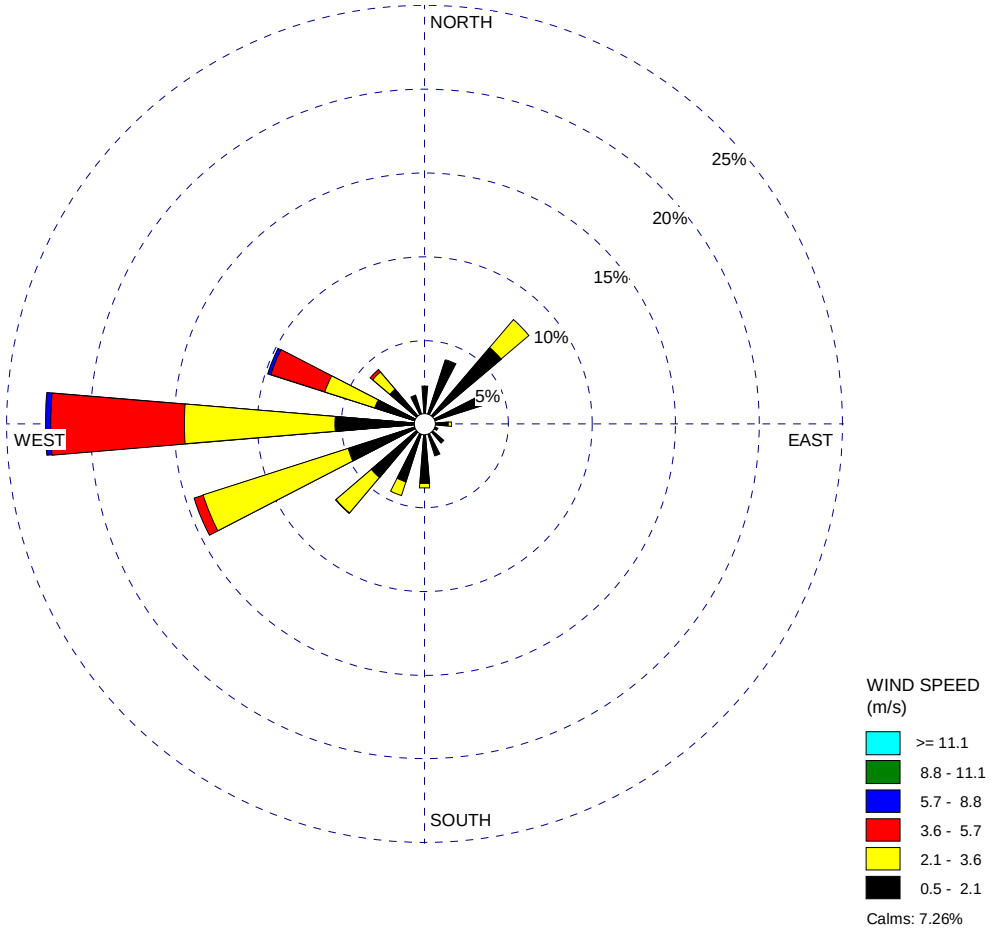
Figure 5.1A-12

WIND ROSE PLOT:

NRG Encina, 3rd Quarter, 2005
July, 2005 to Sept., 2005

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2005 **Jul 1 - Sep 30** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **7.26%**	TOTAL COUNT: **2204 hrs.**	
	AVG. WIND SPEED: **2.08 m/s**	DATE: **8/28/2007**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

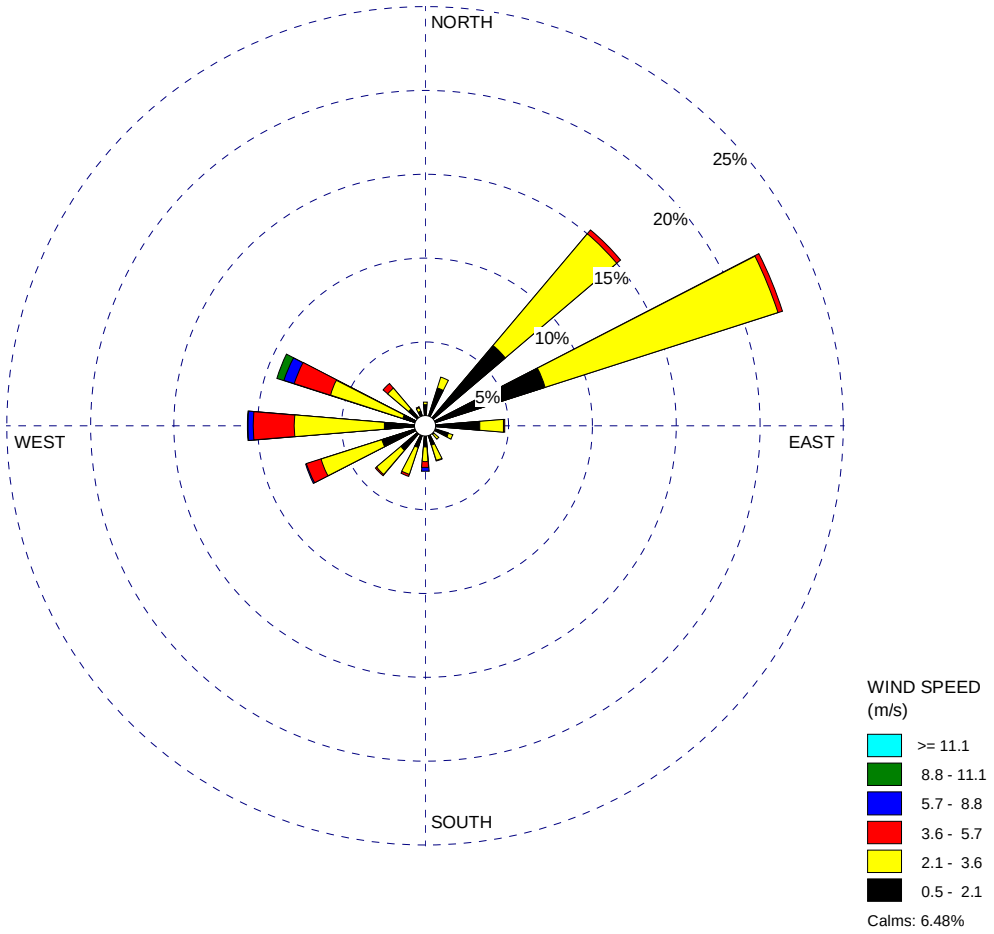
Figure 5.1A-13

WIND ROSE PLOT:

NRG Encina, 4th Quarter, 2003
Oct., 2003 to Dec., 2003

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2003 **Oct 1 - Dec 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **6.48%**	TOTAL COUNT: **2206 hrs.**	
	AVG. WIND SPEED: **2.25 m/s**	DATE: **8/28/2007**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

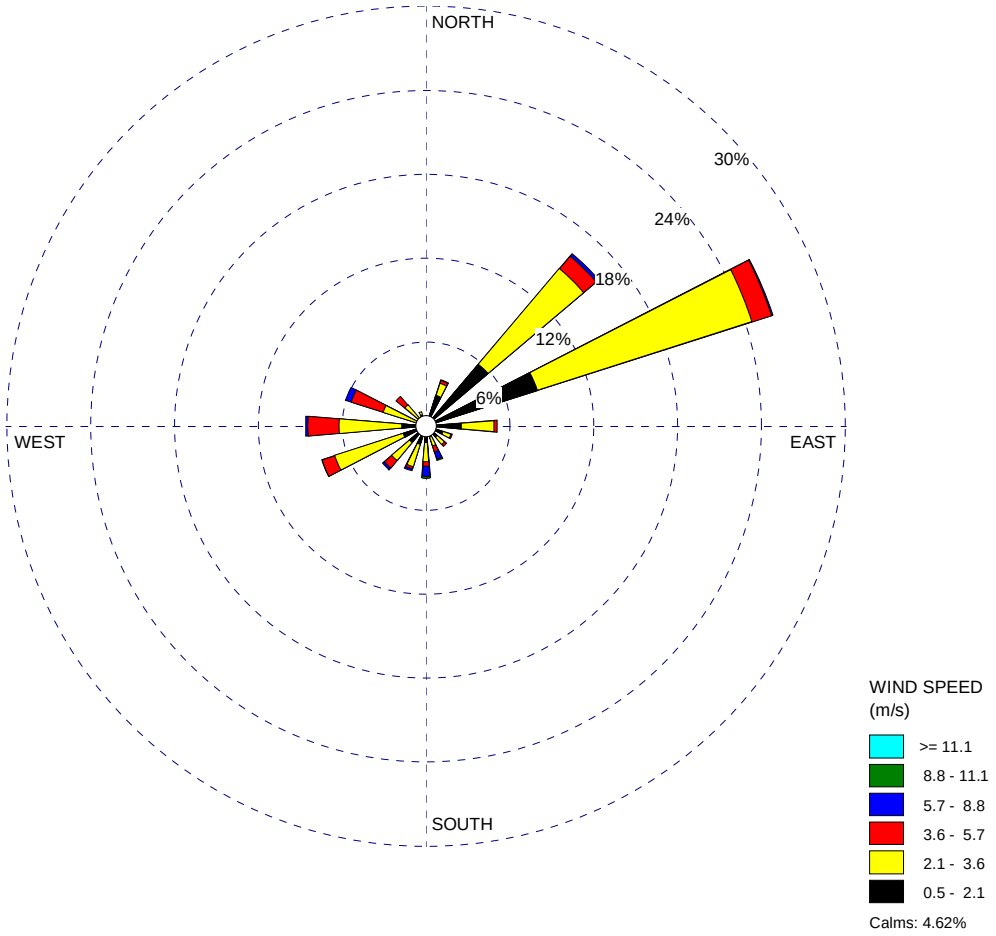
Figure 5.1A-14

WIND ROSE PLOT:

NRG Encina, 4th Quarter, 2004
Oct., 2004 to Dec., 2004

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2004 **Oct 1 - Dec 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **4.62%**	TOTAL COUNT: **2207 hrs.**	
	AVG. WIND SPEED: **2.51 m/s**	DATE: **8/28/2007**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

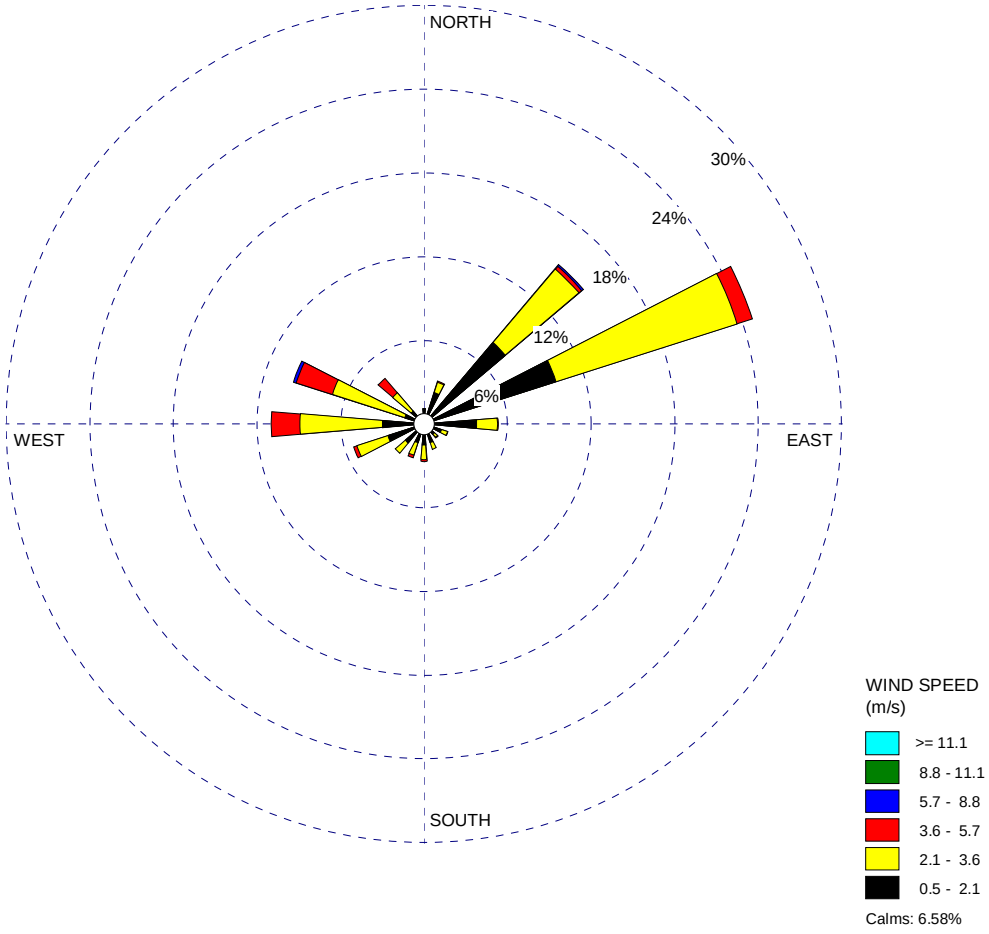
Figure 5.1A-15

WIND ROSE PLOT:

NRG Encina, 4th Quarter, 2005
Oct., 2005 to Dec., 2005

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2005 **Oct 1 - Dec 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **6.58%**	TOTAL COUNT: **2203 hrs.**	
	AVG. WIND SPEED: **2.14 m/s**	DATE: **8/28/2007**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

TABLE 5.1A-1

Station ID: 72292 Run ID:
Year: 2003
Date Range: Jan 1 - Dec 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Wind Direction	Speed m/s 0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.013492	0.000572	0.000114	0.000000	0.000000	0.000000	0.014178
11.25 - 33.75	0.025726	0.003887	0.000229	0.000114	0.000000	0.000000	0.029957
33.75 - 56.25	0.050995	0.041848	0.002744	0.002058	0.000000	0.000000	0.097645
56.25 - 78.75	0.068260	0.082781	0.003430	0.000800	0.000000	0.000000	0.155271
78.75 - 101.25	0.028699	0.011548	0.001029	0.000000	0.000114	0.000000	0.041390
101.25 - 123.75	0.013492	0.002858	0.000229	0.000000	0.000000	0.000000	0.016579
123.75 - 146.25	0.008118	0.003544	0.000114	0.000000	0.000000	0.000000	0.011777
146.25 - 168.75	0.015550	0.009490	0.001258	0.000686	0.000000	0.000000	0.026984
168.75 - 191.25	0.019780	0.012692	0.003430	0.001143	0.000000	0.000000	0.037046
191.25 - 213.75	0.023325	0.018523	0.001486	0.000000	0.000000	0.000000	0.043334
213.75 - 236.25	0.026869	0.029499	0.001486	0.000000	0.000000	0.000000	0.057855
236.25 - 258.75	0.033158	0.061628	0.009947	0.001143	0.000000	0.000000	0.105877
258.75 - 281.25	0.028127	0.067231	0.042305	0.011319	0.000686	0.000000	0.149668
281.25 - 303.75	0.016465	0.039332	0.029156	0.008804	0.002401	0.000343	0.096501
303.75 - 326.25	0.015436	0.014178	0.005145	0.001486	0.000114	0.000000	0.036359
326.25 - 348.75	0.009261	0.002401	0.000114	0.000000	0.000000	0.000000	0.011777
Sub-Total:	0.396753	0.402012	0.102218	0.027555	0.003316	0.000343	0.930708
Calms:							0.067694
Missing/Incomplete:							0.001598
Total:							1.000000

Frequency of Calm Winds: 6.78%
Average Wind Speed: 2.33 m/s

TABLE 5.1A-2

Station ID: 72292 Run ID:
Year: 2004
Date Range: Jan 1 - Dec 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Speed m/s

Wind Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.010709	0.000797	0.000000	0.000000	0.000000	0.000000	0.011506
11.25 - 33.75	0.024493	0.007063	0.000911	0.000114	0.000000	0.000000	0.032581
33.75 - 56.25	0.056277	0.047961	0.003645	0.001139	0.000000	0.000000	0.109023
56.25 - 78.75	0.071087	0.081226	0.008202	0.000342	0.000000	0.000000	0.160857
78.75 - 101.25	0.025518	0.012417	0.001139	0.000000	0.000000	0.000000	0.039075
101.25 - 123.75	0.015379	0.004215	0.000342	0.000000	0.000000	0.000000	0.019936
123.75 - 146.25	0.013784	0.006152	0.001253	0.000000	0.000000	0.000000	0.021189
146.25 - 168.75	0.016519	0.012531	0.002392	0.001481	0.000228	0.000000	0.033151
168.75 - 191.25	0.021531	0.018797	0.003987	0.001823	0.000342	0.000000	0.046480
191.25 - 213.75	0.020848	0.025404	0.001823	0.000342	0.000000	0.000000	0.048416
213.75 - 236.25	0.028366	0.035543	0.003076	0.000570	0.000114	0.000000	0.067669
236.25 - 258.75	0.030873	0.079631	0.014126	0.000911	0.000000	0.000000	0.125541
258.75 - 281.25	0.020620	0.054113	0.052062	0.006494	0.000114	0.000000	0.133402
281.25 - 303.75	0.011734	0.023696	0.025290	0.006721	0.000000	0.000000	0.067441
303.75 - 326.25	0.007177	0.008886	0.006494	0.000684	0.000000	0.000000	0.023240
326.25 - 348.75	0.007177	0.001253	0.000000	0.000000	0.000000	0.000000	0.008430
Sub-Total:	0.382092	0.419686	0.124744	0.020620	0.000797	0.000000	0.947291
Calms:							0.052026
Missing/Incomplete:							0.000683
Total:							1.000000

Frequency of Calm Winds: 5.21%
Average Wind Speed: 2.40 m/s

TABLE 5.1A-3

Station ID: 72292 Run ID:
Year: 2005
Date Range: Jan 1 - Dec 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Speed m/s

Wind Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.013943	0.000457	0.000000	0.000000	0.000000	0.000000	0.014400
11.25 - 33.75	0.027200	0.006400	0.000571	0.000114	0.000000	0.000000	0.034286
33.75 - 56.25	0.060800	0.052343	0.002629	0.000914	0.000000	0.000000	0.116686
56.25 - 78.75	0.067657	0.072914	0.005600	0.000000	0.000000	0.000000	0.146171
78.75 - 101.25	0.025829	0.011429	0.000571	0.000114	0.000000	0.000000	0.037943
101.25 - 123.75	0.010971	0.005714	0.000229	0.000000	0.000000	0.000000	0.016914
123.75 - 146.25	0.010400	0.004914	0.001600	0.000000	0.000000	0.000000	0.016914
146.25 - 168.75	0.015314	0.007086	0.005143	0.002400	0.000114	0.000000	0.030057
168.75 - 191.25	0.021029	0.010286	0.003543	0.001143	0.000000	0.000000	0.036000
191.25 - 213.75	0.022286	0.011886	0.001371	0.000229	0.000000	0.000000	0.035771
213.75 - 236.25	0.029600	0.024800	0.001714	0.000114	0.000000	0.000000	0.056229
236.25 - 258.75	0.034057	0.062971	0.009143	0.000343	0.000000	0.000000	0.106514
258.75 - 281.25	0.030400	0.065371	0.057943	0.007314	0.000229	0.000000	0.161257
281.25 - 303.75	0.017371	0.034857	0.030514	0.006057	0.000571	0.000000	0.089371
303.75 - 326.25	0.014057	0.015200	0.006743	0.000571	0.000114	0.000000	0.036686
326.25 - 348.75	0.010286	0.001143	0.000000	0.000000	0.000000	0.000000	0.011429
Sub-Total:	0.411200	0.387771	0.127314	0.019314	0.001029	0.000000	0.945548
Calms:							0.053311
Missing/Incomplete:							0.001142
Total:							1.000000

Frequency of Calm Winds: 5.34%
Average Wind Speed: 2.35 m/s

TABLE 5.1A-4

Station ID: 72292 Run ID:
Year: 2003
Date Range: Jan 1 - Mar 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Speed m/s

Wind Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.012059	0.000928	0.000464	0.000000	0.000000	0.000000	0.013451
11.25 - 33.75	0.019944	0.006494	0.000928	0.000464	0.000000	0.000000	0.027829
33.75 - 56.25	0.050093	0.049629	0.007885	0.008349	0.000000	0.000000	0.115955
56.25 - 78.75	0.102968	0.151206	0.011132	0.003247	0.000000	0.000000	0.268553
78.75 - 101.25	0.037570	0.026902	0.003247	0.000000	0.000464	0.000000	0.068182
101.25 - 123.75	0.017161	0.003711	0.000928	0.000000	0.000000	0.000000	0.021800
123.75 - 146.25	0.005102	0.003711	0.000464	0.000000	0.000000	0.000000	0.009276
146.25 - 168.75	0.009740	0.010668	0.003711	0.002319	0.000000	0.000000	0.026438
168.75 - 191.25	0.004174	0.014842	0.003711	0.001391	0.000000	0.000000	0.024119
191.25 - 213.75	0.010204	0.011596	0.001855	0.000000	0.000000	0.000000	0.023655
213.75 - 236.25	0.015770	0.012987	0.000000	0.000000	0.000000	0.000000	0.028757
236.25 - 258.75	0.026438	0.030148	0.008813	0.003247	0.000000	0.000000	0.068646
258.75 - 281.25	0.022263	0.045918	0.017161	0.010204	0.000464	0.000000	0.096011
281.25 - 303.75	0.012059	0.046846	0.030612	0.015770	0.005102	0.001391	0.111781
303.75 - 326.25	0.007421	0.018553	0.008349	0.004638	0.000000	0.000000	0.038961
326.25 - 348.75	0.006957	0.004174	0.000000	0.000000	0.000000	0.000000	0.011132
Sub-Total:	0.359926	0.438312	0.099258	0.049629	0.006030	0.001391	0.948387
Calms:							0.045161
Missing/Incomplete:							0.006452
Total:							1.000000

Frequency of Calm Winds: 4.55%
Average Wind Speed: 2.58 m/s

TABLE 5.1A-5

Station ID: 72292 Run ID:
Year: 2003
Date Range: Apr 1 - Jun 30
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Wind Direction	Speed m/s 0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.009187	0.000000	0.000000	0.000000	0.000000	0.000000	0.009187
11.25 - 33.75	0.019752	0.000919	0.000000	0.000000	0.000000	0.000000	0.020671
33.75 - 56.25	0.026183	0.025723	0.000000	0.000000	0.000000	0.000000	0.051906
56.25 - 78.75	0.045935	0.031695	0.000000	0.000000	0.000000	0.000000	0.077630
78.75 - 101.25	0.024345	0.005053	0.000000	0.000000	0.000000	0.000000	0.029398
101.25 - 123.75	0.013321	0.002756	0.000000	0.000000	0.000000	0.000000	0.016077
123.75 - 146.25	0.013780	0.005053	0.000000	0.000000	0.000000	0.000000	0.018833
146.25 - 168.75	0.016077	0.013780	0.000459	0.000459	0.000000	0.000000	0.030776
168.75 - 191.25	0.039045	0.016537	0.005053	0.000919	0.000000	0.000000	0.061553
191.25 - 213.75	0.041801	0.022049	0.001378	0.000000	0.000000	0.000000	0.065227
213.75 - 236.25	0.034910	0.052825	0.004134	0.000000	0.000000	0.000000	0.091870
236.25 - 258.75	0.036748	0.086817	0.014699	0.000919	0.000000	0.000000	0.139182
258.75 - 281.25	0.027561	0.077630	0.071199	0.029858	0.001837	0.000000	0.208085
281.25 - 303.75	0.006890	0.027561	0.033992	0.011943	0.000000	0.000000	0.080386
303.75 - 326.25	0.012862	0.008268	0.008268	0.001378	0.000459	0.000000	0.031236
326.25 - 348.75	0.005972	0.002297	0.000000	0.000000	0.000000	0.000000	0.008268
Sub-Total:	0.374368	0.378962	0.139182	0.045475	0.002297	0.000000	0.934277
Calms:							0.059334
Missing/Incomplete:							0.006390
Total:							1.000000

Frequency of Calm Winds: 5.97%
Average Wind Speed: 2.54 m/s

TABLE 5.1A-6

Station ID: 72292 Run ID:
Year: 2003
Date Range: Jul 1 - Sep 30
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Wind Direction	Speed m/s 0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.019937	0.000000	0.000000	0.000000	0.000000	0.000000	0.019937
11.25 - 33.75	0.039420	0.001359	0.000000	0.000000	0.000000	0.000000	0.040779
33.75 - 56.25	0.064794	0.004984	0.000000	0.000000	0.000000	0.000000	0.069778
56.25 - 78.75	0.049388	0.003625	0.000000	0.000000	0.000000	0.000000	0.053013
78.75 - 101.25	0.020390	0.000453	0.000000	0.000000	0.000000	0.000000	0.020843
101.25 - 123.75	0.009062	0.002266	0.000000	0.000000	0.000000	0.000000	0.011328
123.75 - 146.25	0.006797	0.001359	0.000000	0.000000	0.000000	0.000000	0.008156
146.25 - 168.75	0.024014	0.004078	0.000453	0.000000	0.000000	0.000000	0.028546
168.75 - 191.25	0.023108	0.010874	0.001359	0.000000	0.000000	0.000000	0.035342
191.25 - 213.75	0.027639	0.023561	0.001359	0.000000	0.000000	0.000000	0.052560
213.75 - 236.25	0.037608	0.033077	0.000906	0.000000	0.000000	0.000000	0.071590
236.25 - 258.75	0.042139	0.091074	0.007250	0.000000	0.000000	0.000000	0.140462
258.75 - 281.25	0.038061	0.091527	0.056185	0.002266	0.000000	0.000000	0.188038
281.25 - 303.75	0.032623	0.037608	0.029452	0.001359	0.000000	0.000000	0.101042
303.75 - 326.25	0.028092	0.013593	0.000453	0.000000	0.000000	0.000000	0.042139
326.25 - 348.75	0.014952	0.000906	0.000000	0.000000	0.000000	0.000000	0.015859
Sub-Total:	0.478024	0.320344	0.097417	0.003625	0.000000	0.000000	0.893742
Calms:							0.099955
Missing/Incomplete:							0.006303
Total:							1.000000

Frequency of Calm Winds: 10.06%
Average Wind Speed: 1.97 m/s

TABLE 5.1A-7

Station ID: 72292 Run ID:
Year: 2003
Date Range: Oct 1 - Dec 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Speed m/s

Wind Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.012693	0.001360	0.000000	0.000000	0.000000	0.000000	0.014053
11.25 - 33.75	0.023572	0.006800	0.000000	0.000000	0.000000	0.000000	0.030372
33.75 - 56.25	0.062557	0.087035	0.003173	0.000000	0.000000	0.000000	0.152765
56.25 - 78.75	0.075249	0.145512	0.002720	0.000000	0.000000	0.000000	0.223481
78.75 - 101.25	0.032638	0.014053	0.000907	0.000000	0.000000	0.000000	0.047597
101.25 - 123.75	0.014506	0.002720	0.000000	0.000000	0.000000	0.000000	0.017226
123.75 - 146.25	0.006800	0.004080	0.000000	0.000000	0.000000	0.000000	0.010879
146.25 - 168.75	0.012239	0.009519	0.000453	0.000000	0.000000	0.000000	0.022212
168.75 - 191.25	0.012693	0.008613	0.003626	0.002267	0.000000	0.000000	0.027199
191.25 - 213.75	0.013599	0.016772	0.001360	0.000000	0.000000	0.000000	0.031732
213.75 - 236.25	0.019039	0.019039	0.000907	0.000000	0.000000	0.000000	0.038985
236.25 - 258.75	0.027199	0.038078	0.009066	0.000453	0.000000	0.000000	0.074796
258.75 - 281.25	0.024479	0.053490	0.024479	0.003173	0.000453	0.000000	0.106074
281.25 - 303.75	0.014053	0.045331	0.022665	0.006346	0.004533	0.000000	0.092928
303.75 - 326.25	0.013146	0.016319	0.003626	0.000000	0.000000	0.000000	0.033092
326.25 - 348.75	0.009066	0.002267	0.000453	0.000000	0.000000	0.000000	0.011786
Sub-Total:	0.373527	0.470988	0.073436	0.012239	0.004986	0.000000	0.929279
Calms:							0.064414
Missing/Incomplete:							0.006306
Total:							1.000000

Frequency of Calm Winds: 6.48%
Average Wind Speed: 2.25 m/s

TABLE 5.1A-8

Station ID: 72292 Run ID:
Year: 2004
Date Range: Jan 1 - Mar 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Speed m/s

Wind Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.013743	0.002290	0.000000	0.000000	0.000000	0.000000	0.016033
11.25 - 33.75	0.019240	0.005497	0.000458	0.000000	0.000000	0.000000	0.025195
33.75 - 56.25	0.065048	0.060925	0.001832	0.002290	0.000000	0.000000	0.130096
56.25 - 78.75	0.084746	0.123225	0.018323	0.000458	0.000000	0.000000	0.226752
78.75 - 101.25	0.036189	0.017407	0.002290	0.000000	0.000000	0.000000	0.055886
101.25 - 123.75	0.013284	0.004123	0.000458	0.000000	0.000000	0.000000	0.017865
123.75 - 146.25	0.012826	0.003665	0.002749	0.000000	0.000000	0.000000	0.019240
146.25 - 168.75	0.013284	0.011452	0.001374	0.000458	0.000000	0.000000	0.026569
168.75 - 191.25	0.015117	0.017865	0.003207	0.000000	0.000000	0.000000	0.036189
191.25 - 213.75	0.016033	0.019698	0.000916	0.000000	0.000000	0.000000	0.036647
213.75 - 236.25	0.019698	0.015117	0.000916	0.000458	0.000000	0.000000	0.036189
236.25 - 258.75	0.021072	0.044434	0.004123	0.000458	0.000000	0.000000	0.070087
258.75 - 281.25	0.018781	0.053138	0.032066	0.001832	0.000458	0.000000	0.106276
281.25 - 303.75	0.012826	0.040311	0.037105	0.015575	0.000000	0.000000	0.105818
303.75 - 326.25	0.008704	0.012826	0.012368	0.000458	0.000000	0.000000	0.034356
326.25 - 348.75	0.008246	0.001374	0.000000	0.000000	0.000000	0.000000	0.009620
Sub-Total:	0.378836	0.433349	0.118186	0.021988	0.000458	0.000000	0.950206
Calms:							0.047053
Missing/Incomplete:							0.002741
Total:							1.000000

Frequency of Calm Winds: 4.72%
Average Wind Speed: 2.40 m/s

TABLE 5.1A-9

Station ID: 72292 Run ID:
Year: 2004
Date Range: Apr 1 - Jun 30
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Speed Knots

