TAP AND HAP EMISSIONS

Common Name	TAP	HAP	Washington State SQERs: Averaging Period	SQER (lb/averaging period)	ASIL (µg/m3)	De Minimis (lb/averaging period)	Turbine Emission Factors: AP-42 Turb-NG	AP-42 Turb-Dist	CATEF Turb-NG SCR/CO Max	CATEF Turb-NG SCR/CO Mean	CATEF Turb-NG Max Converted	CATEF Turb-Oil SCR/CO Max	CATEF Turb-Oil SCR/CO Mean	CATEF Turb-Dist Max Converted	Maximum Emission Factors: Turbine NG	Turbine Distillate	AP-42 Eng-Dist
Washington Toxic Air Pollutants (TAPs) per 173-460-150							lb/MMBtu	lb/MMBtu	lb/MMcf	lb/MMcf	lb/MMBtu	lb/Mgal	lb/Mgal	lb/MMBtu	lb/MMBtu	lb/MMBtu	lb/MMBtu
1,1-Dichloroethylene	Yes	Yes	24-hr	26.3	200	1.31		2.02E-05							0.00E+00	2.02E-05	0.00E+00
1,3-Butadiene	Yes	Yes	year	1.13	0.00588	0.0564	4.29E-07	1.58E-05	1.33E-04	1.27E-04	1.3E-07				1.30E-07	1.58E-05	0.00E+00
Acetaldehyde	Yes	Yes	year	71	0.37	3.55	1.76E-05		5.11E-01	1.37E-01	5.01E-04				5.01E-04	0.00E+00	2.52E-05
Acrolein	Yes	Yes	24-hr	0.00789	0.06	0.000394	3.62E-06		6.93E-02	1.89E-02	6.79E-05				6.79E-05	0.00E+00	7.88E-06
Ammonia	Yes		24-hr	9.31	70.8	0.465									0.00E+00	0.00E+00	0.00E+00
Arsenic & Inorganic Arsenic	Yes	Yes	year	0.0581	0.000303	0.00291		1.06E-05				2.72E-04	2.02E-04	1.96E-06	0.00E+00	1.96E-06	0.00E+00
Benz[a]anthracene	Yes		year	1.74	0.00909	0.0872			1.34E-04	2.26E-05	1.31E-07	3.06E-04	8.53E-05	2.2E-06	1.31E-07	2.20E-06	6.22E-07
Benzene	Yes	Yes	year	6.62	0.0345	0.331	3.26E-06	5.48E-05	4.72E-02	1.33E-02	4.63E-05	1.18E-02	1.13E-02	8.49E-05	4.63E-05	8.49E-05	7.76E-04
Benzo[a]pyrene	Yes		year	0.174	0.000909	0.00872			9.16E-05	1.39E-05	8.98E-08	3.06E-04	8.33E-05	2.2E-06	8.98E-08	2.20E-06	2.57E-07
Benzo[b]fluoranthene	Yes		year	1.74	0.00909	0.0872			6.72E-05	1.13E-05	6.59E-08	3.06E-04	1.32E-04	2.2E-06	6.59E-08	2.20E-06	1.11E-06
Benzo[k]fluoranthene	Yes		year	1.74	0.00909	0.0872			6.72E-05	1.10E-05	6.59E-08	3.06E-04	1.30E-04	2.2E-06	6.59E-08	2.20E-06	2.18E-07
Beryllium & Compounds (NOS)	Yes	Yes	year	0.08	0.000417	0.004		3.07E-07				1.37E-04	5.43E-05	9.86E-07	0.00E+00	9.86E-07	0.00E+00
Cadmium & Compounds	Yes	Yes	year	0.0457	0.000238	0.00228		4.80E-06				3.56E-04	3.25E-04	2.56E-06	0.00E+00	2.56E-06	0.00E+00
Carbon monoxide	Yes		1-hr	50.4	23000	1.14	3.34E-02	1.03E-01							*3.34E-02*	*1.03E-01*	*1.06E+00*
Chromium(VI)	Yes	Yes	year	0.00128	0.00000667	0.000064						1.64E-05	1.08E-05	1.18E-07	0.00E+00	1.18E-07	0.00E+00
Chrysene	Yes		year	17.4	0.0909	0.872			1.50E-04	2.52E-05	1.47E-07	3.06E-04	1.03E-04	2.2E-06	1.47E-07	2.20E-06	1.53E-06
Copper & Compounds	Yes		1-hr	0.219	100	0.011						1.48E-03	9.98E-04	1.06E-05	0.00E+00	1.06E-05	0.00E+00
Dibenz[a,h]anthracene	Yes		year	0.16	0.000833	0.00799			1.34E-04	2.35E-05	1.31E-07	3.06E-04	8.25E-05	2.2E-06	1.31E-07	2.20E-06	3.46E-07
Diesel Engine Exhaust, Particulate	Yes		year	0.639	0.00333	0.032	6.63E-03	1.15E-02							*6.63E-03*	*1.15E-02*	*3.34E-03*
