APPENDIX 8.1C

Commissioning and Operational Dispersion Modeling

APPENDIX 8.1C

Commissioning and Operational Dispersion Modeling

Tables presented in this Appendix are as follows:

- Table 8.1C.1 Stack Parameters for ISCST3 Input
- Table 8.1C.2a-b Building and Tank Parameters for ISCST3 Input
- Table 8.1C.3a Commissioning Modeling Parameters—Screening
- Table 8.1C.3b Commissioning Modeling Results Summary—Screening
- Table 8.1C.4a Operational Modeling Parameters—Screening
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- Table 8.1C.5a Winter Wind Table
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- Table 8.1C.7 Climatic Data Summaries for Los Angeles Civic Center, CA
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- Figure 8.1C.1 ISC Model Setup

Vernon Power Plant
Table 8.1C.1 Summary Table of Stack Parameters (ISCST3 Input)

Source ID	Source Description	Easting (X) (m)	Northing (Y) (m)	Base Elev. (m)	Stack Height (m)	Stack Diam. (m)
1	Gas Turbine A	388117.17	3762149.47	55.47	54.86	6.10
2	Gas Turbine B	388155.58	3762149.47	55.47	54.86	6.10
3	Gas Turbine C	388193.98	3762149.47	55.47	54.86	6.10
4	Cooling tower 1	388091.98	3762203.66	55.47	17.68	9.14
5	Cooling tower 2	388108.44	3762203.66	55.47	17.68	9.14
6	Cooling tower 3	388124.90	3762203.66	55.47	17.68	9.14
7	Cooling tower 4	388141.36	3762203.66	55.47	17.68	9.14
8	Cooling tower 5	388157.82	3762203.66	55.47	17.68	9.14
9	Cooling tower 6	388174.28	3762203.66	55.47	17.68	9.14
10	Cooling tower 7	388190.74	3762203.66	55.47	17.68	9.14
11	Cooling tower 8	388190.74	3762187.19	55.47	17.68	9.14
12	Cooling tower 9	388174.28	3762187.19	55.47	17.68	9.14
13	Cooling tower 10	388157.82	3762187.19	55.47	17.68	9.14
14	Cooling tower 11	388141.36	3762187.19	55.47	17.68	9.14
15	Cooling tower 12	388124.90	3762187.19	55.47	17.68	9.14
16	Cooling tower 13	388108.44	3762187.19	55.47	17.68	9.14
17	Cooling tower 14	388091.98	3762187.19	55.47	17.68	9.14
18	firepumpE	388320.75	3762162.50	55.47	4.88	0.08
19	firepumpW	388075.60	3762149.00	55.47	4.88	0.08

Vernon Power Plant
Table 8.1C2a Building Parameters for ISCST3 Input

Building Name	Number of Tiers	Tier Number	Base Elevation (ft)	Tier Height (m)	Tier Height (ft)	Number of Corners	Corner 1 East (X) (m)	Corner 1 North (Y) (m)	Corner 2 East (X) (m)	Corner 2 North (Y) (m)	Corner 3 East (X) (m)	Corner 3 North (Y) (m)	Corner 4 East (X) (m)	Corner 4 North (Y) (m)	Corner 5 East (X) (m)	Corner 5 North (Y) (m)	Corner 6 East (X) (m)	Corner 6 North (Y) (m)	Corner 7 East (X) (m)
A1	1	1	182	6.4	20.9974	4	388111.84	3762067.5	388111.84	3762097.9	388122.5	3762097.9	388122.5	3762067.5					
A2	2	1	182	12.5	41.0105	8	388110.46	3762062	388110.46	3762068.9	388113.82	3762076.4	388113.82	3762082.7	388120.52	3762082.7	388120.52	3762076.4	388123.88
A2	*	2	*	21.95	72.0144	4	388110.46	3762062	388110.46	3762068.9	388123.88	3762068.9	388123.88	3762062					
A5a	1	1	182	28.96	95.0131	4	388109.85	3762125.6	388109.85	3762146.2	388124.49	3762146.2	388124.49	3762125.6					
A5b	1	1	182	21.34	70.0131	4	388111.45	3762115.3	388111.45	3762125.6	388123.64	3762125.6	388123.64	3762115.3					
A5c	1	1	182	13.72	45.0131	4	388115.39	3762097.9	388113.39	3762115.3	388121.08	3762115.3	388119.08	3762097.9					
27/28	1	1	182	3.05	10.0066	4	388217.56	3762054.3	388217.56	3762066.4	388226.25	3762066.4	388226.25	3762054.3					
50A	1	1	182	3.66	12.0079	4	388321.31	3762163	388321.31	3762170.3	388331.04	3762170.3	388331.04	3762163					
50B	1	1	182	3.66	12.0079	4	388075.6	3762149	388075.6	3762156.6	388085.33	3762156.6	388085.33	3762149					
35	1	1	182	14.63	47.9987	4	388082.93	3762180	388082.93	3762211.6	388200.11	3762211.6	388200.11	3762180					
38/39	1	1	182	3.66	12.0079	4	388223.81	3762203.5	388223.81	3762215.8	388243.28	3762215.8	388243.28	3762203.5					
51	1	1	182	7.62	25	4	388223.84	3762020.5	388223.84	3762048	388251.34	3762048	388251.34	3762020.5					
18	1	1	182	6.1	20.0131	4	388202.78	3762135.8	388202.78	3762157.7	388214.96	3762157.7	388214.96	3762135.8					
44	1	1	182	6.1	20.0131	4	388312.66	3762182.2	388312.66	3762220.3	388330.93	3762220.3	388330.93	3762182.2					
B1	1	1	182	6.4	20.9974	4	388150.25	3762067.5	388150.25	3762097.9	388160.91	3762097.9	388160.91	3762067.5					
B2	2	1	182	12.5	41.0105	8	388148.87	3762062	388148.87	3762068.9	388152.23	3762076.4	388152.23	3762082.7	388158.93	3762082.7	388158.93	3762076.4	388162.29
B2	*	2	*	21.95	72.0144	4	388148.87	3762062	388148.87	3762068.9	388162.29	3762068.9	388162.29	3762062					
B5a	1	1	182	28.96	95.0131	4	388148.26	3762125.6	388148.26	3762146.2	388162.9	3762146.2	388162.9	3762125.6					
B5b	1	1	182	21.34	70.0131	4	388149.48	3762115.3	388149.48	3762125.6	388161.68	3762125.6	388161.68	3762115.3					
B5c	1	1	182	13.72	45.0131	4	388153.79	3762097.9	388151.79	3762115.3	388159.39	3762115.3	388157.39	3762097.9					
C1	1	1	182	6.4	20.9974	4	388188.65	3762067.5	388188.65	3762097.9	388199.31	3762097.9	388199.31	3762067.5					
C2	2	1	182	12.5	41.0105	8	388187.27	3762062	388187.27	3762068.9	388190.63	3762076.4	388190.63	3762082.7	388197.33	3762082.7	388197.33	3762076.4	388200.69
C2	*	2	*	21.95	72.0144	4	388187.27	3762062	388187.27	3762068.9	388200.69	3762068.9	388200.69	3762062					
C5a	1	1	182	28.96	95.0131	4	388186.66	3762125.6	388186.66	3762146.2	388201.3	3762146.2	388201.3	3762125.6					
C5b	1	1	182	21.34	70.0131	4	388187.88	3762115.3	388187.88	3762125.6	388200.08	3762125.6	388200.08	3762115.3					
C5c	1	1	182	13.72	45.0131	4	388192.17	3762097.9	388190.17	3762115.3	388197.79	3762115.3	388195.79	3762097.9					
out-1	1	1	180.12	13.72	45.0131	10	388359.22	3762207	388359.22	3762166.3	388399.94	3762166.3	388399.94	3762155.8	388425.06	3762155.8	388425.06	3762166.3	388436.34
out-2	1	1	178.15	13.72	45.0131	8	388303.75	3762099.5	388346.22	3762099.5	388346.22	3762084	388407.75	3762084	388406.88	3762099.5	388451.94	3762099.5	388452.81
out-3	1	1	175.85	13.72	45.0131	8	388303.75	3761979	388337.53	3761979	388337.53	3761965.3	388408.59	3761965.3	388408.59	3761980.8	388452.81	3761980.8	388453.69
out-4	1	1	173.88	13.72	45.0131	9	388307.59	3761838	388306.81	3761784.3	388448.53	3761755.3	388455.53	3761756.3	388454	3761840.3	388411.16	3761840.3	388411.16
out-5	1	1	171.92	13.72	45.0131	15	388290.47	3761749.3	388326.28	3761750	388439.97	3761727.3	388439.97	3761695.5	388434.53	3761695.5	388434.53	3761669.8	388429.06
out-6	1	1	173.23	13.72	45.0131	10	388105.94	3761799	388134.75	3761793.5	388149.53	3761788	388162.78	3761781.8	388164.34	3761652.5	388105.94	3761653.3	388105.94
out-7	1	1	175.85	13.72	45.0131	16	387952.38	3761888	387952.03	3761863.8	387948.38	3761864	387949.03	3761822.8	388004.91	3761823	388004.91	3761817.8	388045.5
out-8	1	1	176.84	13.72	45.0131	10	387948.38	3761918.3	388029.53	3761918.5	388029.53	3761914.5	388036.19	3761914.5	388036.19	3761909	388042.16	3761908.5	388042.16
out-9	1	1	180.12	13.72	45.0131	5	388012.44	3762125	388013.63	3762065.5	388013.63	3762057	388039.81	3762057.3	388039.22	3762125.5			
out-11	1	1	185.04	13.72	45.0131	13	387962.22	3762320.3	387962.22	3762249.5	387999.81	3762249	387999.81	3762266.5	388006.88	3762266.5	388006.88	3762251.8	388044.47
out-12	1	1	183.07	13.72	45.0131	10	388075.5	3762324.8	388076.06	3762274.5	388115.28	3762275	388115.28	3762260.5	388122.91	3762260.5	388122.91	3762255.5	388143.03
out-13	1	1	182.74	13.72	45.0131	5	388184.97	3762336.3	388185.53	3762267.5	388235.63	3762268	388235.63	3762330.8	388196.97	3762336.3			
out-14	1	1	182.09	13.72	45.0131	11	388255.38	3762331.3	388256.47	3762268.5	388320.75	3762268.5	388320.75	3762281.8	388327.28	3762281.8	388327.28	3762286.5	388348.5
out-10	1	1	178.48	13.72	45.0131	4	388000.66	3762140.8	387761.63	3762139.8	387761.63	3762003.5	388002.41	3762003.5					
20/21/22	1	1	181.99	22.86	75	6	388207.01	3762075.3	388207.01	3762099.8	388213.11	3762099.8	388213.11	3762117.9	388261.55	3762117.9	388261.55	3762075.3	

Vernon Power Plant
Table 8.1C2a Building Parameters for ISCST3 Input

Building Name	Corner 7 North (Y) (m)	Corner 8 East (X) (m)	Corner 8 North (Y) (m)	Corner 9 East (X) (m)	Corner 9 North (Y) (m)	Corner 10 East (X) (m)	Corner 10 North (Y) (m)	Corner 11 East (X) (m)	Corner 11 North (Y) (m)	Corner 12 East (X) (m)	Corner 12 North (Y) (m)	Corner 13 East (X) (m)	Corner 13 North (Y) (m)	Corner 14 East (X) (m)	Corner 14 North (Y) (m)	Corner 15 East (X) (m)	Corner 15 North (Y) (m)	Corner 16 East (X) (m)	Corner 16 North (Y) (m)
A1																			
A2	3762068.9	388123.88	3762062																
A2																			
A5a																			
A5b																			
A5c																			
27/28																			
50A																			
50B																			
35																			
38/39																			
51																			
18																			
44																			
B1																			
B2	3762068.9	388162.29	3762062																
B2																			
B5a																			
B5b																			
B5c																			
C1																			
C2	3762068.9	388200.69	3762062																
C2																			
C5a																			
C5b																			
C5c																			
out-1	3762166.3	388436.34	3762228.8	388367.88	3762228.8	388367.88	3762208.8												
out-2	3762019.8	388303.75	3762019																
out-3	3761879.3	388304.63	3761877.8																
out-4	3761824.8	388350.44	3761824.8	388350.44	3761838.8														
out-5	3761669.8	388429.06	3761667.3	388422.06	3761667.3	388421.28	3761665	388408.81	3761665	388408.81	3761680.5	388330.19	3761679.8	388330.97	3761662.8	388291.25	3761662.8		
out-6	3761673.5	388096.59	3761674.5	388095.81	3761769.5	388105.94	3761769.5												
out-7	3761818.8	388045.5	3761829.8	388042.16	3761829.8	388042.16	3761854	388038.5	3761854	388038.5	3761856.3	387983.97	3761856.3	387983.63	3761863.3	388008.25	3761863	388007.91	3761888.3
out-8	3761895	388029.53	3761895	388029.19	3761901	387948.72	3761900												
out-9																			
out-11	3762252.3	388045	3762325.3	388005.25	3762325.3	388005.25	3762315.5	387976.94	3762315.5	387976.94	3762322	387961.69	3762321.5						
out-12	3762257.3	388141.97	3762331.3	388120.72	3762331.3	388120.72	3762325.8												
out-13																			
out-14	3762286	388348.5	3762317.5	388320.19	3762317.5	388319.66	3762332.3	388254.28	3762331.8										
out-10																			
20/21/22																			

Vernon Power Plant
Table 8.1C.2b Tank Parameters for ISCST3 Input

	Base Elevation (ft)	Center East, X (m)	Center North, Y (m)	Tank Height (m)	Tank Height (ft)	Tank Diameter (m)
water	55.47	388282.3	3762209	13.716	45	24.384
deminera	55.47	388251.6	3762209	9.144	30	12.192