Wind Direction	1 - 4	4 - 7	7 - 11	11 - 17	17 - 21	>= 22	Total
348.75 - 11.25	0.007784	0.000000	0.000000	0.000000	0.000000	0.000000	0.007784
11.25 - 33.75	0.016026	0.003663	0.000000	0.000000	0.000000	0.000000	0.019689
33.75 - 56.25	0.038919	0.021062	0.000000	0.000000	0.000000	0.000000	0.059982
56.25 - 78.75	0.068223	0.024725	0.000000	0.000000	0.000000	0.000000	0.092949
78.75 - 101.25	0.026099	0.006868	0.000000	0.000000	0.000000	0.000000	0.032967
101.25 - 123.75	0.022436	0.005037	0.000000	0.000000	0.000000	0.000000	0.027473
123.75 - 146.25	0.021978	0.010073	0.000000	0.000000	0.000000	0.000000	0.032051
146.25 - 168.75	0.024267	0.025641	0.001832	0.000000	0.000000	0.000000	0.051740
168.75 - 191.25	0.033883	0.032967	0.007784	0.000000	0.000000	0.000000	0.074634
191.25 - 213.75	0.026099	0.051740	0.003663	0.000000	0.000000	0.000000	0.081502
213.75 - 236.25	0.039835	0.075092	0.004121	0.000000	0.000458	0.000000	0.119505
236.25 - 258.75	0.028388	0.097985	0.024725	0.001832	0.000000	0.000000	0.152930
258.75 - 281.25	0.013736	0.047619	0.062271	0.013736	0.000000	0.000000	0.137363
281.25 - 303.75	0.010989	0.010073	0.025641	0.004121	0.000000	0.000000	0.050824
303.75 - 326.25	0.001374	0.007326	0.003205	0.001374	0.000000	0.000000	0.013278
326.25 - 348.75	0.002747	0.000000	0.000000	0.000000	0.000000	0.000000	0.002747
Sub-Total:	0.382784	0.419872	0.133242	0.021062	0.000458	0.000000	0.954795
Calms:							0.042466
Missing/Incomplete:							0.002740
Total:							1.000000

Frequency of Calm Winds: 4.26%
Average Wind Speed: 4.75 Knots

TABLE 5.1A-10

Station ID: 72292 Run ID:
Year: 2004
Date Range: Jul 1 - Sep 30
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Speed m/s

Wind Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.014519	0.000000	0.000000	0.000000	0.000000	0.000000	0.014519
11.25 - 33.75	0.039474	0.009982	0.000907	0.000000	0.000000	0.000000	0.050363
33.75 - 56.25	0.063067	0.020417	0.000907	0.000000	0.000000	0.000000	0.084392
56.25 - 78.75	0.048094	0.015880	0.000000	0.000000	0.000000	0.000000	0.063975
78.75 - 101.25	0.014519	0.002269	0.000000	0.000000	0.000000	0.000000	0.016788
101.25 - 123.75	0.013158	0.001815	0.000000	0.000000	0.000000	0.000000	0.014973
123.75 - 146.25	0.009982	0.004083	0.000454	0.000000	0.000000	0.000000	0.014519
146.25 - 168.75	0.020417	0.006352	0.001815	0.000000	0.000000	0.000000	0.028584
168.75 - 191.25	0.025408	0.010889	0.001815	0.000000	0.000000	0.000000	0.038113
191.25 - 213.75	0.027677	0.013612	0.000907	0.000000	0.000000	0.000000	0.042196
213.75 - 236.25	0.038566	0.035390	0.000454	0.000000	0.000000	0.000000	0.074410
236.25 - 258.75	0.056715	0.124773	0.018149	0.000907	0.000000	0.000000	0.200544
258.75 - 281.25	0.032668	0.070780	0.091652	0.008621	0.000000	0.000000	0.203721
281.25 - 303.75	0.017695	0.017695	0.014519	0.003176	0.000000	0.000000	0.053085
303.75 - 326.25	0.011343	0.002722	0.002269	0.000907	0.000000	0.000000	0.017241
326.25 - 348.75	0.009074	0.001361	0.000000	0.000000	0.000000	0.000000	0.010436
Sub-Total:	0.442377	0.338022	0.133848	0.013612	0.000000	0.000000	0.925339
Calms:							0.071946
Missing/Incomplete:							0.002715
Total:							1.000000

Frequency of Calm Winds: 7.21%
Average Wind Speed: 2.24 m/s

TABLE 5.1A-11

Station ID: 72292 Run ID:
Year: 2004
Date Range: Oct 1 - Dec 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Speed m/s

Wind Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.006797	0.000906	0.000000	0.000000	0.000000	0.000000	0.007703
11.25 - 33.75	0.023108	0.009062	0.002266	0.000453	0.000000	0.000000	0.034889
33.75 - 56.25	0.057997	0.089261	0.011781	0.002266	0.000000	0.000000	0.161305
56.25 - 78.75	0.083371	0.160852	0.014499	0.000906	0.000000	0.000000	0.259628
78.75 - 101.25	0.025374	0.023108	0.002266	0.000000	0.000000	0.000000	0.050748
101.25 - 123.75	0.012687	0.005890	0.000906	0.000000	0.000000	0.000000	0.019483
123.75 - 146.25	0.010421	0.006797	0.001812	0.000000	0.000000	0.000000	0.019030
146.25 - 168.75	0.008156	0.006797	0.004531	0.005437	0.000906	0.000000	0.025827
168.75 - 191.25	0.011781	0.013593	0.003172	0.007250	0.001359	0.000000	0.037155
191.25 - 213.75	0.013593	0.016765	0.001812	0.001359	0.000000	0.000000	0.033530
213.75 - 236.25	0.015406	0.016765	0.006797	0.001812	0.000000	0.000000	0.040779
236.25 - 258.75	0.017218	0.051201	0.009515	0.000453	0.000000	0.000000	0.078387
258.75 - 281.25	0.017218	0.044857	0.022202	0.001812	0.000000	0.000000	0.086090
281.25 - 303.75	0.005437	0.026733	0.024014	0.004078	0.000000	0.000000	0.060263
303.75 - 326.25	0.007250	0.012687	0.008156	0.000000	0.000000	0.000000	0.028092
326.25 - 348.75	0.008609	0.002266	0.000000	0.000000	0.000000	0.000000	0.010874
Sub-Total:	0.324422	0.487540	0.113729	0.025827	0.002266	0.000000	0.951197
Calms:							0.046091
Missing/Incomplete:							0.002711
Total:							1.000000

Frequency of Calm Winds: 4.62%
Average Wind Speed: 2.51 m/s

TABLE 5.1A-12

Station ID: 72292 Run ID:
Year: 2005
Date Range: Jan 1 - Mar 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Wind Direction	Speed m/s 0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.015285	0.000926	0.000000	0.000000	0.000000	0.000000	0.016211
11.25 - 33.75	0.023622	0.012506	0.001390	0.000463	0.000000	0.000000	0.037981
33.75 - 56.25	0.051413	0.078277	0.007411	0.002316	0.000000	0.000000	0.139416
56.25 - 78.75	0.064845	0.119963	0.010190	0.000000	0.000000	0.000000	0.194998
78.75 - 101.25	0.030570	0.025012	0.001853	0.000463	0.000000	0.000000	0.057897
101.25 - 123.75	0.015748	0.013895	0.000463	0.000000	0.000000	0.000000	0.030107
123.75 - 146.25	0.008800	0.012506	0.005095	0.000000	0.000000	0.000000	0.026401
146.25 - 168.75	0.004632	0.011116	0.019453	0.009727	0.000463	0.000000	0.045391
168.75 - 191.25	0.012969	0.015285	0.011579	0.004632	0.000000	0.000000	0.044465
191.25 - 213.75	0.014358	0.008800	0.002316	0.000926	0.000000	0.000000	0.026401
213.75 - 236.25	0.012043	0.017138	0.002779	0.000463	0.000000	0.000000	0.032422
236.25 - 258.75	0.020380	0.029180	0.004632	0.001390	0.000000	0.000000	0.055581
258.75 - 281.25	0.017601	0.050486	0.032422	0.015748	0.000463	0.000000	0.116721
281.25 - 303.75	0.011116	0.032422	0.033812	0.011579	0.001853	0.000000	0.090783
303.75 - 326.25	0.008337	0.022696	0.006484	0.000463	0.000000	0.000000	0.037981
326.25 - 348.75	0.012043	0.003242	0.000000	0.000000	0.000000	0.000000	0.015285
Sub-Total:	0.323761	0.453451	0.139880	0.048170	0.002779	0.000000	0.963578
Calms:							0.031812
Missing/Incomplete:							0.004610
Total:							1.000000

Frequency of Calm Winds: 3.20%
Average Wind Speed: 2.69 m/s

TABLE 5.1A-13

Station ID: 72292 Run ID:
Year: 2005
Date Range: Apr 1 - Jun 30
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Wind Direction	Speed m/s 0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.006868	0.000458	0.000000	0.000000	0.000000	0.000000	0.007326
11.25 - 33.75	0.021520	0.005037	0.000000	0.000000	0.000000	0.000000	0.026557
33.75 - 56.25	0.055403	0.040751	0.000458	0.000000	0.000000	0.000000	0.096612
56.25 - 78.75	0.070055	0.032051	0.000916	0.000000	0.000000	0.000000	0.103022
78.75 - 101.25	0.021062	0.004121	0.000000	0.000000	0.000000	0.000000	0.025183
101.25 - 123.75	0.007326	0.004121	0.000000	0.000000	0.000000	0.000000	0.011447
123.75 - 146.25	0.008700	0.003663	0.000916	0.000000	0.000000	0.000000	0.013278
146.25 - 168.75	0.022436	0.012363	0.001374	0.000000	0.000000	0.000000	0.036172
168.75 - 191.25	0.020604	0.012821	0.001374	0.000000	0.000000	0.000000	0.034799
191.25 - 213.75	0.024267	0.020604	0.001374	0.000000	0.000000	0.000000	0.046245
213.75 - 236.25	0.046703	0.044872	0.003663	0.000000	0.000000	0.000000	0.095238
236.25 - 258.75	0.040293	0.108516	0.023352	0.000000	0.000000	0.000000	0.172161
258.75 - 281.25	0.020147	0.061813	0.098901	0.010531	0.000458	0.000000	0.191850
281.25 - 303.75	0.012363	0.021062	0.027015	0.008700	0.000458	0.000000	0.069597
303.75 - 326.25	0.008242	0.007326	0.005037	0.001832	0.000458	0.000000	0.022894
326.25 - 348.75	0.005037	0.000000	0.000000	0.000000	0.000000	0.000000	0.005037
Sub-Total:	0.391026	0.379579	0.164377	0.021062	0.001374	0.000000	0.953054
Calms:							0.042388
Missing/Incomplete:							0.004558
Total:							1.000000

Frequency of Calm Winds: 4.26%
Average Wind Speed: 2.51 m/s

TABLE 5.1A-14

Station ID: 72292 Run ID:
Year: 2005
Date Range: Jul 1 - Sep 30
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Wind Direction	Speed m/s 0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.022686	0.000000	0.000000	0.000000	0.000000	0.000000	0.022686
11.25 - 33.75	0.039927	0.000454	0.000000	0.000000	0.000000	0.000000	0.040381
33.75 - 56.25	0.059891	0.021779	0.000000	0.000000	0.000000	0.000000	0.081670
56.25 - 78.75	0.036298	0.004083	0.000000	0.000000	0.000000	0.000000	0.040381
78.75 - 101.25	0.014065	0.001815	0.000000	0.000000	0.000000	0.000000	0.015880
101.25 - 123.75	0.007713	0.000454	0.000000	0.000000	0.000000	0.000000	0.008167
123.75 - 146.25	0.014519	0.000454	0.000000	0.000000	0.000000	0.000000	0.014973
146.25 - 168.75	0.019964	0.000000	0.000000	0.000000	0.000000	0.000000	0.019964
168.75 - 191.25	0.035390	0.002722	0.000000	0.000000	0.000000	0.000000	0.038113
191.25 - 213.75	0.036298	0.008621	0.000000	0.000000	0.000000	0.000000	0.044918
213.75 - 236.25	0.041742	0.027677	0.000454	0.000000	0.000000	0.000000	0.069873
236.25 - 258.75	0.048094	0.090744	0.005898	0.000000	0.000000	0.000000	0.144737
258.75 - 281.25	0.053539	0.089837	0.079855	0.003176	0.000000	0.000000	0.226407
281.25 - 303.75	0.031307	0.031307	0.034029	0.001815	0.000000	0.000000	0.098457
303.75 - 326.25	0.027223	0.013612	0.001815	0.000000	0.000000	0.000000	0.042650
326.25 - 348.75	0.017695	0.000454	0.000000	0.000000	0.000000	0.000000	0.018149
Sub-Total:	0.506352	0.294011	0.122051	0.004991	0.000000	0.000000	0.923216
Calms:							0.072267
Missing/Incomplete:							0.004517
Total:							1.000000

Frequency of Calm Winds: 7.26%
Average Wind Speed: 2.08 m/s

TABLE 5.1A-15

Station ID: 72292 Run ID:
Year: 2005
Date Range: Oct 1 - Dec 31
Time Range: 00:00 - 23:00

Frequency Distribution
(Normalized)

Wind Direction	Speed m/s 0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75 - 11.25	0.010894	0.000454	0.000000	0.000000	0.000000	0.000000	0.011348
11.25 - 33.75	0.023604	0.007717	0.000908	0.000000	0.000000	0.000000	0.032229
33.75 - 56.25	0.076260	0.068997	0.002724	0.001362	0.000000	0.000000	0.149342
56.25 - 78.75	0.099410	0.136178	0.011348	0.000000	0.000000	0.000000	0.246936
78.75 - 101.25	0.037676	0.014980	0.000454	0.000000	0.000000	0.000000	0.053109
101.25 - 123.75	0.013164	0.004539	0.000454	0.000000	0.000000	0.000000	0.018157
123.75 - 146.25	0.009532	0.003177	0.000454	0.000000	0.000000	0.000000	0.013164
146.25 - 168.75	0.014072	0.004993	0.000000	0.000000	0.000000	0.000000	0.019065
168.75 - 191.25	0.014980	0.010440	0.001362	0.000000	0.000000	0.000000	0.026782
191.25 - 213.75	0.014072	0.009532	0.001816	0.000000	0.000000	0.000000	0.025420
213.75 - 236.25	0.017703	0.009532	0.000000	0.000000	0.000000	0.000000	0.027236
236.25 - 258.75	0.027236	0.023150	0.002724	0.000000	0.000000	0.000000	0.053109
258.75 - 281.25	0.029959	0.059010	0.020427	0.000000	0.000000	0.000000	0.109396
281.25 - 303.75	0.014526	0.054471	0.027236	0.002270	0.000000	0.000000	0.098502
303.75 - 326.25	0.012256	0.017249	0.013618	0.000000	0.000000	0.000000	0.043123
326.25 - 348.75	0.006355	0.000908	0.000000	0.000000	0.000000	0.000000	0.007263
Sub-Total:	0.421698	0.425329	0.083522	0.003631	0.000000	0.000000	0.929959
Calms:							0.065522
Missing/Incomplete:							0.004519
Total:							1.000000

Frequency of Calm Winds: 6.58%
Average Wind Speed: 2.14 m/s

APPENDIX 5.1B

Emissions and Operating Parameters

Table 5.1B-1A
New Equipment Maximum Hourly Emission Rates, lbs/hr (Commissioning Year)

	NOx	CO	VOC	PM10	SOx	NH3
Gas Turbine - Normal Operations	15.13	9.21	5.28	9.50	4.40	14.01
Gas Turbine - Startup	69.17	545.67	16.34	9.50	4.40	14.01
Gas Turbine - Shutdown	46.74	286.28	9.66	9.50	4.40	14.01
Gas Turbine - Startup/Shutdown	85.64	813.52	20.73	9.50	4.40	14.01
Gas Turbine - Commissioning	200.13	3812.63	163.75	9.50	4.40	14.01
Emergency Firepump Engine	2.08	0.24	0.05	0.04	0.00	0.00
Maximum (Single Gas Turbine) =	200.13	3812.63	163.75	9.50	4.40	14.01
Maximum (Two Gas Turbines) =	400.25	7625.25	327.50	19.00	8.79	28.01
Maximum (New Equipment)[1] =	400.25	7625.25	327.50	19.00	8.79	28.01

Table 5.1B-1B
New Equipment Maximum Hourly Emission Rates, lbs/hr (Non-Commissioning Year)

	NOx	CO	VOC	PM10	SOx	NH3
Gas Turbine - Normal Operations	15.13	9.21	5.28	9.50	4.40	14.01
Gas Turbine - Startup	69.17	545.67	16.34	9.50	4.40	14.01
Gas Turbine - Shutdown	46.74	286.28	9.66	9.50	4.40	14.01
Gas Turbine - Startup/Shutdown	85.64	813.52	20.73	9.50	4.40	14.01
Emergency Firepump Engine	2.08	0.24	0.05	0.04	0.00	0.00
Maximum (Single Gas Turbine) =	85.64	813.52	20.73	9.50	4.40	14.01
Maximum (Two Gas Turbines) =	171.28	1627.04	41.45	19.00	8.79	28.01
Maximum (New Equipment)[2] =						

Notes:

1. This total does not include the emissions for the emergency firepump engine because this engine will not be operated when the gas turbines are undergoing the commissioning phase with maximum hourly emissions.
2. This total does not include the emissions for the emergency firepump engine because this engine will not be operated when the gas turbines are undergoing a startup or shutdown.

Table 5.1B-2A
New Equipment Maximum Daily Emission Rates, lbs/day (Commissioning Year)

	Operating Hours per GT	Hourly Emission Rate (lbs/hr) NOx	CO	VOC	PM10	SOx	NH3	Daily Emissions (lbs/day) NOx	CO	VOC	PM10	SOx	NH3
Gas Turbine - Normal Operations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00
Gas Turbine - Startup	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00
Gas Turbine - Shutdown	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00
Gas Turbine - Startup/Shutdown	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00
Gas Turbine - Commissioning	various	various	various	various	various	various	various	1755.00	43712.00	1310.00	221.00	105.53	336.14
Emergency Firepump Engine	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (Single Gas Turbine) =								1755.00	43712.00	1310.00	221.00	105.53	336.14
Maximum (Two Gas Turbines) =								3510.00	87424.00	2620.00	442.00	211.06	672.28
Maximum (New Equipment)[1] =								3510.00	87424.00	2620.00	442.00	211.06	672.28

Table 5.1B-2B
New Equipment Maximum Daily Emission Rates, lbs/day (Non-Commissioning Year)

	Operating Hours per GT	Hourly Emission Rate (lbs/hr) NOx	CO	VOC	PM10	SOx	NH3	Cumulative Daily Emissions (lbs/day) NOx	CO	VOC	PM10	SOx	NH3
Gas Turbine - Normal Operations	12	15.13	9.21	5.28	9.50	4.40	14.01	181.60	110.57	63.33	114.00	52.76	168.07
Gas Turbine - Startup	6	69.17	545.67	16.34	9.50	4.40	14.01	415.01	3274.03	98.05	57.00	26.38	84.03
Gas Turbine - Shutdown	6	46.74	286.28	9.66	9.50	4.40	14.01	280.41	1717.67	57.97	57.00	26.38	84.03
Gas Turbine - Startup/Shutdown	0	85.64	813.52	20.73	9.50	4.40	14.01	0.00	0.00	0.00	0.00	0.00	0.00
Emergency Firepump Engine	1	2.08	0.24	0.05	0.04	0.00	0.00	2.08	0.24	0.05	0.04	0.00	0.00
Maximum (Single Gas Turbine) =								877.02	5102.26	219.35	228.00	105.53	336.14
Maximum (Two Gas Turbines) =								1754.05	10204.52	438.70	456.00	211.06	672.28
Maximum (New Equipment) =								1756.13	10204.76	438.75	456.04	211.06	672.28

Notes:
1. This total does not include the emissions for the emergency firepump engine because this engine will not be operated when the gas turbines are undergoing the commissioning phase with maximum daily emissions.

Table 5.1B-3
New Equipment Annual Emissions - Commissioning Year

Operating Condition	Hours per Year	NOx (lbs/hr)	CO (lbs/hr)	VOC (lbs/hr)	PM10 (lbs/hr)	SOx (lbs/hr)	NH3 (lbs/hr)	NOX (lbs/year)	CO (lbs/year)	VOC (lbs/year)	PM10 (lbs/year)	SOx (lbs/year)	NH3 (lbs/year)
Unit 6 Start-Up	300	51.88	409.25	16.34	9.50	1.37	13.08	15,563	122,776	4,903	2,850	411	3,923
Unit 6 Commissioning1	415	30.07	314.07	16.75	9.42	1.37	13.08	12,478	130,337	6,952	3,911	568	5,427
Unit 6 Normal Operation	2,600	14.13	8.60	4.93	9.50	1.37	13.08	36,739	22,369	1,764	24,700	3,558	34,002
Unit 6 Shutdown	300	35.05	214.71	9.66	9.50	1.37	13.08	10,515	64,413	2,899	2,850	411	3,923
Unit 6 Totals	**3,615**							**75,296**	**339,894**	**16,517**	**34,311**	**4,947**	**47,276**
Unit 7 Start-Up	300	51.88	409.25	16.34	9.50	1.37	13.08	15,563	122,776	4,903	2,850	411	3,923
Unit 7 Commissioning1	415	30.07	314.07	16.75	9.42	1.37	13.08	12,478	130,337	6,952	3,911	568	5,427
Unit 7 Normal Operation	2,600	14.13	8.60	4.93	9.50	1.37	13.08	36,739	22,369	12,812	24,700	3,558	34,002
Unit 7 Shutdown	300	35.05	214.71	9.66	9.50	1.37	13.08	10,515	64,413	2,899	2,850	411	3,923
Unit 7 Totals	**3,615**							**75,296**	**339,894**	**27,565**	**34,311**	**4,947**	**47,276**
Emergency Firepump	50	2.08	0.24	0.05	0.04	0.00	0.00	104	12	2	2	0	0
Total Gas Turbine Annual Emissions (lb/year)								**150,591**	**679,788**	**44,082**	**68,622**	**9,895**	**94,552**
Total New Equipment Annual Emissions (lb/year)								**150,695**	**679,800**	**44,085**	**68,624**	**9,895**	**94,552**
Total Gas Turbine Annual Emissions (tons/year)								**75.3**	**339.9**	**22.0**	**34.3**	**4.9**	**47.3**
Total Unit Equipment Annual Emissions (tons/year)								**75.3**	**339.9**	**22.0**	**34.3**	**4.9**	**47.3**

Table 5.1B-4
New Equipment Annual Emissions - Non-Commissioning Year

Operating Condition	Hours per Year	NOx (lbs/hr)	CO (lbs/hr)	VOC (lbs/hr)	PM10 (lbs/hr)	SOx (lbs/hr)	NH3 (lbs/hr)	NOX (lbs/year)	CO (lbs/year)	VOC (lbs/year)	PM10 (lbs/year)	SOx (lbs/year)	NH3 (lbs/year)
Unit 6 Start-Up	300	51.88	409.25	16.34	9.50	1.37	13.08	15,563	122,776	4,903	2,850	411	3,923
Unit 6 Normal Operations	3,500	14.13	8.60	4.93	9.50	1.37	13.08	49,457	30,112	17,247	33,250	4,790	45,772
Unit 6 Shutdown	300	35.05	214.71	9.66	9.50	1.37	13.08	10,515	64,413	2,899	2,850	411	3,923
Unit 6 Totals	**4,100**							**75,535**	**217,300**	**25,048**	**38,950**	**5,611**	**53,619**
Unit 7 Start-Up	300	51.88	409.25	16.34	9.50	1.37	13.08	15,563	122,776	4,903	2,850	411	3,923
Unit 7 Normal Operations	3,500	14.13	8.60	4.93	9.50	1.37	13.08	49,457	30,112	17,247	33,250	4,790	45,772
Unit 7 Shutdown	300	35.05	214.71	9.66	9.50	1.37	13.08	10,515	64,413	2,899	2,850	411	3,923
Unit 7 Totals	**4,100**							**75,535**	**217,300**	**25,048**	**38,950**	**5,611**	**53,619**
Emergency Firepump	**50**	2.08	0.24	0.05	0.04	0.00	0.00	104	12	2	2	0	0
Total Gas Turbine Annual Emissions (lb/year)								**151,070**	**434,600**	**50,096**	**77,900**	**11,222**	**107,237**
Total New Equipment Annual Emissions (lb/year)								**151,174**	**434,612**	**50,099**	**77,902**	**11,222**	**107,237**
Total Gas Turbine Annual Emissions (tons/year)								**75.5**	**217.3**	**25.0**	**39.0**	**5.6**	**53.6**
Total New Equipment Annual Emissions (tons/year)								**75.6**	**217.3**	**25.0**	**39.0**	**5.6**	**53.6**

Table 5.1B-5
Gas Turbine Emissions By Mode

Standard Conditions: 60 F 29.92
Reference O2: 15.00%

	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6	CASE 7	CASE 8	CASE 9	CASE 10	CASE 11	CASE 12	CASE 13	CASE 14	CASE 15	CASE 16	CASE 17	CASE 18	CASE 19	CASE 20	CASE 21
Case	Avg. Peak	Avg. Base	Avg. Base	Avg. Mid.	Avg. Low	Hot Peak	Hot Base	Hot Base	Hot Mid.	Hot Low	Mild Base	Mild Base	Mild Mid.	Mild. Low	Cold Base	Cold Mid	Cold Low	Avg. Low (60%)	Hot Low (60%)	Mild Low (60%)	Cold Low (60%)
Ambient Temperature (F)	73.6	73.6	73.6	73.6	73.6	104.0	104.0	104.0	104.0	104.0	61.0	61.0	61.0	61.0	37.4	37.4	37.4	73.6	104.0	61.0	37.4
Ambient Humidity (%)	65.6%	65.6%	65.5%	65.5%	65.5%	11.8%	11.8%	11.8%	11.8%	11.8%	74.8%	74.7%	74.7%	74.7%	44.2%	44.2%	44.2%	65.5%	11.8%	74.7%	44.2%
Turbine Load	PWR AUG	BASE	BASE	75%	50%	PWR AUG	BASE	BASE	75%	50%	BASE	BASE	75%	50%	BASE	75%	50%	60%	60%	60%	60%
With Dilution Air	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Cooler On/Off	on	on	off	off	off	on	on	off	off	off	on	off	off	off	off	off	off	off	off	off	off
Steam Injection (lbs/hr)	127,969	0	0	0	0	125,737	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heat Input (HHV)	2070.00	1947.00	1903.00	1546.00	1187.00	2034.00	1913.00	1722.00	1409.00	1093.00	2000.00	1976.00	1602.00	1227.00	2085.00	1685.00	1289.00	1348.00	1236.00	1395.00	1465.00
Exhaust Gas Parameters																					
Exhaust Flow Rate (wacfm)	1,458,766	1,379,693	1,351,217	1,112,102	919,519	1,434,498	1,373,686	1,244,127	1,025,286	858,818	1,421,303	1,405,943	1,153,041	946,396	1,487,415	1,212,624	989,849	981,319	912,246	1,014,615	1,064,636
Exhaust Flow Rate (dscfm)	801,242	803,726	792,131	662,232	544,529	791,102	793,580	741,837	625,609	519,737	828,149	822,087	685,218	561,169	868,990	720,630	588,246	580,328	561,030	609,618	639,996
Exhaust Flow Rate (lbs/hr)	4,036,678	3,903,851	3,839,793	3,202,493	2,622,683	3,981,735	3,851,442	3,567,164	3,001,087	2,483,475	4,007,243	3,973,181	3,303,910	2,694,877	4,173,152	3,452,789	2,807,066	2,848,509	2,685,531	2,932,940	3,059,689
Stack Temperature (F)	361	358	356	345	354	359	366	352	336	346	363	362	351	357	371	359	363	340	331	344	352
Diluent Concentrations																					
O2 (%), dry basis	13.10%	13.63%	13.69%	13.98%	14.47%	13.13%	13.66%	13.93%	14.23%	14.70%	13.65%	13.68%	13.97%	14.47%	13.69%	13.97%	14.47%	14.25%	14.49%	14.24%	14.24%
Pollutant Concentrations																					
VOC as CH4, ppmvd	2.64	2.46	2.44	2.34	2.18	2.63	2.45	2.36	2.26	2.10	2.45	2.44	2.35	2.18	2.44	2.35	2.18	2.25	2.17	2.26	2.26
CO, ppmvd	2.64	2.46	2.44	2.34	2.18	2.63	2.45	2.36	2.26	2.10	2.45	2.44	2.35	2.18	2.44	2.35	2.18	2.25	2.17	2.26	2.26
NOx, ppmvd	2.64	2.46	2.44	2.34	2.18	2.63	2.45	2.36	2.26	2.10	2.45	2.44	2.35	2.18	2.44	2.35	2.18	2.25	2.17	2.26	2.26
SOx (short term), ppmvd	0.55	0.51	0.51	0.49	0.45	0.55	0.51	0.49	0.47	0.44	0.51	0.51	0.49	0.45	0.51	0.49	0.45	0.47	0.45	0.47	0.47
SOx (long term), ppmvd	0.18	0.17	0.17	0.16	0.15	0.18	0.17	0.16	0.16	0.15	0.17	0.17	0.16	0.15	0.17	0.16	0.15	0.16	0.15	0.16	0.16
NH3, ppmvd	6.60	6.15	6.10	5.86	5.45	6.57	6.13	5.90	5.65	5.25	6.13	6.11	5.87	5.45	6.10	5.87	5.45	5.63	5.43	5.64	5.64
PM10 (gr/dscf)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pollutant Concentrations at Ref. O2																					
VOC as CH4, ppmvd	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CO, ppmvd	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
NOx, ppmvd	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
SOx (short term), ppmvd	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
SOx (long term), ppmvd	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
NH3, ppmvd	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Emission Rates (lbs/MMbtu)																					
VOC as CH4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
CO	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
NOx	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072
SOx	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021
NH3	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067	0.0067
PM10	0.0046	0.0049	0.0050	0.0061	0.0080	0.0047	0.0050	0.0055	0.0067	0.0087	0.0047	0.0048	0.0059	0.0077	0.0045	0.0056	0.0074	0.0070	0.0077	0.0068	0.0065
Emission Rates (lbs/hour)																					
VOC as CH4	5.24	4.93	4.82	3.91	3.00	5.15	4.84	4.36	3.57	2.77	5.06	5.00	4.05	3.11	5.28	4.26	3.26	3.41	3.13	3.53	3.71
CO	9.15	8.60	8.41	6.83	5.25	8.99	8.45	7.61	6.22	4.83	8.84	8.73	7.08	5.42	9.21	7.45	5.70	5.96	5.46	6.16	6.47
NOx	15.02	14.13	13.81	11.22	8.62	14.76	13.88	12.50	10.22	7.93	14.51	14.34	11.63	8.91	15.13	12.23	9.36	9.79	8.97	10.12	10.63
SOx (short term)	4.37	4.11	4.01	3.26	2.50	4.29	4.03	3.63	2.97	2.30	4.22	4.17	3.38	2.59	4.40	3.55	2.72	2.84	2.61	2.94	3.09
SOx (long term)	1.46	1.37	1.34	1.09	0.83	1.43	1.34	1.21	0.99	0.77	1.41	1.39	1.13	0.86	1.47	1.18	0.91	0.95	0.87	0.98	1.03
NH3	13.91	13.08	12.78	10.38	7.97	13.66	12.85	11.57	9.46	7.34	13.43	13.27	10.76	8.24	14.01	11.32	8.66	9.06	8.30	9.37	9.84
PM10	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50

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Table 5.1B-6

Estimated SGT6-5000F Gas Turbine Performance
Combined Cycle / Ultra Low NO $_x$ Combustor
SGen6-1000A (Static) / 0.85 Power Factor

