

DOCKETED

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Appendix H
Hazardous Air Pollutant Stationary Source
Potential to Emit

Toxics emissions are summarized in the following table:

Table 6-2. Source Process Rates

Pollutant ID	Pollutant Name	Max. Hourly Emissions (lbs) ¹	Annual Emissions (lbs) ²	Emission Factor Origin
Natural Gas Turbine				
7664417	Ammonia	1.75E+01	3.52E+04	Permit Limit
115071	Propylene	7.79E+00	4.82E+03	CATEF ³
75070	Acetaldehyde	4.12E-01	2.55E+02	AP-42 ⁴
107028	Acrolein	6.61E-02	4.09E+01	AP-42
71432	Benzene	1.24E-01	7.65E+01	AP-42
106990	1,3-Butadiene	4.44E-03	2.74E+00	AP-42
100414	Ethylbenzene	3.30E-01	2.04E+02	AP-42
50000	Formaldehyde	9.27E+00	5.73E+03	CATEF ⁴
110543	Hexane	2.62E+00	1.62E+03	CATEF
91203	Naphthalene	1.35E-02	8.35E+00	AP-42
---	Total PAH's (listed individually below)	6.63E-03	4.10E+00	---
83329	Acenaphthene	1.92E-04	1.18E-01	CATEF
208968	Acenaphthylene	1.48E-04	9.17E-02	CATEF
120127	Anthracene	3.42E-04	2.12E-01	CATEF
56553	Benzo(a)anthracene	2.29E-04	1.41E-01	CATEF
50328	Benzo(a)pyrene	1.40E-04	8.66E-02	CATEF
192972	Benzo(e)pyrene	5.50E-06	3.40E-03	CATEF
205992	Benzo(b)fluoranthrene	1.14E-04	7.07E-02	CATEF
207089	Benzo(k)fluoranthrene	1.11E-04	6.88E-02	CATEF
191242	Benzo(g,h,i)perylene	1.38E-04	8.54E-02	CATEF
218019	Chrysene	2.55E-04	1.58E-01	CATEF
53703	Dibenz(a,h)anthracene	2.37E-04	1.47E-01	CATEF
206440	Fluoranthene	4.37E-04	2.70E-01	CATEF
86737	Fluorene	5.87E-04	3.63E-01	CATEF
193395	Indeno(1,2,3-cd)pyrene	2.37E-04	1.47E-01	CATEF
85018	Phenanthrene	3.17E-03	1.96E+00	CATEF
129000	Pyrene	2.80E-04	1.73E-01	CATEF
75569	Propylene oxide	2.99E-01	1.85E+02	AP-42
108883	Toluene	1.35E+00	8.35E+02	AP-42
1330207	Xylene	6.59E-01	4.08E+02	AP-42
Diesel Emergency Engine				
9901	Diesel particulate matter	3.00E-02	6.00E+00	Engine Manufacturer

¹The maximum hourly emissions for the natural gas turbine represent a startup/shutdown scenario with a low catalyst control efficiency that results in an 8.01 time increase in the rate of toxic emissions. This rate of increase was calculated as the ratio of the worst case startup/shutdown hourly VOC emission rate to the normal operation hourly VOC emission rate.

²Annual emissions for the natural gas turbine represent 400 combined startup/shutdown hours and 1,750 normal operation hours.

³Toxic emission factors derived from the California Toxic Emission Factor (CATEF) database. The CATEF emission factors (mean values) were converted to from lb/mmcf to lb/mmBtu using the HHV of natural gas.

⁴Toxic emission factor derived from US EPA's AP-42 Table 3.1-3 (4/00). Since the emission factors presented in AP-42 are uncontrolled, a 50% control efficiency was applied to account for the presence of the oxidation catalyst.

Table D-6 (Revised December 4, 2015)

Puente Power Project

Non-Criteria Pollutant Annual Emissions (maximum 2-year avg. over past 5-years)

MGS Existing Units 1 - 3

Pollutant	Unit 1	Unit 2	Unit 3 GT	Unit 1	Unit 2	Unit 3 GT	Subtotal tons/yr
	Annual Avg Firing Rate MMscf/yr	Annual Avg Firing Rate MMscf/yr	Annual Avg Firing Rate MMscf/yr	Annual Emissions tons/yr	Annual Emissions tons/yr	Annual Emissions tons/yr	
Ammonia (not a HAP)	1,102	1,297	89	2.511	2.956	0.000	5.467
Propylene (Not a HAP)	1,102	1,297	89	0.009	0.010	0.034	0.053
Propylene oxide	1,102	1,297	89	0.000	0.000	0.001	0.001
Benzene	1,102	1,297	89	0.001	0.001	0.001	0.003
Formaldehyde	1,102	1,297	89	0.002	0.002	0.041	0.045
Hexane	1,102	1,297	89	0.001	0.001	0.011	0.013
Naphthalene	1,102	1,297	89	0.000	0.000	0.000	0.000
Dichlorobenzene	1,102	1,297	89	0.000	0.000	0.000	0.000
Toluene	1,102	1,297	89	0.004	0.005	0.006	0.015
1,3-Butadiene	1,102	1,297	89	0.000	0.000	0.000	0.000
Acetaldehyde	1,102	1,297	89	0.000	0.001	0.002	0.003
Acrolein	1,102	1,297	89	0.000	0.001	0.000	0.001
Ethyl Benzene	1,102	1,297	89	0.001	0.001	0.001	0.004
PAHs (other)	1,102	1,297	89	0.000	0.000	0.000	0.000
Xylene	1,102	1,297	89	0.003	0.004	0.003	0.010
						Total (HAPs) =	0.095
						Total (All) =	5.615