Table 8.1C.3a Commissioning Modeling Parameters-Screening

	Scenario Per Turbine	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)	SO_2 (lb/hr)	PM_{10} (lb/hr)	Velocity (m/s)	Temperature (K)
24-Hour	**CTG Testing (Full Speed No Load, FSNL)**	14.41	95.92	40.24	0.08	3.06	9.43	359.26
	CTG Testing @ 40% Load	21.56	13.38	28.11	0.21	3.48	11.28	359.26
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load	69.34	132.12	35.20	0.25	4.53	9.58	359.26
	Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load	23.01	15.92	6.37	0.36	4.00	12.38	359.26
	Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning	29.94	16.69	7.71	0.48	5.34	12.38	359.26
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	27.31	13.04	3.28	0.44	4.00	14.79	360.37
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	35.50	14.71	3.87	0.58	4.32	19.04	367.59
	Bypass Operation, STG Initial Roll & Trip Test	10.73	15.53	5.70	0.29	3.34	12.38	359.26
	Bypass Operation, STG Load Test	15.35	16.69	7.71	0.48	5.34	12.38	359.26
	CTG on Bypass, STG Load Test	22.95	15.05	4.31	0.78	5.78	19.04	367.59
	STG Load Test, Combined Cycle, Combined Cycle Testing	33.22	15.74	5.21	1.19	8.69	19.04	367.59
	Commissioning Duct Burners	11.24	18.35	5.24	0.61	5.73	18.20	364.82
	Emissions Tuning	17.82	14.71	3.87	0.58	4.32	19.04	367.59
	Cal ISO Certification	10.40	17.86	3.88	0.54	4.89	19.04	367.59
	RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB	11.24	18.35	5.24	0.61	5.73	18.20	364.82
	Performance Testing	17.70	22.31	5.23	1.11	9.89	19.04	367.59
	Performance Testing with DB	19.49	23.35	8.14	1.26	11.68	18.20	364.82
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	9.43 9.58	359.26 359.26
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	11.28 12.38	359.26 359.26
	Combination Scenario- STG Load Test, Combined Cycle, Combined Cycle Testing; Bypass Operation, STG Load Test	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	19.04	367.59
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	19.04 12.38	367.59 359.26

Table 8.1C.3a Commissioning Modeling Parameters-Screening

	Scenario Per Turbine	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)	SO_2 (lb/hr)	PM_{10} (lb/hr)	Velocity (m/s)	Temperature (K)
8-Hour	**CTG Testing (Full Speed No Load, FSNL)**	43.23	287.76	120.71	0.24	9.17	9.43	359.26
	CTG Testing @ 40% Load	64.67	40.15	84.34	0.63	10.44	11.28	359.26
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load	142.13	269.47	70.43	0.51	9.13	9.58	359.26
	1) Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)							
	2) Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning	48.76	45.44	15.10	0.73	8.09	12.38	359.26
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	56.62	38.34	8.83	0.92	8.07	14.79	360.37
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	73.28	43.10	10.26	1.22	8.72	19.04	367.59
	1) Bypass Operation, STG Initial Roll & Trip Test							
	2) Bypass Operation, STG Load Test	27.58	45.44	15.10	0.73	8.09	12.38	359.26
	1) CTG on Bypass, STG Load Test							
	2) STG Load Test, Combined Cycle, Combined Cycle Testing							
	3) Emissions Tuning	38.27	43.10	10.26	1.22	8.72	19.04	367.59
	Commissioning Duct Burners	18.75	49.64	12.83	1.30	11.90	18.20	364.82
	1) Cal ISO Certification							
	2) Performance Testing	23.91	49.13	10.28	1.14	10.00	19.04	367.59
	1) RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB							
	2) Performance Testing with DB	25.47	50.04	12.83	1.30	11.90	18.20	364.82
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	9.43 9.58	359.26 359.26
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	11.28 12.38	359.26 359.26
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	19.04 12.38	367.59 359.26

Table 8.1C.3a Commissioning Modeling Parameters-Screening

	Scenario Per Turbine	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)	SO_2 (lb/hr)	PM_{10} (lb/hr)	Velocity (m/s)	Temperature (K)
3-Hour	**CTG Testing (Full Speed No Load, FSNL)**	43.80	311.12	121.89	0.24	9.28	9.43	359.26
	CTG Testing @ 40% Load	73.55	102.51	85.15	0.65	10.68	9.58	359.26
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load	142.13	295.63	70.63	0.51	9.14	9.49	359.26
	1) Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning							
	2) Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)	60.77	113.46	26.88	0.73	8.23	9.58	359.26
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	63.67	99.65	20.16	0.92	8.18	9.58	359.26
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	79.95	111.50	22.90	1.22	8.72	9.58	359.26
	1) Bypass Operation, STG Initial Roll & Trip Test							
	2) Bypass Operation, STG Load Test	42.77	113.46	26.88	0.73	8.23	9.58	359.26
	1) CTG on Bypass, STG Load Test							
	2) STG Load Test, Combined Cycle, Combined Cycle Testing							
	3) Emissions Tuning	50.74	111.50	22.90	1.22	8.72	9.58	359.26
	Commissioning Duct Burners	37.79	115.71	24.56	1.30	11.90	9.58	359.26
	1) Cal ISO Certification							
	2) Performance Testing	39.42	116.18	22.92	1.14	10.00	9.58	359.26
	1) RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB							
	2) Performance Testing with DB	40.42	116.76	24.56	1.30	11.90	9.58	359.26
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	9.43	359.26
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	9.58	359.26
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	9.58	359.26

Table 8.1C.3a Commissioning Modeling Parameters-Screening

	Scenario Per Turbine	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)	SO_2 (lb/hr)	PM_{10} (lb/hr)	Velocity (m/s)	Temperature (K)
1-Hour	**CTG Testing (Full Speed No Load, FSNL)**	43.80	385.87	121.89	0.24	9.28	9.43	359.26
	CTG Testing @ 40% Load	98.25	302.05	85.15	0.65	10.68	9.58	359.26
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load	142.13	379.32	71.28	0.51	9.16	9.49	359.26
	1) Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning							
	2) Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)	99.19	331.09	64.59	0.73	8.69	9.58	359.26
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	86.26	295.45	55.68	0.92	8.53	9.58	359.26
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	103.74	330.60	63.62	1.22	8.72	9.58	359.26
	1) Bypass Operation, STG Initial Roll & Trip Test							
	2) Bypass Operation, STG Load Test	91.37	331.09	64.59	0.73	8.69	9.58	359.26
	1) Emissions Tuning							
	2) STG Load Test, Combined Cycle, Combined Cycle Testing							
	3) CTG on Bypass, STG Load Test	92.14	330.60	63.62	1.30	11.90	9.58	359.26
	Commissioning Duct Burners	92.14	330.60	63.62	1.22	8.72	9.58	359.26
	1)Performance Testing							
	2) Cal ISO Certification	90.27	331.49	63.62	1.14	10.00	9.58	359.26
	1)Perfromance Testing with DB							
	2) RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB	90.27	331.49	63.62	1.30	11.90	9.58	359.26
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	9.43	359.26
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	9.58	359.26
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	See Individual Scenarios	9.58	359.26

24-Hr and 8-Hr parameters are based on final loading point of commissioning sequence
1-Hr and 3-Hr parameters are based on the lowest velocity and lowest temperature of commissioning sequence

Table 8.1C.3b Commissioning Modeling Results Summary- Screening

NO_x Results

	Scenario Per Turbine	Unit Emissions							NO_x - Scaled to Actual Emissions							
		Unit1	Unit2	Unit3	Units 1&2	Units 1&3	Units 2&3	All	Unit1	Unit2	Unit3	Units 1&2	Units 1&3	Units 2&3	All	Scenario Maximum
1-Hour	**CTG Testing (Full Speed No Load, FSNL)**	3.45047	3.47792	~~3.47810~~					19.0444	19.1959	~~19.1969~~					19.1959
	CTG Testing @ 40% Load	3.43124	3.45858	~~3.46090~~					42.4766	42.8150	~~42.8437~~					42.8150
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load)	~~3.45047~~	3.47792	3.47810					~~61.7941~~	62.2857	62.2889					62.2889
	1) Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning															
	2) Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)	3.43124	3.45858	3.46090					42.8815	43.2231	43.2521					43.2521
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	3.43124	3.45858	3.46090					37.2916	37.5887	37.6139					37.6139
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	3.43124	3.45858	3.46090					44.8505	45.2078	45.2382					45.2382
	1) Bypass Operation, STG Initial Roll & Trip Test															
	2) Bypass Operation, STG Load Test	3.43124			3.43124				39.5018			39.5018				39.5018
	1) Emissions Tuning															
	2) STG Load Test, Combined Cycle, Combined Cycle Testing															
	3) CTG on Bypass, STG Load Test	3.43124	3.45858					10.29612	39.8368	40.1542					119.5383	**119.5383**
	Commissioning Duct Burners							10.29612							119.5383	**119.5383**
	1)Performance Testing															
	2) Cal ISO Certification							10.29612							117.1054	117.1054
	1)Perfromance Testing with DB															
	2) RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB	3.43124	3.45858	3.46090			6.90382	10.29612	39.0260	39.3370	39.3634			78.5222	117.1054	117.1054
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	3.45047		3.47810		6.92857			61.7941		19.1969		80.9910			80.9910
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	3.43124		3.46090		6.89214			42.8815		42.8437		85.7252			85.7252
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	3.43124	3.45858	3.46090				10.29612	39.8368	40.1542	39.8433				119.5383	**119.5383**

Table 8.1C.3b Commissioning Modeling Results Summary- Screening

CO Results

	Scenario Per Turbine	Unit Emissions							CO - Scaled to Actual Emissions							
		Unit1	Unit2	Unit3	Units 1&2	Units 1&3	Units 2&3	All	Unit1	Unit2	Unit3	Units 1&2	Units 1&3	Units 2&3	All	Scenario Maximum
8-Hour	**CTG Testing (Full Speed No Load, FSNL)**	1.26772	1.26698	1.26513					45.9651	45.9383	45.8712					45.9651
	CTG Testing @ 40% Load	1.01780	1.02052	1.01298					5.1486	5.1623	5.1242					5.1623
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load)	1.25352	1.25269	1.25076					42.5615	42.5334	42.4678					42.5334
	1) Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)															
	2) Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning	0.98260	0.98522	0.97782					5.6264	5.6414	5.5990					5.6414
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	0.90953	0.91193	0.90485					4.3942	4.4058	4.3716					4.4058
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	0.78199	0.78402	0.77758					4.2469	4.2579	4.2230					4.2579
	1) Bypass Operation, STG Initial Roll & Trip Test															
	2) Bypass Operation, STG Load Test	0.98260			1.96782				5.6264			11.2678				11.2678
	1) CTG on Bypass, STG Load Test															
	2) STG Load Test, Combined Cycle, Combined Cycle Testing															
	3) Emissions Tuning	0.78199	0.78402					2.33838	4.2469	4.2579					12.6995	12.6995
	Commissioning Duct Burners							2.42324							15.1565	15.1565
	1) Cal ISO Certification															
	2) Performance Testing							2.33838							14.4755	14.4755
	1) RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB															
	2) Performance Testing with DB	0.81036	0.81248	0.80588			1.61288	2.42324	5.1094	5.1227	5.0811			10.1693	15.2786	15.2786
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	1.25352		1.26513		2.49927			42.5615		45.8712		88.4327			**88.4327**
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	0.98260		1.01298		1.98790			5.6264		5.1242		10.7505			10.7505
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	0.78199	0.78402	0.97782				2.53654	4.2469	4.2579	5.5990				14.1039	14.1039
1-Hour	**CTG Testing (Full Speed No Load, FSNL)**	3.45047	3.47792	3.47810					167.7616	169.0963	169.1050					169.0963
	CTG Testing @ 40% Load	3.43124	3.45858	3.46090					130.5885	131.6290	131.7173					131.6290
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load)	3.45047	3.47792	3.47810					164.9111	166.2230	166.2316					166.2316
	1) Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning															
	2) Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)	3.43124	3.45858	3.46090					143.1428	144.2834	144.3802					144.3802
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	3.43124	3.45858	3.46090					127.7338	128.7515	128.8379					128.8379
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	3.43124	3.45858	3.46090					142.9283	144.0672	144.1638					144.1638
	1) Bypass Operation, STG Initial Roll & Trip Test															
	2) Bypass Operation, STG Load Test	3.43124			3.43124				143.1428			143.1428				143.1428
	1) Emissions Tuning															
	2) STG Load Test, Combined Cycle, Combined Cycle Testing															
	3) CTG on Bypass, STG Load Test	3.43124	3.45858					10.29612	142.9283	144.0672					428.8850	428.8850
	Commissioning Duct Burners							10.29612							428.8850	428.8850
	1)Performance Testing															
	2) Cal ISO Certification							10.29612							430.0401	**430.0401**
	1)Perfromance Testing with DB															
	2) RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB	3.43124	3.45858	3.46090			6.90382	10.29612	143.3133	144.4552	144.5521			288.3533	430.0401	**430.0401**
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	3.45047		3.47810		6.92857			164.9111		169.1050		334.0161			334.0161
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	3.43124		3.46090		6.89214			143.1428		131.7173		274.8601			274.8601
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	3.43124	3.45858	3.46090				10.29612	142.9283	144.0672	144.3802				428.8850	428.8850