Based on USA651 rev 6.xls
August 3, 2007

SITE CONDITIONS:	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6	CASE 7	CASE 8	CASE 9	CASE 10	CASE 11	CASE 12	CASE 13	CASE 14	CASE 15	CASE 16	CASE 17	CASE 18	CASE 19	CASE 20	CASE 21
FUEL TYPE	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas
LOAD LEVEL	PWR AUG	BASE	BASE	75%	50%	PWR AUG	BASE	BASE	75%	50%	BASE	BASE	75%	50%	BASE	75%	50%	60%	60%	60%	60%
NET FUEL HEATING VALUE, Btu/lb$_m$ (LHV)	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541
GROSS FUEL HEATING VALUE, Btu/lb$_m$ (HHV)	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801	22,801
AMBIENT DRY BULB TEMPERATURE, °F	73.6	73.6	73.6	73.6	73.6	104.0	104.0	104.0	104.0	104.0	61.0	61.0	61.0	61.0	37.4	37.4	37.4	73.6	104.0	61.0	37.4
AMBIENT WET BULB TEMPERATURE, °F	65.5	65.5	65.5	65.5	65.5	66.5	66.5	66.5	66.5	66.5	56.2	56.2	56.2	56.2	30.7	30.7	30.7	65.5	66.5	56.2	30.7
AMBIENT RELATIVE HUMIDITY, %	65.6	65.6	65.5	65.5	65.5	11.8	11.8	11.8	11.8	11.8	74.8	74.7	74.7	74.7	44.2	44.2	44.2	65.5	11.8	74.7	44.2
BAROMETRIC PRESSURE, psia	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64
COMPRESSOR INLET TEMPERATURE, °F	66.7	66.7	73.6	73.6	73.6	72.1	72.1	104.0	104.0	104.0	56.9	61.0	61.0	61.0	37.4	37.4	37.4	73.6	104.0	61.0	37.4
EVAPORATIVE COOLER STATUS / EFFECTIVENESS, %	85	85	OFF	OFF	OFF	85	85	OFF	OFF	OFF	85	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
INLET PRESSURE LOSS, in. H_2O (Total)	4.5	4.5	4.4	3.0	2.0	4.4	4.4	4.0	2.8	1.9	4.6	4.6	3.1	2.1	4.8	3.3	2.2	2.4	2.3	2.5	2.6
EXHAUST PRESSURE LOSS, in. H_2O (Total)	19.1	17.6	17.1	12.0	8.1	18.6	17.2	15.0	10.7	7.3	18.3	18.1	12.6	8.5	19.5	13.6	9.0	9.5	8.6	10.0	10.7
EXHAUST PRESSURE LOSS, in. H_2O (Static)	15.5	14.3	13.9	9.8	6.6	15.2	14.0	12.2	8.7	6.0	14.9	14.7	10.3	6.9	15.9	11.0	7.3	7.8	7.0	8.1	8.7
INJECTION FLUID	Steam	---	---	---	---	Steam	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INJECTION RATIO	1.40	---	---	---	---	1.40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	PWR AUG					PWR AUG															
GAS TURBINE PERFORMANCE:																					
FUEL FLOW, lb$_m$/hr	90,796	85,394	83,471	67,802	52,071	89,203	83,883	75,535	61,786	47,924	87,695	86,673	70,260	53,835	91,454	73,902	56,535	59,137	54,190	61,170	64,237
FUEL FLOW, dscfm	34,175	32,142	31,418	25,520	19,599	33,575	31,573	28,431	23,256	18,038	33,008	32,623	26,445	20,263	34,422	27,816	21,280	22,259	20,397	23,024	24,178
INJECTION RATE, lb$_m$/hr	127,969	---	---	---	---	125,737	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HEAT INPUT, MMBtu/hr (LHV)	1,865	1,754	1,715	1,393	1,070	1,832	1,723	1,552	1,269	984	1,801	1,780	1,443	1,106	1,879	1,518	1,161	1,215	1,113	1,256	1,320
HEAT INPUT, MMBtu/hr (HHV)	2,070	1,947	1,903	1,546	1,187	2,034	1,913	1,722	1,409	1,093	2,000	1,976	1,602	1,227	2,085	1,685	1,289	1,348	1,236	1,395	1,465
EXHAUST TEMPERATURE, °F	1,101	1,101	1,106	1,106	1,106	1,105	1,105	1,129	1,129	1,129	1,091	1,093	1,093	1,093	1,075	1,075	1,075	1,106	1,129	1,093	1,075
EXHAUST FLOW, lb$_m$/hr	4,036,678	3,903,851	3,839,793	3,202,493	2,622,683	3,981,735	3,851,442	3,567,164	3,001,087	2,483,475	4,007,243	3,973,181	3,303,910	2,694,877	4,173,152	3,452,789	2,807,066	2,848,509	2,685,531	2,932,940	3,059,689
HRSG STACK EXHAUST GAS COMPOSITION (% BY VOLUME):																					
OXYGEN	11.23	12.35	12.45	12.75	13.27	11.28	12.40	12.82	13.13	13.64	12.45	12.50	12.80	13.32	12.64	12.93	13.46	13.03	13.41	13.08	13.22
OXYGEN (dry)	13.10	13.63	13.69	13.98	14.47	13.13	13.66	13.93	14.23	14.70	13.65	13.68	13.97	14.47	13.69	13.97	14.47	14.25	14.49	14.24	14.24
CARBON DIOXIDE	3.85	3.80	3.78	3.64	3.40	3.84	3.78	3.69	3.55	3.32	3.81	3.80	3.66	3.42	3.83	3.69	3.45	3.51	3.42	3.53	3.56
WATER	14.23	9.34	9.06	8.79	8.33	14.11	9.23	7.96	7.69	7.23	8.80	8.64	8.37	7.90	7.72	7.45	6.98	8.54	7.44	8.11	7.19
NITROGEN	69.87	73.65	73.85	73.95	74.13	69.95	73.72	74.64	74.75	74.93	74.08	74.20	74.30	74.48	74.94	75.04	75.23	74.05	74.85	74.40	75.15
ARGON	0.82	0.86	0.87	0.87	0.87	0.82	0.86	0.88	0.88	0.88	0.87	0.87	0.87	0.87	0.88	0.88	0.88	0.87	0.88	0.87	0.88
MOLECULAR WEIGHT	27.75	28.28	28.31	28.33	28.36	27.76	28.29	28.42	28.44	28.47	28.34	28.36	28.38	28.41	28.46	28.48	28.51	28.34	28.46	28.39	28.50
STACK TEMPERATURE, °F	361	358	356	345	354	359	366	352	336	346	363	362	351	357	371	359	363	340	331	344	352
STACK EXHAUST FLOW RATE, dscfm	801,242	803,726	792,131	662,232	544,529	791,102	793,580	741,837	625,609	519,737	828,149	822,087	685,218	561,169	868,990	720,630	588,246	590,328	561,030	609,618	639,996
STACK EXHAUST FLOW RATE, acfm	1,458,766	1,379,693	1,351,217	1,112,102	919,519	1,434,498	1,373,686	1,244,127	1,025,286	858,818	1,421,303	1,405,943	1,153,041	946,396	1,487,415	1,212,624	989,849	981,319	912,246	1,014,615	1,064,8.9

NOTES:

- All data is estimated and not guaranteed.
- Performance is based on new and clean condition.
- IGV schedule may be adjusted during commissioning. Part load performance will be adjusted accordingly.
- Gas fuel composition: 95.776% CH_4, 1.806% C_2H_6, 0.335% C_3H_8, 0.122% C_4H_{10}, 0.043% C_5H_{12}, 0.026% C_6H_{14}, 0.682% N_2, 1.112% CO_2, 0.2 grains S/100 scf and 0.04428 lb$_m$/dscf density.
- Gas fuel must be in compliance with the Siemens gas fuel specification (ZDX555-DC01-MBP-2500-01).
- Average temperature of the gas fuel is 59 °F.
- Sensible Heat of the fuel is not included in the calculated Heat Input values.
- Injection is for power augmentation and not for NO_x control.
- Please be advised that the information contained in this transmittal has been prepared and is being transmitted per customer request specifically for information purposes only. Such information is not intended to be used for evaluation of plant design and/or performance relative to contractual commitments. Data included in any permit application or Environmental Impact Statement are strictly the customer's responsibility. Siemens is available to review permit application data upon request.

Table 5.1B-7
CTG Hourly Emissions - Startup/Shutdown Emissions

CTG - Hourly Startup Emissions (per GT)							
	Time (minutes)	NOx Emissions (lbs/hr)	CO Emissions (lbs/hr)	VOC Emissions (lbs/hr)	NOx Emissions (lbs)	CO Emissions (lbs)	VOC Emissions (lbs)
Maximum Startup Emissions	22	N/A	N/A	N/A	25.0	267.0	13.0
Maximum Normal Operation Emissions	38	15.1	9.2	5.3	9.6	5.8	3.3
Sub-total =	60				34.6	272.8	16.3
Adjustment Factor (short term) =					2	2	1
Adjustment Factor (long term) =					1.5	1.5	1
Total (short term) =					69.2	545.7	16.3
Total (long term) =					51.9	409.3	16.3

CTG - Hourly Shutdown Emissions (per GT)							
	Time (minutes)	NOx Emissions (lbs/hr)	CO Emissions (lbs/hr)	VOC Emissions (lbs/hr)	NOx Emissions (lbs)	CO Emissions (lbs)	VOC Emissions (lbs)
Maximum Shutdown Emissions	7	N/A	N/A	N/A	10.0	135.0	5.0
Maximum Normal Operation Emissions	53	15.1	9.2	5.3	13.4	8.1	4.7
Sub-total =	60				23.4	143.1	9.7
Adjustment Factor (short term) =					2	2	1
Adjustment Factor (long term) =					1.5	1.5	1
Total (short term) =					46.7	286.3	9.7
Total (long term) =					35.1	214.7	9.7

CTG - Hourly Startup/Shutdown Emissions (per GT)							
	Time (minutes)	NOx Emissions (lbs/hr)	CO Emissions (lbs/hr)	VOC Emissions (lbs/hr)	NOx Emissions (lbs)	CO Emissions (lbs)	VOC Emissions (lbs)
Maximum Startup Emissions	22	N/A	N/A	N/A	25.0	267.0	13.0
Maximum Shutdown Emissions	7	N/A	N/A	N/A	10.0	135.0	5.0
Maximum Normal Operation Emissions	31	15.1	9.2	5.3	7.8	4.8	2.7
Sub-total =	60				42.8	406.8	20.7
Adjustment Factor (short term) =					2	2	1
Adjustment Factor (long term) =					1.5	1.5	1
Total (short term) =					85.6	813.5	20.7
Total (long term) =					64.2	610.1	20.7

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Table 5.1B-8
NRG - Total Estimated Startup and Shutdown Emissions
SGT6-5000F in Super Peaker Combined Cycle Operation on Natural Gas @ 62 °F and 41 °F

Mode	~ Time (minutes)	Total Emissions per Event (pounds)			
		NO_X	CO	VOC	PM
Startup on Natural Gas @ 62 °F	22	24	259	12	3
Shutdown on Natural Gas @ 62 °F	7	10	131	5	1
Startup on Natural Gas @ 41 °F	22	25	267	13	3
Shutdown on Natural Gas @ 41 °F	7	10	135	5	1

General Notes
1.) All data is ESTIMATED, NOT guaranteed and is for ONE unit.
2.) Gas fuel must be in compliance with Siemens fuel specifications.
3.) Emissions are at the HRSG exhaust stack outlet and exclude ambient air contributions.
4.) Emissions are based on new and clean conditions.
5.) Please be advised that the information contained in this transmittal has been prepared and is being transmitted per customer request specifically for information purposes only. Such information is not intended to be used for evaluation of plant design and/or performance relative to contractual commitments. Data included in any permit application or Environmental Impact Statement is strictly the customer's responsibility. Siemens is available to review permit application data upon request.

Startup Emissions Notes
1.) Estimated startup (SU) data are from gas turbine (GT) ignition through 100% GT load plus 10 minutes, by which time it is assumed emissions will be in compliance.
2.) Estimated SU and shutdown (SD) data are based on the assumed times noted above and will be higher for longer times.
3.) Estimated SU and SD data are based on the ambient temperatures noted above and will be higher at lower ambient temperatures.
4.) NO_X emissions assume SCR is not in operation (no removal).
5.) CO emissions assume 20% removal from ignition to 100% GT load and 90% removal from 100% GT load on.
6.) SU assumes 5 minutes from turning gear to synchronization.
7.) SD assumes 100% load to FSNL with no cooldown at FSNL.
8.) Operator actions do not extend startup or shutdown.
9.) It is assumed that there is no restriction from the interconnected utility for loading the GT from synchronization to 100% load within the SU times considered.

Table 5.1B-9

Commissioning Schedule for SGT6-5000F CTGs (Per GT

Day	Activity	Duration (hr)	GT Load (%)	Modeling Load (%)	Startup/Shutdown Emissions (lbs) NOx	CO	VOC	PM	Fuel Use (lbs)	Running Emissions (lbs) NOx	CO	VOC	PM	Fuel Use (lbs)	Total Emissions (lbs) NOx	CO	VOC	PM	Fuel Use (lbs)	Calculated Hourly Emissions (lbs/hr) NOx	CO	VOC	PM
1	GT Testing (FSNL, Excitation Test, Dummy Synch Checks)	8	0	FSNL	6	483	21	1	2474	370	30018	1289	92	153752	376	30501	1310	93	156226	47.0	3812.6	163.8	11.6
2	GT Testing @ 40% load	8	0-40	40	126	3712	105	12	35529	1475	13971	572	90	403519	1601	17683	677	102	439048	200.1	2210.4	84.6	12.8
3	Steam Blow/HRSG Tuning	12	0-25	25	69	2648	77	8	19888	1686	41064	892	136	462406	1755	43712	969	144	482294	146.3	3642.7	80.8	12.0
4	Steam Blow/HRSG Tuning	12	0-50	50	157	3971	120	15	48447	850	5176	593	96	697169	1007	9147	713	111	745616	83.9	762.3	59.4	9.3
5	Steam Blow	12	0-50	50	157	3971	120	15	48447	850	5176	593	96	697169	1007	9147	713	111	745616	83.9	762.3	59.4	9.3
6	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
11	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
12	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
13	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
14	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
15	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
16	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
17	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
18	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
19	Steam Blow restoration, install SCR/CO Catalyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
20	Establish vacuum/HSRG Tuning/BOP Tuning	16	60	60	86	805	73	9	32811	153	104	63	128	1046636	239	908	136	137	1079447	14.9	56.8	8.5	8.6
21	Establish vacuum/BOP Tuning	16	60	60	86	805	73	9	32811	153	104	63	128	1046636	239	908	136	137	1079447	14.9	56.8	8.5	8.6
22	GT Load Test & Bypass Valve Tuning	16	60	60	86	805	73	9	32811	153	104	63	128	1046636	239	908	136	137	1079447	14.9	56.8	8.5	8.6
23	GT Load Test & Bypass Valve Tuning	16	60	60	86	805	73	9	32811	153	104	63	128	1046636	239	908	136	137	1079447	14.9	56.8	8.5	8.6
24	GT Load Test & Bypass Valve Tuning / Safety Valve Testing	12	75	75	87	805	74	10	41264	135	36	18	96	919646	222	842	92	106	960910	18.5	70.2	7.7	8.8
25	GT Base Load / Commissioning of Ammonia system	12	100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
26	GT Load Test & Bypass Valve Tuning	12	100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
27	No Operation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
28	Install Emissions Test Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
29	Bypass Operation / STG Initial Roll & Trip Test	10	0-60	60	86	805	73	9	32811	96	65	39	80	654147	182	869	113	89	686958	18.2	86.9	11.3	8.9
30	Bypass Operation / STG Load Test	16	0-60	60	86	805	73	9	32811	153	104	63	128	1046636	239	908	136	137	1079447	14.9	56.8	8.5	8.6
31	GT on Bypass / STG Load Test	16	0-100	100	92	806	74	13	71104	225	61	31	139	1536640	317	867	105	152	1607744	19.8	54.2	6.6	9.5
32	Combine Cycle testing / Drift Test	24	0-100	100	49	524	48	7	36789	338	91	46	208	2304961	386	615	93	215	2341750	16.1	25.6	3.9	9.0
33	Combine Cycle testing / Drift Test	24	100	100	43	282	27	6	34315	338	91	46	208	2304961	380	374	73	214	2339275	15.8	15.6	3.0	8.9
34	Emissions Tuning / Drift Test	12	50-100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
35	Emissions Tuning / Drift Test	12	50-100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
36	Pre-performance Testing / Drift Test	12	100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
37	Pre-performance Testing / Drift Test	12	100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
38	Pre-performance Testing / Drift Test	12	100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
39	RATA / Pre-performance Testing / Source Testing	15	100	100	92	806	74	13	71104	211	57	29	130	1440600	303	864	103	143	1511704	20.2	57.6	6.9	9.5
40	Pre-performance Testing / Source Testing	14	100	100	92	806	74	13	71104	197	53	27	122	1344560	289	860	101	134	1415664	20.6	61.4	7.2	9.6
41	Pre-performance Testing / Source Testing	12	50-100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
42	Remove Emissions Test Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
43	No Operation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
44	Water Wash & Performance preparation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
45	Water Wash & Performance preparation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
46	Performance Testing	24	100	100	92	806	74	13	71104	338	91	46	208	2304961	429	898	120	221	2376064	17.9	37.4	5.0	9.2
47	Performance Testing	24	100	100	92	806	74	13	71104	338	91	46	208	2304961	429	898	120	221	2376064	17.9	37.4	5.0	9.2
48	CALISO Certification	12	50-100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
49	CALISO Certification	12	100	100	92	806	74	13	71104	169	46	23	104	1152480	260	852	97	117	1223584	21.7	71.0	8.1	9.8
	Total =	415			2,590	33,316	2,140	323	1,530,579	9,902	97,021	4,812	3,589	34,287,432	12,478	130,337	6,952	3,911	35,818,008				
													Average =		254.7	2659.9	141.9	79.8		30.1	314.1	16.8	9.4
													Maximum =		1755.0	43712.0	1310.0	221.0		200.1	3812.6	163.8	12.8

Table 5.1B-10

Emergency Firepump Engine					
Rating (bhp) =	246				
Fuel =	Diesel				
Fuel Consumption (gal/hr) =	12.2				
Exhaust Temperature (F) =	938				
Exhaust Diameter (inches) =	4				
Exhaust Flow Rate (acfm) =	1,328				
Exhaust Velocity (ft/sec) =	254				
Daily Operating Hours =	1				
Annual Operating Hours =	50				
	NOx	**CO**	**VOC**	**PM10**	**SOx**
Emission Factor (g/bhp-hr) =	3.83	0.45	0.09	0.07	0.00
Hourly Emissions (lbs/hr) =	2.08E+00	2.42E-01	4.88E-02	3.53E-02	2.66E-03
Daily Emissions (lbs/day) =	2.08E+00	2.42E-01	4.88E-02	3.53E-02	2.66E-03
Annual Emissions (lbs/year) =	1.04E+02	1.21E+01	2.44E+00	1.76E+00	1.33E-01
Annual Emissions (tons/year) =	5.20E-02	6.06E-03	1.22E-03	8.81E-04	6.64E-05

Table 5.1B-11
California ATCM Tier 2 Emission Data
EPA Tier 2 Emission Data

CFP6E-F35 Fire Pump Driver

Type: 4 Cycle; In-Line; 6 Cylinder
Aspiration: Turbocharged, Charge Air Cooled

15 PPM Diesel Fuel													
		Fuel Consumption		D2 Cycle Exhaust Emissions						Exhaust			
				Grams per BHP - HR			Grams per kW - HR			Temperature		Gas Flow	
RPM	BHP	Gal/Hr	L/hr	NMHC+NOx	CO	PM	NMHC+NOx	CO	PM	°F	°C	CFM	L/sec
1760	210	10.2	38.6	3.924	0.447	0.065	5.262	0.600	0.088	917	492	1051	496
2100	232	11.4	43.2							917	492	1207	570
2350	246	12.2	46.2							938	503	1328	627
2600	225	11.6	43.9							925	496	1380	651

The emissions values above are based on CARB approved calculations for converting EPA (500 ppm) fuel to CARB (15 ppm) fuel.

300-500 PPM Diesel Fuel													
		Fuel Consumption		D2 Cycle Exhaust Emissions						Exhaust			
				Grams per BHP - HR			Grams per kW - HR			Temperature		Gas Flow	
RPM	BHP	Gal/Hr	L/hr	NMHC+NOx	CO	PM	NMHC+NOx	CO	PM	°F	°C	CFM	L/sec
1760	210	10.2	38.61108	4.265	0.447	0.075	5.720	0.600	0.100	917	492	1051	496
2100	232	11.4	43.15356							917	492	1207	570
2350	246	12.2	46.18188							938	503	1328	627
2600	225	11.6	43.91064							925	496	1380	651

QSB5.9 Base Model Manufactured by Cummins Inc.
- Using fuel rating 90847

Reference EPA Standard Engine Family: 5CEXL0359ABE

No special options needed to meet current regulation emissions for all 50 states

Test Methods:

EPA/CARB Nonroad emissions recorded per 40CFR89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A, for Constant Speed Engines (ref. ISO8178-4, D2).

Diesel Fuel Specifications:

Cetane Number: 40-48
Reference: ASTM D975 No. 2-D

Reference Conditions:

Air Inlet Temperature: 25°C (77°F)
Fuel Inlet Temperature: 40°C (104°F)
Barometric Pressure: 100 kPa (29.53 in Hg)
Humidity: 10.7 g/kg (75 grains H_2O/lb) of dry air; required for NOx correctior
Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to maximum allowable limit.

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results.

Table 5.1B-12
Actual Annual Emissions For Units 1, 2, and 3*
Encina Power Plant

Total Emissions in tons/year						
		Reported Emissions				
Years	Units	NOx	CO	VOC	PM	SOx
1995	1	37.5	12.5	0.4	0.9	0.2
	2	52.2	15.9	0.6	1.2	0.2
	3	95.2	30.6	1.2	3.3	10.6
1996	1	59.4	19.8	0.7	1.5	0.3
	2	66.2	21.0	0.7	1.6	0.3
	3	71.7	44.9	1.6	3.4	0.7
1997	1	55.4	111.8	3.6	7.7	3.6
	2	54.7	110.4	3.6	7.6	0.4
	3	100.1	202.2	6.6	14.0	0.7
1998	1					
	2					
	3					
1999	1	20.2	52.6	1.7	3.6	0.2
	2	48.5	126.1	4.1	8.7	0.4
	3	93.2	242.5	7.9	16.8	0.9
2000	1	74.1	235.4	7.8	16.4	1.5
	2	79.3	248.8	8.2	17.6	3.7
	3	128.7	409.8	13.4	28.4	1.6
2001	1	106.0	315.3	10.5	24.9	23.8
	2	113.7	335.0	11.1	26.8	27.9
	3	135.2	425.4	14.0	31.1	13.9
2002	1	15.6	138.6	4.5	9.6	0.5
	2	23.0	174.6	5.8	13.2	8.4
	3	20.4	181.3	5.9	12.6	0.6
2003	1	12.1	57.0	3.8	7.5	4.5
	2	14.0	70.6	4.7	8.3	3.1
	3	20.1	100.4	6.7	12.2	4.9
2004	1	12.5	82.4	5.4	9.9	0.6
	2	15.9	105.2	6.9	14.9	0.8
	3	24.8	163.4	10.7	19.3	1.2
2005	1	10.8	73.6	4.9	9.6	0.6
	2	11.7	79.9	5.3	11.9	0.7
	3	12.7	87.6	5.8	11.7	0.7
2006**	1	3.4	24.5	1.6	3.2	0.2
	2	7.0	46.0	3.0	6.8	0.4
	3	8.6	55.8	3.7	7.5	0.5

Notes:
* Based on SDAPCD annual inventory reports for the Encina Power Plant.
** Calculated based on annual fuel use and SDAPCD default emission factors.

Table 5.1B-13
2-Year Average Baseline Emissions For Units 1, 2, and 3
Encina Power Plant

Total Emissions in tons/year						
		Reported Emissions				
Years	Units	NOx	CO	VOC	PM	SOx
5-Year Lookback Max 2-year Average Per Unit	1	13.9	97.8	5.2	9.8	2.6
	2	18.5	122.6	6.1	13.4	5.8
	3	22.5	140.9	8.7	15.8	3.1
Total =		54.8	361.3	20.0	38.9	11.4
5-Year Lookback Most Recent 2-year Average	1	7.1	49.1	3.3	6.4	0.4
	2	9.4	62.9	4.2	9.4	0.5
	3	10.7	71.7	4.7	9.6	0.6
Total =		27.1	183.7	12.1	25.3	1.5
5-Year Lookback 5-Year Average	1	11.2	73.6	4.3	8.3	1.5
	2	14.2	91.5	5.3	11.3	2.2
	3	18.0	117.5	7.0	13.3	1.8
Total =		43.4	282.6	16.6	32.9	5.6
10-Year Lookback Maximum 2-year Average Per Unit	1	90.1	275.4	9.2	20.7	12.7
	2	96.5	291.9	9.7	22.2	18.2
	3	132.0	417.6	13.7	29.8	7.8
Total =		318.5	984.9	32.5	72.6	38.6

Table 5.1B-14
Actual Annual Emissions For Units 4, 5, and Gas Turbine*
Encina Power Plant

Total Emissions in tons/year						
		Reported Emissions				
Years	Units	NOx	CO	VOC	PM	SOx
2002	4	101.9	804.5	26.4	58.2	5.4
	5	113.7	922.1	30.2	66.0	5.6
	GT	1.5	0.4	0.2	0.2	0.2
2003	4	75.7	416.6	27.3	53.5	3.0
	5	87.4	481.0	31.5	46.7	3.4
	GT	2.4	0.7	0.2	0.2	0.2
2004	4	86.5	570.9	37.4	70.5	4.1
	5	80.9	533.8	35	54	3.8
	GT	3.5	0.9	0.2	0.3	0.2
2005	4	53.2	384.1	25.1	47.7	2.7
	5	37.2	268.7	17.6	28.4	1.9
	GT	0.5	0.1	0.1	0.1	0.1
2006**	4	35.4	247.8	16.2	30.9	2.0
	5	37.4	264.5	17.3	28.1	2.1
	GT	1.0	0.3	0.0	0.1	0.0

Notes:
* Based on SDAPCD annual inventory reports for the Encina Power Plant.
** Calculated based on annual fuel use and SDAPCD default emission factors.

Table 5.1B-15
2-Year Average Baseline Emissions For Units 4, 5, and Gas Turbine
Encina Power Plant

Total Emissions in tons/year						
		Reported Emissions				
Years	Units	NOx	CO	VOC	PM	SOx
2002 to 2003	4	88.8	610.6	26.9	55.9	4.2
	5	100.6	701.6	30.9	56.4	4.5
	GT	2.0	0.6	0.2	0.2	0.2
Total =		191.3	1312.7	57.9	112.4	8.9
2003 to 2004	4	81.1	493.8	32.4	62.0	3.6
	5	84.2	507.4	33.3	50.4	3.6
	GT	3.0	0.8	0.2	0.3	0.2
Total =		168.2	1002.0	65.8	112.6	7.4
2004 to 2005	4	69.9	477.5	31.3	59.1	3.4
	5	59.1	401.3	26.3	41.2	2.9
	GT	2.0	0.5	0.2	0.2	0.2
Total =		130.9	879.3	57.7	100.5	6.4
2005 to 2006	4	44.3	315.9	20.7	39.3	2.4
	5	37.3	266.6	17.5	28.3	2.0
	GT	0.8	0.2	0.1	0.1	0.1
Total =		82.3	582.7	38.2	67.7	4.4

Table 5.1B-16
Greenhouse Gas Emission Calculation for New Equipment

Equipment	Annual Average Hourly Heat Input(1) (MMBtu/hr)	Maximum Expected Annual Operating Hours (hrs/year)	Annual Average Heat Input (MMBtu/year)	CO2 Emission Factor(2) (kg/MMBtu)	CH4 Emission Factor(3) (kg/MMBtu)	N2O Emission Factor(3) (kg/MMBtu)	CO2 Emission Rate (kg/year)	CH4 Emission Rate (kg/year)	N2O Emission Rate (kg/year)
Unit 6	1,947	4,100	7.98E+06	53.05	5.90E-03	1.00E-04	4.23E+08	4.71E+04	7.98E+02
Unit 7	1,947	4,100	7.98E+06	53.05	5.90E-03	1.00E-04	4.23E+08	4.71E+04	7.98E+02
Firepump Engine	2	50	8.46E+01	73.15	3.00E-04	1.00E-04	6.19E+03	2.54E-02	8.46E-03

Equipment	Global Warming Potential Factor(4) for CO2	Global Warming Potential Factor(4) for CH4	Global Warming Potential Factor(4) for N2O	Global Warming Potential CO2 Emiss. as CO2 (kg/year)	Global Warming Potential CH4 Emiss. as CO2 (kg/year)	Global Warming Potential N2O Emiss. as CO2 (kg/year)	Global Warming Potential CO2 Emiss. as CO2 (MT/year)(5)	Global Warming Potential CH4 Emiss. as CO2 (MT/year)	Global Warming Potential N2O Emiss. as CO2 (MT/year)	Total (MT/year)
Unit 6	1	23	310	4.23E+08	1.08E+06	2.47E+05	4.23E+05	1.08E+03	2.47E+02	4.25E+05
Unit 7	1	23	310	4.23E+08	1.08E+06	2.47E+05	4.23E+05	1.08E+03	2.47E+02	4.25E+05
Firepump Engine	1	23	310	6.19E+03	5.84E-01	2.62E+00	6.19E+00	5.84E-04	2.62E-03	6.19E+00
									Total =	**8.50E+05**

Notes:
(1) For CTGs, based on annual average temperature, baseload operation, with inlet air cooling.
(2) CARB Draft Emission Factors for Mandatory Reporting Program, August 10, 2007, carbon dioxide emission factors stationary source combustion table - natural gas and Diesel oil facto
(3) CARB Draft Emission Factors for Mandatory Reporting Program, August 10, 2007, CH4 and N2O emission factors stationary source combustion table - natural gas and Diesel oil facto
(4) California Climate Action Registry, Appendix to the General Reporting Protocol: Power/Utility Reporting Protocol, Version 1.0, April 2005, Table 5.4.
(5) MT/year stands for metric tonnes per year.

