04/13/2001
Delta Power
Chino Site Performance
Black & Veatch Project 066561.0040
Simple Cycle Emissions Estimates, Revision 0

Case Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CTG Model	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint	LM6000Sprint
Diluent	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30	Water/30
CTG Fuel Type	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas
CTG Load	100%	75%	50%	100%	100%	100%	75%	50%	100%	100%	100%	75%	50%	100%	100%
CTG Inlet Air Conditioning In Operation?	Chiller OFF	Chiller OFF	Chiller OFF	Chiller OFF	Chiller ON	Chiller OFF	Chiller OFF	Chiller OFF	Chiller OFF	Chiller ON	Chiller OFF	Chiller OFF	Chiller OFF	Fogger ON	Fogger ON
SPRINT System In Operation?	SPRINT OFF	SPRINT OFF	SPRINT OFF	SPRINT ON	SPRINT ON	SPRINT OFF	SPRINT OFF	SPRINT OFF	SPRINT ON	SPRINT ON	SPRINT OFF	SPRINT OFF	SPRINT OFF	SPRINT ON	SPRINT ON
SCR / CO Catalyst In Operation?	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON	SCR/CO ON
Silencer installed?	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	No Silencer	Silencer Installed	ncer Not Installed
Ambient Temperature, F	24	24	24	66	66	66	66	66	114	114	114	114	114	92	92
Fuel Sulfur Content (grains/100 standard cubic feet)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Ambient Temperature, F	24.0	24.0	24.0	66.0	66.0	66.0	66.0	66.0	114.0	114.0	114.0	114.0	114.0	92.0	92.0
Ambient Relative Humidity, %	47.0	47.0	47.0	63.0	63.0	63.0	63.0	63.0	26.0	26.0	26.0	26.0	26.0	54.0	54.0
Atmospheric Pressure, psia	14.312	14.312	14.312	14.312	14.312	14.312	14.312	14.312	14.312	14.312	14.312	14.312	14.312	14.312	14.312
CTG Compressor Inlet Dry Bulb Temperature, F	24.0	24.0	24.0	66.0	45.0	66.0	66.0	66.0	114.0	45.0	114.0	114.0	114.0	78.8	78.8
CTG Compr. Inlet Relative Humidity, %	47.4	47.4	47.4	63.1	100.0	63.1	63.1	63.1	26.1	100.0	26.1	26.1	26.1	96.2	96.2
Inlet Loss, in. H2O	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.5	4.5
Exhaust Loss, in. H2O	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	8.5	7.5
CTG Performance Reference	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates	BV Estimates
CTG Load Level (percent of Base Load)	100%	75%	50%	100%	100%	100%	75%	50%	100%	100%	100%	75%	50%	100%	100%
Gross CTG Output, kW	50,203	37,652	25,108	44,262	46,908	38,493	28,879	19,260	28,678	46,908	22,591	16,959	11,319	38,535	38,580
Gross CTG Heat Rate, Btu/kWh (LHV)	8,392	8,812	10,107	8,789	8,664	8,740	9,585	11,156	9,932	8,664	10,451	11,761	14,327	8,952	8,940
Gross CTG Heat Rate, Btu/kWh (HHV)	9,311	9,777	11,214	9,751	9,613	9,697	10,634	12,377	11,019	9,613	11,595	13,049	15,896	9,932	9,919
Chiller Auxiliary Power, kW	0	0	0	0	477	0	0	0	0	1699	0	0	0	0	0
CTG Auxiliary Power, kW	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Net CTG Output, kW	50,003	37,452	24,908	44,062	46,231	38,293	28,679	19,060	28,478	45,009	22,391	16,759	11,119	38,335	38,380
Net CTG Heat Rate, Btu/kWh (LHV)	8,426	8,859	10,188	8,829	8,791	8,786	9,652	11,273	10,002	9,030	10,544	11,901	14,585	8,999	8,987
Net CTG Heat Rate, Btu/kWh (HHV)	9,348	9,829	11,304	9,795	9,754	9,748	10,708	12,507	11,096	10,019	11,699	13,205	16,182	9,984	9,971
CTG Heat Input, MBtu/h (LHV)	421.3	331.8	253.8	389.0	406.4	336.4	276.8	214.9	284.8	406.4	236.1	199.5	162.2	345.0	344.9
CTG Heat Input, MBtu/h (HHV)	467.4	368.1	281.6	431.6	450.9	373.3	307.1	238.4	316.0	450.9	262.0	221.3	179.9	382.7	382.7
CTG Water Injection Flow, lb/h (includes SPRINT system water consumption)	23,790	15,903	10,135	24,363	23,124	17,025	12,181	7,884	16,852	23,124	9,815	7,237	4,887	17,663	17,659
CTG Steam Injection Flow, lb/h	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Injection Fluid/Fuel Ratio	1.2	1.0	0.8	1.3	1.2	1.1	0.9	0.8	1.2	1.2	0.9	0.8	0.6	1.1	1.1
CTG Exhaust Flow, lb/h	1,091,160	1,002,600	867,960	989,640	1,031,400	951,480	849,960	749,160	787,320	1,031,400	725,400	662,040	599,760	928,800	928,800
CTG Exhaust Temperature, F	799	724	686	857	846	801	779	737	885	846	845	822	788	848	848
Total CTG Fuel Flow, lb/h	20,260	15,950	12,200	18,710	19,540	16,180	13,310	10,330	13,700	19,540	11,350	9,590	7,800	16,590	16,590
CTG Fuel Temperature, F	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
CTG Fuel LHV, Btu/lb	20,796	20,796	20,796	20,796	20,796	20,796	20,796	20,796	20,796	20,796	20,796	20,796	20,796	20,796	20,796
CTG Fuel HHV, Btu/lb	23,073	23,073	23,073	23,073	23,073	23,073	23,073	23,073	23,073	23,073	23,073	23,073	23,073	23,073	23,073
HHV/LHV Ratio	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095	1.1095