Ethylbenzene	Yes	Yes	year	76.8	0.4	3.84	3.20E-05		5.70E-02	1.79E-02	5.59E-05				5.59E-05	0.00E+00	0.00E+00
Formaldehyde	Yes	Yes	year	32	0.167	1.6	3.60E-04	2.82E-04	6.87E+00	9.17E-01	6.74E-03	1.56E-01	7.05E-02	1.12E-03	*3.60E-04*	*2.82E-04*	7.89E-05
Hydrogen chloride	Yes	Yes	24-hr	1.18	9	0.0591						8.61E-02	8.09E-02	6.19E-04	0.00E+00	6.19E-04	0.00E+00
Indeno[1,2,3-cd]pyrene	Yes		year	1.74	0.00909	0.0872			1.34E-04	2.35E-05	1.31E-07	3.06E-04	8.26E-05	2.2E-06	1.31E-07	2.20E-06	4.14E-07
Lead and compounds (NOS)	Yes	Yes	year	16	0.0833	10		1.42E-05				7.18E-04	6.08E-04	5.17E-06	0.00E+00	5.17E-06	0.00E+00
Manganese & Compounds	Yes	Yes	24-hr	0.00526	0.04	0.000263		7.89E-04				1.43E-02	1.03E-02	1.03E-04	0.00E+00	1.03E-04	0.00E+00
Mercury, Elemental	Yes	Yes	24-hr	0.0118	0.09	0.000591		1.20E-06				5.14E-06	2.71E-06	3.7E-08	0.00E+00	3.70E-08	0.00E+00
m-Xylene	Yes	Yes	24-hr	29.0	221	1.45	6.38E-05		1.08E-01	4.89E-02	1.06E-04				1.06E-04	0.00E+00	1.93E-04
Naphthalene	Yes	Yes	year	5.64	0.0294	0.282	1.27E-06	3.52E-05	7.88E-03	1.66E-03	7.73E-06	2.77E-02	1.08E-02	1.99E-04	7.73E-06	1.99E-04	1.30E-04
n-Hexane	Yes		24-hr	92.0	700	4.60			3.82E-01	2.59E-01	3.75E-04				3.75E-04	0.00E+00	0.00E+00
Nitrogen dioxide	Yes		1-hr	1.03	470	0.457	1.28E-02	2.34E-01							*1.28E-02*	*2.34E-01*	*7.65E+00*
o-Xylene	Yes	Yes	24-hr	29.0	221	1.45	6.38E-05		4.88E-02	2.40E-02	4.78E-05				4.78E-05	0.00E+00	1.93E-04
Perchloroethylene	Yes	Yes	year	32.4	0.169	1.62		3.24E-05							0.00E+00	3.24E-05	0.00E+00
Propylene	Yes		24-hr	394	3000	19.7			2.00E+00	7.71E-01	0.001961				1.96E-03	0.00E+00	2.79E-03
Propylene oxide	Yes	Yes	year	51.8	0.27	2.59	2.86E-05		5.87E-02	4.78E-02	5.75E-05				5.75E-05	0.00E+00	0.00E+00
p-Xylene	Yes	Yes	24-hr	29.0	221	1.45	6.38E-05		1.08E-01	4.89E-02	1.06E-04				1.06E-04	0.00E+00	1.93E-04
Selenium & Selenium Cmpnds	Yes	Yes	24-hr	2.63	20	0.131		2.52E-05				9.13E-06	8.39E-06	6.57E-08	0.00E+00	6.57E-08	0.00E+00
Sulfur dioxide	Yes		1-hr	1.45	660	0.457	3.38E-03	3.30E-02							*3.38E-03*	*3.30E-02*	*9.76E-03*
Sulfuric Acid	Yes		24-hr	0.131	1	0.00657	3.38E-03	3.30E-02							*3.38E-03*	*3.30E-02*	*9.76E-03*
Toluene	Yes	Yes	24-hr	657	5000	32.9	1.34E-04		1.68E-01	7.10E-02	1.65E-04				1.65E-04	0.00E+00	2.81E-04
Trichloroethylene	Yes	Yes	year	95.9	0.5	4.8		2.75E-05							0.00E+00	2.75E-05	0.00E+00
Vinyl Chloride	Yes	Yes	year	2.46	0.0128	0.123		5.27E-05							0.00E+00	5.27E-05	0.00E+00
Additional Federal Hazardous Air Pollutants (HAPs) (per CAA 112b) identified as compounded (instead of individual component from WAC list), and used instead of above in total HAP calculation.																	
Chromium Compounds		Yes						1.08E-05				5.60E-04	4.24E-04	4.03E-06	0.00E+00	4.03E-06	0.00E+00
Nickel Compounds		Yes						4.61E-06				1.42E-01	4.88E-02	2.71E-03	0.00E+00	2.71E-03	0.00E+00
Xylenes (isomers and mixtures)		Yes					6.38E-05		6.26E-02	2.61E-02	6.14E-05				6.14E-05	0.00E+00	1.93E-04
Total HAP Compounds																	