Table 5.1B-17

Selective Catalytic Reduction Specifications

Catalyst Properties	Specifications
Manufacturer	Cormetech
Catalyst Description	Titanium/Vanadium/Tungsten with homogeneous honeycomb structure
Catalyst Dimensions	25 feet high, 70 feet wide
Catalyst Volume	2,050 ft^3
Catalyst Life	5 years
Space Velocity	23,000 hr^{-1}
Ammonia Injection Rate	135 lb/hr (at 19% NH3)
NOx removal efficiency	>90%
NOx at stack outlet	2.0 ppmv at 15% O_2
Maximum Operating Temperature	750ºF

Table 5.1B-18
Oxidation Catalyst Specifications

Catalyst Properties	Specifications
Manufacturer	Engelhard
Catalyst Description	Pt
Catalyst Dimensions	25 feet high, 70 feet wide
Catalyst Volume	290 ft^3
Catalyst Life	5 years
Space Velocity	218,000 hr^{-1}
Area Velocity	82,000 ft/hr
CO removal efficiency	>70%
CO at stack outlet	2.0 ppmv at 15% O_2
Maximum Operating Temperature	1,000ºF

Table 5.1B-19
Hourly Emissions for Existing Units 1, 2, 3, 4, and 5 and the Gas Turbine

Device	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Gas Turbine
Fuel	Natural Gas/Oil	Natural Gas/Oil	Natural Gas/Oil	Natural Gas/Oil	Natural Gas/Oil	Natural Gas/Oil
Maximum Power Rating (MW)	113	109	115	323	342	15
Maximum Heat Input (MMBtu/hr)	1013	1013	1128	3245	3475	317
Natural Gas F-factor (dscf/MMBtu)	8710	8710	8710	8710	8710	8710
Natural Gas F-factor (wscf/MMBtu)	10610	10610	10610	10610	10610	10610
Reference O2	3.0%	3.0%	3.0%	3.0%	3.0%	15.0%
Actual O2	7.9%	4.8%	4.5%	3.3%	2.1%	15.7%
Exhaust Temperature (F)	310	310	310	310	310	981
Exhaust Rate (dscfm @ ref. O2)	171,700	171,700	191,192	550,015	589,000	163,012
Exhaust Rate (wacfm @ actual O2)	418,696	339,751	370,708	992,604	996,771	609,032

	Unit 1 Emission Factors		Unit 2 Emission Factors		Unit 3 Emission Factors		Unit 4 Emission Factors		Unit 5 Emission Factors		Gas Turbine Emission Factors	
Pollutant	Nat. Gas (lb/MMscf)[1]	Oil (lbs/1000 gal)[1]	Nat. Gas (lb/MMscf)[1]	Oil (lbs/1000 gal)[1]	Nat. Gas (lb/MMscf)[1]	Oil (lbs/1000 gal)[1]	Nat. Gas (lb/MMscf)[1]	Oil (lbs/1000 gal)[3]	Nat. Gas (lb/MMscf)[1]	Oil (lbs/1000 gal)[3]	Nat. Gas (lb/MMscf)[1]	Oil (lbs/1000 gal)[2]
NOx	11.60	67.00	11.60	67.00	11.60	67.00	11.60	32.00	11.60	32.00	119.00	27.50
CO	84.00	5.00	84.00	5.00	84.00	5.00	84.00	5.00	84.00	5.00	30.60	10.60
VOC	5.50	0.76	5.50	0.76	5.50	0.76	5.50	0.76	5.50	0.76	2.14	0.06
PM10	10.80	7.00	12.40	7.00	11.10	7.00	10.40	7.00	8.88	7.00	6.73	1.60
SOx	0.60	7.00	0.60	7.00	0.60	7.00	0.60	7.00	0.60	7.00	0.60	7.10

	Unit 1 Hourly Emissions		Unit 2 Hourly Emissions		Unit 3 Hourly Emissions		Unit 4 Hourly Emissions		Unit 5 Hourly Emissions		Gas Turbine Hourly Emissions	
Pollutant	Nat. Gas (lbs/hr)	Oil (lbs/hr)	Nat. Gas (lbs/hr)	Oil (lbs/hr)	Nat. Gas (lbs/hr)	Oil (lbs/hr)	Nat. Gas (lbs/hr)	Oil (lbs/hr)	Nat. Gas (lbs/hr)	Oil (lbs/hr)	Nat. Gas (lbs/hr)	Oil (lbs/hr)
NOx	11.53	452.47	11.53	452.47	12.84	503.84	36.93	692.27	39.55	741.33	37.01	63.63
CO	83.48	33.77	83.48	33.77	92.96	37.60	267.41	108.17	286.37	115.83	9.52	24.53
VOC	5.47	5.13	5.47	5.13	6.09	5.72	17.51	16.44	18.75	17.61	0.67	0.14
PM10	10.73	47.27	12.32	47.27	12.28	52.64	33.11	151.43	30.27	162.17	2.09	3.70
SOx	0.60	47.27	0.60	47.27	0.66	52.64	1.91	151.43	2.05	162.17	0.19	16.43

Notes:
1. From 2005 SDAPCD emission inventory report for Encina Power Plant.
2. From 2004 SDAPCD emission inventory report for Encina Power Plant.
2. From 2002 SDAPCD emission inventory report for Encina Power Plant.

Table 5.1B-20
Greenhouse Gas Emission Calculation for Units 1, 2, and 3

Equipment	Annual Average(1) Heat Input (MMBtu/year)	CO2 Emission Factor(2) (kg/MMBtu)	CH4 Emission Factor(3) (kg/MMBtu)	N2O Emission Factor(3) (kg/MMBtu)	CO2 Emission Rate (kg/year)	CH4 Emission Rate (kg/year)	N2O Emission Rate (kg/year)
Unit 1 - nat. gas	3.31E+06	53.05	5.90E-03	1.00E-04	1.76E+08	1.95E+04	3.31E+02
Unit 1 - oil	4.93E+04	78.80	3.00E-04	1.00E-04	3.89E+06	1.48E+01	4.93E+00
Unit 2 - nat. gas	3.51E+06	53.05	5.90E-03	1.00E-04	1.86E+08	2.07E+04	3.51E+02
Unit 2 - oil	6.22E+04	78.80	3.00E-04	1.00E-04	4.90E+06	1.87E+01	6.22E+00
Unit 3 - nat. gas	5.03E+06	53.05	5.90E-03	1.00E-04	2.67E+08	2.97E+04	5.03E+02
Unit 3 - oil	2.62E+04	78.80	3.00E-04	1.00E-04	2.07E+06	7.86E+00	2.62E+00

Equipment	Global Warming Potential Factor(4) for CO2	Global Warming Potential Factor(4) for CH4	Global Warming Potential Factor(4) for N2O	Global Warming Potential CO2 Emiss. as CO2 (kg/year)	Global Warming Potential CH4 Emiss. as CO2 (kg/year)	Global Warming Potential N2O Emiss. as CO2 (kg/year)	Global Warming Potential CO2 Emiss. as CO2 (MT/year)(5)	Global Warming Potential CH4 Emiss. as CO2 (MT/year)	Global Warming Potential N2O Emiss. as CO2 (MT/year)	Total (MT/year)
Unit 1 - nat. gas	1	23	310	1.76E+08	4.49E+05	1.03E+05	1.76E+05	4.49E+02	1.03E+02	1.76E+05
Unit 1 - oil	1	23	310	3.89E+06	3.40E+02	1.53E+03	3.89E+03	3.40E-01	1.53E+00	3.89E+03
Unit 2 - nat. gas	1	23	310	1.86E+08	4.76E+05	1.09E+05	1.86E+05	4.76E+02	1.09E+02	1.87E+05
Unit 2 - oil	1	23	310	4.90E+06	4.29E+02	1.93E+03	4.90E+03	4.29E-01	1.93E+00	4.91E+03
Unit 3 - nat. gas	1	23	310	2.67E+08	6.83E+05	1.56E+05	2.67E+05	6.83E+02	1.56E+02	2.68E+05
Unit 3 - oil	1	23	310	2.07E+06	1.81E+02	8.13E+02	2.07E+03	1.81E-01	8.13E-01	2.07E+03
									Total =	**6.42E+05**

Notes:
(1) Based on maximum 2-year annual average with a 10-year look back period.
(2) CARB Draft Emission Factors for Mandatory Reporting Program, August 10, 2007, carbon dioxide emission factors stationary source combustion table - natural gas and resid. oil factors.
(3) CARB Draft Emission Factors for Mandatory Reporting Program, August 10, 2007, CH4 and N2O emission factors stationary source combustion table - natural gas and resid. oil factors.
(4) California Climate Action Registry, Appendix to the General Reporting Protocol: Power/Utility Reporting Protocol, Version 1.0, April 2005, Table 5.4.
(5) MT/year stands for metric tonnes per year.

APPENDIX 5.1C

Evaluation of Best Available Control Technology (BACT)

APPENDIX 5.1C

EVALUATION OF BEST AVAILABLE CONTROL TECHNOLOGY

BACT is defined in San Diego Air Pollution Control District (SDAPCD or District) Regulation 2, Rule 20.1 as:

> *The lowest emitting of any of the following:*
>
> *(A) the most stringent emission limitation, or the most effective emission control device or control technique, which has been proven in field application and which is cost-effective for such class or category of emission unit, unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that such limitation, device or control technique is not technologically feasible, or*
>
> *(B) any emission control device, emission limitation or control technique which has been demonstrated but not necessarily proven in field application and which is cost-effective for such class or category of emission unit, as determined by the Air Pollution Control Officer, unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that such limitation, device or control technique is not technologically feasible, or*
>
> *(C) any control equipment, process modifications, changes in raw material including alternate fuels, and substitution of equipment or processes with any equipment or processes, or any combination of these, determined by the Air Pollution Control Officer on a case-by-case basis to be technologically feasible and cost-effective, including transfers of technology from another category of source, or*
>
> *(D) the most stringent emission limitation, or the most effective emission control device or control technique, contained in any State Implementation Plan (SIP) approved by the federal EPA for such emission unit category, unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that such limitation or technique has not been proven in field application, that it is not technologically feasible or that it is not cost-effective for such class or category of emission unit.*

EPA policy requires the use of a "top-down" approach to determining BACT.[1] Under this procedure, the applicant first examines the most stringent alternative and that alternative is established as BACT unless the applicant demonstrates, and the permitting authority concurs, that the most stringent technology is not available or achievable. For natural gas-fired combined cycle gas turbines, available control techniques are well defined and are consistently required, but emission concentration limits vary. Therefore, this analysis will focus on the emissions limitations that constitute BACT for the proposed project.

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[1] EPA OAQPS, "New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Area Permitting," Draft, October 1990.

5.1C.1 BACT for the Combined-Cycle Combustion Gas Turbines

To evaluate BACT for the CECP turbines, the SDAPCD permitting and BACT guidance was reviewed. Although the District publishes BACT guidance for some classes and categories of sources, no BACT determinations are specified for gas turbines. Therefore, the U.S. Environmental Protection Agency (EPA) Reasonably Available Control Technology (RACT)-BACT-Lowest Achievable Emission Rate (LAER) Clearinghouse (RBLC) was consulted to review recent EPA BACT decisions for gas-fired gas turbines. These recent BACT decisions are summarized in Table 5.1C-1 below. NOx BACT levels from the RBLC range from 2.0 to 3.0 parts per million concentration[2] (ppmc), with averaging periods ranging from one to 24 hours. Carbon monoxide (CO) BACT levels range from 2.0 to 18.0 ppmc. Volatile organic compound (VOC) levels range from 1.3 to 13 ppmc. Because these projects were recently permitted, no performance data are yet available.

The Air Resources Board's (ARB) BACT Clearinghouse Database was also reviewed for recent BACT decisions regarding large gas turbine projects in California. Relevant BACT decisions are summarized in Table 5.1C-2. Nitrogen oxides (NOx) levels shown in these determinations range from 2.0 to 2.5 ppm, with averaging periods ranging from one to three hours. CO BACT determinations range from 2 to 4 ppmc, with various averaging periods. VOC determinations range from 1 to 2 ppmc, again with various averaging periods.

Finally, the ARB's Guidance for Power Plant Siting and Best Available Control Technology was also reviewed. The relevant BACT levels recommended in the ARB power plant guidance document are summarized in Table 5.1C-3.

The amended Determination of Compliance issued to the Otay Mesa Generating Project (which is located in the SDCAPCD) in 2003 required the use of dry low-NOx combustors with selective catalytic reduction (SCR) technology to achieve a NOx exhaust concentration of 2.0 ppmc or less (1-hr average)[3], a CO exhaust concentration of 6 ppmc (3-hr average), and a VOC concentration of 2.0 ppmc (1-hr average). The gas turbines will be fueled with natural gas to minimize SO_2 and $PM_{10}/PM_{2.5}$ emissions.

During the SDAPCD's review of the application for a Determination of Compliance for the proposed South Bay Replacement Project in 2006, the SDAPCD required the use of dry low-NOx combustors with selective catalytic reduction (SCR) technology to achieve a NOx exhaust concentration of 2.0 ppmc or less (1-hr average), the use of an oxidation catalyst to achieve a CO exhaust concentration of 2 ppmc (3-hr average), and a VOC concentration of 1.5 ppmc (1-hr

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[2] Parts per million concentration means parts per million by volume on a dry basis at the appropriate reference oxygen concentration of 15% for turbines and 3% for boilers.

[3] The 2003 Otay Mesa permit allows excursions from the 2.0 ppmc/1-hour average limit under certain specific conditions, consistent with the excursions allowed for other similar CTG plants with extremely low NOx limitations.

average). These gas turbines were also to be fueled with natural gas to minimize SO_2 and $PM_{10}/PM_{2.5}$ emissions.

Table 5.1C-4 summarizes the proposed BACT determination for the CECP CTGs.

Table 5.1C-1

Gas Turbine BACT Determinations (EPA RBLC Clearinghouse}

Facility/Location	Date Permit Issued	Equipment/Rating	NOx Limit/Control Technology	CO Limit/Control Technology	VOC Limit/Control Technology
Forsyth Energy Plant Forsyth Co, NC	9/29/2005	1844.3 MMBtu/hr combined cycle turbine w/ duct burner	2.5 ppm, 24-hour average (SCR and DLN)	11.6 ppm, 3-hr average (good combustion practices)	No BACT determination
Sierra Pacific Power Company Tracy Station Storey Co, NV	8/16/2005	306 MW combined-cycle turbine w/ duct burner	2 ppm, 3-hr average (SCR and DLN)	3.5 ppm, 3-hr average (oxidation catalyst)	4 ppm, 3-hr average
North Star Power Co Ramsey Co, MN	8/12/2005	330 MW total, 2 combined-cycle turbines w/ duct burners	No BACT determination	10 ppm w/o duct firing 18 ppm w duct firing (good combustion practices)	2 ppm w/o duct firing 13 ppm w/ duct firing
Wanapa Energy Center Umatilla Co, OR	8/8/2005	GE Frame 7FA gas turbine and duct burner	2 ppm, 3-hr average (SCR and DLN)	2 ppm, 3-hr average (oxidation catalyst)	No BACT determination
Hines Power Block 4 Polk Co, FL	6/8/2005	530 MW combined cycle gas turbine	2.5 ppm (SCR)	8 ppm (good combustion practices)	No BACT determination
Florida Power and Light Turkey Point Power Plant Dade Co, FL	6/8/2005	Four GE 7FA gas turbines with duct firing	2.0 ppm, 24-hr average (DLN and SCR)	8 ppm, 24-hr average (good combustion practices)	1.3 ppm (good combustion practices)
Berrien Energy, LLC	4/13/2005	1584 MMBtu/hr gas turbine with duct firing	2.5 ppm, 24-hr average (SCR and	2 ppm, 3-hr average	3.2 lb/hr

Table 5.1C-1

Gas Turbine BACT Determinations (EPA RBLC Clearinghouse}

Facility/Location	Date Permit Issued	Equipment/Rating	NOx Limit/Control Technology	CO Limit/Control Technology	VOC Limit/Control Technology
Berrien Co, MI			DLN)	(oxidation catalyst)	
Duke Energy Hanging Rock Energy Facility Lawrence Co, OH	12/28/2004	Four GE 7FA gas turbines with duct firing	3.0 ppm, 3-hr average (SCR and DLN)	9 ppm, 24-hr average	20.4 lb/hr
Wellton Mohawk Generating Station Yuma Co, AZ	12/1/2004	GE 7FA gas turbines with duct firing	2.0 ppm, 3-hr average (SCR and DLN)	3.0 ppm, 3-hr average (oxidation catalyst)	2.0 ppm, 3-hr average (oxidation catalyst)

Table 5.1C-2

Summary of BACT Determinations (ARB BACT Clearinghouse)

Facility/District	Permit No./Date	Equipment/Rating	NOx Limit/ Control Technology	CO Limit/Control Technology	VOC/HC Limit/ Control Technology
Western Midway Sunset Power Project San Joaquin Valley Air Pollution Control District (SJVAPCD)	S-1135-313-0 12/12/2003	GE 7FA or S-W 501F	2 ppm, 1-hr average SCR	4 ppm, 3-hr average Oxidation catalyst	1.4 ppm, 3-hr average Oxidation catalyst
Three Mountain Power, LLC Shasta County AQMD	99-PO-01 10/10/2003	GE 7FA or S-W 501F	2.5 ppm, 1-hr average SCR	4 ppm, 3-hr average Oxidation catalyst	2 ppm, 1-hr average Oxidation catalyst
Magnolia Power Project SCAQMD	386305 5/27/2003	GE 7FA	2 ppm, 3-hr average SCR	2 ppm, 1-hr average Oxidation catalyst[a]	2 ppm, 1-hr average Oxidation catalyst
Elk Hills Power Project SJVAPCD	S-3523-1-0	GE 7FA	2.5 ppm, 1-hr average SCR	4 ppm, 3-hr average Oxidation catalyst	2 ppm, 3-hr average Oxidation catalyst
Sutter Power Project Feather River AQMD	97-AFC-2 12/1/2000	S-W 501F	2.5 ppm, 1-hr average SCR	4 ppm, 24-hr average Oxidation catalyst	1 ppm, 24-hr average Oxidation catalyst

Note:

a. District indicates that applicant proposed 2 ppm to lower offset liability.

Table 5.1C-3

ARB BACT Guidance For Power Plants

Pollutant	BACT
Nitrogen Oxides	2.5 ppmv @ 15% O_2 (1-hour average) 2.0 ppmv @ 15% O_2 (3-hour average)
Sulfur Dioxide	Fuel sulfur limit of 1.0 grains/100 scf
Carbon Monoxide	Nonattainment areas: 6 ppmv @ 15% O_2 (3-hour average) Attainment areas: District discretion
VOC	2 ppmv @ 15% O_2 (3-hour average)
NH_3	5 ppmv @ 15% O_2 (3-hour average)
PM_{10}	Fuel sulfur limit of 1.0 grains/100 scf

Table 5.1C-4

Proposed BACT Determination for CECP Combined-Cycle Gas Turbines

Pollutant	Proposed BACT Determination
Nitrogen Oxides	Dry low-NOx combustor and SCR system, 2.0 ppmc[a], 1-hour average, with excursions under specific conditions
Sulfur Dioxide	Natural gas fuel (sulfur content not to exceed 0.75 grain/100 scf short-term average, 0.25 grains/100 scf long-term average)
Carbon Monoxide	Good combustion practices and oxidation catalyst, 2.0 ppmc, 1-hour average
VOC	Good combustion practices, 1.5 ppmc, 1-hour average
PM_{10}	Natural gas fuel, 9.5 PM_{10} lbs/hr

Note:

a. ppmc: parts per million by volume, corrected to 15% O_2

5.1C.2. Top Down BACT Analysis for Combined-Cycle Combustion Turbines

Since the CECP is proposing to achieve the most stringent emission levels discussed above, there is no reason to perform a detailed top down BACT analysis for any criteria pollutant.

APPENDIX 5.1D

Modeling Analysis

Table 5.1D-1
Dimensions for Major Equipment

CEC Item	Description	Length (ft. & in.)	Width (ft. & in.)	Height[1] (ft. & in.)
1	Gas Turbine Enclosure	**35.3**	35'-0 3/8"	32'-1 3/4"
28	Gas Turbine Inlet Filter	**71.7**	**45.3**	76'-2 1/4'
21	Electrical Package	32'-1"	6.8'	12'-1 3/8"
20	Lube Oil Cooler	24'-10"	11'-10"	24'-6 3/4"
25	Rotor Air Cooler (Fin-Fan)	27'-5 3/8"	13'-4 1/2"	26'-1"
2	Heat Recovery Steam Generator	131.5'	25'-10"	88'-0"
13	HRSG Stack	--	25.0' (outer) dia	100' (from model)
23	Boiler Blow Down	7'-3 3/4"	7'8 5/8"	17'-3 1/8"
24	Boiler Feedwater Pumps	22'-1 3/4"	25'-1 5/8"	10'-3 5/8"
34	Sampling Panel	20'-10"	3'-0"	8'-4"
17	Continuous Emissions Monitoring	15'-0"	13'-4"	9'-6"
18	SCR Skid	32'-0"	11'0"	21'-9 3/8"
22	MV Switchgear	40'-0"	16'-3"	19'-1 1/2"
26	Generator Circuit Breaker	15'-6 5/8"	8'-9"	26'-8 1/2"
27	Auxiliary Transformer	17'-11 5/8"	9'-1"	10'-5 5/8"
5A	Generator Transformer - Gas Turbine	29'-3 5/8"	21'-8 1/4"	24'-10 3/4"
5B	Generator Transformer - Steam Turbine	27'-2 1/4"	21'-4"	22'-8 7/8"
15	Oil/Water Separator	*See Note 2.*		
30	Steam Turbine PCC	27'-6 1/8"	13'-4"	18'-0 7/8"
31	Gland Steam Condensers	31'-2"	10'-9 7/8"	10'-4 3/8"
3	Steam Turbine	60'-9"	22'-2 1/8"	28'-10"
32	ST Lube Oil Cooler	34'-2 5/8"	11'-5 3/4"	12'-3 1/4"
4	Steam Turbine Fin Fan Cooler	121.5'	90.7'	22'-0"
33	Condensate Polishing Fin Fan Cooler	27'-5 3/8"	13'-4 1/2"	26'-1"
29	Air Compressor Area	19'-1"	18'-0"	15'-0"
16	Balance of Plant PCC	30'-0"	27'-8"	18'-0 7/8"
	Chemical Dosing Equipment	10'-0"	17'-6"	8'-2 3/8"
35	Deaerator / Drain Tanks / Condensate Pumps	28'-3"	25'-5"	42'-0"
14	Ammonia Storage/Unloading	60.2'	15.3'	12'
	Ammonia Storage Sump	Underground	Underground	
6A	Fuel Gas Conditioning	72.1'	43.8'	12'
6B	Fuel Gas Compressors Enclosure	53.5'	51.5'	12'
7	Raw Water Water Tank (360,000 gal)		50.3' (dia)	30'
8	Demineralized Water Tank (250,000 gal)		46.3' (dia)	25'
19	Crane Maintenance Pad	40'	25'	--
36	Raw Water Forwarding Pumps	14'	6.66'	5'
37	Fire Water Pumps Enclosure	40'	19.4'	12'
38	Demineralized Water Forwarding Pumps	13'	6.66'	5'
	Diesel Fire Pump	Inside Item # 37	Inside Item # 37	
11	Fire Water Tank (240, 000 gal)		50.1' (dia)	25'
9	Gas Turbine Generator (below #28)	25'	9'	32'
10	Steam Turbine Generator	20'	8'	28'-10"

Notes:
1. Heights are given as dimension above grade.
2. Oil/Water Separator is typically buried.

Table 5.1D-2

Screening Modeling Inputs

Data For Each Turbine

Case	Amb Temp deg F	Stack height feet	Stack Height meters	Stack Diam feet	Stack Diam meters	Stack flow wacfm	Stack flow m3/sec	Stack Vel ft/sec	Stack Vel m/sec	Stack Temp deg F	Stack Temp deg K
Avg. Peak	73.6	100.0	30.48	20.0	6.10	1,458,766	688.55	77.39	23.59	361.0	455.93
Avg. Base (cooler)	73.6	100.0	30.48	20.0	6.10	1,379,693	651.23	73.20	22.31	358.0	454.26
Avg. Base	73.6	100.0	30.48	20.0	6.10	1,351,217	637.79	71.68	21.85	356.0	453.15
Avg. Mid.	73.6	100.0	30.48	20.0	6.10	1,112,102	524.92	59.00	17.98	345.0	447.04
Avg. Low (60%)	73.6	100.0	30.48	20.0	6.10	981,319	463.19	52.06	15.87	340.0	444.26
Hot Peak	104	100.0	30.48	20.0	6.10	1,434,498	677.10	76.10	23.20	359.0	454.82
Hot Base (cooler)	104	100.0	30.48	20.0	6.10	1,373,686	648.39	72.88	22.21	366.0	458.71
Hot Base	104	100.0	30.48	20.0	6.10	1,244,127	587.24	66.00	20.12	352.0	450.93
Hot Mid.	104	100.0	30.48	20.0	6.10	1,025,286	483.95	54.39	16.58	336.0	442.04
Hot Low (60%)	104	100.0	30.48	20.0	6.10	912,246	430.59	48.40	14.75	331.0	439.26
Mild Base (cooler)	61	100.0	30.48	20.0	6.10	1,421,303	670.87	75.40	22.98	363.0	457.04
Mild Base	61	100.0	30.48	20.0	6.10	1,405,943	663.62	74.59	22.73	362.0	456.48
Mild Mid.	61	100.0	30.48	20.0	6.10	1,153,041	544.25	61.17	18.64	351.0	450.37
Mild Low (60%)	61	100.0	30.48	20.0	6.10	1,014,615	478.91	53.83	16.41	344.0	446.48
Cold Base	37.4	100.0	30.48	20.0	6.10	1,487,415	702.07	78.91	24.05	371.0	461.48
Cold Mid.	37.4	100.0	30.48	20.0	6.10	1,212,624	572.37	64.33	19.61	359.0	454.82
Cold Low (60%)	37.4	100.0	30.48	20.0	6.10	1,064,636	502.52	56.48	17.22	352.0	450.93

	NOx lb/hr	CO lb/hr	PM10 lb/hr	SOx lb/hr	NOx g/sec	CO g/sec	PM10 g/sec	SOx g/sec
Avg. Peak	15.02	9.15	10.00	4.37	1.893	1.153	1.260	0.550
Avg. Base (cooler)	14.13	8.60	10.00	4.11	1.780	1.084	1.260	0.517
Avg. Base	13.81	8.41	10.00	4.01	1.740	1.060	1.260	0.506
Avg. Mid.	11.22	6.83	10.00	3.26	1.414	0.861	1.260	0.411
Avg. Low (60%)	9.79	5.96	10.00	2.84	1.233	0.751	1.260	0.358
Hot Peak	14.76	8.99	10.00	4.29	1.860	1.132	1.260	0.540
Hot Base (cooler)	13.88	8.45	10.00	4.03	1.749	1.065	1.260	0.508
Hot Base	12.50	7.61	10.00	3.63	1.575	0.959	1.260	0.458
Hot Mid.	10.22	6.22	10.00	2.97	1.288	0.784	1.260	0.374
Hot Low (60%)	8.97	5.46	10.00	2.61	1.130	0.688	1.260	0.328
Mild Base (cooler)	14.51	8.84	10.00	4.22	1.828	1.113	1.260	0.531
Mild Base	14.34	8.73	10.00	4.17	1.807	1.100	1.260	0.525
Mild Mid.	11.63	7.08	10.00	3.38	1.465	0.892	1.260	0.426
Mild Low (60%)	10.12	6.16	10.00	2.94	1.275	0.777	1.260	0.371
Cold Base	15.13	9.21	10.00	4.40	1.907	1.161	1.260	0.554
Cold Mid.	12.23	7.45	10.00	3.55	1.541	0.938	1.260	0.448
Cold Low (60%)	10.63	6.47	10.00	3.09	1.339	0.815	1.260	0.389

Table 5.1D-3
Screening Level Modeling Impacts
(Combined Impacts for Two Gas Turbines)

Operating Mode	Conc. (ug/m3) NO2 1-hr	Conc. (ug/m3) CO 1-hr	Conc. (ug/m3) SO2 1-hr	Conc. (ug/m3) SO2 3-hr	Conc. (ug/m3) CO 8-hr	Conc. (ug/m3) PM10 24-hr	Conc. (ug/m3) SO2 24-hr	Conc. (ug/m3) NO2 Annual	Conc. (ug/m3) PM10 Annual	Conc. (ug/m3) SO2 Annual
Avg. Peak	15.361	14.028	4.463	2.483	5.012	1.602	0.699	0.275	0.183	0.080
Avg. Base (cooler)	14.936	13.641	4.340	2.469	5.001	1.665	0.684	0.279	0.197	0.081
Avg. Base	14.789	13.506	4.297	2.460	4.991	1.687	0.677	0.280	0.203	0.081
Avg. Mid.	13.543	12.368	3.935	2.180	5.517	1.894	0.618	0.278	0.248	0.081
Avg. Low (60%)	12.795	11.686	3.718	2.027	5.117	2.055	0.584	0.274	0.279	0.079
Hot Peak	15.262	13.939	4.434	2.467	5.029	1.624	0.696	0.277	0.188	0.081
Hot Base (cooler)	14.605	13.339	4.244	2.402	4.870	1.657	0.668	0.271	0.195	0.079
Hot Base	14.125	12.900	4.104	2.306	5.239	1.769	0.642	0.277	0.222	0.081
Hot Mid.	13.060	11.927	3.795	2.097	5.295	2.003	0.595	0.277	0.271	0.081
Hot Low (60%)	12.183	11.127	3.540	1.994	4.711	2.236	0.582	0.270	0.301	0.079
Mild Base (cooler)	15.027	13.724	4.366	2.429	4.954	1.627	0.686	0.273	0.188	0.079
Mild Base	14.955	13.658	4.345	2.438	4.957	1.640	0.683	0.275	0.191	0.080
Mild Mid.	13.713	12.524	3.984	2.210	5.436	1.845	0.623	0.276	0.238	0.080
Mild Low (60%)	12.865	11.749	3.738	2.075	5.240	1.996	0.587	0.273	0.270	0.079
Cold Base	15.156	13.842	4.404	2.431	4.839	1.569	0.690	0.265	0.175	0.077
Cold Mid.	13.923	12.716	4.045	2.266	5.226	1.783	0.634	0.274	0.224	0.080
Cold Low (60%)	13.016	11.887	3.782	2.112	5.352	1.928	0.595	0.271	0.255	0.079

Table 5.1D-4A
Emission Rates and Stack Parameters for Refined Modeling

						Emission Rates, g/s									Emission Rates, lb/hr			
	Stack Diam, m	Stack Height, m	Temp, deg K	Exhaust Flow, m3/s	Exhaust Velocity, m/s	NOx	SO2	CO	PM10	Stack Diam, ft	Stack Height, ft	Exh Temp, Deg F	Exh Flow Rate, ft3/m	Exhaust Velocity, ft/s	NOx	SO2	CO	PM10
Averaging Period: One hour NOx																		
Unit 6	6.1	30.5	456	688.5	23.6	1.8931	n/a	n/a	n/a	20	100	361	1,458,766	77	15.02	n/a	n/a	n/a
Unit 7	6.1	30.5	456	688.5	23.6	1.8931	n/a	n/a	n/a	20	100	361	1,458,766	77	15.02	n/a	n/a	n/a
Firepump Engine	0.1	9.1	776	0.6	77.3	0.2620	n/a	n/a	n/a	0.33	30	938	1,328	254	2.08	n/a	n/a	n/a
Averaging Period: One hour CO and SOx																		
Unit 6	6.1	30.5	456	688.5	23.6	n/a	0.5500	1.1526	n/a	20	100	361	1,458,766	77	n/a	4.37	9.15	n/a
Unit 7	6.1	30.5	456	688.5	23.6	n/a	0.5500	1.1526	n/a	20	100	361	1,458,766	77	n/a	4.37	9.15	n/a
Firepump Engine	0.1	9.1	776	0.6	77.3	n/a	0.0003	0.0305	n/a	0.33	30	938	1,328	254	n/a	0.00	0.24	n/a
Averaging Period: Three hours SOx																		
Unit 6	6.1	30.5	456	688.5	23.6	n/a	0.5500	n/a	n/a	20	100	361	1,458,766	77	n/a	4.37	n/a	n/a
Unit 7	6.1	30.5	456	688.5	23.6	n/a	0.5500	n/a	n/a	20	100	361	1,458,766	77	n/a	4.37	n/a	n/a
Firepump Engine	0.1	9.1	776	0.6	77.3	n/a	0.0001	n/a	n/a	0.33	30	938	1,328	254	n/a	0.00	n/a	n/a

Table 5.1D-4B
Emission Rates and Stack Parameters for Refined Modeling (cont.)

