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Appendix B
Emissions Data

Table B-1 (Revised December 4, 2015)
Puente Power Project
Performance Runs for Gas Turbine

Ambient Condition	Winter	Winter	ISO	ISO	Summer	Summer	Summer	Summer	Summer	Summer
Ambient Temperature (deg. F)	38.9	38.9	59	59	77.8	77.8	77.8	82	82	82
Relative Humidity, %	26%	26%	60%	60%	50%	50%	50%	31%	31%	31%
Load	Maximum	Minimum	Maximum	Minimum	Maximum	Maximum	Minimum	Maximum	Maximum	Minimum
Evap Cooling?	Off	Off	Off	Off	On	Off	Off	On	Off	Off
Output Summary										
Gross Output, MW	280	70	276	69	270	258	76	272	254	77
HHV Fuel Input, MMBtu/hr	2,572.07	1,080.07	2,552.16	1,057.38	2,507.74	2,417.99	1,093.67	2,521.81	2,384.57	1,101.53
Fuel Flow, scf/hr	2,523,252	1,059,268	2,502,903	1,037,111	2,459,944	2,371,766	1,072,608	2,473,510	2,337,851	1,080,295
Stack Parameters										
Stack Exhaust Flow, 1000s lb/hr	6,109.00	3,316.00	6,197.00	3,297.00	6,158.00	6,039.00	3,398.00	6,193.00	6,012.00	3,433.00
Stack Exhaust Temperature, Deg.F	900	900	900	900	900	900	900	900	900	900
Exhaust Composition, Vol %										
N2	75.50%	76.04%	74.94%	75.46%	74.31%	74.58%	75.02%	74.53%	74.93%	75.36%
O2	14.03%	15.57%	14.04%	15.50%	13.95%	14.11%	15.38%	14.00%	14.26%	15.48%
CO2	3.19%	2.48%	3.12%	2.44%	3.07%	3.02%	2.44%	3.07%	3.01%	2.44%
H2O	6.38%	4.99%	7.00%	5.69%	7.77%	7.39%	6.27%	7.50%	6.91%	5.82%
Ar	0.91%	0.91%	0.91%	0.90%	0.89%	0.89%	0.89%	0.89%	0.89%	0.91%
Molecular Weight	28.56	28.64	28.48	28.56	28.39	28.43	28.5	28.42	28.48	28.55
Stack Exhaust Flow, 1000s ACFM	3,530.67	1,922.03	3,587.69	1,915.87	3,576.29	3,485.05	1,977.90	3,592.25	3,482.77	1,995.01
Stack Emission Rates										
NOx, ppmvd@15% O2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
CO, ppmvd@15% O2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
ROC as CH4, ppmvd@15% O2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
NH3, ppmvd@15% O2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Particulates, lb/hr	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
NOx, lb/hr	23.1	9.7	22.9	9.5	22.5	21.7	9.8	22.6	21.4	9.9
CO, lb/hr	22.5	9.4	22.3	9.2	21.9	21.2	9.5	22.1	20.9	9.6
ROC as CH4, lb/hr	6.4	2.7	6.4	2.6	6.3	6.1	2.7	6.3	6.0	2.8
NH3 Slip, lb/hr	17.1	7.2	17.0	7.0	16.7	16.1	7.3	16.8	15.9	7.3

Table B-2 (Revised December 4, 2015)
Puente Power Project
Gas Turbine Hourly Emissions - Startup/Shutdown Emissions

Gas Turbine - Hourly Startup Emissions												
	Time (minutes)	NOx Emissions (lbs/hr)	CO Emissions (lbs/hr)	ROC Emissions (lbs/hr)	PM10 Emissions (lbs/hr)	SOx Emissions (lbs/hr)	NOx Emissions (lbs)	CO Emissions (lbs)	ROC Emissions (lbs)	PM10 Emissions (lbs)	SOx Emissions (lbs)
Maximum Startup Emissions	30	N/A	N/A	N/A	N/A	5.4	87.0	167.0	17.0	3.7	2.7
Maximum Normal Operation Emissions	30	23.1	22.5	6.4	10.1	5.4	11.6	11.3	3.2	5.1	2.7
Total =	60						98.6	178.3	20.2	8.8	5.4

Gas Turbine - Hourly Shutdown Emissions												
	Time (minutes)	NOx Emissions (lbs/hr)	CO Emissions (lbs/hr)	ROC Emissions (lbs/hr)	PM10 Emissions (lbs/hr)	SOx Emissions (lbs/hr)	NOx Emissions (lbs)	CO Emissions (lbs)	ROC Emissions (lbs)	PM10 Emissions (lbs)	SOx Emissions (lbs)
Maximum Shutdown Emissions	12	N/A	N/A	N/A	N/A	5.4	4.0	145.0	25.0	1.5	1.1
Maximum Normal Operation Emissions	48	23.1	22.5	6.4	10.1	5.4	18.5	18.0	5.2	8.1	4.3
Total =	60						22.5	163.0	30.2	9.6	5.4

Gas Turbine - Hourly Startup/Shutdown/Restart Emissions												
	Time (minutes)	NOx Emissions (lbs/hr)	CO Emissions (lbs/hr)	ROC Emissions (lbs/hr)	PM10 Emissions (lbs/hr)	SOx Emissions (lbs/hr)	NOx Emissions (lbs)	CO Emissions (lbs)	ROC Emissions (lbs)	PM10 Emissions (lbs)	SOx Emissions (lbs)
Maximum Startup Emissions	30	N/A	N/A	N/A	N/A	5.4	87.0	167.0	17.0	3.7	2.7
Maximum Shutdown Emissions	12	N/A	N/A	N/A	N/A	5.4	4.0	145.0	25.0	1.5	1.1
Maximum Restart Emissions*	18	N/A	N/A	N/A	N/A	5.4	52.2	100.2	10.2	2.2	1.6
Total =	60						143.2	412.2	52.2	7.4	5.4

Note: * Calculated based on maximum startup emissions reduced for 18 minute period.

GE Power and Water

October 28, 2015

To: NRG Puente Power Team

Subject: NRG Puente Power
GE IPS: 976085
GE PM10 Emission Guarantee

The NRG Puente Power Plant, will utilize the 7HA.01 gas turbine technology installed in a simple cycle configuration equipped with an air attemperated simple cycle SCR and CO catalyst. For this installation, GE is offering a Particulate Matter emission guarantee of 10.1 lbs/hr as measured at the emission sampling ports located at the turbine stack exit. This guarantee shall apply for the entire load range from minimum emission compliant load (MECL) through base load operation and across the guarantee ambient temperature range of 38.9 to 82 deg F.

Regards,

Andrew Dicke
GE Power and Water
Emissions and Permitting Application Engineer