Table 8.1C.3b Commissioning Modeling Results Summary- Screening

SO_2 Results

		Unit Emissions							SO_2 - Scaled to Actual Emissions							
	Scenario Per Turbine	**Unit1**	**Unit2**	**Unit3**	**Units 1&2**	**Units 1&3**	**Units 2&3**	**All**	**Unit1**	**Unit2**	**Unit3**	**Units 1&2**	**Units 1&3**	**Units 2&3**	**All**	**Scenario Maximum**
24-Hour	**CTG Testing (Full Speed No Load, FSNL)**	0.63289	0.62678	~~0.62778~~					0.0064	0.0064	~~0.0064~~					0.0064
	CTG Testing @ 40% Load	0.56740	0.57049	~~0.57342~~					0.0149	0.0150	~~0.0151~~					0.0150
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load)	~~0.62778~~	0.62166	0.61964					~~0.0197~~	0.0195	0.0195					0.0195
	Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)	0.54828	0.55107	0.55370					0.0245	0.0247	0.0248					0.0248
	Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning	0.54828	0.55107	0.55370					0.0330	0.0332	0.0333					0.0333
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	0.48895	0.49097	0.49282					0.0273	0.0274	0.0275					0.0275
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	0.42103	0.42214	0.42310					0.0305	0.0306	0.0307					0.0307
	Bypass Operation, STG Initial Roll & Trip Test	0.54828							0.0203							0.0203
	Bypass Operation, STG Load Test				1.09935							0.0661				0.0661
	CTG on Bypass, STG Load Test															
	STG Load Test, Combined Cycle, Combined Cycle Testing	0.42103	0.42214	0.42310				1.26628	0.0629	0.0631	0.0632				0.1893	0.1893
	Commissioning Duct Burners	0.42103	0.43746	0.43860				1.31221	0.0324	0.0337	0.0338				0.1011	0.1011
	Emissions Tuning	0.42103	0.42214						0.0305	0.0306						0.0306
	Cal ISO Certification	0.42103	0.42214	0.42310				1.26628	0.0286	0.0287	0.0287				0.0860	0.0860
	RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB	0.42103	0.43746				0.87606	1.31221	0.0324	0.0337				0.0675	0.1011	0.1011
	Performance Testing	0.42103	0.42214	0.42310				1.26628	0.0588	0.0590	0.0591				0.1769	0.1769
	Performance Testing with DB	0.42103	0.43746	0.43860				1.31221	0.0668	0.0695	0.0696				0.2083	**0.2083**
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	0.62778		0.62294		1.24761			0.0197		0.0064		0.0261			0.0261
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	0.54828		0.57342		1.12170			0.02453		0.0151		0.0396			0.0396
	Combination Scenario- STG Load Test, Combined Cycle, Combined Cycle Testing; Bypass Operation, STG Load Test	0.42103	0.42214	0.42310				1.26628	0.06294	0.06311	0.0415				0.1676	0.1676
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	0.42103	0.42214	0.55370				1.39688	0.0413	0.0414	0.0333				0.1161	0.1161
3-Hour	**CTG Testing (Full Speed No Load, FSNL)**	2.87916	2.88798	~~2.86830~~					0.0888	0.0891	~~0.0885~~					0.0891
	CTG Testing @ 40% Load	2.70238	2.71109	~~2.69200~~					0.2215	0.2222	~~0.2207~~					0.2222
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load)	~~2.87916~~	2.88798	2.86830					~~0.1853~~	0.1858	0.1846					0.1858
	1) Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning															
	2) Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)	2.70238	2.71109	2.69200					0.2499	0.2507	0.2490					0.2507
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	2.70238	2.71109	2.69200					0.3149	0.3159	0.3136					0.3159
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	2.70238	2.71109	2.69200					0.4163	0.4176	0.4147					0.4176
	1) Bypass Operation, STG Initial Roll & Trip Test															
	2) Bypass Operation, STG Load Test	2.70238			5.73161				0.2499			0.5301				0.5301
	1) CTG on Bypass, STG Load Test															
	2) STG Load Test, Combined Cycle, Combined Cycle Testing															
	3) Emissions Tuning	2.70238	2.71109					8.56516	0.4163	0.4176					1.3193	1.3193
	Commissioning Duct Burners							8.56516							1.4074	**1.4074**
	1) Cal ISO Certification															
	2) Performance Testing							8.56516							1.2303	1.2303
	1) RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB															
	2) Performance Testing with DB	2.70238	2.71109	2.69200			5.70617	8.56516	0.4441	0.4455	0.4423			0.9376	1.4074	**1.4074**
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	2.87916		2.86830		5.74746			0.18527		0.08850		0.2738			0.2738
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	2.70238		2.69200		5.39438			0.24991		0.22067		0.4706			0.4706
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	2.70238	2.71109	2.69200				8.10547	0.41625	0.41759	0.2490				1.0828	1.0828

Table 8.1C.3b Commissioning Modeling Results Summary- Screening

SO_2 Results

		Unit Emissions							SO_2 - Scaled to Actual Emissions							
	Scenario Per Turbine	**Unit1**	**Unit2**	**Unit3**	**Units 1&2**	**Units 1&3**	**Units 2&3**	**All**	**Unit1**	**Unit2**	**Unit3**	**Units 1&2**	**Units 1&3**	**Units 2&3**	**All**	**Scenario Maximum**
1-Hour	**CTG Testing (Full Speed No Load, FSNL)**	3.45047	3.47792	~~3.47810~~					0.1065	0.1073	~~0.1073~~					0.1073
	CTG Testing @ 40% Load	3.43124	3.45858	~~3.46090~~					0.2813	0.2835	~~0.2837~~					0.2835
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load)	~~3.45047~~	3.47792	3.47810					~~0.2220~~	0.2238	0.2238					0.2238
	1) Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning															
	2) Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)	3.43124	3.45858	3.46090					0.3173	0.3198	0.3201					0.3201
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	3.43124	3.45858	3.46090					0.3998	0.4030	0.4032					0.4032
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	3.43124	3.45858	3.46090					0.5285	0.5327	0.5331					0.5331
	1) Bypass Operation, STG Initial Roll & Trip Test															
	2) Bypass Operation, STG Load Test	3.43124			3.43124				0.3173			0.3173				0.3173
	1) Emissions Tuning															
	2) STG Load Test, Combined Cycle, Combined Cycle Testing															
	3) CTG on Bypass, STG Load Test	3.43124	3.45858					10.29612	0.5638	0.5683					1.6918	**1.6918**
	Commissioning Duct Burners							10.29612							1.5859	1.5859
	1)Performance Testing															
	2) Cal ISO Certification							10.29612							1.4789	1.4789
	1)Perfromance Testing with DB															
	2) RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB	3.43124	3.45858	3.46090			6.90382	10.29612	0.5638	0.5683	0.5687			1.1344	1.6918	**1.6918**
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	3.45047		3.47810		6.92857			0.2220		0.1073		0.3294			0.3294
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	3.43124		3.46090		6.89214			0.3173		0.2837		0.6010			0.6010
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	3.43124	3.45858	3.46090				10.29612	0.5638	0.5683	0.3201				1.6918	**1.6918**

PM_{10} Results

		Unit Emissions							PM_{10} - Scaled to Actual Emissions							
	Scenario Per Turbine	**Unit1**	**Unit2**	**Unit3**	**Units 1&2**	**Units 1&3**	**Units 2&3**	**All**	**Unit1**	**Unit2**	**Unit3**	**Units 1&2**	**Units 1&3**	**Units 2&3**	**All**	**Scenario Maximum**
24-Hour	**CTG Testing (Full Speed No Load, FSNL)**	0.63289	0.62678	~~0.62778~~					0.2437	0.2414	~~0.2417~~					0.2437
	CTG Testing @ 40% Load	0.56740	0.57049	~~0.57342~~					0.2487	0.2500	~~0.2513~~					0.2500
	Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load)	~~0.62778~~	0.62166	0.61964					~~0.3583~~	0.3548	0.3536					0.3548
	Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load)	0.54828	0.55107	0.55370					0.2767	0.2781	0.2794					0.2794
	Establish Vacuum, HRSG Tuning, BOP Tuning / Establish Vacuum, BOP Tuning / CTG Load Test & Bypass Valve Tuning	0.54828	0.55107	0.55370					0.3688	0.3707	0.3724					0.3724
	CTG Load Test & Bypass Valve Tuning, Live Safety Valve Testing	0.48895	0.49097	0.49282					0.2463	0.2473	0.2483					0.2483
	CTG Load Test, Bypass Value Tuning (100%) and CTG Baseload, Commissioning of Ammonia System	0.42103	0.42214	0.42310					0.2294	0.2300	0.2306					0.2306
	Bypass Operation, STG Initial Roll & Trip Test	0.54828							0.2306							0.2306
	Bypass Operation, STG Load Test				1.09935							0.7395				0.7395
	CTG on Bypass, STG Load Test															
	STG Load Test, Combined Cycle, Combined Cycle Testing	0.42103	0.42214	0.42310				1.26628	0.4609	0.4621	0.4631				1.3861	1.3861
	Commissioning Duct Burners	0.42103	0.43746	0.43860				1.31221	0.3037	0.3156	0.3164				0.9467	0.9467
	Emissions Tuning	0.42103	0.42214						0.2294	0.2300						0.2300
	Cal ISO Certification	0.42103	0.42214	0.42310				1.26628	0.2593	0.2600	0.2605				0.7798	0.7798
	RATA, Pre-performance Testing, Source Testing, Drift testing and CAL ISO Certification with DB	0.42103	0.43746				0.87606	1.31221	0.3040	0.3158				0.6325	0.9474	0.9474
	Performance Testing	0.42103	0.42214	0.42310				1.26628	0.5245	0.5259	0.5271				1.5775	1.5775
	Performance Testing with DB	0.42103	0.43746	0.43860				1.31221	0.6196	0.6438	0.6455				1.9312	**1.9312**
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (25% load); CTG Testing (Full Speed No Load, FSNL)	0.62778		0.62294		1.24761			0.3583		0.2417		0.6000			0.6000
	Combination Scenario- Extended Bypass Blowdown to Condenser/HRSG Tuning (50% load); CTG Testing @ 40% Load	0.54828		0.57342		1.12170			0.27668		0.2513		0.5280			0.5280
	Combination Scenario- STG Load Test, Combined Cycle, Combined Cycle Testing; Bypass Operation, STG Load Test	0.42103	0.42214	0.42310				1.26628	0.46086	0.46207	0.3081				1.2310	1.2310
	Combination Scenario- CTG on Bypass, STG Load Test; Bypass Operation, STG Load Test	0.42103	0.42214	0.55370				1.39688	0.3066	0.3074	0.4032				1.0171	1.0171

24-Hr and 8-Hr parameters are based on final loading point of commissioning sequence
1-Hr and 3-Hr parameters are based on the lowest velocity and lowest temperature of commissioning sequence.