						Emission Rates, g/s								Emission Rates, lb/hr			
	Stack Diam, m	Stack Height, m	Temp, deg K	Exhaust Flow, m3/s	Exhaust Velocity, m/s	NOx	SO2	CO	PM10	Stack Diam, ft	Stack Height, ft	Exh Temp, Deg F	Exh Flow Rate, ft3/m	Exhaust Velocity, ft/s	NOx	SO2	CO	PM10
Averaging Period: Eight hours CO																		
Unit 6	6.1	30.5	447	524.9	18.0	n/a	n/a	0.8607	n/a	20	100	345	1,112,102	59	n/a	n/a	6.83	n/a
Unit 7	6.1	30.5	447	524.9	18.0	n/a	n/a	0.8607	n/a	20	100	345	1,112,102	59	n/a	n/a	6.83	n/a
Firepump Engine	0.1	9.1	776	0.6	77.3	n/a	n/a	0.0038	n/a	0.33	30	938	1328	254	n/a	n/a	0.03	n/a
Averaging Period: 24-hour SOx																		
Unit 6	6.1	30.5	456	688.5	23.6	n/a	0.5500	n/a	n/a	20	100	361	1,458,766	77	n/a	4.37	n/a	n/a
Unit 7	6.1	30.5	456	688.5	23.6	n/a	0.5500	n/a	n/a	20	100	361	1,458,766	77	n/a	4.37	n/a	n/a
Firepump Engine	0.1	9.1	776	0.6	77.3	n/a	0.0000	n/a	n/a	0.33	30	938	1,328	254	n/a	0.00	n/a	n/a
Averaging Period: 24-hour PM10																		
Unit 6	6.1	30.5	439	430.5	14.8	n/a	n/a	n/a	1.2600	20	100	331	912,246	48	n/a	n/a	n/a	10.00
Unit 7	6.1	30.5	439	430.5	14.8	n/a	n/a	n/a	1.2600	20	100	331	912,246	48	n/a	n/a	n/a	10.00

Table 5.1D-4C
Emission Rates and Stack Parameters for Refined Modeling (cont.)

						Emission Rates, g/s									Emission Rates, lb/hr			
	Stack Diam, m		Temp, deg K	Exhaust Flow, m3/s	Exhaust Velocity, m/s	NOx	SO2	CO	PM10	Stack Diam, ft	Stack Height, ft	Exh Temp, Deg F	Exh Flow Rate, ft3/m	Exhaust Velocity, ft/s	NOx	SO2	CO	PM10
Averaging Period: Annual NOx and SOx																		
Unit 6	6.1	30.5	453	637.7	21.8	1.0865	0.0807	n/a	n/a	20	100	356	1,351,217	72	8.62	0.64	n/a	n/a
Unit 7	6.1	30.5	453	637.7	21.8	1.0865	0.0807	n/a	n/a	20	100	356	1,351,217	72	8.62	0.64	n/a	n/a
Firepump Engine	0.1	9.1	776	0.6	77.3	0.0015	0.0000	n/a	n/a	0.33	30	938	1,328	254	0.01	0.00	n/a	n/a
Averaging Period: Annual PM10																		
Unit 6	6.1	30.5	439	430.5	14.8	n/a	n/a	n/a	0.5602	20	100	331	912,246	48	n/a	n/a	n/a	4.45
Unit 7	6.1	30.5	439	430.5	14.8	n/a	n/a	n/a	0.5602	20	100	331	912,246	48	n/a	n/a	n/a	4.45
Firepump Engine	0.1	9.1	776	0.6	77.3	n/a	n/a	n/a	0.0000	0.33	30	938	1,328	254	n/a	n/a	n/a	0.00

Table 5.1D-5A
SCREEN3 - Fumigation Analysis

Emission Rates		NOx (g/sec)	CO (g/sec)	PM10 (g/sec)	SO2 (g/sec)	
	Each Turbine (Avg. Peak)	1.89	1.15	1.26	0.55	
Inversion Breakup	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)	Distance to Maxima (m)
Each Turbine	0.74	1.39	0.85	0.93	0.40	23763
Shoreline Fumigation	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)	Distance to Maxima (m)
Each Turbine	5.11	9.68	5.89	6.44	2.81	1981
Flat Terrain	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)	Distance to Maxima (m)
Each Turbine	0.58	1.10	0.67	0.73	0.32	1200

Table 5.1D-5B
SCREEN3 - Fumigation Analysis

1-hr Average Impacts					
		Actual Impacts			
	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)
Inversion Fumigation					
Each Turbine	0.74	1.39	0.85	-	0.40
Both Turbines		2.78	1.69	-	0.81
		Actual Impacts			
	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)
Shoreline Fumigation					
Each Turbine	5.11	9.68	5.89	-	2.81
Both Turbines		19.35	11.78	-	5.62

3-hr Average Impacts					
		Actual Impacts			
	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)
Inversion Fumigation					
Each Turbine	0.66	-	-	-	0.33
Both Turbines		-	-	-	0.65
	3-hr average	Actual Impacts			
	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)
Shoreline Fumigation					
Each Turbine	2.84	-	-	-	1.41
Both Turbines		-	-	-	2.82

Table 5.1D-5C
SCREEN3 - Fumigation Analysis

8-hr Average Impacts					
		Actual Impacts			
	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)
Inversion Fumigation					
Each Turbine	0.61	-	0.49	-	-
Both Turbines		-	0.98	-	-
		Actual Impacts			
	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)
Shoreline Fumigation					
Each Turbine	1.43	-	1.15	-	-
Both Turbines		-	2.31	-	-

24-hr Average Impacts					
		Actual Impacts			
	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)
Inversion Fumigation					
Each Turbine	0.59	-	-	0.30	0.13
Both Turbines		-	-	0.59	0.26
	Unit Impacts (ug/m3)	NOx (ug/m3)	CO (ug/m3)	PM10 (ug/m3)	SO2 (ug/m3)
Shoreline Fumigation					
Each Turbine	0.86	-	-	0.43	0.19
Both Turbines		-	-	0.87	0.38

NOTES TO TABLE 5.1D-5

INVERSION BREAKUP FUMIGATION/SHORELINE FUMIGATION ANALYSIS

Inversion breakup fumigation is generally a short-term phenomenon and was evaluated here as persisting for up to 90 minutes. SCREEN3 was used to model 1-hour unit impacts from the gas turbines under 2.5 m/s winds and F stability for fumigation impacts and under all meteorological conditions for the flat terrain impacts (as shown in the Table 5.1D-5A). Shoreline fumigation was modeled for the gas turbines using the default SCREEN3 TIBL factor of 6 at a distance to shoreline of 540 meters. As with inversion breakup fumigation, shoreline fumigation conditions were assumed to persist for up to 90 minutes. Since SCREEN3 is a single-source model, each SCREEN3 run evaluated the impacts of the gas turbines with an emission rate of 1.0 g/s per engine and SCREEN3 results are in units of $\mu g/m^3$ per 1.0 g/s.

For longer-term averaging periods, impacts were calculated using the highest modeled impact from SCREEN3 for the corresponding averaging period. A sample calculation for 24-hour average PM_{10} is as follows:

- 1-hour average unit impact under inversion breakup conditions = 0.74 µg/m3 per 1.0 g/s
- 1-hour average unit impact from SCREEN3 for flat terrain = 0.58 µg/m3 per 1.0 g/s
- For a single gas turbine, the appropriate unit impact for the 24-hour averaging period is calculated as 1.5 hours of inversion breakup fumigation plus 22.5 hours of operation under typical conditions (from SCREEN3): [(1.5 * 0.74 µg/m3 per g/s) + (22.5 * 0.58 µg/m3 per g/s)] ÷ 24 hrs = 0.59 $\mu g/m^3$ per g/s
- The PM_{10} emission rate is 1.26 g/sec; the SCREEN3 factor for converting 1-hour impacts to 24-hour impacts is 0.4
- 24-hour PM_{10} impacts under fumigation conditions is calculated as 0.59 $\mu g/m^3$ per g/s * 1.26 g/sec * 0.4 = 0.297 $\mu g/m^3$ for a single gas turbine

Table 5.1D-6

Startup/Shutdown and Commissioning Modeling Inputs

Operating Case	Amb Temp deg F	Stack height feet	Stack Height meters	Stack Diam feet	Stack Diam meters	Stack flow wacfm	Stack flow m3/sec	Stack Vel ft/sec	Stack Vel m/sec	Stack Temp deg F	Stack Temp deg K
Startup/Shutdown											
Unit 6 - Startup/Shutdown	104	100	30.48	20	6.10	858,818	405.37	45.56	13.89	346.00	447.59
Unit 7 - Startup/Shutdown	104	100	30.48	20	6.10	858,818	405.37	45.56	13.89	346.00	447.59
Commissioning											
One Unit In Commissioning	104	100	30.48	20	6.10	858,818	405.37	45.56	13.89	346.00	447.59
One Unit in Startup/Shutdown	104	100	30.48	20	6.10	858,818	405.37	45.56	13.89	346.00	447.59

	NOx lb/hr	CO lb/hr	NOx g/sec	CO g/sec
Startup/Shutdown				
Unit 6 - Startup/Shutdown	85.64	813.52	10.79	102.50
Unit 7 - Startup/Shutdown	85.64	813.52	10.79	102.50
Commissioning				
One Unit in Commissioning	200.13	3812.63	25.22	480.39
One Unit in Startup/Shutdown	85.64	813.52	10.79	102.50

Figure 5.1D-1
Layout of the Receptor Grids

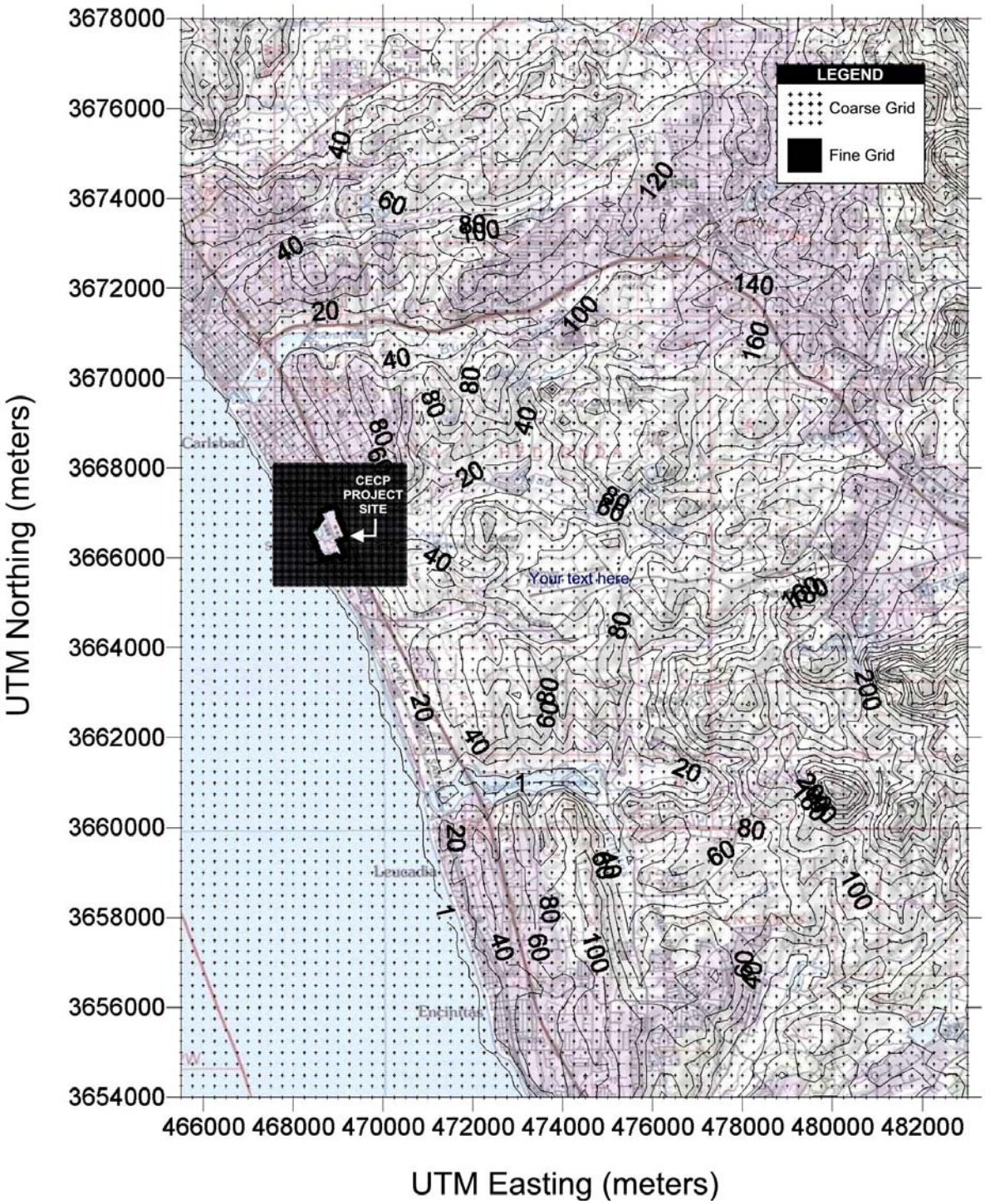


Figure 5.1D-2
CECP New Equipment Maximum 1-Hour Average NO_2 Impacts
($\mu g/m^3$, Ozone-Limited)

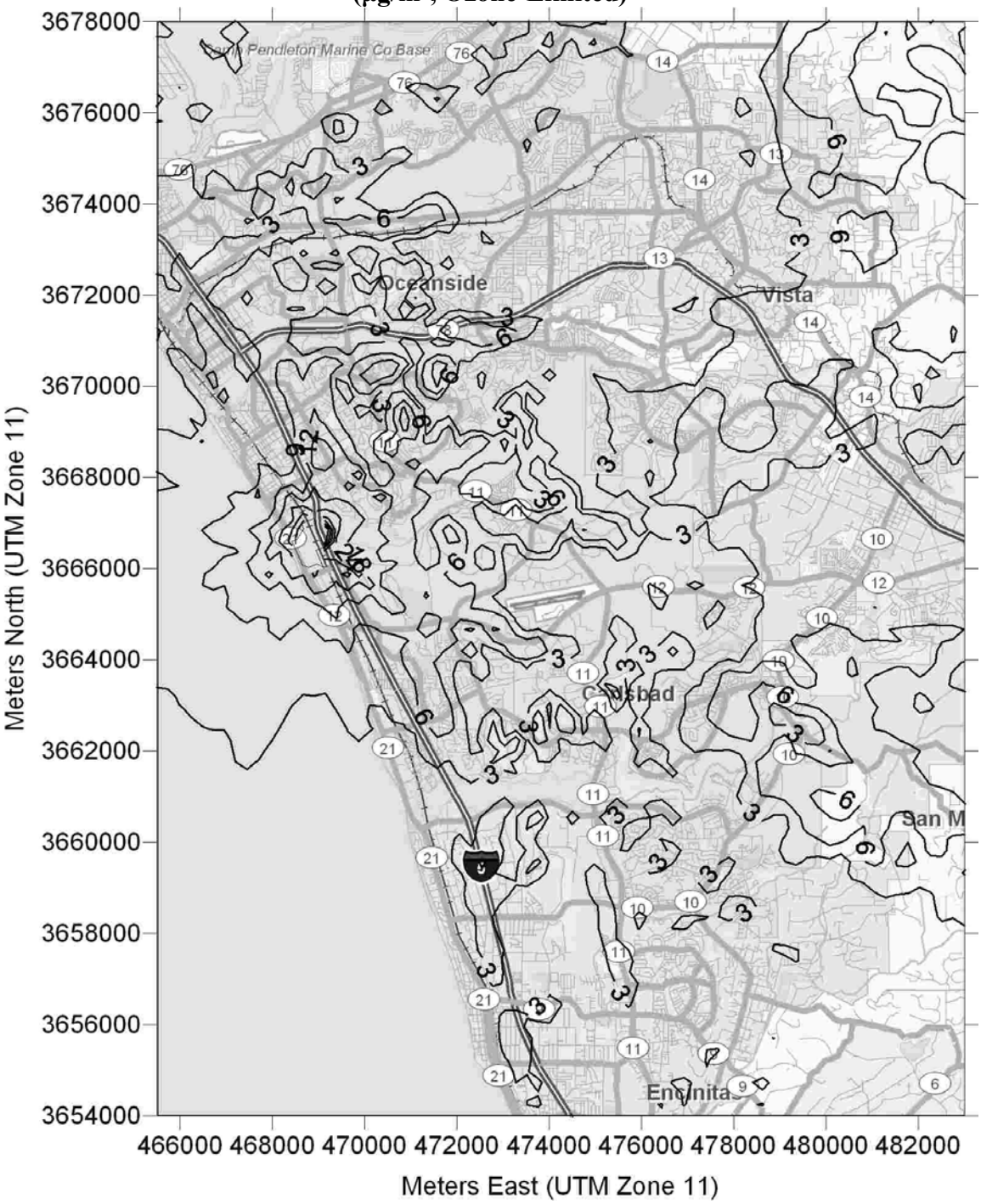


Figure 5.1D-3
CECP New Equipment Maximum 24-Hour Average PM_{10} Impacts ($\mu g/m^3$)

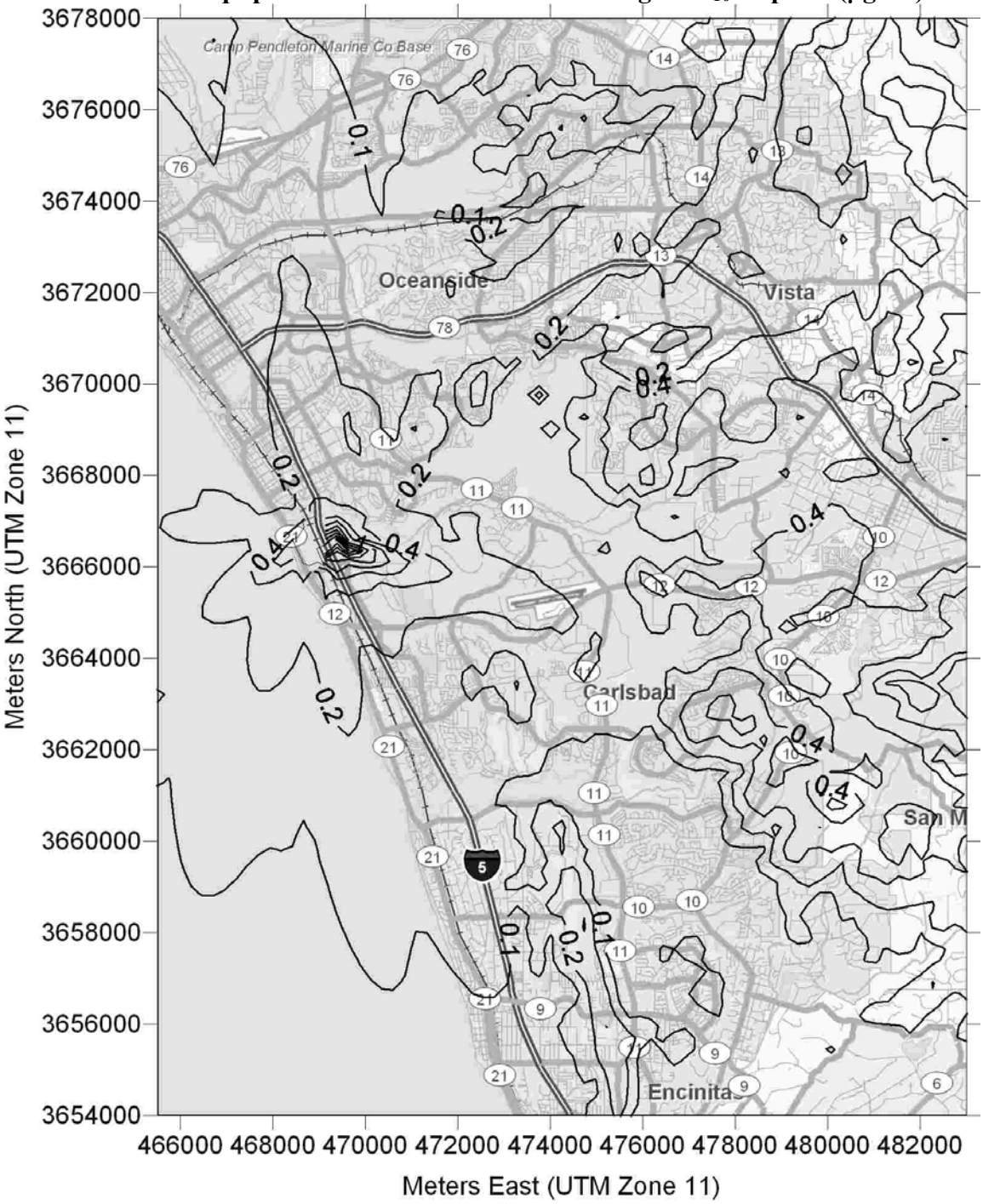
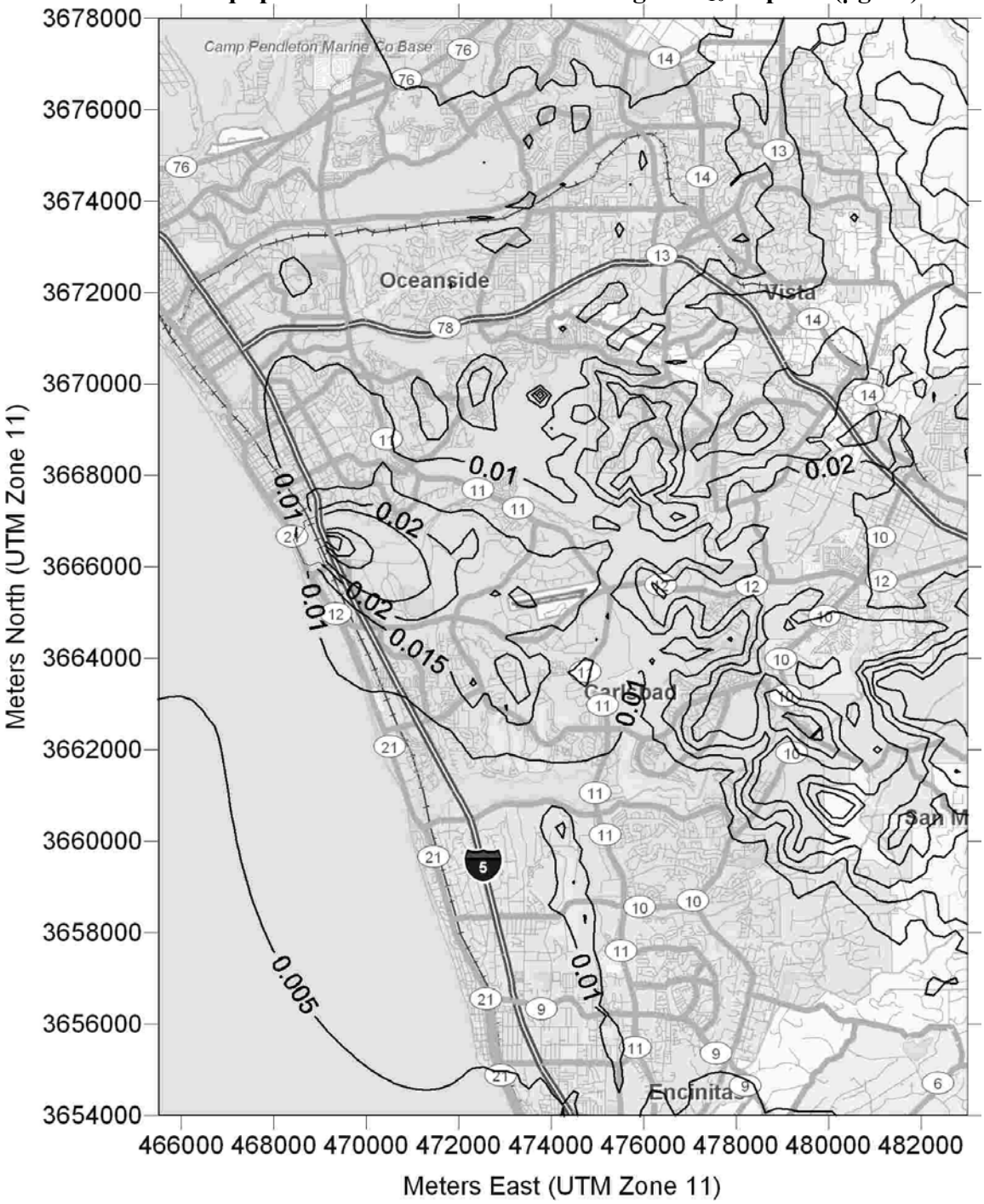


Figure 5.1D-4
CECP New Equipment Maximum Annual Average PM_{10} Impacts ($\mu g/m^3$)



APPENDIX 5.1E

Construction Emissions and Impact Analysis

APPENDIX 5.1E

Construction Emissions and Impact Analysis

Onsite Construction

The initial construction of the CECP is expected to last approximately 19 months provided construction on both CTG units occurs simultaneously. The construction of the two units may be staggered which would increase the overall construction period from 19 to approximately 25 months. Maximum air quality impacts are expected to occur with the 19 month schedule due to the higher concentration of construction equipment on a daily, monthly, and annual basis. Consequently, the 19 months construction schedule is analyzed below. Construction activities will occur in the following main phases:

- Berm work;
- Site preparation and reclaim water pipeline installation;
- Foundation work;
- Installation of major equipment and transmission line work; and
- Construction/installation of major structures.

Construction Activities

The construction of CECP will begin with the removal of intermediate berms that are located in the area where the new equipment will be constructed. This work will include adjustments to the slopes on the perimeter berms. During this same period work will be performed on the installation of a new reclaim water pipeline. After these activities are completed, site preparation activities will begin which will include installation of drainage systems, underground utilities and conduits, grading and backfilling operations, and installation of pilings. After site preparation is finished, the construction of the foundations and structures is expected to begin. During this period work will also be performed on the installation of transmission lines to the existing switch yards. Once the foundations and structures are finished, installation and assembly of the mechanical and electrical equipment are scheduled to commence.

Fugitive dust emissions from the construction of the project will result from:

- Dust entrained during site preparation and grading/excavation at the construction site;
- Dust entrained during onsite travel on paved and unpaved surfaces;
- Dust entrained during aggregate and soil loading and unloading operations; and
- Wind erosion of areas disturbed during construction activities.

Combustion emissions during construction will result from:

- Exhaust from the diesel construction equipment used for site preparation, grading, excavation, trenching, and construction of onsite structures;
- Exhaust from water trucks used to control construction dust emissions;

- Exhaust from portable welding machines;
- Exhaust from pickup trucks and diesel trucks used to transport workers and materials around the construction site;
- Exhaust from diesel trucks used to deliver concrete, fuel, and construction supplies to the construction site including the heavy hauling of major components using truck and/or rail; and
- Exhaust from automobiles used by workers to commute to the construction site.

To determine the potential worst-case daily construction impacts, exhaust and dust emission rates have been evaluated for each source of emissions. Maximum short-term impacts are calculated based on the equipment mix expected during the second month of the construction schedule. Annual emissions are based on the equipment mix during the peak 12-month period out of the overall 19-month construction period.

Available Mitigation Measures

The following typical mitigation measures are proposed to control exhaust emissions from the diesel heavy equipment and potential emissions of fugitive dust during construction of the project.

- Unpaved roads and disturbed areas in the project construction site will be watered as frequently as necessary to prevent fugitive dust plumes. The frequency of watering can be reduced or eliminated during periods of precipitation.
- The vehicle speed limit will be 15 miles per hour within the construction site.
- The construction site entrances shall be posted with visible speed limit signs.
- Construction equipment vehicle tires will be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways.
- Gravel ramps of at least 20 feet in length will be provided at the tire washing/cleaning station.
- Unpaved exits from the construction site will be graveled or treated to prevent track-out to public roadways.
- Construction vehicles will enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the Compliance Project Manager.
- Construction areas adjacent to any paved roadway will be provided with sandbags or other measures as specified in the Storm Water Pollution Prevention Plan (SWPPP) to prevent run-off to roadways.
- Paved roads within the construction site will be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris.
- At least the first 500 feet of any public roadway exiting from the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff from the construction site is visible on public roadways.

- Soil storage piles and disturbed areas that remain inactive for longer than 10 days will be covered or treated with appropriate dust suppressant compounds.
- Vehicles used to transport solid bulk material on public roadways and having the potential to cause visible emissions will be provided with a cover, or the materials will be sufficiently wetted and loaded onto the trucks in a manner to provide at least one foot of freeboard.
- Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) will be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this condition shall remain in place until the soil is stabilized or permanently covered with vegetation.

An on-site Air Quality Construction Mitigation Manager will be responsible for directing and documenting compliance with construction-related mitigation conditions.

Estimates of Emissions with Mitigation Measures - Onsite Construction

Tables 5.1E-1 and 5.1E-2 show the estimated maximum daily and annual heavy equipment exhaust and fugitive dust emissions with recommended mitigation measures for onsite construction activities. Detailed emission calculations are included as Attachment 5.1E-1.

Table 5.1E-1

Maximum Daily Emissions During Construction, Pounds Per Day

	NOx	CO	VOC	SOx	PM_{10}	$PM_{2.5}$
Onsite						
Construction Equipment	386.6	220.0	35.5	0.4	15.9	15.9
Fugitive Dust	--	--	--	--	42.3	8.2
Offsite						
Worker Travel, Truck, Rail Deliveries[a]	218.8	379.2	42.6	0.4	9.5	9.5
Total Emissions						
Total	605.4	599.2	78.1	0.8	67.7	33.6

Note:

a. Offsite emissions.

Table 5.1E-2

Peak Annual Emissions During Project Construction, Tons Per Year

	NOx	CO	VOC	SOx	PM_{10}	$PM_{2.5}$
Onsite						
Construction Equipment	18.0	15.3	1.9	0.0	0.8	0.8
Fugitive Dust	--	--	--	--	2.8	0.5
Offsite						
Worker Travel, Truck, Rail Deliveries [a]	11.0	31.7	3.3	0.0	0.5	0.5
Total Emissions						
Total	29.0	47.0	5.2	0.0	4.1	1.8

Note:

a. Offsite emissions.

Analysis of Ambient Impacts from Onsite Construction

Ambient air quality impacts from emissions during construction of the project were estimated using an air quality dispersion modeling analysis. The modeling analysis considers the construction site location, the surrounding topography, and the sources of emissions during construction, including vehicle and equipment exhaust emissions and fugitive dust.

Existing Ambient Levels

As with the modeling analysis of project operating impacts (Section 5.1), ambient monitoring data collected from monitoring stations in the project area were used to establish the ambient background levels for the construction impact modeling analysis. Table 5.1E-3 shows the maximum concentrations of NOx, SO_2, CO, and PM_{10} recorded for 2004 through 2006.

TABLE 5.1E-3

Maximum Background Concentrations[A], project area, 2004-2006 ($\mu g/m^3$)

Pollutant	Averaging Time	2004	2005	2006
NO_2 (Camp Pendleton)	1-hour	**185.9**	144.6	152.1
	Annual	**22.5**	22.5	20.7
SO_2 (San Diego)	1-hour	**110.0**	94.3	89.1
	3-hour	52.4	68.1	**78.6**
	24-hour	**23.6**	23.6	23.5
	Annual	**10.5**	7.9	10.5
CO (Escondido)	1-hour	**6,300**	5,900	5,700
	8-hour	**3,800**	3,100	3,600
PM_{10} (Escondido)	24-hour	**57**	42	51
	Annual	**28**	24	24
$PM_{2.5}$ (Escondido)	24-hour[b]	37	32	28
	Annual	**14.1**	12.3	11.5

Source: California Air Quality Data, California Air Resources Board website; EPA AIRData website. Reported values have been rounded to the nearest tenth of a $\mu g/m^3$ except for PM_{10} which were already rounded to the nearest integer.