Common Name	Maximum Hourly Emissions: 7FA.05	7FA.04	SGT6	LMS100	Maximum 24-Hour Emissions: 7FA.05	7FA.04	SGT6	LMS100	Maximum Annual Emissions: 7FA.05	7FA.04	SGT6	LMS100	Maximum Emissions (lb/ave. period): 7FA.05	7FA.04	SGT6	LMS100	Maximum Annual HAP Emissions: 7FA.05	7FA.04	SGT6	LMS100
Washington Toxic Air Pollutants (TAPs) per 173-460-150	lb/hr	lb/hr	lb/hr	lb/hr	lb/day	lb/day	lb/day	lb/day	lb/yr	lb/yr	lb/yr	lb/yr					lb/yr	lb/yr	lb/yr	lb/yr
1,1-Dichloroethylene					1.09E+00	9.79E-01	1.04E+00	8.44E-01					1.09	0.98	1.04	0.84	15.3	13.7	14.6	11.8
1,3-Butadiene									**1.25E+01**	**1.12E+01**	**1.20E+01**	**9.84E+00**	**12.5**	**11.2**	**12.0**	**9.8**	12.5	11.2	12.0	9.8
Acetaldehyde									**2.21E+03**	**1.88E+03**	**2.19E+03**	**2.29E+03**	**2207**	**1879**	**2187**	**2292**	2207	1879	2187	2292
Acrolein					**3.72E+00**	**3.17E+00**	**3.69E+00**	**2.99E+00**					**3.72**	**3.17**	**3.69**	**2.99**	299	255	297	311
Ammonia					***7.68E+02***	***6.89E+02***	***7.32E+02***	***5.95E+02***					**768**	**689**	**732**	**595**				
Arsenic & Inorganic Arsenic									**1.48E+00**	**1.33E+00**	**1.41E+00**	**1.14E+00**	**1.48**	**1.33**	**1.41**	**1.14**	1.48	1.33	1.41	1.14
Benz[a]anthracene									**2.25E+00**	**1.99E+00**	**2.16E+00**	**1.89E+00**	**2.25**	**1.99**	**2.16**	**1.89**				
Benzene									**2.69E+02**	**2.32E+02**	**2.65E+02**	**2.64E+02**	**269**	**232**	**265**	**264**	269	232	265	264
Benzo[a]pyrene									**2.06E+00**	**1.83E+00**	**1.98E+00**	**1.70E+00**	**2.06**	**1.83**	**1.98**	**1.70**				
Benzo[b]fluoranthene									**1.96E+00**	**1.74E+00**	**1.88E+00**	1.59E+00	**1.96**	**1.74**	**1.88**	1.59				
Benzo[k]fluoranthene									**1.96E+00**	**1.74E+00**	**1.88E+00**	1.59E+00	**1.96**	**1.74**	**1.88**	1.59				
Beryllium & Compounds (NOS)									**7.46E-01**	**6.69E-01**	**7.11E-01**	**5.76E-01**	**0.75**	**0.67**	**0.71**	**0.58**	0.75	0.67	0.71	0.58
Cadmium & Compounds									**1.94E+00**	**1.74E+00**	**1.85E+00**	**1.50E+00**	**1.94**	**1.74**	**1.85**	**1.50**	1.94	1.74	1.85	1.50
Carbon monoxide	***5.38E+02***	***5.37E+02***	***2.17E+03***	***1.08E+02***									**538**	**537**	**2175**	**108**				
Chromium(VI)									**8.93E-02**	**8.01E-02**	**8.51E-02**	**6.90E-02**	**0.09**	**0.08**	**0.09**	**0.07**	0.089	0.080	0.085	0.069
Chrysene									2.32E+00	2.05E+00	2.23E+00	1.97E+00	2.32	2.05	2.23	1.97				
Copper & Compounds	2.40E-02	2.15E-02	2.29E-02	1.85E-02									0.02	0.02	0.02	0.02				
Dibenz[a,h]anthracene									**2.24E+00**	**1.99E+00**	**2.16E+00**	**1.89E+00**	**2.24**	**1.99**	**2.16**	**1.89**				
Diesel Engine Exhaust, Particulate									***2.92E+01***	***2.92E+01***	***2.92E+01***	***2.92E+01***	***29***	***29***	***29***	***29***				
Ethylbenzene									**2.46E+02**	**2.10E+02**	**2.44E+02**	**2.56E+02**	**246**	**210**	**244**	**256**	246	210	244	256