Table 8.1C.4A Operational Turbine Modeling Emissions Summary

Summary of Modeling Operational Emissions [a, b, c]													
Time Period	Scenario	NO_x (lb/hr)	CO (lb/hr)	PM_{10} (lb/hr)	SO_2 [d] (lb/hr)	NO_x (g/s)	CO (g/s)	PM_{10} (g/s)	SO_2 (g/s)	Velocity [e] (m/s)	Velocity [e] (ft/s)	Temperature [e, f] °F	Temperature [e, f] K
Annual	WORST CASE ANNUAL [g]	16.2	14.2	10.8	1.2	2.0	1.8	1.4	0.2	18.20	59.71	197	365
24-Hour	100%Load_35F	16.7	24.0	9.8	1.2	2.1	3.0	1.2	0.2	19.04	62.48	202	368
	70%Load_35F	13.3	21.9	8.0	0.9	1.7	2.8	1.0	0.1	14.79	48.54	189	360
	60%Load_35F	12.2	21.2	8.0	0.8	1.5	2.7	1.0	0.1	13.49	44.25	185	358
	50%Load_35F	11.1	23.2	8.0	0.7	1.4	2.9	1.0	0.1	12.38	40.62	187	359
	100%Load_65F_DB_85%EVAP	17.7	24.5	11.9	1.3	2.2	3.1	1.5	0.2	18.20	59.70	197	365
	100%Load_65F_85%EVAP	16.1	23.6	9.3	1.2	2.0	3.0	1.2	0.1	18.30	60.05	204	369
	100%Load_65F	15.8	23.4	9.2	1.1	2.0	3.0	1.2	0.1	17.95	58.88	202	368
	70%Load_65F	12.6	21.5	8.0	0.9	1.6	2.7	1.0	0.1	14.04	46.05	192	362
	60%Load_65F	11.6	20.9	8.0	0.8	1.5	2.6	1.0	0.1	12.83	42.10	188	360
	50%Load_65F	10.6	22.7	8.0	0.7	1.3	2.9	1.0	0.1	11.88	38.98	193	363
	100%Load_93F_DB_85%EVAP	15.4	23.3	8.9	1.1	1.9	2.9	1.1	0.1	17.56	57.62	203	368
	70%Load_93F	11.8	21.0	8.0	0.8	1.5	2.6	1.0	0.1	13.02	42.71	187	359
	60%Load_93F	10.9	20.4	8.0	0.7	1.4	2.6	1.0	0.1	12.00	39.36	185	358
	50%Load_93F	10.0	22.2	8.0	0.6	1.3	2.8	1.0	0.1	10.95	35.92	192	362
	100%Load_93F_85%EVAP	17.1	24.3	11.5	1.3	2.2	3.1	1.4	0.2	17.46	57.28	196	364
8-Hour	100%Load_35F	nn	53.2	nn	nn	nn	6.7	nn	nn	19.04	62.48	202	368
	70%Load_35F	nn	51.4	nn	nn	nn	6.5	nn	nn	14.79	48.54	189	360
	60%Load_35F	nn	50.9	nn	nn	nn	6.4	nn	nn	13.49	44.25	185	358
	50%Load_35F	nn	52.5	nn	nn	nn	6.6	nn	nn	12.38	40.62	187	359
	100%Load_65F_DB_85%EVAP	nn	53.6	nn	nn	nn	6.8	nn	nn	18.20	59.70	197	365
	100%Load_65F_85%EVAP	nn	52.9	nn	nn	nn	6.7	nn	nn	18.30	60.05	204	369
	100%Load_65F	nn	52.7	nn	nn	nn	6.6	nn	nn	17.95	58.88	202	368
	70%Load_65F	nn	51.1	nn	nn	nn	6.4	nn	nn	14.04	46.05	192	362
	60%Load_65F	nn	50.6	nn	nn	nn	6.4	nn	nn	12.83	42.10	188	360
	50%Load_65F	nn	52.1	nn	nn	nn	6.6	nn	nn	11.88	38.98	193	363
	100%Load_93F_DB_85%EVAP	nn	52.6	nn	nn	nn	6.6	nn	nn	17.56	57.62	203	368
	70%Load_93F	nn	50.7	nn	nn	nn	6.4	nn	nn	13.02	42.71	187	359
	60%Load_93F	nn	50.2	nn	nn	nn	6.3	nn	nn	12.00	39.36	185	358
	50%Load_93F	nn	51.7	nn	nn	nn	6.5	nn	nn	10.95	35.92	192	362
	100%Load_93F_85%EVAP	nn	53.4	nn	nn	nn	6.7	nn	nn	17.46	57.28	196	364
3-Hour	100%Load_35F	nn	nn	nn	1.22	nn	nn	nn	0.15	19.04	62.48	202	368
	70%Load_35F	nn	nn	nn	0.95	nn	nn	nn	0.12	14.79	48.54	189	360
	60%Load_35F	nn	nn	nn	0.89	nn	nn	nn	0.11	13.49	44.25	185	358
	50%Load_35F	nn	nn	nn	0.83	nn	nn	nn	0.10	12.38	40.62	187	359
	100%Load_65F_DB_85%EVAP	nn	nn	nn	1.30	nn	nn	nn	0.16	18.20	59.70	197	365
	100%Load_65F_85%EVAP	nn	nn	nn	1.16	nn	nn	nn	0.15	18.30	60.05	204	369
	100%Load_65F	nn	nn	nn	1.14	nn	nn	nn	0.14	17.95	58.88	202	368
	70%Load_65F	nn	nn	nn	0.91	nn	nn	nn	0.11	14.04	46.05	192	362
	60%Load_65F	nn	nn	nn	0.85	nn	nn	nn	0.11	12.83	42.10	188	360
	50%Load_65F	nn	nn	nn	0.79	nn	nn	nn	0.10	11.88	38.98	193	363
	100%Load_93F_DB_85%EVAP	nn	nn	nn	1.11	nn	nn	nn	0.14	17.56	57.62	203	368
	70%Load_93F	nn	nn	nn	0.86	nn	nn	nn	0.11	13.02	42.71	187	359
	60%Load_93F	nn	nn	nn	0.81	nn	nn	nn	0.10	12.00	39.36	185	358
	50%Load_93F	nn	nn	nn	0.75	nn	nn	nn	0.09	10.95	35.92	192	362
	100%Load_93F_85%EVAP	nn	nn	nn	1.25	nn	nn	nn	0.16	17.46	57.28	196	364
1-Hour	Warm Start_remainder 35F 100%load	35.0	269	nn	1.01	4.4	33.9	nn	0.13	12.38	40.63	187	359
	Cold Start_remainder 35F 100%load	37.2	279	nn	0.98	4.7	35.2	nn	0.12	12.38	40.63	187	359
	Shut Down_remainder 35F 100%load	25.6	90	nn	0.98	3.2	11.3	nn	0.12	12.38	40.63	187	359
	100%Load_35F	15.4	9.4	nn	1.22	1.9	1.2	nn	0.15	19.04	62.48	202	368
	70%Load_35F	11.7	7.1	nn	0.92	1.5	0.9	nn	0.12	14.79	48.54	189	360
	60%Load_35F	10.5	6.4	nn	0.83	1.3	0.8	nn	0.10	13.49	44.25	185	358
	50%Load_35F	9.3	8.5	nn	0.73	1.2	1.1	nn	0.09	12.38	40.62	187	359
	100%Load_65F_DB_85%EVAP	16.5	10.0	nn	1.30	2.1	1.3	nn	0.16	18.20	59.70	197	365
	100%Load_65F_85%EVAP	14.7	9.0	nn	1.16	1.9	1.1	nn	0.15	18.30	60.05	204	369
	100%Load_65F	14.4	8.8	nn	1.14	1.8	1.1	nn	0.14	17.95	58.88	202	368
	70%Load_65F	10.9	6.7	nn	0.86	1.4	0.8	nn	0.11	14.04	46.05	192	362
	60%Load_65F	9.8	6.0	nn	0.77	1.2	0.8	nn	0.10	12.83	42.10	188	360
	50%Load_65F	8.7	8.0	nn	0.69	1.1	1.0	nn	0.09	11.88	38.98	193	363
	100%Load_93F_DB_85%EVAP	14.0	8.6	nn	1.11	1.8	1.1	nn	0.14	17.56	57.62	203	368
	70%Load_93F	10.0	6.1	nn	0.79	1.3	0.8	nn	0.10	13.02	42.71	187	359
	60%Load_93F	9.0	5.5	nn	0.71	1.1	0.7	nn	0.09	12.00	39.36	185	358
	50%Load_93F	8.1	7.4	nn	0.62	1.0	0.9	nn	0.08	10.95	35.92	192	362
	100%Load_93F_85%EVAP	15.8	9.7	nn	1.25	2.0	1.2	nn	0.16	17.46	57.28	196	364

[a] Source: Siemens Estimated SGT6-5000F Gas Turbine Performance Sheets for 35, 65, 93°F, all dated May 8, 2006. Scenarios with DB are based on maximum theoretical emissions.
[b] nn: Information not required
[c] Per CTG
[d] SO_2 Emissions using the emission factor 0.6 lb SO_2 per mm cuft natural gas – Source: SCAQMD AER Program
[e] Annual, 24-hour, 8-hour, and 3-hour velocity and temperature parameters are from steady state scenarios. The highest levels of SO_2 emissions occur during the steady state conditions. 1-hour velocity and temperature parameters are from the lowest velocity and lowest temperature during the start/shut down and 1 hour of steady state conditions.
[f] Source: Siemens Estimated HRSG Exhaust Stack Exit (Tip) Temperatures (F)
[g] Worst case annual determined by 5,000 hours of 65°F with Duct Burner and evaporative cooler, 192 starts and 192 stops with the remainder of the yearly hours at 65°F without duct burner with evaporative cooler

Table 8.1C.4b Operational Modeling Results Summary- Screening

Vernon Power Plant
Updated 06/25/06

Summary of Modeling Operational Emissions [a, b, c]