Notes:

a. With the exception of 24-hr $PM_{2.5}$, bolded values are the highest during the three years and are used to represent background concentrations.

b. 24-hour average $PM_{2.5}$ concentrations shown are 98th percentile values rather than highest values because compliance with the ambient air quality standards is based on 98th percentile readings. Since the ambient standard is based on a 3-year average of the 98th percentile readings, the 3-year average of the 2004 to 2006 98th percentile readings was used to represent the background concentration.

Dispersion Model

The EPA guideline Industrial Source Complex Short Term (ISCST) model was used to estimate ambient impacts from construction activities.

The emission sources for the construction site were grouped into three categories: exhaust emissions, construction dust emissions, and windblown dust emissions. The exhaust and construction dust emissions were modeled as volume sources. The windblown dust emissions were modeled as area sources. For the volume sources, the vertical dimension was set to 6 meters, and the horizontal dimension was set based on the width of the construction area.

For the windblown dust sources, the area covers the active construction area. An effective plume height of 0.5 meters was used in the modeling analysis. The construction impacts modeling analysis receptor set excluded the areas under the applicant's control, including the existing Encina Power Plant property.

To determine the construction impacts on short-term ambient standards (24 hours and less), the worst-case daily onsite construction emission levels shown in Table 5.1E-1 were used. For pollutants with annual average ambient standards, the annual onsite emission levels shown in Table 5.1E-2 were used.

As with the refined modeling discussed in Section 5.1, the construction impact modeling was performed using the 2003 to 2005 Camp Pendleton Marine Base monitoring station meteorological data set.

Modeling Results

Based on the emission rates of NOx, SO_2, CO, and PM_{10} and the meteorological data, the ISCST model calculates hourly and annual ambient impacts for each pollutant. As mentioned above, the modeled 1-hour, 3-hour, 8-hour, and 24-hour ambient impacts are based on the worst-case daily emission rates of NOx, SO_2, CO, and PM_{10}. The annual impacts are based on the annual emission rates of these pollutants.

The 1-hour and annual average concentrations of NO_2 were computed following the revised EPA guidance for computing these concentrations (August 9, 1995 *Federal Register,* 60 FR 40465). The ISCST_OLM model was used for the 1-hour average NO_2 impacts; uncorrected 1-hour impacts are also reported for comparison. The annual average was calculated using the ambient ratio method (ARM) with the national default value of 0.75 for the annual average NO_2/NOx ratio.

The modeling analysis results are shown in Table 5.1E-4. Also included in the table are the maximum background levels that have occurred in the last 3 years and the resulting total ambient impacts. Construction impacts alone for all modeled pollutants are expected to be below the most stringent state and national standards. With the exception of the 24-hour and annual average PM_{10}, construction activities are not expected to cause an exceedance of state or federal ambient air quality standards. However, the state 24-hour and annual PM_{10} standards are exceeded in the absence of the construction emissions for the project.

The dust mitigation measures already proposed by the applicant are expected to be effective in minimizing fugitive dust emissions. The attached isopleth diagrams show the extent of the modeled impacts from construction PM_{10} for the 24-hour and annual averaging periods. The attached isopleth diagrams also show 1-hour average NO_2 modeled impacts.

Table 5.1E-4

Modeled Maximum Onsite Construction Impacts

Pollutant	Averaging Time	Maximum Impacts ($\mu g/m^3$)	Background ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	State Standard ($\mu g/m^3$)	Federal Standard ($\mu g/m^3$)
NO_2[a]	1-hour	341	185.9	527	470[c]	--
	Annual	18	22.5	41	--	100
SO_2	1-hour	4	110.0	114	650	--
	3-hour	2	78.6	81	--	1300
	24-hour	0.3	23.6	24	109	365
	Annual	0.03	10.5	11	--	80
CO	1-hour	1,796	6,300	8,096	23,000	40,000
	8-hour	298	3,800	4,098	10,000	10,000
PM_{10}[b]	24-hour	41	57	98	50	150
	Annual	5	28	33	20	--
$PM_{2.5}$[b]	24-hour	17	32	49	--	35
	Annual	2	14	16	12	15

Notes:

a. Ozone limiting method applied for 1-hour average, using concurrent O_3 data (1990). ARM applied for annual average, using national default 0.75 ratio.

b. $PM_{10}/PM_{2.5}$ impacts shown are from fugitive dust as well as combustion sources. Annual average $PM_{10}/PM_{2.5}$ impact from combustion sources only is 1.0 $\mu g/m^3$.

c. Existing 1-hr NO_2 standard shown (effective during September 2007) since the proposed new standard may or may not be effective during the construction phase of the proposed project.

As shown on these isopleth diagrams, maximum impacts occur on the project site fenceline, and concentrations decrease rapidly within a couple of hundred meters of the project site. For example, maximum modeled 24-hour average PM_{10} impacts along the fenceline are approximately 40 $\mu g/m^3$. However, impacts are reduced by half within 100 meters of the facility fenceline. The same is true for 1-hr average NO_2 impacts with impacts along the facility fenceline of approximately 300 $\mu g/m^3$ and impacts reduced by half within 100 meters of the fenceline.

It is also important to note that emissions in an exhaust plume are dispersed through the entrainment of ambient air, which dilutes the concentration of the emissions as they are carried away from the source by winds. The process of mixing the pollutants with greater and greater volumes of cleaner air is controlled primarily by the turbulence in the atmosphere. This dispersion occurs both horizontally, as the exhaust plume rises above the emission point, and vertically, as winds carry the plume horizontally away from its source.

The rise of a plume above its initial point of release is a significant contributing factor to the reductions in ground-level concentrations, both because a rising plume entrains more ambient air as it travels downwind, and because it travels farther downwind (and thus also undergoes more horizontal dispersion) before it impacts the ground. Vertical plume rise occurs as a result of buoyancy (plume is hotter than ambient air, and hot air,

being less dense, tends to rise) and/or momentum (plume has an initial vertical velocity).

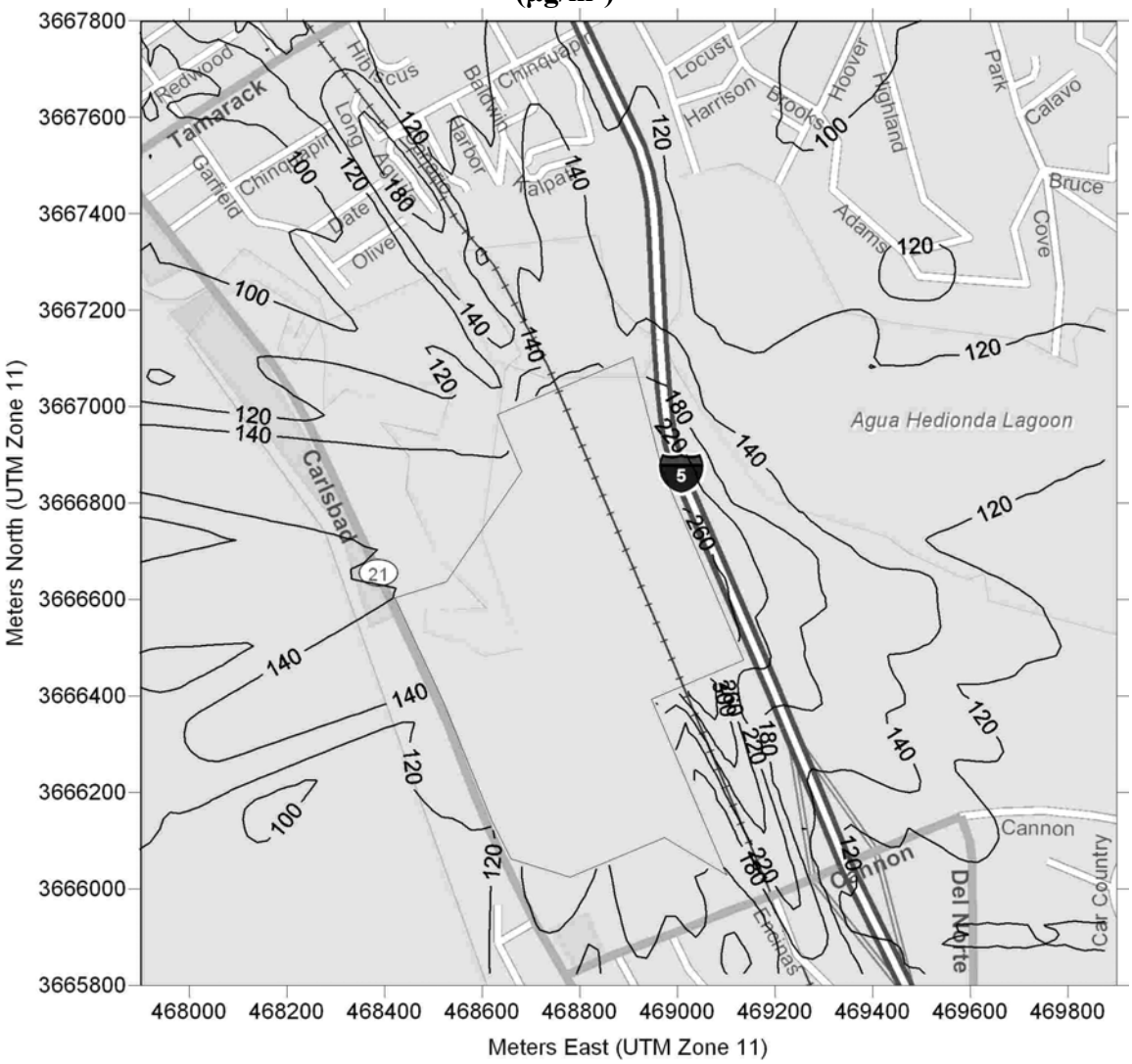
In ISCST3, area sources are not considered to have either buoyant or momentum plume rise, and therefore the model assumes that there is no vertical dispersion taking place. Thus a significant source of plume dilution is ignored when sources are modeled as area sources. The project construction site impacts are not unusual in comparison to most construction project analyses. Construction sites that use good dust suppression techniques and low-emitting vehicles typically do not cause exceedances of air quality standards. The input and output modeling files are being provided electronically.

Health Risk of Diesel Exhaust

The combustion portion of annual PM_{10} emissions from Table 5.1E-2 above was modeled separately to determine the annual average Diesel PM_{10} exhaust concentration. This was used with HARP-derived risk values for Diesel exhaust particulate[4] for a 70-year lifetime to determine the potential carcinogenic risk from Diesel exhaust during construction. The results of this health risk analysis are included in the Public Health Section (Section 5.9).

[4] See Section 5.9 for a discussion of the use of the HARP model to derive cancer risk values.

Figure 5.1E-1
Maximum 1-Hour Average NO_2 Impacts
($\mu g/m^3$)



During Construction Activities (Ozone-Limited)

Figure 5.1E-2
Maximum 24-Hour Average PM_{10} Impacts ($\mu g/m^3$)
During Construction Activities, All Sources

Figure 5.1E-3
Maximum Annual Average PM_{10} Impacts ($\mu g/m^3$)
During Construction Activities, All Sources

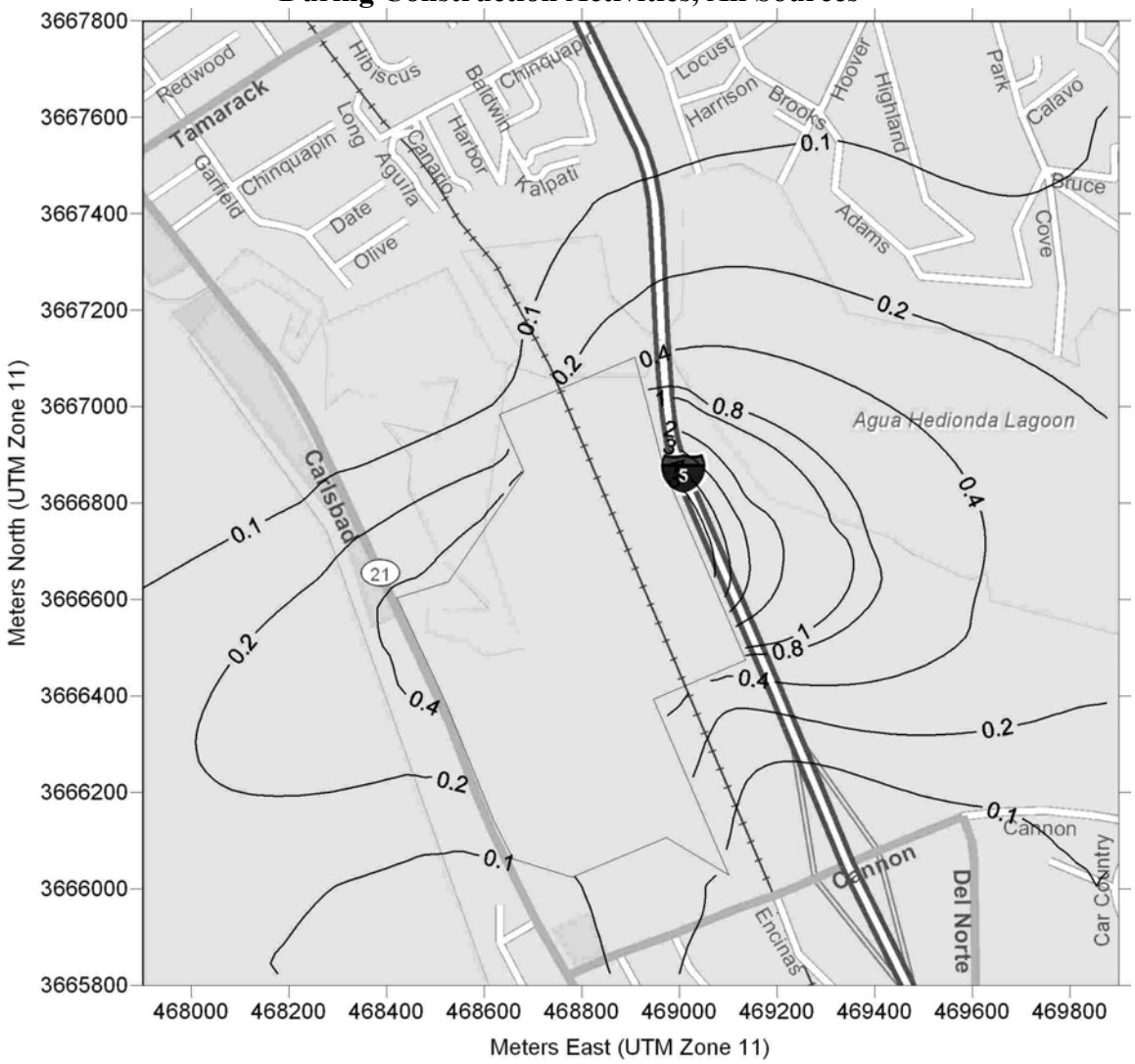
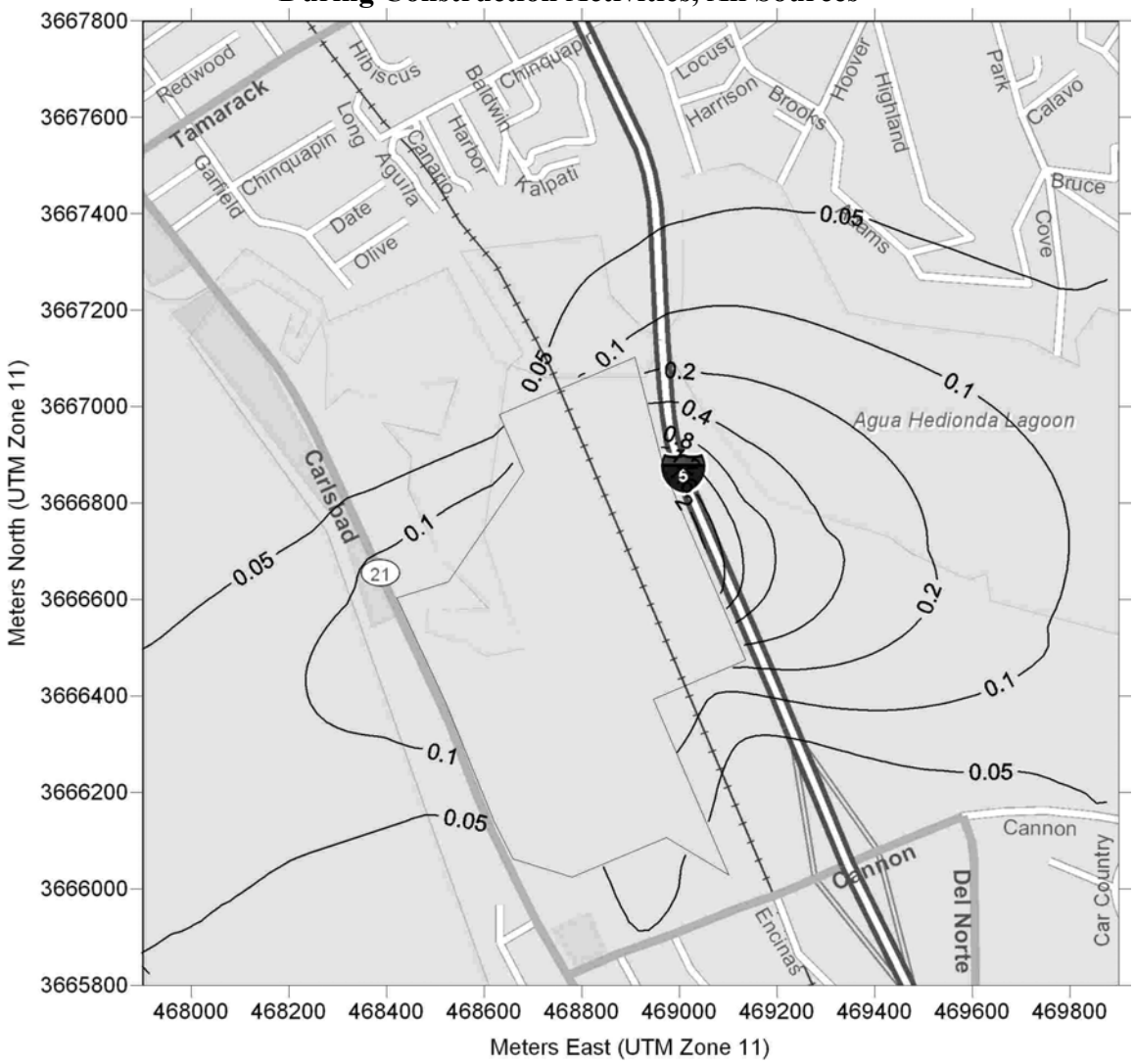


Figure 5.1E-4
Maximum Annual Average $PM_{2.5}$ Impacts ($\mu g/m^3$)
During Construction Activities, All Sources



Attachment 5.1E-1

Detailed Construction Emissions Calculations

Table 5.1E1-1
Construction Equipment Daily Fuel Use - Power Plant Work

Equipment	Hrs/Day Per Unit	Gals/Hr Per Unit	Daily Fuel Use (gals/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm, 25 hp	6.0	1.27	0.0	0.0	22.9	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	22.9	22.9	22.9
Paving Equipment																					
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	6.8	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	95.2	95.2	95.2	95.2	95.2
Compactors																					
Cat, CS-563, Diesel, 145 hp	5.2	4.00	0.0	0.0	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	0.0	0.0	0.0	0.0	0.0
Portable Compression Equipment																					
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	4.8	0.25	0.0	0.0	3.6	3.6	3.6	3.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0	0.0	0.0
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	4.8	0.25	0.0	0.0	2.4	1.2	3.6	3.6	3.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0	0.0	0.0
Concrete Vibrators																					
North Rock, flex shaft, electric	4.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Towers																					
Magnum 5000, 15.5 hp	7.0	1.27	0.0	0.0	17.8	17.8	8.9	8.9	8.9	8.9	0.0	0.0	0.0	0.0	0.0	0.0	17.8	17.8	17.8	17.8	17.8
Dozer																					
Cat, D4, 80 hp	5.6	3.25	0.0	0.0	36.4	36.4	36.4	36.4	18.2	18.2	18.2	18.2	18.2	18.2	18.2	0.0	18.2	18.2	18.2	18.2	18.2
Excavator, Back Hoe																					
Cat, 312, 78 hp	6.0	2.75	0.0	0.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	16.5	16.5	16.5	16.5	16.5	33.0	33.0	16.5	16.5	16.5
Excavator, Loader																					
Cat, 938F, 160 hp	6.4	4.00	0.0	0.0	51.2	51.2	51.2	51.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Motor Grader																					
Cat, 140G, 165 hp	7.2	4.50	0.0	0.0	32.4	32.4	32.4	32.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32.4	32.4	32.4
Cranes, 225 Ton																					
Manitowoc 999 (390 hp)	5.6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 150 Ton																					
Manitowoc 555 (340 hp)	5.6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 20 Ton																					
Grove RT530E-2 (160 hp)	4.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manlift, JLG & Scissor Lift																					
60 Footer, 35 hp	5.6	1.27	0.0	0.0	14.2	14.2	14.2	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	14.2	14.2	14.2
80 Footer, 35 hp	5.6	1.27	0.0	0.0	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	14.2	14.2	14.2	14.2	14.2
Scissor Lift, 25 hp	5.6	1.27	0.0	0.0	7.1	7.1	7.1	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
Water Trucks																					
International	4.0	3.13	0.0	0.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Welders																					
200 AMP Diesel, 35 hp	6.0	1.27	0.0	0.0	15.2	15.2	22.9	38.1	38.1	38.1	38.1	38.1	30.5	30.5	30.5	30.5	30.5	30.5	22.9	22.9	22.9
300 AMP Diesel, 45 hp	6.0	1.27	0.0	0.0	15.2	15.2	15.2	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	15.2	15.2	15.2
Trucks, Light Duty																					
1500 Light Duty	6.4	1.56	0.0	0.0	39.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	30.0	30.0	20.0	20.0	20.0	20.0
Trucks, Fuel/Lube																					
International	4.0	3.13	0.0	0.0	25.0	25.0	12.5	12.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Trucks, Large																					
Cat, 725, 309 hp	5.2	4.25	0.0	0.0	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Flatbed Ford	6.4	1.56	0.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trucks, Large																					
Dump Trucks - Contract	6.4	3.13	0.0	0.0	240.4	240.4	140.2	140.2	140.2	140.2	120.2	120.2	80.1	80.1	40.1	40.1	20.0	20.0	20.0	20.0	20.0
Tanks, Fuel/Lube																					
750 Gallons Each	4.0	3.13	0.0	0.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Truck, Concrete Pump																					
International	4.8	3.13	0.0	0.0	0.0	0.0	0.0	0.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0
Heavy Hauler	0.5	7.00	0.0	0.0	7.6	22.8	22.8	0.0	0.0	30.4	22.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total =			0.0	0.0	649.5	681.1	569.5	583.8	508.3	537.5	501.0	461.7	414.0	414.0	374.0	335.8	449.8	457.1	405.9	405.9	405.9

Table 5.1E1-2
Construction Equipment Daily Fuel Use - Site Prep

Equipment	Hrs/Day Per Unit	Gals/Hr Per Unit	Daily Fuel Use (gals/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm	12.0	1.27	30.5	30.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paving Equipment																					
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	11.2	7.00	0.0	78.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compactors																					
Cat, CS-563, Diesel, 145 hp	10.4	4.00	83.2	83.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compression Equipment																					
Multiquip, Jumping Jack, MRT-80L, gas oil, 2 cycle, 3.3 hp	9.6	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	9.6	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators																					
North Rock, flex shaft	8.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Towers																					
Magnum 5000, 15.5 hp	11.2	1.27	28.4	28.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dozer																					
Cat, D4	11.2	3.25	72.8	72.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Back Hoe																					
Cat, 312	12.0	2.75	33.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Loader																					
938F	12.8	4.00	51.2	51.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Motor Grader																					
140G	12.8	4.50	57.6	57.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 225 Ton																					
Manitowoc 4100	11.2	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 150 Ton																					
Manitowoc	11.2	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 20 Ton																					
Grove	8.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manlift, JLG & Scissor Lift																					
60 Footer	11.2	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80 Footer	11.2	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scissor Lift	11.2	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Trucks																					
International	8.0	3.13	50.1	50.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welders																					
200 AMP Diesel	12.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300 AMP Diesel	12.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Light Duty																					
1500 Light Duty	12.8	1.56	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Fuel/Lube																					
International	8.0	3.13	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Large																					
Cat, D200	10.4	4.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flatbed Ford	12.8	1.56	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Large																					
Dump Trucks - Contract	12.8	3.13	40.1	40.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tanks, Fuel/Lube																					
750 Gallons Each	0.0	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Concrete Pump																					
International	9.6	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total =			511.8	590.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 5.1E1-3
Construction Equipment Daily Fuel Use - Berm Work

Equipment	Hrs/Day Per Unit	Gals/Hr Per Unit	Daily Fuel Use (gals/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm	12.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paving Equipment																					
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	11.2	7.00	0.0	78.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compactors																					
Cat, CS-563, Diesel, 145 hp	12.8	4.00	102.4	102.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compression Equipment																					
Multiquip, Jumping Jack, MRT-80L, gas oil, 2 cycle, 3.3 hp	9.6	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	9.6	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators																					
North Rock, flex shaft	8.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Towers																					
Magnum 5000, 15.5 hp	11.2	1.27	56.9	56.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dozer																					
Cat, D4	11.2	3.25	36.4	36.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Back Hoe																					
Cat, 312	12.0	2.75	66.0	99.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Loader																					
938F	12.8	4.00	102.4	153.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Motor Grader																					
140G	12.8	4.50	57.6	57.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 225 Ton																					
Manitowoc 4100	11.2	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 150 Ton																					
Manitowoc	11.2	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 20 Ton																					
Grove	8.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manlift, JLG & Scissor Lift																					
60 Footer	11.2	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80 Footer	11.2	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scissor Lift	11.2	1.27	0.0	28.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Trucks																					
International	8.0	3.13	50.1	75.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welders																					
200 AMP Diesel	12.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300 AMP Diesel	12.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Light Duty																					
1500 Light Duty	12.8	1.56	39.9	39.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Fuel/Lube																					
International	8.0	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Large																					
Cat, D200	10.4	4.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flatbed Ford	12.8	1.56	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Large																					
Dump Trucks -	15.2	3.13	475.8	570.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tanks, Fuel/Lube																					
750 Gallons Each	8.0	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Concrete Pump																					
International	9.6	3.13	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total =			1007.4	1348.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 5.1E1-4
Construction Equipment Daily Fuel Use - Reclaim Water Line

Equipment	Hrs/Day Per Unit	Gals/Hr Per Unit	Daily Fuel Use (gals/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm	12.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paving Equipment																					
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	11.2	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compactors																					
Cat, CS-563, Diesel, 145 hp	10.4	4.00	41.6	41.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compression Equipment																					
Multiquip, Jumping Jack, MRT-80L, gas oil, 2 cycle, 3.3 hp	9.6	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	9.6	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators																					
North Rock, flex shaft	8.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Towers																					
Magnum 5000, 15.5 hp	11.2	1.27	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dozer																					
Cat, D4	11.2	3.25	36.4	36.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Back Hoe																					
Cat, 312	12.0	2.75	66.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Loader																					
938F	12.8	4.00	51.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Motor Grader																					
140G	12.8	4.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 225 Ton																					
Manitowoc 4100	11.2	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 150 Ton																					
Manitowoc	11.2	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 20 Ton																					
Grove	8.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manlift, JLG & Scissor Lift																					
60 Footer	11.2	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80 Footer	11.2	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scissor Lift	11.2	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Trucks																					
International	8.0	3.13	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welders																					
200 AMP Diesel	12.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300 AMP Diesel	12.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Light Duty																					
1500 Light Duty	12.8	1.56	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Fuel/Lube																					
International	8.0	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Large																					
Cat, D200	10.4	4.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flatbed Ford	12.8	1.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Large																					
Dump Trucks - Contract	12.8	3.13	40.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tanks, Fuel/Lube																					
750 Gallons Each	8.0	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Concrete Pump																					
International	9.6	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total =			294.5	156.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 5.1E1-5
Construction Equipment Daily Fuel Use - Transmission

Equipment	Hrs/Day Per Unit	Gals/Hr Per Unit	Daily Fuel Use (gals/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm	6.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paving Equipment																					
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	5.6	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compactors																					
Cat, CS-563, Diesel, 145 hp	5.2	4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Portable Compression Equipment																					
Multiquip, Jumping Jack, MRT-80L, gas oil, 2 cycle, 3.3 hp	4.8	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	4.8	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrators																					
North Rock, flex shaft	4.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Towers																					
Magnum 5000, 15.5 hp	5.6	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dozer																					
Cat, D4	5.6	3.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Back Hoe																					
Cat, 312	6.0	2.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5	16.5	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Loader																					
938F	6.4	4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.6	25.6	0.0	0.0	0.0	0.0	0.0	0.0
Excavator, Motor Grader																					
140G	6.4	4.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 225 Ton																					
Manitowoc 4100	5.6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 150 Ton																					
Manitowoc	5.6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranes, 20 Ton																					
Grove	4.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manlift, JLG & Scissor Lift																					
60 Footer	5.6	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	14.2	14.2	0.0	0.0	0.0	0.0	0.0
80 Footer	5.6	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scissor Lift	5.6	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	7.1	7.1	0.0	0.0	0.0	0.0	0.0
Water Trucks																					
International	4.0	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Welders																					
200 AMP Diesel	6.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300 AMP Diesel	6.0	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Light Duty																					
1500 Light Duty	6.4	1.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0
Trucks, Fuel/Lube																					
International	4.0	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trucks, Large																					
Cat, D200	5.2	4.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.1	22.1	22.1	0.0	0.0	0.0	0.0	0.0
Flatbed Ford	6.4	1.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
Trucks, Large																					
Dump Trucks - Contract	6.4	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Tanks, Fuel/Lube																					
750 Gallons Each	4.0	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Concrete Pump																					
International	4.8	3.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
Total =			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	133.4	150.5	73.4	0.0	0.0	0.0	0.0	0.0