Formaldehyde									**1.80E+03**	**1.54E+03**	**1.78E+03**	**1.81E+03**	**1799**	**1542**	**1775**	**1812**	1799	1542	1775	1812
Hydrogen chloride					**3.35E+01**	**3.00E+01**	**3.19E+01**	**2.59E+01**					**33.5**	**30.0**	**31.9**	**25.9**	469	420	447	362
Indeno[1,2,3-cd]pyrene									**2.24E+00**	**1.99E+00**	**2.16E+00**	**1.89E+00**	**2.24**	**1.99**	**2.16**	**1.89**				
Lead and compounds (NOS)									3.91E+00	3.51E+00	3.73E+00	3.02E+00	3.91	3.51	3.73	3.02	3.91	3.51	3.73	3.02
Manganese & Compounds					**5.56E+00**	**4.99E+00**	**5.30E+00**	**4.30E+00**					**5.56**	**4.99**	**5.30**	**4.30**	77.8	69.8	74.2	60.2
Mercury, Elemental					2.00E-03	1.79E-03	1.91E-03	1.54E-03					0.0020	0.0018	0.0019	0.0015	0.028	0.025	0.027	0.022
m-Xylene					6.41E+00	5.55E+00	6.36E+00	5.87E+00					6.41	5.55	6.36	5.87	467	397	463	485
Naphthalene									**1.85E+02**	**1.64E+02**	**1.78E+02**	**1.52E+02**	**185**	**164**	**178**	**152**	185	164	178	152
n-Hexane					2.04E+01	1.73E+01	2.02E+01	1.62E+01					20.4	17.3	20.2	16.2				
Nitrogen dioxide	***2.42E+02***	***2.41E+02***	***2.46E+02***	***1.51E+02***									**242**	**241**	**246**	**151**				
o-Xylene					3.25E+00	2.87E+00	3.23E+00	3.37E+00					3.25	2.87	3.23	3.37	211	180	209	220
Perchloroethylene									2.45E+01	2.20E+01	2.34E+01	1.90E+01	24.5	22.0	23.4	19.0	24.5	22.0	23.4	19.0
Propylene					1.16E+02	1.00E+02	1.15E+02	1.03E+02					116	100	115	103				
Propylene oxide									**2.54E+02**	**2.16E+02**	**2.51E+02**	**2.63E+02**	**254**	**216**	**251**	**263**	254	216	251	263
p-Xylene					6.41E+00	5.55E+00	6.36E+00	5.87E+00					6.41	5.55	6.36	5.87	467	397	463	485
Selenium & Selenium Cmpnds					3.55E-03	3.18E-03	3.39E-03	2.74E-03					0.0035	0.0032	0.0034	0.0027	0.05	0.04	0.05	0.04
Sulfur dioxide	***1.65E+01***	***1.62E+01***	***1.74E+01***	***1.67E+01***									**16.5**	**16.2**	**17.4**	**16.7**				
Sulfuric Acid					***5.28E+02***	***6.06E+02***	***5.52E+02***	***4.19E+02***					**528**	**606**	**552**	**419**				
Toluene					9.90E+00	8.57E+00	9.82E+00	9.00E+00					9.90	8.57	9.82	9.00	726	618	720	754
Trichloroethylene									2.08E+01	1.87E+01	1.98E+01	1.61E+01	20.8	18.7	19.8	16.1	20.8	18.7	19.8	16.1
Vinyl Chloride									**3.99E+01**	**3.58E+01**	**3.80E+01**	**3.08E+01**	**39.9**	**35.8**	**38.0**	**30.8**	39.9	35.8	38.0	30.8
Additional Federal Hazardous Air Pollutants (HAPs) (per CAA 112b) identified as compounded (instead of individual component from WAC list), and used instead of above in total HAP calculation.																				
Chromium Compounds									3.05E+00	2.73E+00	2.91E+00	2.36E+00					3.05	2.73	2.91	2.36
Nickel Compounds									2.05E+03	1.84E+03	1.96E+03	1.59E+03					2050	1839	1955	1585
Xylenes (isomers and mixtures)									2.71E+02	2.30E+02	2.68E+02	2.81E+02					271	230	268	281
Total HAP Compounds																	8977	7787	8780	8490
																Total HAPs (tpy)	**4.49**	**3.89**	**4.39**	**4.25**