	Temp/RH	Scenario	NO_x (lb/hr)	CO (lb/hr)	PM_{10} (lb/hr)	SO_2 [d] (lb/hr)	Velocity [e] (m/s)	Velocity [e] (ft/s)	Temperature [e, f] °F	Temperature [e, f] K	Unit Emissions Unit1	Unit Emissions Unit2	Unit Emissions Unit3	Unit Emissions All	NO_x Actual Emissions Unit1	NO_x Actual Emissions Unit2	NO_x Actual Emissions Unit3	NO_x Actual Emissions All	CO Actual Emissions Unit1	CO Actual Emissions Unit2	CO Actual Emissions Unit3	CO Actual Emissions All	PM_{10} Actual Emissions Unit1	PM_{10} Actual Emissions Unit2	PM_{10} Actual Emissions Unit3	PM_{10} Actual Emissions All	SO_2 Actual Emissions Unit1	SO_2 Actual Emissions Unit2	SO_2 Actual Emissions Unit3	SO_2 Actual Emissions All
Annual	65 / 60	WORST CASE ANNUAL [g]	16.2	14.2	11	1.2	18.20	59.70	197	365	0.11192	0.11186	0.11234	0.33556	0.22808	0.22795	0.22893	0.68382					0.15176	0.15167	0.15233	0.45500	0.01746	0.01745	0.01752	0.05234
24-hr	35 / 75	100%Load_35F	nn	nn	9.80	1.22	19.04	62.48	202	368	0.42017	0.42126	0.42221	1.26364									0.51883	0.52017	0.52134	1.56034	0.06472	0.06489	0.06503	0.19464
	35 / 75	70%Load_35F	nn	nn	8.05	0.93	14.79	48.54	189	360	0.48987	0.49189	0.49376	1.47551									0.49670	0.49875	0.50065	1.49609	0.05729	0.05753	0.05774	0.17256
	35 / 75	60%Load_35F	nn	nn	8.05	0.84	13.49	44.25	185	358	0.53380	0.53637	0.53878	1.60895									0.54125	0.54385	0.54630	1.63139	0.05618	0.05645	0.05671	0.16934
	35 / 75	50%Load_35F	nn	nn	8.05	0.75	12.38	40.62	187	359	0.54894	0.55174	0.55438	1.65505									0.55660	0.55944	0.56211	1.67814	0.05156	0.05182	0.05207	0.15544
	65 / 60	100%Load_65F_DB_85%EVAP	nn	nn	11.90	1.30	18.20	59.70	197	365	0.43576	0.43705	0.43819	1.31099									0.65338	0.65531	0.65702	**1.96570**	0.07160	0.07182	0.07200	**0.21542**
	65 / 60	100%Load_65F_85%EVAP	nn	nn	9.30	1.16	18.30	60.05	204	369	0.42603	0.42720	0.42822	1.28144									0.49922	0.50059	0.50179	1.50159	0.06237	0.06254	0.06269	0.18759
	65 / 60	100%Load_65F	nn	nn	9.20	1.14	17.95	58.88	202	368	0.43202	0.43326	0.43436	1.29963									0.50080	0.50223	0.50351	1.50653	0.06188	0.06206	0.06222	0.18616
	65 / 60	70%Load_65F	nn	nn	8.05	0.87	14.04	46.05	192	362	0.49570	0.49781	0.49976	1.49327									0.50262	0.50475	0.50673	1.51410	0.05421	0.05444	0.05466	0.16331
	65 / 60	60%Load_65F	nn	nn	8.05	0.78	12.83	42.10	188	360	0.53909	0.54174	0.54423	1.62505									0.54661	0.54930	0.55182	1.64772	0.05319	0.05346	0.05370	0.16035
	65 / 60	50%Load_65F	nn	nn	8.05	0.70	11.88	38.98	193	363	0.54768	0.55047	0.55309	1.65123									0.55532	0.55815	0.56081	1.67426	0.04839	0.04863	0.04887	0.14589
	93 / 32	100%Load_93F_DB_85%EVAP	nn	nn	8.90	1.11	17.56	57.62	203	368	0.43645	0.43775	0.43890	1.31311									0.48966	0.49112	0.49241	1.47321	0.06107	0.06125	0.06141	0.18372
	93 / 32	70%Load_93F	nn	nn	8.05	0.80	13.02	42.71	187	359	0.53856	0.54120	0.54368	1.62345									0.54607	0.54875	0.55126	1.64610	0.05444	0.05471	0.05496	0.16411
	93 / 32	60%Load_93F	nn	nn	8.05	0.73	12.00	39.36	185	358	0.55789	0.56083	0.56360	1.68232									0.56567	0.56865	0.57146	1.70579	0.05111	0.05138	0.05163	0.15411
	93 / 32	50%Load_93F	nn	nn	8.05	0.64	10.95	35.92	192	362	0.56680	0.56988	0.57280	1.70949									0.57471	0.57783	0.58079	1.73334	0.04539	0.04564	0.04587	0.13691
	93 / 32	100%Load_93F_85%EVAP	nn	nn	11.50	1.25	17.46	57.28	196	364	0.44642	0.44785	0.44913	1.34340									0.64686	0.64893	0.65079	1.94659	0.07046	0.07069	0.07089	0.21204
8-Hour	35 / 75	100%Load_35F	nn	53.16	nn	nn	19.04	62.48	202	368	0.78044	0.78247	0.77604	2.33377					5.22731	5.24090	5.19784	15.63135								
	35 / 75	70%Load_35F	nn	51.43	nn	nn	14.79	48.54	189	360	0.91108	0.91349	0.90640	2.72447					5.90430	5.91992	5.87397	17.65606								
	35 / 75	60%Load_35F	nn	50.91	nn	nn	13.49	44.25	185	358	0.95513	0.95766	0.95038	2.85619					6.12658	6.14281	6.09612	18.32074								
	35 / 75	50%Load_35F	nn	52.48	nn	nn	12.38	40.62	187	359	0.98369	0.98631	0.97891	2.94162					6.50499	6.52232	6.47338	19.45248								
	65 / 60	100%Load_65F_DB_85%EVAP	nn	53.61	nn	nn	18.20	59.70	197	365	0.80965	0.81177	0.80518	2.42113					5.46886	5.48318	5.43867	16.35376								
	65 / 60	100%Load_65F_85%EVAP	nn	52.86	nn	nn	18.30	60.05	204	369	0.79225	0.79431	0.78782	2.36908					5.27646	5.29018	5.24696	15.77830								
	65 / 60	100%Load_65F	nn	52.71	nn	nn	17.95	58.88	202	368	0.80355	0.80564	0.79909	2.40287					5.33653	5.35041	5.30691	15.95793								
	65 / 60	70%Load_65F	nn	51.13	nn	nn	14.04	46.05	192	362	0.92297	0.92541	0.91827	2.76001					5.94646	5.96218	5.91618	17.78205								
	65 / 60	60%Load_65F	nn	50.61	nn	nn	12.83	42.10	188	360	0.96589	0.96846	0.96113	2.88837					6.15909	6.17548	6.12874	18.41797								
	65 / 60	50%Load_65F	nn	52.11	nn	nn	11.88	38.98	193	363	0.98311	0.98573	0.97833	2.93987					6.45470	6.47191	6.42332	19.30200								
	93 / 32	100%Load_93F_DB_85%EVAP	nn	52.56	nn	nn	17.56	57.62	203	368	0.81216	0.81428	0.80768	2.42862					5.37837	5.39240	5.34870	16.08304								
	93 / 32	70%Load_93F	nn	50.68	nn	nn	13.02	42.71	187	359	0.96445	0.96702	0.95969	2.88408					6.15902	6.17544	6.12863	18.41787								
	93 / 32	60%Load_93F	nn	50.23	nn	nn	12.00	39.36	185	358	0.99975	1.00242	0.99495	2.98963					6.32777	6.34466	6.29738	18.92241								
	93 / 32	50%Load_93F	nn	51.66	nn	nn	10.95	35.92	192	362	1.01788	1.02061	1.01307	3.04388					6.62528	6.64305	6.59397	**19.81230**								
	93 / 32	100%Load_93F_85%EVAP	nn	53.38	nn	nn	17.46	57.28	196	364	0.82988	0.83206	0.82536	2.48163					5.58198	5.59664	5.55158	16.69206								
3-Hour	35 / 75	100%Load_35F	nn	nn	nn	1.22	19.04	62.48	202	368	2.07037	2.07825	2.06192	6.19690													0.31890	0.32012	0.31760	0.95452
	35 / 75	70%Load_35F	nn	nn	nn	0.95	14.79	48.54	189	360	2.41812	2.42655	2.40857	7.23529													0.29022	0.29123	0.28907	0.86836
	35 / 75	60%Load_35F	nn	nn	nn	0.89	13.49	44.25	185	358	2.53542	2.54398	2.52552	7.58538													0.28366	0.28462	0.28255	0.84864
	35 / 75	50%Load_35F	nn	nn	nn	0.83	12.38	40.62	187	359	2.61150	2.62014	2.60138	7.81245													0.27159	0.27249	0.27053	0.81247
	65 / 60	100%Load_65F_DB_85%EVAP	nn	nn	nn	1.30	18.20	59.70	197	365	2.14811	2.15612	2.13940	6.42907													0.35297	0.35429	0.35154	**1.05641**
	65 / 60	100%Load_65F_85%EVAP	nn	nn	nn	1.16	18.30	60.05	204	369	2.10179	2.10973	2.09323	6.29075													0.30768	0.30885	0.30643	0.92091
	65 / 60	100%Load_65F	nn	nn	nn	1.14	17.95	58.88	202	368	2.13186	2.13985	2.12320	6.38054													0.30537	0.30651	0.30413	0.91395
	65 / 60	70%Load_65F	nn	nn	nn	0.91	14.04	46.05	192	362	2.44977	2.45823	2.44012	7.32974													0.28109	0.28206	0.27999	0.84104
	65 / 60	60%Load_65F	nn	nn	nn	0.85	12.83	42.10	188	360	2.56408	2.57267	2.55409	7.67092													0.27514	0.27606	0.27407	0.82313
	65 / 60	50%Load_65F	nn	nn	nn	0.8	11.88	38.98	193	363	2.60995	2.61859	2.59984	7.80781													0.26132	0.26218	0.26030	0.78174
	93 / 32	100%Load_93F_DB_85%EVAP	nn	nn	nn	1.1	17.56	57.62	203	368	2.15478	2.16280	2.14605	6.44898													0.30148	0.30260	0.30026	0.90230
	93 / 32	70%Load_93F	nn	nn	nn	0.9	13.02	42.71	187	359	2.56026	2.56884	2.55028	7.65951													0.27903	0.27997	0.27794	0.83477
	93 / 32	60%Load_93F	nn	nn	nn	0.8	12.00	39.36	185	358	2.65428	2.66295	2.64403	7.94008													0.27177	0.27265	0.27072	0.81297
	93 / 32	50%Load_93F	nn	nn	nn	0.7	10.95	35.92	192	362	2.70260	2.71132	2.69223	8.08428													0.25506	0.25588	0.25408	0.76296
	93 / 32	100%Load_93F_85%EVAP	nn	nn	nn	1.3	17.46	57.28	196	364	2.20196	2.21006	2.19307	6.58988													0.34756	0.34884	0.34615	1.04015
1-Hour		Warm Start_remainder 35F 100%load	35.0	269	nn	1.0	12.38	40.63	187	359	3.14592	3.16369	3.17313	9.42785	13.88540	13.96383	14.00550	41.61246	106.63970	107.24207	107.56206	319.58319					0.39963	0.40189	0.40309	1.19764
		Cold Start_remainder 35F 100%load	37.2	279	nn	1.0	12.38	40.63	187	359	3.14592	3.16369	3.17313	9.42785	14.72838	14.81157	14.85577	**44.13874**	110.65377	111.27881	111.61085	**331.61274**					0.38927	0.39147	0.39264	1.16659
		Shut Down_remainder 35F 100%load	25.6	89.7	nn	1.0	12.38	40.63	187	359	3.14592	3.16369	3.17313	9.42785	10.15012	10.20746	10.23791	30.41839	35.55846	35.75931	35.86602	106.56337					0.38920	0.39140	0.39256	1.16637
	35 / 75	100%Load_35F	15.4	9.4	nn	1.2	19.04	62.48	202	368	2.54189	2.54935	2.54662	7.60109	4.93228	4.94676	4.94146	14.74916	3.01061	3.01945	3.01622	9.00273					0.39153	0.39268	0.39226	1.17081
	35 / 75	70%Load_35F	11.7	7.1	nn	0.9	14.79	48.54	189	360	2.93353	2.94781	2.95464	8.78465	4.32461	4.34566	4.35573	12.95033	2.62434	2.63711	2.64322	7.85875					0.34178	0.34345	0.34424	1.02350
	35 / 75	60%Load_35F	10.5	6.4	nn	0.8	13.49	44.25	185	358	3.06720	3.08412	3.09258	9.19078	4.05791	4.08029	4.09148	12.15940	2.47339	2.48703	2.49386	7.41144					0.31991	0.32168	0.32256	0.95861
	35 / 75	50%Load_35F	9.3	8.5	nn	0.7	12.38	40.62	187	359	3.14592	3.16369	3.17313	9.42785	3.68639	3.70721	3.71827	11.04755	3.36928	3.38831	3.39842	10.09723					0.29093	0.29257	0.29345	0.87187
	65 / 60	100%Load_65F_DB_85%EVAP	16.5	10.0	nn	1.3	18.20	59.70	197	365	2.63029	2.63901	2.63411	7.86785	5.46837	5.48650	5.47631	16.35726	3.31417	3.32515	3.31898	9.91349					0.43220	0.43364	0.43283	**1.29283**
	65 / 60	100%Load_65F_85%EVAP	14.7	9.0	nn	1.2	18.30	60.05	204	369	2.57448	2.58226	2.57840	7.69919	4.76845	4.78286	4.77571	14.26044	2.91946	2.92828	2.92391	8.73088					0.37688	0.37802	0.37746	1.12710
	65 / 60	100%Load_65F	14.4	8.8	nn	1.1	17.95	58.88	202	368	2.60833	2.61664	2.61156	7.80117	4.73255	4.74763	4.73841	14.15444	2.89212	2.90133	2.89570	8.64994					0.37362	0.37481	0.37408	1.11744
	65 / 60	70%Load_65F	10.9	6.7	nn	0.9	14.04	46.05	192	362	2.96429	2.97974	2.98694	8.87977	4.07116	4.09237	4.10226	12.19548	2.50245	2.51550	2.52157	7.49630					0.32192	0.32359	0.32438	0.96433
	65 / 60	60%Load_65F	9.8	6.0	nn	0.8	12.83	42.10	188	360	3.09509	3.11231	3.12111	9.27477	3.82182	3.84308	3.85395	11.45249	2.33989	2.35291	2.35956	7.01173					0.30159	0.30327	0.30413	0.90375
	65 / 60	50%Load_65F	8.7	8.0	nn	0.7	11.88	38.98	193	363	3.14051	3.15822	3.16759	9.41155	3.44263	3.46204	3.47231	10.31694	3.16563	3.18349	3.19293	9.48684					0.27218	0.27372	0.27453	0.81568
	93 / 32	100%Load_93F_DB_85%EVAP	14.0	8.6	nn	1.1	17.56	57.62	203	368	2.63301	2.64178	2.63669	7.87613	4.64463	4.66010	4.65112	13.89349	2.85313	2.86263	2.85712	8.53457					0.36839	0.36962	0.36891	1.10197
	93 / 32	70%Load_93F	10.0	6.1	nn	0.8	13.02	42.71	187	359	3.09279	3.10999	3.11876	9.26786	3.89692	3.91859	3.92964	11.67750	2.37712	2.39034	2.39708	7.12328					0.30916	0.31088	0.31176	0.92643
	93 / 32	60%Load_93F	9.0	5.5	nn	0.7	12.00	39.36	185	358	3.19896	3.21731	3.22743	9.58759	3.62762	3.64843	3.65991	10.87233	2.21688	2.22960	2.23661	6.64420					0.28811	0.28977	0.29068	0.86351
	93 / 32	50%Load_93F	8.1	7.4	nn	0.6	10.95	35.92	192	362	3.24480	3.26364	3.27436	9.72563	3.31164	3.33087	3.34181	9.92598	3.02545	3.04302	3.05301	9.06818					0.25325	0.25472	0.25555	0.75906
	93 / 32	100%Load_93F_85%EVAP	15.8	9.7	nn	1.3	17.46	57.28	196	364	2.69107	2.69951	2.69826	8.04820	5.35738	5.37418	5.37170	16.02236	3.28903	3.29934	3.29781	9.83651					0.42476	0.42609	0.42589	1.27033

[a] Source: Siemens Estimated SGT6-5000F Gas Turbine Performance Sheets for 35, 65, 93°F, all dated May 8, 2006. Scenarios with DB are based on maximum theoretical emissions.

[b] nn: Information not required

[c] Per CTG

[d] SO_2 Emissions using the emission factor 0.6 lb SO_2 per mm cuft natural gas – Source: SCAQMD AER Program

[e] Annual, 24-hour, 8-hour, and 3-hour velocity and temperature parameters are from steady state scenarios. The highest levels of SO_2 emissions occur during the steady state conditions. 1-hour velocity and temperature parameters are from the lowest velocity and lowest temperature during the start/shut down and 1 hour of steady state scenarios.

[f] Source: Siemens Estimated HRSG Exhaust Stack Exit (Tip) Temperatures (F)

[g] Worst case annual determined by 5,000 hours of 65°F with Duct Burner and evaporative cooler, 192 starts and 192 stops with the remainder of the yearly hours (8,760 hrs) at 65°F without duct burner with evaporative cooler

TABLE 8.1C.5a
Winter Frequency Distribution (Counts)
Date Range: Jan 1 - Mar 31

	Wind Speed (m/s)						
Wind Direction (from)	**0.5-2.1**	**2.1-3.6**	**3.6-5.7**	**5.7-8.8**	**8.8-11.1**	**≥11**	**Totals**
N	72	15	0	0	0	0	87
NNE	68	47	0	0	0	0	115
NE	215	31	0	0	0	0	246
ENE	173	48	12	1	0	0	234
E	75	47	9	0	0	0	131
ESE	20	8	1	0	0	0	29
SE	36	20	0	0	0	0	56
SSE	47	20	4	0	0	0	71
S	59	15	2	1	0	0	77
SWS	48	17	3	1	0	0	69
SW	26	31	5	2	0	0	64
WSW	66	70	59	9	1	0	205
W	152	190	129	12	5	1	489
WNW	45	20	8	0	0	0	73
NW	23	5	1	1	0	0	30
NNW	37	6	3	0	0	0	46
Totals	**1,162**	**590**	**236**	**27**	**6**	**1**	

Count of calm winds: 138
Source: SCAQMD 1981 Vernon Meteorological Data

TABLE 8.1C.5b
Spring Frequency Distribution (Counts)
Date Range: Apr 1 - Jun 30

	Wind Speed (m/s)						
Wind Direction (from)	**0.5-2.1**	**2.1-3.6**	**3.6-5.7**	**5.7-8.8**	**8.8-11.1**	**≥11**	**Totals**
N	9	0	0	0	0	0	9
NNE	9	3	0	0	0	0	12
NE	45	12	0	0	0	0	57
ENE	70	10	0	0	0	0	80
E	66	10	0	0	0	0	76
ESE	20	3	0	0	0	0	23
SE	109	32	0	0	0	0	141
SSE	107	31	1	0	0	0	139
S	141	42	5	0	0	0	188
SWS	78	33	9	0	0	0	120
SW	49	48	34	4	0	0	135
WSW	75	90	119	12	0	0	296
W	186	317	195	6	0	0	704
WNW	39	9	1	1	0	0	50
NW	8	1	0	0	0	0	9
NNW	10	1	0	0	0	0	11
Totals	**1,021**	**642**	**364**	**23**	**0**	**0**	

Count of calm winds: 134
Source: SCAQMD 1981 Vernon Meteorological Data

TABLE 8.1C.5c
Summer Frequency Distribution (Counts)
Date Range: Jul 1 - Sep 30

	Wind Speed (m/s)						
Wind Direction (from)	**0.5-2.1**	**2.1-3.6**	**3.6-5.7**	**5.7-8.8**	**8.8-11.1**	**≥11**	**Totals**
N	13	2	0	0	0	0	15
NNE	9	0	0	0	0	0	9
NE	17	0	0	0	0	0	17
ENE	39	0	0	0	0	0	39
E	69	1	0	0	0	0	70
ESE	16	3	0	0	0	0	19
SE	37	2	0	0	0	0	39
SSE	70	13	0	0	0	0	83
S	116	23	2	0	0	0	141
SWS	103	23	5	0	0	0	131
SW	59	38	9	0	0	0	106
WSW	51	65	29	0	0	0	145
W	355	450	271	3	0	0	1,079
WNW	98	4	2	0	0	0	104
NW	20	0	0	0	0	0	20
NNW	15	2	0	0	0	0	17
Totals	**1,087**	**626**	**318**	**3**	**0**	**0**	