Table 5.1E1-6A
Nonroad Equipment Combustion Emission Factors

			Base Factors g/bhp, if Tier 1 >50 hp (1)						Appendix A Table A2 Adjustment (2)						Adjustment (3)	Adjusted Factors (g/bhp)					
Equipment	HP Cat.	Tier	BSFC lb/hp	NOx	CO	VOC	SOx	PM10	Adj. Type	NOx	CO	VOC	SOx	PM10	PM10 Fuel S	BSFC	NOx	CO	VOC	SOx	PM10
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm, 25 hp	16-25	2	0.408	4.4399	2.1610	0.4380	0.0056	0.2665	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.22	3.31	0.46	0.0055	0.23
Paving Equipment																					
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	100-175	2	0.367	4.1000	0.8667	0.3384	0.0050	0.1800	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	3.90	1.33	0.36	0.0049	0.13
Compactors																					
Cat, CS-563, Diesel, 145 hp	100-175	2	0.367	4.1000	0.8667	0.3384	0.0050	0.1800	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	3.90	1.33	0.36	0.0049	0.13
Portable Compression Equipment																					
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	Gasoline	na	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	Gasoline	na	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline
Concrete Vibrators																					
North Rock, flex shaft, electric	Electric	na	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric	Electric
Light Towers																					
Magnum 5000, 15.5 hp	50-100	2	0.408	4.7000	2.3655	0.3672	0.0056	0.2400	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.47	3.62	0.39	0.0055	0.20
Dozer																					
Cat, D4, 80 hp	50-100	2	0.408	4.7000	2.3655	0.3672	0.0056	0.2400	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.47	3.62	0.39	0.0055	0.20
Excavator, Back Hoe																					
Cat, 312, 78 hp	50-100	2	0.408	4.7000	2.3655	0.3672	0.0056	0.2400	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.47	3.62	0.39	0.0055	0.20
Excavator, Loader																					
Cat, 938F, 160 hp	100-175	2	0.367	4.1000	0.8667	0.3384	0.0050	0.1800	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	3.90	1.33	0.36	0.0049	0.13
Excavator, Motor Grader																					
Cat, 140G, 165 hp	100-175	2	0.367	4.1000	0.8667	0.3384	0.0050	0.1800	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	3.90	1.33	0.36	0.0049	0.13
Cranes, 225 Ton																					
Manitowoc 999 (390 hp)	300-600	2	0.367	4.3351	0.8425	0.1669	0.0050	0.1316	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	4.12	1.29	0.18	0.0049	0.08
Cranes, 150 Ton																					
Manitowoc 555 (340 hp)	300-600	2	0.367	4.3351	0.8425	0.1669	0.0050	0.1316	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	4.12	1.29	0.18	0.0049	0.08
Cranes, 20 Ton																					
Grove RT530E-2 (160 hp)	100-175	2	0.367	4.1000	0.8667	0.3384	0.0050	0.1800	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	3.90	1.33	0.36	0.0049	0.13
Manlift, JLG & Scissor Lift																					
60 Footer, 35 hp	25-50	2	0.408	4.7279	1.5323	0.2789	0.0056	0.3389	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.49	2.34	0.29	0.0055	0.32
80 Footer, 35 hp	25-50	2	0.408	4.7279	1.5323	0.2789	0.0056	0.3389	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.49	2.34	0.29	0.0055	0.32
Scissor Lift, 25 hp	16-25	2	0.408	4.4399	2.1610	0.4380	0.0056	0.2665	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.22	3.31	0.46	0.0055	0.23
Water Trucks																					
International	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Welders																					
200 AMP Diesel, 35 hp	25-50	2	0.408	4.7279	1.5323	0.2789	0.0056	0.3389	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.49	2.34	0.29	0.0055	0.32
300 AMP Diesel, 45 hp	25-50	2	0.408	4.7279	1.5323	0.2789	0.0056	0.3389	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.096	0.412	4.49	2.34	0.29	0.0055	0.32
Trucks, Light Duty																					
1500 Light Duty	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Trucks, Fuel/Lube																					
International	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Trucks, Large																					
Cat, 725, 309 hp	300-600	2	0.367	4.3351	0.8425	0.1669	0.0050	0.1316	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	4.12	1.29	0.18	0.0049	0.08
Flatbed Ford	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Trucks, Large																					
Dump Trucks - Contract	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Tanks, Fuel/Lube																					
750 Gallons Each																					
Truck, Concrete Pump																					
International	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Heavy Hauler	300-600	2	0.367	4.3351	0.8425	0.1669	0.0050	0.1316	Hi LF	0.95	1.53	1.05	1.01	1.23	-0.087	0.371	4.12	1.29	0.18	0.0049	0.08

Table 5.1E1-6B
Nonroad Equipment Combustion Emission Factors

		Adjusted factors lbs/1000 gallon (4)				
Equipment	Tier	NOx	CO	VOC	SOx	PM10
Air Compressors						
Ingersoll Rand, Diesel, 185 cfm, 25 hp	2	160.21	125.59	17.47	0.21	8.79
Paving Equipment						
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	2	164.48	56.00	15.00	0.21	5.69
Compactors						
Cat, CS-563, Diesel, 145 hp	2	164.48	56.00	15.00	0.21	5.69
Portable Compression Equipment						
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	na	195.25	7792.25	408.25	0.00	12.80
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	na	195.25	7792.25	408.25	0.00	12.80
Concrete Vibrators						
North Rock, flex shaft, electric	na	Electric	Electric	Electric	Electric	Electric
Light Towers						
Magnum 5000, 15.5 hp	2	169.60	137.47	14.65	0.21	7.55
Dozer						
Cat, D4, 80 hp	2	169.60	137.47	14.65	0.21	7.55
Excavator, Back Hoe						
Cat, 312, 78 hp	2	169.60	137.47	14.65	0.21	7.55
Excavator, Loader						
Cat, 938F, 160 hp	2	164.48	56.00	15.00	0.21	5.69
Excavator, Motor Grader						
Cat, 140G, 165 hp	2	164.48	56.00	15.00	0.21	5.69
Cranes, 225 Ton						
Manitowoc 999 (390 hp)	2	173.91	54.43	7.40	0.21	3.17
Cranes, 150 Ton						
Manitowoc 555 (340 hp)	2	173.91	54.43	7.40	0.21	3.17
Cranes, 20 Ton						
Grove RT530E-2 (160 hp)	2	164.48	56.00	15.00	0.21	5.69
Manlift, JLG & Scissor Lift						
60 Footer, 35 hp	2	170.61	89.05	11.12	0.21	12.17
80 Footer, 35 hp	2	170.61	89.05	11.12	0.21	12.17
Scissor Lift, 25 hp	2	160.21	125.59	17.47	0.21	8.79
Water Trucks						
International	na	227.93	118.67	19.67	0.21	9.69
Welders						
200 AMP Diesel, 35 hp	2	170.61	89.05	11.12	0.21	12.17
300 AMP Diesel, 45 hp	2	170.61	89.05	11.12	0.21	12.17
Trucks, Light Duty						
1500 Light Duty	na	27.86	197.54	17.32	0.18	1.98
Trucks, Fuel/Lube						
International	na	227.93	118.67	19.67	0.21	9.69
Trucks, Large						
Cat, 725, 309 hp	2	173.91	54.43	7.40	0.21	3.17
Flatbed Ford	na	149.14	152.96	16.01	0.24	4.30
Trucks, Large						
Dump Trucks - Contract	na	227.93	118.67	19.67	0.21	9.69
Tanks, Fuel/Lube						
750 Gallons Each						
Truck, Concrete Pump						
International	na	227.93	118.67	19.67	0.21	9.69
Heavy Hauler	2	173.91	54.43	7.40	0.21	3.17

Notes: Onsite Combustion Emissions
(1) - Steady State Emission Factors from Table A2 of EPA November 2002 NR-009b Publication.
(2) - In use adjustment factors per Table A3 EPA November 2002 NR-009b Publication.
(3) - PM10 and SO2 adjustments due to Equation 5 and Equation 7 on pages 18 and 19, Respectively of EPA Report No. NR-009b
(4) - Calculation uses adjusted BSFC and assumed 7.1 lbs/gallon. The onroad emission factors are not adjusted.
(5) - Daily fuel use based on peak combustion month equipment schedule.
(6) - Annual fuel use based on average level during peak 12-month period.
(7) - Annual fuel use based on average level during entire construction period.

Table 5.1E1-7A Power Plant Work Equipment	Daily NOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	3.66	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	3.66	3.66	3.66
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.66	15.66	15.66	15.66	15.66
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.70	0.70	0.70	0.70	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.47	0.23	0.70	0.70	0.70	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	3.02	3.02	1.51	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	3.02	3.02	3.02	3.02	3.02
Dozer																			
Cat, D4, 80 hp	0.00	0.00	6.17	6.17	6.17	6.17	3.09	3.09	3.09	3.09	3.09	3.09	3.09	0.00	3.09	3.09	3.09	3.09	3.09
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	5.60	5.60	5.60	5.60	5.60	5.60	5.60	2.80	2.80	2.80	2.80	2.80	5.60	5.60	2.80	2.80	2.80
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	8.42	8.42	8.42	8.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	5.33	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.33	5.33	5.33	5.33
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	2.43	2.43	2.43	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	2.43	2.43	2.43
80 Footer, 35 hp	0.00	0.00	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	2.43	2.43	2.43	2.43	2.43
Scissor Lift, 25 hp	0.00	0.00	1.14	1.14	1.14	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28
Water Trucks																			
International	0.00	0.00	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	2.60	2.60	3.90	6.50	6.50	6.50	6.50	6.50	5.20	5.20	5.20	5.20	5.20	5.20	3.90	3.90	3.90
300 AMP Diesel, 45 hp	0.00	0.00	2.60	2.60	2.60	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	2.60	2.60	2.60
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	1.11	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	0.83	0.83	0.56	0.56	0.56	0.56
Trucks, Fuel/Lube																			
International	0.00	0.00	5.71	5.71	2.85	2.85	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84
Flatbed Ford	0.00	0.00	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	54.79	54.79	31.96	31.96	31.96	31.96	27.40	27.40	18.26	18.26	9.13	9.13	4.57	4.57	4.57	4.57	4.57
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	0.00	0.00	0.00	0.00
Heavy Hauler	0.00	0.00	1.32	3.97	3.97	0.00	0.00	5.29	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	117.89	**121.80**	96.38	98.66	87.87	92.92	85.53	78.76	68.33	68.33	59.20	55.56	73.34	74.97	66.20	66.20	66.20
Monthly Emissions (lbs/month) =	0.00	0.00	2,357.79	2,435.96	1,927.51	1,973.26	1,757.40	1,858.46	1,710.55	1,575.27	1,366.63	1,366.63	1,184.00	1,111.13	1,466.84	1,499.37	1,323.97	1,323.97	1,323.97
Annual Emissions (lbs/year) =												**18,329.46**	19,513.46	20,624.59	19,733.64	18,797.04	18,193.50	17,544.21	17,110.78
Annual Emissions (tons/year) =												**9.16**	9.76	10.31	9.87	9.40	9.10	8.77	8.56

Table 5.1E1-7B Site Prep Equipment	Daily NOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	13.68	13.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	4.82	4.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	12.35	12.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	8.42	8.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	11.41	11.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	5.71	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	2.98	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	9.13	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	89.02	101.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	2,136.47	2,445.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**4,582.42**	2,445.95	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**2.29**	1.22	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-7C Berm Work Equipment	Daily NOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	16.84	16.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	9.65	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	6.17	6.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	11.19	16.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	16.84	25.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	4.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	11.41	17.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	2.98	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	108.44	130.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	6.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	194.12	259.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	4,658.90	6,236.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**10,894.97**	6,236.07	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**5.45**	3.12	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-7D Reclaim Water Line Equipment	Daily NOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	6.84	6.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	6.17	6.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	11.19	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	8.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	5.71	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	50.44	24.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	1,210.52	597.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**1,807.55**	597.03	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**0.90**	0.30	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-7E Transmission Equipment	Daily NOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.80	2.80	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	2.43	2.43	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.56	0.56	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.84	3.84	3.84	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49	1.49	1.49	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.57	4.57	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.42	3.42	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.96	24.45	9.45	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	459.25	489.08	189.10	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**459.25**	948.34	1,137.44	1,137.44	1,137.44	1,137.44	1,137.44	1,137.44
Annual Emissions (tons/year) =												**0.23**	0.47	0.57	0.57	0.57	0.57	0.57	0.57

Table 5.1E1-8A Power Plant Work Equipment	Daily CO Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	2.87	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	2.87	2.87	2.87
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.33	5.33	5.33	5.33	5.33
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	28.05	28.05	28.05	28.05	18.70	18.70	18.70	18.70	18.70	18.70	18.70	18.70	18.70	18.70	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	18.70	9.35	28.05	28.05	28.05	18.70	18.70	18.70	18.70	18.70	18.70	18.70	18.70	18.70	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	2.44	2.44	1.22	1.22	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	2.44	2.44	2.44	2.44	2.44
Dozer																			
Cat, D4, 80 hp	0.00	0.00	5.00	5.00	5.00	5.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	0.00	2.50	2.50	2.50	2.50	2.50
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	4.54	4.54	4.54	4.54	4.54	4.54	4.54	2.27	2.27	2.27	2.27	2.27	4.54	4.54	2.27	2.27	2.27
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	2.87	2.87	2.87	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	1.81	1.81	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81	1.81	1.81	1.81
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	1.27	1.27	1.27	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.27	1.27	1.27
80 Footer, 35 hp	0.00	0.00	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	1.27	1.27	1.27	1.27	1.27
Scissor Lift, 25 hp	0.00	0.00	0.89	0.89	0.89	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79
Water Trucks																			
International	0.00	0.00	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	1.36	1.36	2.04	3.39	3.39	3.39	3.39	3.39	2.71	2.71	2.71	2.71	2.71	2.71	2.04	2.04	2.04
300 AMP Diesel, 45 hp	0.00	0.00	1.36	1.36	1.36	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	1.36	1.36	1.36
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	7.89	9.86	9.86	9.86	9.86	9.86	9.86	9.86	9.86	9.86	9.86	5.92	5.92	3.94	3.94	3.94	3.94
Trucks, Fuel/Lube																			
International	0.00	0.00	2.97	2.97	1.49	1.49	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Flatbed Ford	0.00	0.00	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	28.53	28.53	16.64	16.64	16.64	16.64	14.26	14.26	9.51	9.51	4.75	4.75	2.38	2.38	2.38	2.38	2.38
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	0.00	0.00	0.00	0.00
Heavy Hauler	0.00	0.00	0.41	1.24	1.24	0.00	0.00	1.65	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	116.98	111.39	116.17	118.49	105.23	97.53	93.52	90.01	84.58	84.58	79.82	73.37	83.01	81.07	38.45	38.45	38.45
Monthly Emissions (lbs/month) =	0.00	0.00	2,339.59	2,227.71	2,323.43	2,369.85	2,104.54	1,950.63	1,870.37	1,800.18	1,691.52	1,691.52	1,596.43	1,467.50	1,660.24	1,621.42	769.05	769.05	769.05
Annual Emissions (lbs/year) =												20,369.34	21,965.77	23,433.27	**22,753.91**	22,147.62	20,593.24	18,992.43	17,656.93
Annual Emissions (tons/year) =												10.18	10.98	11.72	**11.38**	11.07	10.30	9.50	8.83

Table 5.1E1-8B Site Prep Equipment	Daily CO Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	4.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	4.66	4.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	3.91	3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	10.01	10.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	4.54	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	2.87	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	5.94	5.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	3.94	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	3.05	3.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	4.75	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	53.70	58.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	1,288.86	1,394.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												2,683.09	1,394.22	0.00	**0.00**	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												1.34	0.70	0.00	**0.00**	0.00	0.00	0.00	0.00

Table 5.1E1-8C Berm Work Equipment	Daily CO Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	4.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	5.73	5.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	7.82	7.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	9.07	13.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	5.73	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	5.94	8.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	7.89	7.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	3.05	3.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	56.46	67.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	109.94	143.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	2,638.50	3,435.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												6,073.70	3,435.20	0.00	**0.00**	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												3.04	1.72	0.00	**0.00**	0.00	0.00	0.00	0.00

Table 5.1E1-8D Reclaim Water Line Equipment	Daily CO Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	9.07	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	3.94	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	32.90	18.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	789.59	450.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												1,240.46	450.87	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.62	0.23	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-8E Transmission Equipment	Daily CO Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	1.27	1.27	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.89	0.89	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97	3.94	3.94	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.20	1.20	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.09	16.70	8.83	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	281.82	333.93	176.69	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												281.82	615.75	792.43	792.43	792.43	792.43	792.43	792.43
Annual Emissions (tons/year) =												0.14	0.31	0.40	0.40	0.40	0.40	0.40	0.40

Table 5.1E1-9A Power Plant Work Equipment	Daily VOC Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.40	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.40	0.40	0.40
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	1.43	1.43	1.43	1.43
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	1.47	1.47	1.47	1.47	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.98	0.49	1.47	1.47	1.47	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.26	0.26	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.26	0.26	0.26	0.26
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.53	0.53	0.53	0.53	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.00	0.27	0.27	0.27	0.27	0.27
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.48	0.48	0.24	0.24	0.24
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.77	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.49	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.49
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.16	0.16	0.16	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.16	0.16	0.16
80 Footer, 35 hp	0.00	0.00	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.16	0.16	0.16	0.16	0.16
Scissor Lift, 25 hp	0.00	0.00	0.12	0.12	0.12	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Water Trucks																			
International	0.00	0.00	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.17	0.17	0.25	0.42	0.42	0.42	0.42	0.42	0.34	0.34	0.34	0.34	0.34	0.34	0.25	0.25	0.25
300 AMP Diesel, 45 hp	0.00	0.00	0.17	0.17	0.17	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.17	0.17	0.17
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.69	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.52	0.52	0.35	0.35	0.35	0.35
Trucks, Fuel/Lube																			
International	0.00	0.00	0.49	0.49	0.25	0.25	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Flatbed Ford	0.00	0.00	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	4.73	4.73	2.76	2.76	2.76	2.76	2.36	2.36	1.58	1.58	0.79	0.79	0.39	0.39	0.39	0.39	0.39
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.00	0.00	0.00	0.00
Heavy Hauler	0.00	0.00	0.06	0.17	0.17	0.00	0.00	0.22	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	12.93	12.86	11.58	11.87	10.40	10.13	9.55	9.14	8.27	8.27	7.48	6.87	8.44	8.46	5.87	5.87	5.87
Monthly Emissions (lbs/month) =	0.00	0.00	258.64	257.21	231.56	237.34	207.96	202.66	191.05	182.85	165.39	165.39	149.62	137.38	168.77	169.13	117.47	117.47	117.47
Annual Emissions (lbs/year) =												2,100.05	**2,249.67**	2,387.04	2,297.18	2,209.10	2,095.01	1,975.14	1,884.64
Annual Emissions (tons/year) =												1.05	**1.12**	1.19	1.15	1.10	1.05	0.99	0.94

Table 5.1E1-9B Site Prep Equipment	Daily VOC Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	1.25	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.35	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	8.31	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	199.46	227.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												427.16	**227.69**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.21	**0.11**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-9C Berm Work Equipment	Daily VOC Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.97	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	1.54	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.99	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	9.36	11.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	17.63	23.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	423.02	564.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												987.18	**564.15**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.49	**0.28**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-9D Reclaim Water Line Equipment	Daily VOC Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.97	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.35	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	4.73	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	113.45	59.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												172.94	**59.50**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.09	**0.03**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-9E Transmission Equipment	Daily VOC Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.16	0.16	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.12	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.35	0.35	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02	2.27	0.95	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.30	45.34	19.03	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												40.30	**85.64**	104.68	104.68	104.68	104.68	104.68	104.68
Annual Emissions (tons/year) =												0.02	**0.04**	0.05	0.05	0.05	0.05	0.05	0.05

Table 5.1E1-10A Power Plant Work Equipment	Daily SOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heavy Hauler	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	0.13	0.14	0.11	0.12	0.10	0.11	0.10	0.09	0.08	0.08	0.07	0.07	0.09	0.09	0.08	0.08	0.08
Monthly Emissions (lbs/month) =	0.00	0.00	2.64	2.77	2.28	2.34	2.04	2.16	2.01	1.85	1.64	1.64	1.47	1.32	1.80	1.83	1.64	1.64	1.64
Annual Emissions (lbs/year) =												21.37	**22.85**	24.17	23.33	22.39	21.75	21.04	20.64
Annual Emissions (tons/year) =												0.01	**0.01**	0.01	0.01	0.01	0.01	0.01	0.01

Table 5.1E1-10B Site Prep Equipment	Daily SOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.11	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	2.57	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												5.53	**2.96**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-10C Berm Work Equipment	Daily SOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.21	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	5.07	6.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												11.87	**6.79**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.01	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-10D Reclaim Water Line Equipment	Daily SOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	1.46	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												2.23	**0.77**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-10E Transmission Equipment	Daily SOx Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.63	0.30	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												0.56	**1.19**	1.49	1.49	1.49	1.49	1.49	1.49
Annual Emissions (tons/year) =												0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-11A Power Plant Work Equipment	Daily PM10 Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.20	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.20	0.20	0.20
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.54	0.54
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.03	0.02	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.13	0.13	0.07	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.27	0.27	0.27	0.27	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.14	0.14	0.14	0.14	0.14
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.12	0.12	0.12	0.12	0.12	0.25	0.25	0.12	0.12	0.12
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.29	0.29	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.18	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.18
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.17	0.17	0.17	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.17	0.17	0.17
80 Footer, 35 hp	0.00	0.00	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.17	0.17	0.17	0.17	0.17
Scissor Lift, 25 hp	0.00	0.00	0.06	0.06	0.06	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Water Trucks																			
International	0.00	0.00	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.19	0.19	0.28	0.46	0.46	0.46	0.46	0.46	0.37	0.37	0.37	0.37	0.37	0.37	0.28	0.28	0.28
300 AMP Diesel, 45 hp	0.00	0.00	0.19	0.19	0.19	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.19	0.19	0.19
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.06	0.06	0.04	0.04	0.04	0.04
Trucks, Fuel/Lube																			
International	0.00	0.00	0.24	0.24	0.12	0.12	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Flatbed Ford	0.00	0.00	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	2.33	2.33	1.36	1.36	1.36	1.36	1.17	1.17	0.78	0.78	0.39	0.39	0.19	0.19	0.19	0.19	0.19
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.00	0.00	0.00
Heavy Hauler	0.00	0.00	0.02	0.07	0.07	0.00	0.00	0.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	5.13	5.25	4.22	4.57	4.21	4.29	4.01	3.81	3.33	3.33	2.94	2.76	3.48	3.49	2.97	2.97	2.97
Monthly Emissions (lbs/month) =	0.00	0.00	102.68	105.07	84.35	91.45	84.23	85.85	80.14	76.20	66.58	66.58	58.81	55.27	69.50	69.88	59.38	59.38	59.38
Annual Emissions (lbs/year) =												843.13	**901.94**	957.21	924.04	888.84	863.87	831.80	806.95
Annual Emissions (tons/year) =												0.42	**0.45**	0.48	0.46	0.44	0.43	0.42	0.40

Table 5.1E1-11B Site Prep Equipment	Daily PM10 Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.21	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	3.62	4.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	86.78	97.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												184.26	**97.48**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.09	**0.05**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-11C Berm Work	Daily PM10 Emissions (lbs/day)																		
Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.50	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.58	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.49	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	4.61	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	7.96	10.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	191.00	255.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												446.62	**255.63**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.22	**0.13**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-11D Reclaim Water Line	Daily PM10 Emissions (lbs/day)																		
Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.50	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	2.08	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	49.90	25.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												74.93	**25.03**	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												0.04	**0.01**	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-11E Transmission Equipment	Daily PM10 Emissions (lbs/day) Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.17	0.17	0.00	0.00	0.00	0.00	0.00
80 Footer, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift, 25 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00
Water Trucks																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300 AMP Diesel, 45 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.04	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	1.00	0.39	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.84	19.97	7.77	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												17.84	**37.81**	45.58	45.58	45.58	45.58	45.58	45.58
Annual Emissions (tons/year) =												0.01	**0.02**	0.02	0.02	0.02	0.02	0.02	0.02

Table 5.1E1-12
Offsite Delivery Truck Emissions

Delivery Truck Daily Emissions (Maximum)												
Number of Deliveries Per Day(1)	Average Round Trip Haul Distance (miles)	Vehicle Miles Traveled Per Day	Emission Factors (lbs/vmt)(1)					Daily Emissions (lbs/day)				
			NOx	CO	VOC	SOx	PM10	NOx	CO	VOC	SOx	PM10
40	80	3200	0.0418	0.0218	0.0036	0.0000	0.0018	133.69	69.60	11.54	0.12	5.69
Idle exhaust (2)												0.168

Delivery Truck Peak Annual Emissions												
Number of Deliveries Per Year	Average Round Trip Haul Distance (miles)	Vehicle Miles Traveled Per Year	Emission Factors (lbs/vmt)(1)					Annual Emissions (tons/yr)				
			NOx	CO	VOC	SOx	PM10	NOx	CO	VOC	SOx	PM10
4044	80	323,520	0.0418	0.0218	0.0036	0.0000	0.0018	6.76	3.52	0.58	0.01	0.29
Idle exhaust (2,3)												0.00849

Notes:
(1) Emission factors for delivery trucks from EMFAC2002, V2.2, San Diego County, model years 1965 to 2008.
(2) Peak annual number of trucks per year times 1 hr idle time per visit times 0.0042 lb/hr
(3) Based on 1.91 g/hr idle emission rate for the composite HDD truck fleet in 2001 from EPA's PART5 model.

Table 5.1E1-13
Offsite Worker Travel Emissions

Worker Travel Daily Emissions (Maximum)														
Number of Workers Per Day(1)	Average Vehicle Occupancy (person/veh.)	Number of Round Trips Per Day	Average Round Trip Haul Distance (Miles)	Vehicle Miles Traveled Per Day (Miles)	Emission Factors (lbs/vmt)(1)					Daily Emissions (lbs/day)				
					NOx	CO	VOC	SOx	PM10	NOx	CO	VOC	SOx	PM10
357	1	357	80	28,560	0.0012	0.0107	0.0010	0.0000	0.0001	33.51	304.46	29.17	0.26	2.48

Worker Travel Peak Annual Emissions															
Average Number of Workers Per Day	Average Vehicle Occupancy (person/veh.)	Number of Round Trips Per Day	Average Round Trip Haul Distance (Miles)	Days per Year	Vehicle Miles Traveled Per Year	Emission Factors (lbs/vmt)(1)					Annual Emissions (tons/yr)				
						NOx	CO	VOC	SOx	PM10	NOx	CO	VOC	SOx	PM10
275	1	275	80	240	5,273,600	0.0012	0.0107	0.0010	0.0000	0.0001	3.09	28.11	2.69	0.02	0.23

Notes:
(1) Emission factors for worker travel from EMFAC2002, V2.2, San Diego County, model years 1965 to 2008.

Table 5.1E1-14
Offsite Rail Haul Emissions

Rail Delivery Daily Emissions (Maximum)											
Inbound						Outbound					
Number of Railcars per day	Loaded Weight of Railcar (tons)	Total Gross Weight of Railcars (tons)	One-Way Haul Distance (miles)	Unit Fuel Use Factor (gal/KGTM)	Fuel Use (gals)	Number of Railcars per day	Tare Weight of Railcar (tons)	Total Gross Weight of Railcars (tons)	One-Way Haul Distance (miles)	Unit Fuel Use Factor (gal/KGTM)	Fuel Use (gals)
15	110	1650	40	1.06	70	15	27	405	40	1.06	17

Total Fuel Use (gals)	Emission Factors (lbs/1000 gals)(1)					Daily Emissions (lbs/day)					
	NOx	CO	VOC	SOx	PM10	NOx	CO	VOC	SOx	PM10	
87	595	59	22	0.21	15	51.58	5.08	1.91	0.02	1.28	

Rail Delivery Annual Emissions										
Total Number of Rail Deliveries per Year	Emissions per Delivery (lbs/rail delivery)					Annual Emissions (tons/yr)				
	NOx	CO	VOC	SOx	PM10	NOx	CO	VOC	SOx	PM10
44.0	51.58	5.08	1.91	0.02	1.28	1.13	0.11	0.04	0.00	0.03

Notes:
(1) EPA publication "Emission Factors for Locomotives", December 1997, EPA420-F-97-051.

Table 5.1E1-15A
Construction Equipment Process Rates For Dust Calculations - Power Plant

Equipment	Per Unit Daily Process Rate	Units	Total Daily Process Rate Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm, 25 hp	N/A	N/A																			
Paving Equipment																					
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	N/A	N/A																			
Compactors																					
Cat, CS-563, Diesel, 145 hp	2.2	vmt/day	0.00	0.00	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																					
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	N/A	N/A																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	N/A	N/A																			
Concrete Vibrators																					
North Rock, flex shaft, electric	N/A	N/A																			
Light Towers																					
Magnum 5000, 15.5 hp	N/A	N/A																			
Dozer																					
Cat, D4, 80 hp	5.6	hrs/day	0.00	0.00	11.20	11.20	11.20	11.20	5.60	5.60	5.60	5.60	5.60	5.60	5.60	0.00	5.60	5.60	5.60	5.60	5.60
Excavator, Back Hoe																					
Cat, 312, 78 hp	945	tons/day	0.00	0.00	1890.00	1890.00	1890.00	1890.00	1890.00	1890.00	1890.00	945.00	945.00	945.00	945.00	945.00	1890.00	1890.00	945.00	945.00	945.00
Excavator, Loader																					
Cat, 938F, 160 hp	672	tons/day	0.00	0.00	1344.00	1344.00	1344.00	1344.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																					
Cat, 140G, 165 hp	3.1	vmt/day	0.00	0.00	3.07	3.07	3.07	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.07	3.07	3.07	3.07
Cranes, 225 Ton																					
Manitowoc 999 (390 hp)	N/A	N/A																			
Cranes, 150 Ton																					
Manitowoc 555 (340 hp)	N/A	N/A																			
Cranes, 20 Ton																					
Grove RT530E-2 (160 hp)	N/A	N/A																			
Manlift, JLG & Scissor Lift																					
60 Footer, 35 hp	N/A	N/A																			
80 Footer, 35 hp	N/A	N/A																			
Scissor Lift, 25 hp	N/A	N/A																			
Water Trucks																					
International	5.1	vmt/day	0.00	0.00	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11
Welders																					
200 AMP Diesel, 35 hp	N/A	N/A																			
300 AMP Diesel, 45 hp	N/A	N/A																			
Trucks, Light Duty																					
1500 Light Duty	2.7	vmt/day	0.00	0.00	10.91	13.64	13.64	13.64	13.64	13.64	13.64	13.64	13.64	13.64	13.64	8.18	8.18	5.45	5.45	5.45	5.45
Trucks, Fuel/Lube																					
International	1.7	vmt/day	0.00	0.00	3.41	3.41	1.70	1.70	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41
Trucks, Large																					
Cat, 725, 309 hp	2.2	vmt/day	0.00	0.00	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22
Flatbed Ford	2.7	vmt/day	0.00	0.00	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Trucks, Large																					
Dump Trucks - Contract	2.7	vmt/day	0.00	0.00	32.73	32.73	19.09	19.09	19.09	19.09	16.36	16.36	10.91	10.91	5.45	5.45	2.73	2.73	2.73	2.73	2.73
Tanks, Fuel/Lube																					
750 Gallons Each	N/A	N/A																			
Truck, Concrete Pump																					
International	2.0	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	435,000	scf/day	0.00	0.00	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000	435,000
Workers	0.1	vmt/day	0.00	0.00	8.24	10.51	10.34	12.33	13.81	14.66	16.08	17.10	17.61	17.44	18.01	17.22	14.83	11.82	10.63	9.38	8.35
Delivery Trucks	0.2	vmt/day	0.00	0.00	1.06	2.43	2.68	3.93	4.45	2.95	2.73	2.40	2.24	2.01	1.45	1.31	1.00	0.48	0.30	0.16	0.27

Table 5.1E1-15B
Construction Equipment Process Rates For Dust Calculations - Site Prep

Equipment	Per Unit Daily Process Rate	Units	Total Daily Process Rate Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm, 25 hp	N/A	N/A																			
Paving Equipment	0																				
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	N/A	N/A																			
Compactors	0																				
Cat, CS-563, Diesel, 145 hp	2.22	vmt/day	4.43	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment	0																				
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	N/A	N/A																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	N/A	N/A																			
Concrete Vibrators	0																				
North Rock, flex shaft, electric	N/A	N/A																			
Light Towers	0																				
Magnum 5000, 15.5 hp	N/A	N/A																			
Dozer	0																				
Cat, D4, 80 hp	5.6	hrs/day	11.20	11.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe	0																				
Cat, 312, 78 hp	945	tons/day	945.00	945.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader	0																				
Cat, 938F, 160 hp	672	tons/day	672.00	672.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader	0																				
Cat, 140G, 165 hp	3.07	vmt/day	3.07	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton	0																				
Manitowoc 999 (390 hp)	N/A	N/A																			
Cranes, 150 Ton	0																				
Manitowoc 555 (340 hp)	N/A	N/A																			
Cranes, 20 Ton	0																				
Grove RT530E-2 (160 hp)	N/A	N/A																			
Manlift, JLG & Scissor Lift	0																				
60 Footer, 35 hp	N/A	N/A																			
80 Footer, 35 hp	N/A	N/A																			
Scissor Lift, 25 hp	N/A	N/A																			
Water Trucks	0																				
International	5.11	vmt/day	10.23	10.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders	0																				
200 AMP Diesel, 35 hp	N/A	N/A																			
300 AMP Diesel, 45 hp	N/A	N/A																			
Trucks, Light Duty	0																				
1500 Light Duty	2.73	vmt/day	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube	0																				
International	1.70	vmt/day	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large	0																				
Cat, 725, 309 hp	2.22	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	2.73	vmt/day	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large	0																				
Dump Trucks - Contract	2.73	vmt/day	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube	0																				
750 Gallons Each	N/A	N/A																			
Truck, Concrete Pump	0																				
International	2.05	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	435,000	scf/day	435,000	435,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Workers	0.06	vmt/day	3.30	4.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Trucks	0.16	vmt/day	1.17	1.76	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-15C
Construction Equipment Process Rates For Dust Calculations - Berm Work