Count of calm winds: 174
Source: SCAQMD 1981 Vernon Meteorological Data

TABLE 8.1C.5d
Autumn Frequency Distribution (Counts)
Date Range: Oct 1 - Dec 31

	Wind Speed (m/s)						
Wind Direction (from)	**0.5-2.1**	**2.1-3.6**	**3.6-5.7**	**5.7-8.8**	**8.8-11.1**	**≥11**	**Totals**
N	50	7	0	0	0	0	57
NNE	98	23	0	0	0	0	121
NE	153	31	0	0	0	0	184
ENE	198	25	9	0	0	0	232
E	137	25	6	0	0	0	168
ESE	29	1	1	0	0	0	31
SE	29	6	0	0	0	0	35
SSE	65	11	0	0	0	0	76
S	75	15	0	0	0	0	90
SWS	31	23	4	0	0	0	88
SW	46	18	6	0	0	0	73
WSW	36	42	12	1	0	0	91
W	186	301	121	9	0	0	617
WNW	73	12	7	5	0	0	97
NW	25	4	1	7	2	0	39
NNW	29	4	2	3	1	0	39
Totals	**1,293**	**548**	**169**	**25**	**3**	**0**	

Count of calm winds: 170
Source: SCAQMD 1981 Vernon Meteorological Data

TABLE 8.1C.5e
Annual Frequency Distribution (Counts)
Date Range: Jan 1 - Dec 31

	Wind Speed (m/s)						
Wind Direction (from)	**0.5-2.1**	**2.1-3.6**	**3.6-5.7**	**5.7-8.8**	**8.8-11.1**	**≥11**	**Totals**
N	144	24	0	0	0	0	168
NNE	184	73	0	0	0	0	257
NE	430	74	0	0	0	0	504
ENE	480	83	21	1	0	0	585
E	347	83	15	0	0	0	445
ESE	85	15	2	0	0	0	102
SE	211	60	0	0	0	0	271
SSE	289	75	5	0	0	0	369
S	391	95	9	1	0	0	496
SWS	290	96	21	1	0	0	408
SW	183	135	54	6	0	0	378
WSW	228	267	219	22	1	0	737
W	879	1,258	716	30	5	1	2,889
WNW	255	45	18	6	0	0	324
NW	76	10	2	8	2	0	98
NNW	91	13	5	3	1	0	113
Totals	**4,563**	**2,406**	**1,087**	**78**	**9**	**1**	

Count of calm winds: 616
Source: SCAQMD 1981 Vernon Meteorological Data

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.08 ppm (157 µg/m^3)[8]		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		50 µg/m^3		
Fine Particulate Matter (PM2.5)	24 Hour	No Separate State Standard		65 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	—
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m^3)		—		
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m^3)	—	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	—	
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	1 Hour	0.25 ppm (655 µg/m^3)		—	—	—
Lead[9]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m^3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[9]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calender year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8. New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18,1997. Contact U.S. EPA for further clarification and current federal policies.

9. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

California Air Resources Board (5/17/06)

LOS ANGELES CIVIC CENTE, CALIFORNIA

NCDC 1971-2000 Monthly Normals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Monthly
Mean Max. Temperature (F)	68.1	69.6	69.8	73.1	74.5	79.5	83.8	84.8	83.3	79.0	73.2	68.7	75.6
Highest Mean Max. Temperature (F)	75.4	76.9	75.4	79.3	82.2	86.8	88.8	90.5	90.4	84.1	78.6	74.7	90.5
Year Highest Occurred	1986	1991	1997	1996	1984	1981	1985	1998	1984	1999	1976	1980	1998
Lowest Mean Max. Temperature (F)	61.9	64.1	62.9	63.4	69.2	71.7	79.1	80.2	77.6	72.6	68.1	60.9	60.9
Year Lowest Occurred	1979	1975	1975	1975	1977	1982	1991	1974	1986	2000	1978	1971	1971
Mean Temperature (F)	58.3	60.0	60.7	63.8	66.2	70.5	74.2	75.2	74.0	69.5	62.9	58.5	66.2
Highest Mean Temperature (F)	65.2	65.3	65.1	69.0	72.7	77.0	78.8	80.5	80.9	73.7	67.1	63.1	80.9
Year Highest Occurred	1986	1995	1997	1992	1997	1981	1985	1994	1984	1983	1995	1980	1984
Lowest Mean Temperature (F)	52.6	54.3	55.1	55.5	61.4	64.9	70.4	71.2	68.4	65.1	57.9	52.2	52.2
Year Lowest Occurred	1979	1979	1975	1975	1977	1982	1987	1976	1986	2000	1978	1971	1971
Mean Min. Temperature (F)	48.5	50.3	51.6	54.4	57.9	61.4	64.6	65.6	64.6	59.9	52.6	48.3	56.6
Highest Mean Min. Temperature (F)	55.0	56.5	56.6	59.2	63.8	67.2	68.9	70.7	71.4	64.6	56.8	51.9	71.4
Year Highest Occurred	1986	1995	1983	1992	1997	1981	1984	1994	1984	1983	1995	1995	1984
Lowest Mean Min. Temperature (F)	43.3	43.3	46.1	47.5	53.6	57.3	60.5	61.4	59.2	55.7	47.6	41.2	41.2
Year Lowest Occurred	1979	1979	1977	1975	1977	1975	1987	1976	1986	1971	1978	1978	1978
Mean Precipitation (in.)	3.33	3.68	3.14	0.83	0.31	0.06	0.01	0.13	0.32	0.37	1.05	1.91	15.14
Highest Precipitation (in.)	12.56	13.68	8.37	5.16	3.10	0.76	0.18	2.26	2.82	2.37	4.41	6.57	13.68
Year Highest Occurred	1995	1998	1983	1983	1998	1993	1986	1977	1976	1987	1982	1971	1998
Lowest Precipitation (in.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Year Lowest Occurred	1976	1984	1997	1997	2000	2000	2000	1999	1999	1999	2000	2000	1976
Heating Degree Days (F)	207.	149.	144.	83.	36.	5.	0.	0.	1.	11.	91.	201.	928.
Cooling Degree Days (F)	15.	23.	26.	58.	84.	178.	295.	325.	281.	164.	44.	13.	1506.

Western Regional Climate Center, wrcc@dri.edu

TABLE A-2

Most Stringent Ambient Air Quality Standard and
Allowable Change in Concentration
For Each Air Contaminant/Averaging Time Combination

Air Contaminant	Averaging Time	Most Stringent Air Quality Standard		Significant Change in Air Quality Concentration	
Nitrogen Dioxide	1-hour	25 pphm	500 ug/m^3	1 pphm	20 ug/m^3
	Annual	5.3 pphm	100 ug/m^3	0.05 pphm	1 ug/m^3
Carbon Monoxide	1-hour	20 ppm	23 mg/m^3	1 ppm	1.1 mg/m^3
	8-hour	9.0 ppm	10 mg/m^3	0.45 ppm	0.50 mg/m^3
Suspended Particulate Matter - <10um (PM_{10})	24-hour	50 ug/m^3			2.5 ug/m^3
	Annual Geometric Mean	30 ug/m^3			1 ug/ m^3
					1 ug/m^3
Sulfate	24-hour	25 ug/m^3			

South Coast Air Quality Management District

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Air Quality Significance Thresholds

Mass Daily Thresholds[a]		
Pollutant	**Construction** [b]	**Operation** [c]
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥10 in 1 million Hazard Index ≥1.0 (project increment) Hazard Index ≥3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [d]		
NO2 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM10 24-hour average annual geometric average annual arithmetic mean	10.4 $\mu g/m^3$ (recommended for construction) [e] 2.5 $\mu g/m^3$ (operation) 1.0 $\mu g/m^3$ 20 $\mu g/m^3$	
Sulfate 24-hour average	1 ug/m^3	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	

[a] Source: SCAQMD CEQA Handbook (SCAQMD, 1993)
[b] Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).
[c] For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.
[d] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
[e] Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million ug/m^3 = microgram per cubic meter ≥greater than or equal to

(Rev. January 2006)

2003 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2003

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide: No. Days of Data	Max. Conc. in ppm 1-hour	Max Conc. in ppm 8-hour	No. Days Standard Exceeded a): Federal ≥ 9.5 ppm 8-hour	State > 9.0 ppm 8-hour	Ozone: No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	Fourth High Conc. ppm 8-hour	No. Days Standard Exceeded: Health Advisory ≥ 0.15 ppm 1-hour	Federal > 0.12 ppm 1-hour	Federal > 0.08 ppm 8-hour	State > 0.09 ppm 1-hour	Nitrogen Dioxide: No. Days of Data	Max Conc. in ppm 1-hour b)	Annual Average b) AAM Conc. ppm	Sulfur Dioxide: No. Days of Data	Max. Conc. in ppm 1-hour c)	Max. Conc. in ppm 24-hour c)
LOS ANGELES COUNTY																					
1	Central LA	087	365	6	4.6	0	0	365	0.152	0.088	0.083	1	1	2	11	361	0.16	0.0338	349	0.05*	0.006*
2	Northwest Coastal LA County	091	365	5	2.7	0	0	365	0.134	0.105	0.083	0	1	1	11	352	0.12	0.0231	--	--	--
3	Southwest Coastal LA County	094	361	7	5.0	0	0	365	0.110	0.078	0.073	0	0	0	2	363	0.12	0.0238	365	0.03	0.006
4	South Coastal LA County	072	363	6	4.7	0	0	365	0.099	0.071	0.063	0	0	0	1	341	0.14*	0.0288*	361	0.03	0.008
6	West San Fernando Valley	074	365	6	4.1	0	0	365	0.179	0.129	0.119	1	14	49	68	364	0.13*	0.0260*	--	--	--
7	East San Fernando Valley	069	349	5*	4.7*	0*	0*	341	0.134*	0.108*	0.097*	0*	4*	20*	37*	344	0.14*	0.0356*	338	0.01*	0.005*
8	West San Gabriel Valley	088	365	5	3.8	0	0	365	0.152	0.108	0.103	1	7	28	44	356	0.14	0.0322	--	--	--
9	East San Gabriel Valley 1	060	365	5	2.6	0	0	365	0.150	0.124	0.107	1	11	21	40	347	0.12*	0.0296*	--	--	--
9	East San Gabriel Valley 2	591	357	3	2.1	0	0	365	0.162	0.134	0.123	7	22	41	61	361	0.12	0.0271	--	--	--
10	Pomona/Walnut Valley	075	365	6	4.4	0	0	365	0.161	0.123	0.109	3	13	24	39	365	0.12	0.0352	--	--	--
11	South San Gabriel Valley	085	365	5	4.0	0	0	364	0.128	0.097	0.084	0	1	2	18	360	0.14	0.0353	--	--	--
12	South Central LA County	084	362	12	7.3	0	0	361	0.081	0.063	0.059	0	0	0	0	356	0.13	0.0312	--	--	--
13	Santa Clarita Valley	090	363	3	1.7	0	0	363	0.194	0.152	0.137	15	35	69	89	363	0.12	0.0221	--	--	--
ORANGE COUNTY																					
16	North Orange County	3177	365	8	4.1	0	0	365	0.165	0.087	0.082	1	1	2	7	361	0.16	0.0284	--	--	--
17	Central Orange County	3176	365	6	3.9	0	0	365	0.136	0.087	0.082	0	2	1	11	362	0.13	0.0240	--	--	--
18	North Coastal Orange County	3195	365	7	5.8	0	0	364	0.107	0.088	0.080	0	0	1	4	362	0.11	0.0199	354	0.02	0.012
19	Saddleback Valley	3812	362	3	1.8	0	0	362	0.153	0.105	0.097	1	4	8	16	--	--	--	--	--	--
RIVERSIDE COUNTY																					
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	365	5	3.7	0	0	365	0.169	0.140	0.123	4	18	62	80	360	0.09	0.0217	363	0.02	0.012
23	Metropolitan Riverside County 2	4146	360	5	3.4	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	Perris Valley	4149	--	--	--	--	--	357	0.155	0.121	0.119	1	7	47	67	--	--	--	--	--	--
25	Lake Elsinore	4158	345	4*	1.3*	0*	0*	345	0.154*	0.137*	0.113*	2*	7*	35*	50*	328	0.08*	0.0182*	--	--	--
29	Banning Airport	4164	--	--	--	--	--	365	0.166	0.146	0.127	3	27	63	75	346	0.09*	0.0193*	--	--	--
30	Coachella Valley 1**	4137	339	3*	1.3*	0*	0*	359	0.141	0.111	0.108	0	4	44	54	347	0.06*	0.0173*	--	--	--
30	Coachella Valley 2**	4157	--	--	--	--	--	365	0.123	0.105	0.102	0	0	19	24	--	--	--	--	--	--
SAN BERNARDINO COUNTY																					
32	Northwest San Bernardino Valley	5175	363	4	2.9	0	0	365	0.155	0.134	0.116	2	15	35	48	363	0.11	0.0349	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	--	--	--	--	--	351	0.176	0.148	0.134	7	26	48	65	355	0.12	0.0307	361	0.01	0.004
34	Central San Bernardino Valley 2	5203	365	5	4.6	0	0	358	0.160	0.137	0.123	4	19	45	59	362	0.10	0.0270	--	--	--
35	East San Bernardino Valley	5204	--	--	--	--	--	365	0.174	0.153	0.138	12	38	72	91	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	--	--	341	0.163*	0.142*	0.130*	6*	34*	74*	84*	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
DISTRICT MAXIMUM				12	7.3	0	0		0.194	0.153	0.138	15	38	74	91		0.16	0.0356		0.05	0.012
SOUTH COAST AIR BASIN				12	7.3	0	0		0.194	0.153	0.138	36	68	119	133		0.16	0.0356		0.05	0.012

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative.

** Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

b) - The state standard is 1-hour average NO_2 > 0.25 ppm. The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm. No location exceeded the standards.

c) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. No location exceeded state standards. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. SO_2 concentrations were well below the federal standards.

South Coast
Air Quality Management District
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www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at http://www.aqmd.gov/telemweb/areamap.aspx. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

2003 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2003

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 d) No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal > 150 µg/m³ 24-hour	State > 50 µg/m³ 24-hour	Annual Average g) AAM Conc. µg/m³	Suspended Particulates PM2.5 e) No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal > 65 µg/m³ 24-hour	Annual Averages h) AAM Conc. µg/m³	Particulates TSP f) No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual Average AAM Conc. µg/m³	Lead f) Max. Monthly Average Conc. i) µg/m³	Max. Quarterly Average Conc. i) µg/m³	Sulfate f) Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard State ≥ 25 µg/m³ 24-hour
LOS ANGELES COUNTY																		
1	Central LA	087	61	81	0	6(9.8)	34.6	330	83.7	5(1.5)	21.3	61	157	73.5	0.15	0.15	14.6	0
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	59	114	49.4	--	--	14.3	0
3	Southwest Coastal LA County	094	61	58	0	3(4.9)	29.7	--	--	--	--	61	122	56.7	0.17	0.10	16.4	0
4	South Coastal LA County	072	61	63	0	4(6.6)	32.8	324	115.2	3(0.9)	18.0	64	159	63.9	0.10	0.05	17.8	0
6	West San Fernando Valley	074	--	--	--	--	--	115	47.5	0	16.4	--	--	--	--	--	--	--
7	East San Fernando Valley	069	50	81*	0*	7(14.0)*	38.1*	92	120.6	1(1.1)	20.9	--	--	--	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	110	89.0	1(0.9)	18.6	59	111	54.3	--	--	12.7	0
9	East San Gabriel Valley 1	060	60	119	0	21(35.0)	44.4	314	121.2	3(1.0)	19.2	55	176	83.9	--	--	11.7	0
9	East San Gabriel Valley 2	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	111	90.3	1(0.9)	20.6	60	160	75.4	0.05	0.04	14.4	0
12	South Central LA County	084	--	--	--	--	--	117	54.8	0	20.2	60	449	105.2	0.04	0.04	14.9	0
13	Santa Clarita Valley	090	61	72	0	10(16.4)	31.8	--	--	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																		
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	61	96	0	6(9.8)	32.7	340	115.5	3(0.9)	17.3	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	57	64	0	2(3.5)	26.7	109	50.6	0	13.1	--	--	--	--	--	--	--
RIVERSIDE COUNTY																		
22	Norco/Corona	4155	58	116	0	15(25.9)	40.5	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	109	164	2(1.8)	62(56.9)	56.9	350	104.3	8(2.3)	24.9	58	283	105.6	0.02	0.02	10.1	0
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	116	73.3	1(0.9)	22.6	60	225	85.0	0.02	0.01	10.0	0
24	Perris Valley	4149	58	142	0	19(32.8)	43.9	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	4164	60	79	0	9(15.0)	29.0	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	60	108	0	4(6.7)	27.1	112	21.2	0	9.0	--	--	--	--	--	--	--
30	Coachella Valley 2**	4157	112	124+	0+	47(42.0)+	50.2+	118	26.8	0	11.4	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																		
32	Northwest San Bernardino Valley	5175	--	--	--	--	--	--	--	--	--	60	269	69.6	0.02	0.02	11.8	0
33	Southwest San Bernardino Valley	5817	62	149	0	18(29.0)	42.9	118	88.9	3(2.5)	23.8	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	50	101*	0*	27(54.0)*	47.2*	111	98.1	1(0.9)	21.8	59	335	119.8	--	--	11.9	0
34	Central San Bernardino Valley 2	5203	59	98	0	23(39.0)	44.9	119	73.9	1(0.8)	22.2	60	242	97.8	0.14	0.08	12.1	0
35	East San Bernardino Valley	5204	58	92	0	15(25.9)	37.0	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	50	47*	0*	0*	25.6*	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	55	35.0	0	10.5	--	--	--	--	--	--	--
DISTRICT MAXIMUM				164	2	62	56.9		121.2	8	24.9		449	119.8	0.17	0.15	17.8	0
SOUTH COAST AIR BASIN				164	2	69	56.9		121.2	14	24.9		449	119.8	0.17	0.15	17.8	0

µg/m³ - Micrograms per cubic meter of air. AAM - Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative.

** Salton Sea Air Basin.

d) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

e) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

f) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

g) - Federal PM10 standard is annual average (AAM) > 50 µg/m³. State standard is annual average (AAM) > 20 µg/m³ (changed from AGM > 30 µg/m³, effective July 5, 2003).

h) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m³. State standard is annual average (AAM) > 12 µg/m³ (new standard, established July 5, 2003).

i) - Federal lead standard is quarterly average > 1.5 µg/m³; and state standard is monthly average ≥ 1.5 µg/m³. No location exceeded lead standards. Special monitoring immediately downwind of stationary sources of lead was carried out at four locations in 2003. The maximum monthly average concentration was 0.35 µg/m³, and the maximum quarterly average concentration was 0.29 µg/m³, both recorded in Central Los Angeles.

\+ - The data for five samples collected on high-wind days (178 µg/m³ on 1/6/03, 132 µg/m³ on 2/2/03, 227 µg/m³ on 5/15/03, 148 µg/m³ on 6/20/03 and 309 µg/m³ on 6/23/03) were excluded in accordance with EPA's Natural Events Policy.

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2004 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2004

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide: No. Days of Data	Max. Conc. in ppm 1-hour	Max Conc. in ppm 8-hour	No. Days Standard Exceeded a) Federal ≥ 9.5 ppm 8-hour	State > 9.0 ppm 8-hour	Ozone: No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	Fourth High Conc. ppm 8-hour	No. Days Standard Exceeded: Health Advisory ≥ 0.15 ppm 1-hour	Federal > 0.12 ppm 1-hour	Federal > 0.08 ppm 8-hour	State b) > 0.09 ppm 1-hour	State b) > 0.07 ppm 8-hour	Nitrogen Dioxide: No. Days of Data	Max Conc. in ppm 1-hour c)	Annual Average c) AAM Conc. ppm	Sulfur Dioxide: No. Days of Data	Max. Conc. in ppm 1-hour d)	Max. Conc. in ppm 24-hour d)
LOS ANGELES COUNTY																							
1	Central LA	087	361	4	3.2	0	0	366	0.110	0.092	0.079	0	0	1	7	7	359	0.16	0.0328	364	0.08	0.015
2	Northwest Coastal LA County	091	360	4	2.3	0	0	366	0.107	0.089	0.078	0	0	1	5	6	355	0.09	0.0198	--	--	--
3	Southwest Coastal LA County 1	094	90*	6*	4.4*	0*	0*	90*	0.069*	0.060*	0.056*	0*	0*	0*	0*	0*	89*	0.08*	0.0310*	89*	0.03*	0.004*
3	Southwest Coastal LA County 2	820	260*	4*	3.0*	0*	0*	262*	0.120*	0.100*	0.086*	0*	0*	4*	4*	13*	230*	0.09*	0.0136*	261*	0.02*	0.007*
4	South Coastal LA County 1	072	366	4	3.4	0	0	366	0.090	0.075	0.071	0	0	0	0	0	356	0.12	0.0280	361	0.04	0.012
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--
6	West San Fernando Valley	074	366	5	3.5	0	0	366	0.131	0.116	0.102	0	2	29	54	65	365	0.08	0.0214	--	--	--
7	East San Fernando Valley	069	366	5	3.7	0	0	366	0.137	0.109	0.089	0	2	7	27	37	356	0.12	0.0332	348	0.02	0.010
8	West San Gabriel Valley	088	361	7	3.4	0	0	365	0.130	0.103	0.093	0	1	9	27	31	355	0.12	0.0270	--	--	--
9	East San Gabriel Valley 1	060	366	3	2.0	0	0	366	0.134	0.104	0.094	0	2	10	28	26	351	0.10	0.0204	--	--	--
9	East San Gabriel Valley 2	591	361	2	2.0	0	0	366	0.134	0.108	0.095	0	4	16	42	35	353	0.12	0.0240	--	--	--
10	Pomona/Walnut Valley	075	366	4	3.1	0	0	366	0.131	0.102	0.097	0	4	13	31	25	364	0.11	0.0314	--	--	--
11	South San Gabriel Valley	085	366	5	3.6	0	0	366	0.104	0.084	0.080	0	0	0	7	7	353	0.12	0.0305	--	--	--
12	South Central LA County	084	366	10	6.7	0	0	366	0.084	0.072	0.065	0	0	0	0	0	362	0.10	0.0301	--	--	--
13	Santa Clarita Valley	090	363	5	3.7	0	0	360	0.158	0.133	0.108	1	13	52	69	81	358	0.09	0.0204	--	--	--
ORANGE COUNTY																							
16	North Orange County	3177	364	7	4.0	0	0	364	0.099	0.080	0.078	0	0	0	6	6	341	0.12	0.0252	--	--	--
17	Central Orange County	3176	366	5	4.1	0	0	366	0.120	0.097	0.088	0	0	6	14	35	361	0.12	0.0199	--	--	--
18	North Coastal Orange County	3195	366	5	4.1	0	0	366	0.104	0.087	0.076	0	0	1	2	5	357	0.10	0.0151	364	0.03	0.008
19	Saddleback Valley	3812	366	2	1.6	0	0	366	0.116	0.089	0.086	0	0	2	11	20	--	--	--	--	--	--
RIVERSIDE COUNTY																							
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	364	4	3.0	0	0	366	0.141	0.117	0.112	0	8	35	59	75	363	0.09	0.0172	331	0.02	0.015
23	Metropolitan Riverside County 2	4146	366	4	2.1	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	Perris Valley	4149	--	--	--	--	--	365	0.128	0.103	0.097	0	2	19	37	47	--	--	--	--	--	--
25	Lake Elsinore	4158	353	2	0.9	0	0	353	0.130	0.116	0.103	0	2	21	41	51	339	0.06	0.0151	--	--	--
29	Banning Airport	4164	--	--	--	--	--	349	0.156	0.116	0.112	1	7	40	49	69	334	0.08	0.0165	--	--	--
30	Coachella Valley 1**	4137	366	2	1.0	0	0	366	0.125	0.108	0.099	0	1	31	36	55	353	0.07	0.0130	--	--	--
30	Coachella Valley 2**	4157	--	--	--	--	--	366	0.111	0.102	0.098	0	0	18	23	51	--	--	--	--	--	--
SAN BERNARDINO COUNTY																							
32	Northwest San Bernardino Valley	5175	366	3	2.1	0	0	366	0.138	0.105	0.103	0	2	18	31	31	365	0.11	0.0305	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	313*	3*	2.1*	0*	0*	366	0.149	0.123	0.112	0	7	28	48	54	346	0.06	0.0273	360	0.01	0.006
34	Central San Bernardino Valley 2	5203	366	4	3.3	0	0	366	0.157	0.130	0.113	1	9	38	55	58	363	0.12	0.0261	--	--	--
35	East San Bernardino Valley	5204	--	--	--	--	--	366	0.160	0.137	0.122	1	12	53	75	76	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	--	--	364	0.163	0.145	0.124	1	9	66	75	96	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DISTRICT MAXIMUM				10	6.7	0	0		0.163	0.145	0.124	1	13	66	75	96		0.16	0.0332		0.08	0.015
SOUTH COAST AIR BASIN				10	6.7	0	0		0.163	0.148	0.124	4	28	90	111	148		0.16	0.0332		0.08	0.015

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

b) - On April 28, 2005, Air Resources Board has approved revising the California Ozone standard to establish a new 8-hour average standard of 0.07 ppm. The new 8-hour standard is expected to take effect by December 2005.

c) - The state standard is 1-hour average NO_2 > 0.25 ppm. The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm. No location exceeded the standards.

d) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. No location exceeded SO_2 standards.