Equipment	Per Unit Daily Process Rate	Units	Total Daily Process Rate Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm, 25 hp	N/A	N/A																			
Paving Equipment	0																				
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	N/A	N/A																			
Compactors	0																				
Cat, CS-563, Diesel, 145 hp	2.22	vmt/day	4.43	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment	0																				
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	N/A	N/A																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	N/A	N/A																			
Concrete Vibrators	0																				
North Rock, flex shaft, electric	N/A	N/A																			
Light Towers	0																				
Magnum 5000, 15.5 hp	N/A	N/A																			
Dozer	0																				
Cat, D4, 80 hp	5.6	hrs/day	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe	0																				
Cat, 312, 78 hp	945	tons/day	1890.00	2835.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader	0																				
Cat, 938F, 160 hp	672	tons/day	1344.00	2016.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader	0																				
Cat, 140G, 165 hp	3.07	vmt/day	3.07	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton	0																				
Manitowoc 999 (390 hp)	N/A	N/A																			
Cranes, 150 Ton	0																				
Manitowoc 555 (340 hp)	N/A	N/A																			
Cranes, 20 Ton	0																				
Grove RT530E-2 (160 hp)	N/A	N/A																			
Manlift, JLG & Scissor Lift	0																				
60 Footer, 35 hp	N/A	N/A																			
80 Footer, 35 hp	N/A	N/A																			
Scissor Lift, 25 hp	N/A	N/A																			
Water Trucks	0																				
International	5.11	vmt/day	10.23	15.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders	0																				
200 AMP Diesel, 35 hp	N/A	N/A																			
300 AMP Diesel, 45 hp	N/A	N/A																			
Trucks, Light Duty	0																				
1500 Light Duty	2.73	vmt/day	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube	0																				
International	1.70	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large	0																				
Cat, 725, 309 hp	2.22	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	2.73	vmt/day	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large	0																				
Dump Trucks - Contract	2.73	vmt/day	27.27	32.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube	0																				
750 Gallons Each	N/A	N/A																			
Truck, Concrete Pump	0																				
International	2.05	vmt/day	0.00	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0	scf/day	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Workers	0.06	vmt/day	3.41	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Trucks	0.16	vmt/day	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-15D
Construction Equipment Process Rates For Dust Calculations - Reclaim Water Line

Equipment	Per Unit Daily Process Rate	Units	Total Daily Process Rate Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm, 25 hp	N/A	N/A																			
Paving Equipment	0																				
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	N/A	N/A																			
Compactors	0																				
Cat, CS-563, Diesel, 145 hp	2.22	vmt/day	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment	0																				
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	N/A	N/A																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	N/A	N/A																			
Concrete Vibrators	0																				
North Rock, flex shaft, electric	N/A	N/A																			
Light Towers	0																				
Magnum 5000, 15.5 hp	N/A	N/A																			
Dozer	0																				
Cat, D4, 80 hp	5.6	hrs/day	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe	0																				
Cat, 312, 78 hp	945	tons/day	1890.00	945.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader	0																				
Cat, 938F, 160 hp	672	tons/day	672.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader	0																				
Cat, 140G, 165 hp	3.07	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton	0																				
Manitowoc 999 (390 hp)	N/A	N/A																			
Cranes, 150 Ton	0																				
Manitowoc 555 (340 hp)	N/A	N/A																			
Cranes, 20 Ton	0																				
Grove RT530E-2 (160 hp)	N/A	N/A																			
Manlift, JLG & Scissor Lift	0																				
60 Footer, 35 hp	N/A	N/A																			
80 Footer, 35 hp	N/A	N/A																			
Scissor Lift, 25 hp	N/A	N/A																			
Water Trucks	0																				
International	5.11	vmt/day	5.11	5.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders	0																				
200 AMP Diesel, 35 hp	N/A	N/A																			
300 AMP Diesel, 45 hp	N/A	N/A																			
Trucks, Light Duty	0																				
1500 Light Duty	2.73	vmt/day	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube	0																				
International	1.70	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large	0																				
Cat, 725, 309 hp	2.22	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	2.73	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large	0																				
Dump Trucks - Contract	2.73	vmt/day	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube	0																				
750 Gallons Each	N/A	N/A																			
Truck, Concrete Pump	0																				
International	2.05	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	185,000	scf/day	185,000	185,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Workers	0.06	vmt/day	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Trucks	0.16	vmt/day	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-15E
Construction Equipment Process Rates For Dust Calculations - Transmission

Equipment	Per Unit Daily Process Rate	Units	Total Daily Process Rate Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																					
Ingersoll Rand, Diesel, 185 cfm, 25 hp	N/A	N/A																			
Paving Equipment	0																				
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	N/A	N/A																			
Compactors	0																				
Cat, CS-563, Diesel, 145 hp	2.22	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment	0																				
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	N/A	N/A																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	N/A	N/A																			
Concrete Vibrators	0																				
North Rock, flex shaft, electric	N/A	N/A																			
Light Towers	0																				
Magnum 5000, 15.5 hp	N/A	N/A																			
Dozer	0																				
Cat, D4, 80 hp	5.6	hrs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe	0																				
Cat, 312, 78 hp	945	tons/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	945.00	945.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader	0																				
Cat, 938F, 160 hp	672	tons/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	672.00	672.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader	0																				
Cat, 140G, 165 hp	3.07	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton	0																				
Manitowoc 999 (390 hp)	N/A	N/A																			
Cranes, 150 Ton	0																				
Manitowoc 555 (340 hp)	N/A	N/A																			
Cranes, 20 Ton	0																				
Grove RT530E-2 (160 hp)	N/A	N/A																			
Manlift, JLG & Scissor Lift	0																				
60 Footer, 35 hp	N/A	N/A																			
80 Footer, 35 hp	N/A	N/A																			
Scissor Lift, 25 hp	N/A	N/A																			
Water Trucks	0																				
International	5.11	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders	0																				
200 AMP Diesel, 35 hp	N/A	N/A																			
300 AMP Diesel, 45 hp	N/A	N/A																			
Trucks, Light Duty	0																				
1500 Light Duty	2.73	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.73	5.45	5.45	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube	0																				
International	1.70	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large	0																				
Cat, 725, 309 hp	2.22	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	2.73	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00
Trucks, Large	0																				
Dump Trucks - Contract	2.73	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube	0																				
750 Gallons Each	N/A	N/A																			
Truck, Concrete Pump	0																				
International	2.05	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	138,750	scf/day	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	138,750	138,750	138,750	0.00	0.00	0.00	0.00	0.00
Workers	0.06	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.16	2.27	1.59	0.00	0.00	0.00	0.00	0.00
Delivery Trucks	0.16	vmt/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.13	0.05	0.02	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-16
Fugitive Dust Controlled Emission Factors

Equipment	Units	Uncontrolled PM2.5 Emission Factor (lbs/unit)	Uncontrolled PM10 Emission Factor (lbs/unit)	Control Factor (%)	Controlled PM2.5 Emission Factor (lbs/unit)	Controlled PM10 Emission Factor (lbs/unit)
Air Compressors						
Ingersoll Rand, Diesel, 185 cfm, 25 hp	N/A					
Paving Equipment						
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp	N/A					
Compactors						
Cat, CS-563, Diesel, 145 hp	vmt	0.33	3.25	92%	2.76E-02	2.76E-01
Portable Compression Equipment						
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp	N/A					
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp	N/A					
Concrete Vibrators						
North Rock, flex shaft, electric	N/A					
Light Towers						
Magnum 5000, 15.5 hp	N/A					
Dozer						
Cat, D4, 80 hp	hours	0.23	0.42	0	2.31E-01	4.19E-01
Excavator, Back Hoe						
Cat, 312, 78 hp	tons	5.30E-05	1.51E-03	0%	5.30E-05	1.51E-03
Excavator, Loader						
Cat, 938F, 160 hp	tons	1.29E-05	8.53E-05	0%	1.29E-05	8.53E-05
Excavator, Motor Grader						
Cat, 140G, 165 hp	vmt	0.01932969	0.2754	0%	1.93E-02	2.75E-01
Cranes, 225 Ton						
Manitowoc 999 (390 hp)	N/A					
Cranes, 150 Ton						
Manitowoc 555 (340 hp)	N/A					
Cranes, 20 Ton						
Grove RT530E-2 (160 hp)	N/A					
Manlift, JLG & Scissor Lift						
60 Footer, 35 hp	N/A					
80 Footer, 35 hp	N/A					
Scissor Lift, 25 hp	N/A					
Water Trucks						
International	vmt	0.28	2.84	92%	0.02	0.24
Welders						
200 AMP Diesel, 35 hp	N/A					
300 AMP Diesel, 45 hp	N/A					
Trucks, Light Duty						
1500 Light Duty	vmt	0.10	0.99	92%	0.01	0.08
Trucks, Fuel/Lube						
International	vmt	0.21	2.13	92%	0.02	0.18
Trucks, Large						
Cat, 725, 309 hp	vmt	0.35	3.46	92%	0.03	0.29
Flatbed Ford	vmt	0.14	1.43	92%	0.01	0.12
Trucks, Large						
Dump Trucks - Contract	vmt	0.30	2.98	92%	0.03	0.25
Tanks, Fuel/Lube						
750 Gallons Each	N/A					
Truck, Concrete Pump						
International	vmt	0.30	2.98	92%	0.03	0.25
Windblown Dust (active construction area)	sq.ft.	6.73E-06	1.682E-05	92%	5.71E-07	1.43E-06
Worker Unpaved Road Travel	vmt	0.08	0.77	92%	0.01	0.07
Delivery Truck Unpaved Road Travel	vmt	0.23	2.31	92%	0.02	0.20

Notes:

1. Wind erosion emission factor for active construction area is based on "Improvement of Specific Emission Factors (BACM Project No. 1), Final Report", prepared for South Coast AQMD by Midwest Research Institute, March 1996.
2. Material unloading emission factors are based on AP-42, Section 13.2.4, 11/06.
(Based on average annual wind speed recorded onsite and default soil moisture contents.)
3. Trenching emission factor is based on AP-42, Table 11.9-2 (dragline operations), 1/95.
(Based on default soil moisture content.)
4. Unpaved surface travel emission factors for water trucks, loaders, dump trucks, forklifts, delivery trucks, are based on AP-42, Section 13.2.2, 11/06.
5. Dust control efficiency for unpaved road travel and active excavation area is based on "Control of Open Fugitive Dust Sources", U.S. EPA, 9/88.
(Based on default evaporation rate shown in EPA document, Figure 3-2, 9/88, and typical water application rate shown in EPA document, page 3-23, 9/88.)

Table 5.1E1-17A
Daily Dust Emissions (lbs/day) - Power Plant Work - PM2.5

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	0.00	0.00	2.59	2.59	2.59	2.59	1.29	1.29	1.29	1.29	1.29	1.29	1.29	0.00	1.29	1.29	1.29	1.29	1.29
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.05	0.05	0.05
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.02	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.06	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.06
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	0.00	0.00	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.09	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.07	0.07	0.05	0.05	0.05	0.05
Trucks, Fuel/Lube																			
International	0.00	0.00	0.06	0.06	0.03	0.03	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Flatbed Ford	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.83	0.83	0.48	0.48	0.48	0.48	0.41	0.41	0.28	0.28	0.14	0.14	0.07	0.07	0.07	0.07	0.07
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.00	0.00	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Worker Unpaved Road Travel	0.00	0.00	0.05	0.07	0.07	0.08	0.09	0.10	0.11	0.11	0.12	0.11	0.12	0.11	0.10	0.08	0.07	0.06	0.05
Delivery Truck Unpaved Road Travel	0.00	0.00	0.02	0.05	0.05	0.08	0.09	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.02	0.01	0.01	0.00	0.01
Total =	0.00	0.00	4.35	4.42	4.04	**4.08**	2.81	2.79	2.73	2.68	2.54	2.53	2.39	1.04	2.23	2.19	2.12	2.11	2.11
Monthly Emissions (lbs/month) =	0.00	0.00	87.02	88.31	80.87	81.62	56.27	55.80	54.52	53.52	50.76	50.65	47.75	20.80	44.63	43.72	42.49	42.28	42.18
Annual Emissions (lbs/year) =												659.34	707.09	727.89	685.50	640.91	602.54	563.20	549.11
Annual Emissions (tons/year) =												0.33	0.35	0.36	0.34	0.32	0.30	0.28	0.27

Table 5.1E1-17B
Daily Dust Emissions (lbs/day) - Site Prep - PM2.5

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Unpaved Road Travel	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Truck Unpaved Road Travel	0.02	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	3.52	3.54	0.01	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	84.53	84.98	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**169.82**	85.29	0.31	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**0.08**	0.04	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-17C
Daily Dust Emissions (lbs/day) - Berm Work - PM2.5

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	1.29	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.10	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	0.25	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.69	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Unpaved Road Travel	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Truck Unpaved Road Travel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	2.63	3.01	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	63.15	72.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**135.37**	72.22	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**0.07**	0.04	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-17D
Daily Dust Emissions (lbs/day) - Reclaim Water Line - PM2.5

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	1.29	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.10	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Unpaved Road Travel	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Truck Unpaved Road Travel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	1.80	1.67	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	43.29	40.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**83.49**	40.20	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**0.04**	0.02	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-17E
Daily Dust Emissions (lbs/day) - Transmission - PM2.5

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.05	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.00	0.00	0.00	0.00	0.00
Worker Unpaved Road Travel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Delivery Truck Unpaved Road Travel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.40	0.42	0.23	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	7.94	8.38	4.69	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**7.97**	16.35	21.03	21.03	21.03	21.03	21.03	21.03
Annual Emissions (tons/year) =												**0.00**	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Table 5.1E1-18A
Daily Dust Emissions (lbs/day) - Power Plant Work - PM10

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	0.00	0.00	4.70	4.70	4.70	4.70	2.35	2.35	2.35	2.35	2.35	2.35	2.35	0.00	2.35	2.35	2.35	2.35	2.35
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	2.85	2.85	2.85	2.85	2.85	2.85	2.85	1.43	1.43	1.43	1.43	1.43	2.85	2.85	1.43	1.43	1.43
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.11	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.84	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.84	0.84	0.84
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	0.00	0.00	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.92	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	0.69	0.69	0.46	0.46	0.46	0.46
Trucks, Fuel/Lube																			
International	0.00	0.00	0.62	0.62	0.31	0.31	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Flatbed Ford	0.00	0.00	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	8.28	8.28	4.83	4.83	4.83	4.83	4.14	4.14	2.76	2.76	1.38	1.38	0.69	0.69	0.69	0.69	0.69
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.00	0.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Worker Unpaved Road Travel	0.00	0.00	0.54	0.69	0.68	0.81	0.90	0.96	1.05	1.12	1.15	1.14	1.18	1.13	0.97	0.77	0.69	0.61	0.55
Delivery Truck Unpaved Road Travel	0.00	0.00	0.21	0.48	0.53	0.77	0.87	0.58	0.53	0.47	0.44	0.39	0.29	0.26	0.20	0.09	0.06	0.03	0.05
Total =	0.00	0.00	22.52	23.17	19.45	**19.82**	17.54	17.30	16.66	15.24	13.86	13.80	12.35	9.46	11.72	11.52	9.98	9.87	9.82
Monthly Emissions (lbs/month) =	0.00	0.00	450.44	463.39	388.97	396.44	350.79	346.02	333.22	304.76	277.19	276.08	247.04	189.23	234.37	230.32	199.55	197.39	196.45
Annual Emissions (lbs/year) =												**3587.28**	3834.33	4023.56	3807.48	3574.42	3385.00	3185.95	3031.61
Annual Emissions (tons/year) =												**1.79**	1.92	2.01	1.90	1.79	1.69	1.59	1.52

Table 5.1E1-18B
Daily Dust Emissions (lbs/day) - Site Prep - PM10

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	4.70	4.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.84	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	2.47	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Unpaved Road Travel	0.22	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Truck Unpaved Road Travel	0.23	0.34	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	13.34	13.53	0.13	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	320.18	324.63	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**647.88**	327.70	3.07	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**0.32**	0.16	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-18C
Daily Dust Emissions (lbs/day) - Berm Work - PM10

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	2.85	4.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.11	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.84	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	2.47	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	6.90	8.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Unpaved Road Travel	0.22	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Truck Unpaved Road Travel	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	17.77	22.44	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	426.54	538.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**965.20**	538.66	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**0.48**	0.27	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-18D
Daily Dust Emissions (lbs/day) - Reclaim Water Line - PM10

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	2.85	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	1.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.26	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Unpaved Road Travel	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery Truck Unpaved Road Travel	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total =	8.48	6.30	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	203.58	151.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**354.72**	151.14	0.00	0.00	0.00	0.00	0.00	0.00
Annual Emissions (tons/year) =												**0.18**	0.08	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.1E1-18E
Daily Dust Emissions (lbs/day) - Transmission - PM10

Equipment	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
Air Compressors																			
Ingersoll Rand, Diesel, 185 cfm, 25 hp																			
Paving Equipment																			
Asphalt Paver, Cat, AP-800D, Diesel, 102 hp																			
Compactors																			
Cat, CS-563, Diesel, 145 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portable Compression Equipment																			
Multiquip, Jumping Jack, MRT-80L, gasoline, 3.3 hp																			
Multiquip, Plate Compactor, MVC-62H, gasoline, 4.6 hp																			
Concrete Vibrators																			
North Rock, flex shaft, electric																			
Light Towers																			
Magnum 5000, 15.5 hp																			
Dozer																			
Cat, D4, 80 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Back Hoe																			
Cat, 312, 78 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Loader																			
Cat, 938F, 160 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Excavator, Motor Grader																			
Cat, 140G, 165 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes, 225 Ton																			
Manitowoc 999 (390 hp)																			
Cranes, 150 Ton																			
Manitowoc 555 (340 hp)																			
Cranes, 20 Ton																			
Grove RT530E-2 (160 hp)																			
Manlift, JLG & Scissor Lift																			
60 Footer, 35 hp																			
80 Footer, 35 hp																			
Scissor Lift, 25 hp																			
Water Trucks																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welders																			
200 AMP Diesel, 35 hp																			
300 AMP Diesel, 45 hp																			
Trucks, Light Duty																			
1500 Light Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.46	0.46	0.00	0.00	0.00	0.00	0.00
Trucks, Fuel/Lube																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Cat, 725, 309 hp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.65	0.65	0.00	0.00	0.00	0.00	0.00
Flatbed Ford	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.33	0.00	0.00	0.00	0.00	0.00
Trucks, Large																			
Dump Trucks - Contract	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Tanks, Fuel/Lube																			
750 Gallons Each																			
Truck, Concrete Pump																			
International	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00
Windblown Dust (active construction area)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.20	0.00	0.00	0.00	0.00	0.00
Worker Unpaved Road Travel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.15	0.10	0.00	0.00	0.00	0.00	0.00
Delivery Truck Unpaved Road Travel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Total =	0.00	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.02	4.27	4.49	1.75	0.00	0.00	0.00	0.00	0.00
Monthly Emissions (lbs/month) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	85.38	89.79	34.98	0.00	0.00	0.00	0.00	0.00
Annual Emissions (lbs/year) =												**85.68**	175.48	210.45	210.45	210.45	210.45	210.45	210.45
Annual Emissions (tons/year) =												**0.04**	0.09	0.11	0.11	0.11	0.11	0.11	0.11

Table 5.1E1-19
Daily and Annual Construction Emissions

Daily Construction Emissions (peak month)						
(lbs/day)						
	NOx	CO	VOC	SOx	PM2.5	PM10
Onsite						
Construction Equipment	386.63	220.01	35.47	0.44	15.92	15.92
Fugitive Dust					8.22	42.27
Subtotal =	386.63	220.01	35.47	0.44	24.15	58.19
Offsite						
Worker Travel	33.51	304.46	29.17	0.26	2.48	2.48
Truck Deliveries	133.69	69.60	11.54	0.12	5.69	5.69
Rail Deliveries	51.58	5.08	1.91	0.02	1.28	1.28
Subtotal =	218.78	379.15	42.62	0.40	9.45	9.45
Total =	605.40	599.16	78.09	0.84	33.60	67.64

Peak Annual Construction Emissions (12-month period) (tons/yr)						
	NOx	CO	VOC	SOx	PM2.5	PM10
Onsite						
Construction Equipment	18.04	15.32	1.86	0.02	0.79	0.79
Fugitive Dust					0.53	2.82
Subtotal =	18.04	15.32	1.86	0.02	1.32	3.61
Offsite						
Worker Travel	3.09	28.11	2.69	0.02	0.23	0.23
Truck Deliveries	6.76	3.52	0.58	0.01	0.29	0.29
Rail Deliveries	1.13	0.11	0.04	0.00	0.03	0.03
Subtotal =	10.99	31.74	3.32	0.03	0.54	0.54
Total =	29.02	47.06	5.18	0.05	1.86	4.16

APPENDIX 5.1F

Cumulative Impacts Analysis

sierra research

1801 J Street
Sacramento, CA 95814
Tel: (916) 444-6666
Fax: (916) 444-8373

Ann Arbor, MI
Tel: (734) 761-6666
Fax: (734) 761-6755

June 8, 2007

Cynthia Gould
San Diego County Air Pollution Control District
10124 Old Grove Road
San Diego, CA 92131

Subject: Cumulative Air Quality Impacts Analysis Public Records Request
Carlsbad Energy Center Project (CECP)

Dear Ms. Gould:

This is a public records request for specific information needed to perform a cumulative air quality impact analysis in conformance with the requirements of the California Environmental Quality Act as requested by the California Energy Commission to be included in an Application for Certification. The proposed project is called the Carlsbad Energy Center (CECP), and will be sited on the property of the existing Encina Power Station, located at 4600 Carlsbad Boulevard, Carlsbad, CA. The proposed CECP would be located at 33 degrees 8 minutes 27 seconds north latitude and 117 degrees 20 minutes 3 seconds west longitude, equivalent to stack Universal Transverse Mercator (UTM) coordinates of 3,666,945.98 meters northing, 468,833.15 meters easting in Zone 11 of North American Datum 1927 (NAD 27).

Specifically, we request the following information for facilities located within a six-mile radius of the CECP project site:

- A list of all new Authority to Construct permits issued after January 1, 2006, for projects that result in a net emissions increase of 5 tons per year or more of NOx, PM_{10}, SOx, or CO. The list should include the name of the facility, the location of the facility, the type of new/modified equipment, and the net emission increases for all criteria pollutants.

- A list of projects for which Authority to Construct permits have not been issued but that are reasonably foreseeable. The list should include the following information, to the extent available:

    - Facility name
    - Facility location
    - Type of new/modified basic emitting equipment
    - Net emission increases for all criteria pollutants

- For each new/modified source identified above, please provide the following facility information for each stack:
    - Height
    - Inside diameter
    - Exit temperature
    - Exhaust flow rate or velocity
    - Base elevation
    - UTM coordinates

If you have any questions regarding this request, please do not hesitate to call me at (916) 444-6666 or (916) 833-8774 (cell).

Sincerely,

Eric Walther

c: Tim Hemig, NRG West

From: Gould, Cynthia [mailto:Cynthia.Gould@sdcounty.ca.gov]
Sent: Thursday, June 21, 2007 4:48 PM
To: Eric Walther
Subject: Carlsbad Energy Center Project Public Info Request

Good Afternoon: attached is a PDF of the map of zip codes within 6 miles of the above mentioned project. Also attached is the spreadsheet of applications received since 2006 whose zip codes fall within the six mile radius. This spreadsheet contains emissions data in tons per year. Because of our computer system, I can not pull data that describes the stack information. I hope this information is helpful. Please contact me should you have questions. Thank you.

Cynthia R. Gould, B.A., B.S., GISci
APCD Aide, Permit Processing
10124 Old Grove Road
San Diego, CA 92131
(858) 586-2618
fax: (858) 586-2601
Celebrating 50 years of air quality progress!

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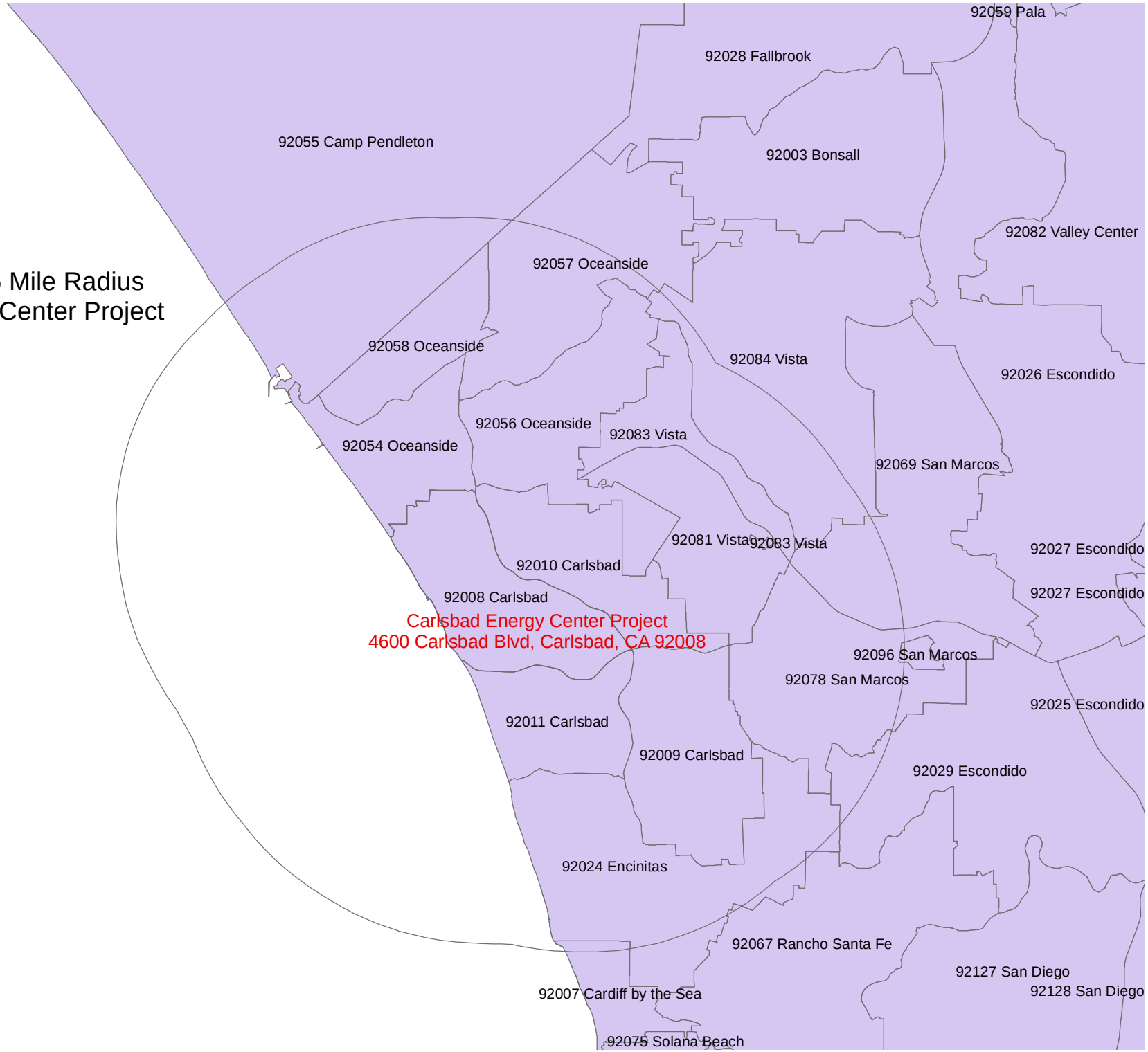
Zip Codes Within 6 Mile Radius of Carlsbad Energy Center Project



ID_NUM	ID_CODE	DBA	CONTACT_TITLE	STREET_NUM	STREET_NAME	CITY	STATE	ZIP	TELEPHONE	AP_NUM	ENG_AP_	AP_TYPE	EQUIP_DESC	ENG_SECTION	AP_RECVD_DATE	FACILITY TOTALS (Criteria Pollutants)						
																CO (tpy)	NOX (tpy)	PM10 (tpy)	VOC or RG (tpy)	SOX (tpy)	Year of Data (Crit)	Report Date (Crit)
71	A	L&L PRINTERS CARLSBAD LLC	PLANT MGR DAVENPORT CARL	6200	YARROW DR	CARLSBAD	CA	92011	760-438-3456	984292		N	GRAPHIC ARTS OPERATION MITSUBISHI MODEL D3000S-4-DI S/N 3890/A345	C	4/25/06 11:38 AM	0.2	0.1	0.1	1.0	0.1	2000	7/8/97
87080	A	HUNTER INDUSTRIES INC	EH&S ANTHONY DENNIS	1940	DIAMOND ST	SAN MARCOS	CA	92069	760-744-5240	984642		N	LOCATED AT BLDG 1943. EMERGENCY STANDBY ENGINE, CUMMINS, MODEL 6BTAA5.9-G1	M	8/11/06 12:00 AM	18.8	1.7	1.0	2.8	0.1	2003	9/28/00
89246	A	PRECISION LITHO INC	CONTROLLER	1185	JOSHUA WY	VISTA	CA	92083	760-727-9400	984031	A	N	GRAPHIC ARTS OPERATION, KOMORI LITHOGRAPHIC PRESS, MODEL L-II-240, S/N 301	C	1/24/06 2:16 PM				3.4		2003	7/6/00
89246	A	PRECISION LITHO INC	CONTROLLER	1185	JOSHUA WY	VISTA	CA	92083	760-727-9400	984032	A	N	GRAPHIC ARTS OPERATION, HEIDELBERG OFFSET LITHOGRAPHIC PRESS, MODEL DI-46-4	C	1/24/06 2:16 PM				3.4		2003	7/6/00
89246	A	PRECISION LITHO INC	CONTROLLER	1185	JOSHUA WY	VISTA	CA	92083	760-727-9400	984033	A	N	GRAPHIC ARTS OPERATION, HAMADA LITHOGRAPHIC PRESS, MODEL C248, S/N CT-81061	C	1/24/06 2:17 PM				3.4		2003	7/6/00

From: Ralph DeSiena [mailto:rdesiena@sdapcd.org]
Sent: Monday, June 25, 2007 8:19 AM
To: Eric Walther
Subject: Re: Carlsbad Energy Center Project Public Info Request

Eric,

Doesn't look like much on the list but for an emergency engine and it looks like it is about 7 miles from the facility.
I'm really not sure how the report date and year of data can be prior to 1/1/06 in this spreadsheet.
I guess we can ask Cynthia that.
It doesn't appear that there is anything worthy of inclusion in a cumulative analysis here.

Ralph