South Coast Air Quality Management District
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The map showing the locations of source/receptor areas can be accessed via the Internet at http://www.aqmd.gov/telemweb/areamap.aspx. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

2004 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2004

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 e) No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal > 150 µg/m³ 24-hour	State > 50 µg/m³ 24-hour	Annual Average h) AAM Conc. µg/m³	Suspended Particulates PM2.5 f) No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal > 65 µg/m³ 24-hour	Annual Averages i) AAM Conc. µg/m³	Particulates TSP g) No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual Average AAM Conc. µg/m³	Lead g) Max. Monthly Average Conc. j) µg/m³	Max. Quarterly Average Conc. j) µg/m³	Sulfate g) Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard State ≥ 25 µg/m³ 24-hour
LOS ANGELES COUNTY																		
1	Central LA	087	61	72	0	5(8.2)	32.7	318	75.0	2(0.6)	19.6	62	115	66.4	0.03	0.03	12.7	0
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	59	79	46.8	--	--	11.4	0
3	Southwest Coastal LA County 1	094	15*	52*	0*	2(13.3)*	30.9*	--	--	--	--	15*	71*	50.5*	0.01	0.01	13.1	0
3	Southwest Coastal LA County 2	820	37*	47*	0*	0*	25.1	--	--	--	--	45*	77*	43.8*	0.01	0.01	14.3	0
4	South Coastal LA County 1	072	60	72	0	4(6.7)	33.1	323	66.6	1(0.3)	17.6	62	103	59.1	0.02	0.01	15.9	0
4	South Coastal LA County 2	077	59	83	0	12(20.3)	38.1	327	59.7	0	16.6	59	112	64.2	0.02	0.01	16.4	0
6	West San Fernando Valley	074	--	--	--	--	--	106	56.2	0	15.6	--	--	--	--	--	--	--
7	East San Fernando Valley	069	60	74	0	7(11.7)	37.5	109	60.1	0	19.2	--	--	--	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	113	59.4	0	16.6	58	95	49.5	--	--	11.2	0
9	East San Gabriel Valley 1	060	55	83	0	8(14.5)	35.4	279	75.6	1(0.4)	18.4	59	156	75.2	--	--	10.6	0
9	East San Gabriel Valley 2	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	108	60.7	0	19.9	55	140	73.0	0.03	0.02	12.4	0
12	South Central LA County	084	--	--	--	--	--	115	55.8	0	18.5	58	128	78.6	0.03	0.03	14.7	0
13	Santa Clarita Valley	090	60	54	0	2(3.3)	28.1	--	--	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																		
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	61	74	0	7(11.5)	34.1	319	58.9	0	16.8	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	57	47	0	0	23.7	111	49.4	0	12.1	--	--	--	--	--	--	--
RIVERSIDE COUNTY																		
22	Norco/Corona	4155	57	76	0	11(19.3)	38.0	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	119	137	0	72(60.5)	55.5	342	91.7	5(1.5)	22.1	60	199	100.5	0.02	0.01	9.8	0
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	110	93.8	2(1.8)	20.8	59	244	81.9	0.01	0.01	9.1	0
24	Perris Valley	4149	59	83	0	15(25.4)	41.4	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	4164	61	82	0	7(11.5)	29.3	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	59	79	0	2(3.4)	26.4	112	27.1	0	9.0	--	--	--	--	--	--	--
30	Coachella Valley 2**	4157	118+	83+	0+	23(19.5)+	39.3+	110	28.5	0	10.7	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																		
32	Northwest San Bernardino Valley	5175	--	--	--	--	--	--	--	--	--	55	127	63.5	0.02	0.01	9.2	0
33	Southwest San Bernardino Valley	5817	58	93	0	17(29.3)	42.8	112	86.1	2(1.8)	20.9	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	61	106	0	29(47.5)	47.7	104	71.4	1(1.0)	20.0	59	235	113.4	--	--	10.8	0
34	Central San Bernardino Valley 2	5203	58	118	0	28(48.3)	48.6	106	93.4	4(3.8)	22.0	58	179	92.7	0.02	0.01	9.6	0
35	East San Bernardino Valley	5204	60	88	0	20(33.3)	38.6	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	57	52	0	1(1.8)	26.4	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	52	28.6	0	9.5	--	--	--			--	--
DISTRICT MAXIMUM				137	0	72	55.5		93.8	5	22.1		244	113.4	0.03	0.03	16.4	0
SOUTH COAST AIR BASIN				137	0	81	55.5		93.8	7	22.1		244	113.4	0.03	0.03	16.4	0

µg/m³ - Micrograms per cubic meter of air. AAM - Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

e) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

f) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

g) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

h) - Federal PM10 standard is annual average (AAM) > 50 µg/m³. State standard is annual average (AAM) > 20 µg/m³ (changed from AGM > 30 µg/m³, effective July 5, 2003).

i) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m³. State standard is annual average (AAM) > 12 µg/m³ (state standard was established on July 5, 2003).

j) - Federal lead standard is quarterly average > 1.5 µg/m³; and state standard is monthly average ≥ 1.5 µg/m³. No location exceeded lead standards. Maximum monthly and quarterly lead concentrations at special monitoring sites immediately downwind of stationary lead sources were 0.59 µg/m³ and 0.30 µg/m³, respectively, both recorded at Southeast Los Angeles County.

\+ - The data for the sample collected on a high-wind day (161 µg/m³ on 10/9/04) was excluded in accordance with EPA's Natural Events Policy.

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2005 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2005

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide: No. Days of Data	Max. Conc. in ppm 1-hour	Max Conc. in ppm 8-hour	No. Days Standard Exceeded a) Federal ≥ 9.5 ppm 8-hour	State > 9.0 ppm 8-hour	Ozone: No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	Fourth High Conc. ppm 8-hour	No. Days Standard Exceeded: Health Advisory ≥ 0.15 ppm 1-hour	Federal b) > 0.12 ppm 1-hour	> 0.08 ppm 8-hour	State c) > 0.09 ppm 1-hour	> 0.07 ppm 8-hour	Nitrogen Dioxide: No. Days of Data	Max Conc. in ppm 1-hour d)	Annual Average d) AAM Conc. ppm	Sulfur Dioxide: No. Days of Data	Max. Conc. in ppm 1-hour f)	Max. Conc. in ppm 24-hour f)
LOS ANGELES COUNTY																							
1	Central LA	087	365	4	2.9	0	0	365	0.121	0.098	0.072	0	0	1	2	2	364	0.13	0.0278	357	0.07	0.010
2	Northwest Coastal LA County	091	365	3	2.3	0	0	361	0.114	0.090	0.077	0	0	1	7	5	365	0.08	0.0178	--	--	--
3	Southwest Coastal LA County	820	365	3	2.2	0	0	365	0.086	0.075	0.068	0	0	0	0	1	365	0.09	0.0134	365	0.04	0.011
4	South Coastal LA County 1	072	365	5	3.7	0	0	365	0.091	0.068	0.059	0	0	0	0	0	365	0.12	0.0241	365	0.04	0.010
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	074	350	5	3.6	0	0	365	0.138	0.113	0.098	0	2	12	30	29	365	0.09	0.0202	--	--	--
7	East San Fernando Valley	069	363	4	3.3	0	0	365	0.142	0.107	0.081	0	2	2	13	12	365	0.09	0.0294	361	0.02	0.012
8	West San Gabriel Valley	088	363	4	3.0	0	0	363	0.145	0.113	0.086	1	2	5	13	12	363	0.09	0.0241	--	--	--
9	East San Gabriel Valley 1	060	365	3	1.6	0	0	365	0.145	0.122	0.087	1	4	6	20	14	365	0.09	0.0251	--	--	--
9	East San Gabriel Valley 2	591	358	6	4.0	0	0	363	0.160	0.130	0.099	2	8	13	31	29	360	0.09	0.0224	--	--	--
10	Pomona/Walnut Valley	075	365	4	2.5	0	0	361	0.140	0.112	0.096	0	4	11	26	18	365	0.08	0.0312	--	--	--
11	South San Gabriel Valley	085	113*	3*	2.4*	0*	0*	116*	0.077*	0.065*	0.051*	0*	0*	0*	0*	0*	116*	0.09*	0.0308*	--	--	--
12	South Central LA County	084	365	7	5.9	0	0	365	0.111	0.081	0.063	0	0	0	1	1	360	0.11	0.0312	--	--	--
13	Santa Clarita Valley	090	365	2	1.3	0	0	364	0.173	0.141	0.118	5	11	47	65	69	--	--	--	--	--	--
ORANGE COUNTY																							
16	North Orange County	3177	365	7	3.1	0	0	365	0.094	0.077	0.067	0	0	0	0	1	361	0.09	0.0249	--	--	--
17	Central Orange County	3176	365	4	3.1	0	0	365	0.095	0.076	0.075	0	0	0	1	4	365	0.09	0.0211	--	--	--
18	North Coastal Orange County	3195	364	5	3.3	0	0	338	0.085	0.073	0.068	0	0	0	0	0	355	0.09	0.0131	359	0.02	0.014
19	Saddleback Valley	3812	365	2	1.6	0	0	365	0.125	0.085	0.078	0	1	1	3	6	--	--	--	--	--	--
RIVERSIDE COUNTY																							
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	363	3	2.6	0	0	358	0.144	0.129	0.105	0	3	33	46	62	365	0.08	0.0222	365	0.02	0.011
23	Metropolitan Riverside County 2	4146	365	4	2.4	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Mira Loma	5214	43*	3*	2.2*	0*	0*	44*	0.050*	0.045*	0.040*	0*	0*	0*	0*	0*	--	--	--	--	--	--
24	Perris Valley	4149	--	--	--	--	--	365	0.126	0.103	0.082	0	1	3	11	18	--	--	--	--	--	--
25	Lake Elsinore	4158	365	2	1.1	0	0	365	0.149	0.119	0.097	1	4	15	37	46	365	0.07	0.0142	--	--	--
29	Banning Airport	4164	--	--	--	--	--	359	0.144	0.131	0.119	0	10	39	47	66	329	0.07	0.0148	--	--	--
30	Coachella Valley 1**	4137	364	3	1.0	0	0	363	0.139	0.116	0.108	0	4	35	41	63	352	0.10	0.0120	--	--	--
30	Coachella Valley 2**	4157	--	--	--	--	--	365	0.114	0.095	0.092	0	0	18	18	36	--	--	--	--	--	--
SAN BERNARDINO COUNTY																							
32	Northwest San Bernardino Valley	5175	364	2	1.9	0	0	365	0.149	0.121	0.101	1	8	15	34	34	364	0.10	0.0313	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	365	3	2.0	0	0	355	0.150	0.128	0.113	2	9	23	49	47	361	0.11	0.0310	365	0.01	0.004
34	Central San Bernardino Valley 2	5203	356	4	3.4	0	0	361	0.163	0.129	0.114	4	9	31	54	58	361	0.10	0.0259	--	--	--
35	East San Bernardino Valley	5204	--	--	--	--	--	364	0.146	0.123	0.113	1	6	24	36	45	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	--	--	354	0.182	0.145	0.130	7	18	69	80	102	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DISTRICT MAXIMUM				7	5.9	0	0		0.182	0.145	0.130	7	18	69	80	102		0.13	0.0313		0.07	0.014
SOUTH COAST AIR BASIN				7	5.9	0	0		0.182	0.145	0.130	11	30	84	102	120		0.13	0.0313		0.07	0.014

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

b) – The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2004.

c) - On April 28, 2005, Air Resources Board has approved revising the California ozone standard to establish a new 8-hour average standard of 0.07 ppm. The new 8-hour standard is expected to take effect in spring 2006.

d) - The state standard is 1-hour average NO_2 > 0.25 ppm. The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm.

e) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm.

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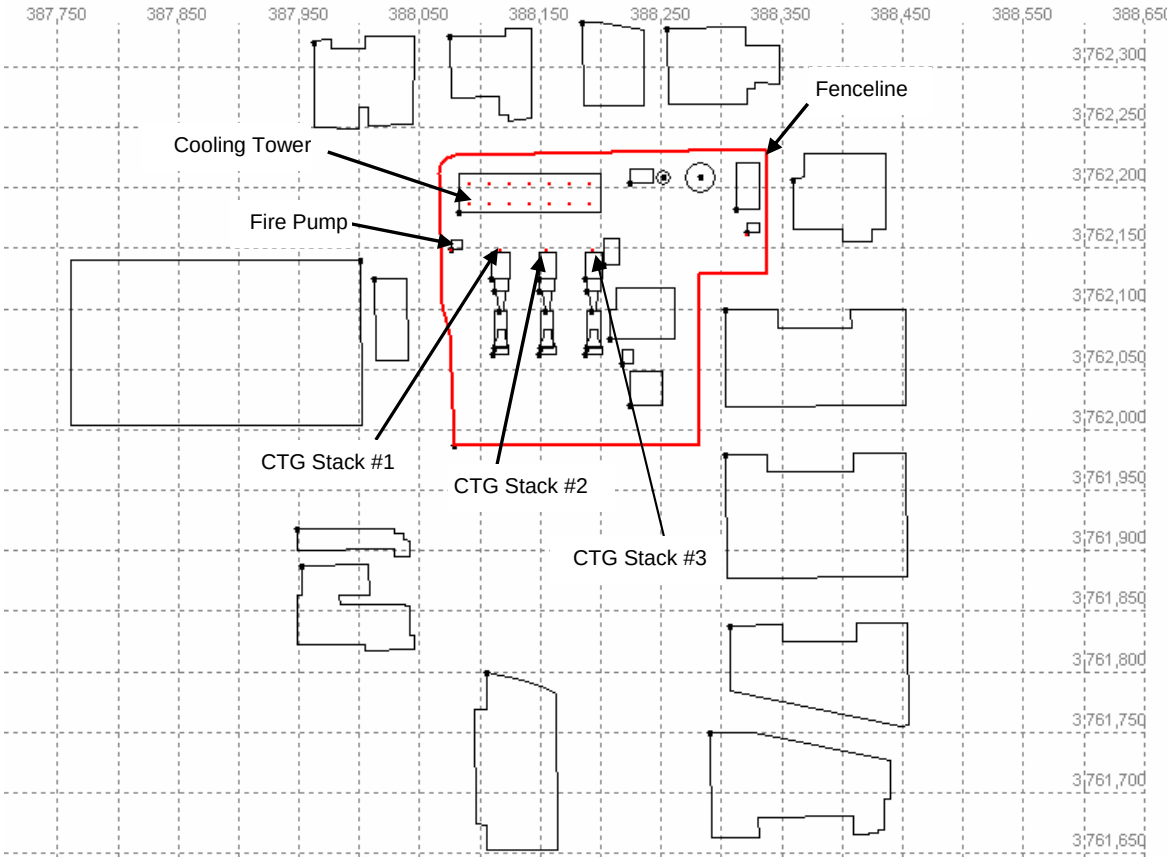
FIGURE 8.1C-1
Vernon Power Plant Facility Layout used for ISCST3 Modeling