Notes:

Emissions calculated by multiplying maximum emission factor by the maximum heat input rate (Higher Heating Value (HHV) in MMBtu/hr) for each fuel type. The short-term (1-hr and 24-hr periods) maximum emissions are the maximum for either fuel, and the annual maximum is the maximum of fuel mix options (NG and ULSD, or 100% NG if greater) . HHV's are provided for each turbine option in Attachment A-4, and for the Emergency Engine in Attachment A-7.

Turbine emissions for ammonia, carbon monoxide, nitrogen dioxide, sulfur dioxide, and sulfuric acid emissions are based on Black & Veatch data provided in Attachment A. The ammonia emissions are due to ammonia slip in the SCR.

Except for "Diesel Engine Exhaust, Particulate", the modeled annual impacts are based on 500 hrs of emergency generator use (if applicable) instead of the current proposed 275 hours. Therefore, these impacts may be conservatively high.

Turbine emissions listed under "Diesel Engine Exhaust, Particulate" are not included here. Ecology has not yet determined whether these turbine emissions are part of "Diesel Engine Exhaust, Particulate", and, therefore, they are not included in the modeling at this time.

CATEF DATA FOR NATURAL GAS-FIRED TURBINES (DOWNLOADED 5/25/10)

SOURCEI	SYSTEM	MATERIAL	SCC	TYPE	CAS	SUBSTANCE	MAXIMUM	MEAN	MEDIAN	UNIT
4668	Turbine	Natural gas	20200203	COC/SCR	198-55-0	Perylene	9.68E-07	7.00E-07	5.79E-07	lbs/MMcf
4673	Turbine	Natural gas	20200203	COC/SCR	85-01-8	Phenanthrene	2.35E-03	3.13E-04	8.57E-05	lbs/MMcf
4678	Turbine	Natural gas	20200203	COC/SCR	115-07-1	Propylene	2.00E+00	7.71E-01	5.71E-01	lbs/MMcf
4683	Turbine	Natural gas	20200203	COC/SCR	75-56-9	Propylene Oxide	5.87E-02	4.78E-02	4.48E-02	lbs/MMcf
4688	Turbine	Natural gas	20200203	COC/SCR	129-00-0	Pyrene	1.27E-04	2.77E-05	1.18E-05	lbs/MMcf
4693	Turbine	Natural gas	20200203	COC/SCR	108-88-3	Toluene	1.68E-01	7.10E-02	5.91E-02	lbs/MMcf
4698	Turbine	Natural gas	20200203	COC/SCR	1330-20-7	Xylene (m,p)	1.08E-01	4.89E-02	4.27E-02	lbs/MMcf
4703	Turbine	Natural gas	20200203	COC/SCR	95-47-6	Xylene (o)	4.88E-02	2.40E-02	2.15E-02	lbs/MMcf
4708	Turbine	Natural gas	20200203	COC/SCR	1330-20-7	Xylene (Total)	6.26E-02	2.61E-02	1.93E-02	lbs/MMcf
4543	Turbine	Natural gas	20200203	COC/SCR	106-99-0	1,3-Butadiene	1.33E-04	1.27E-04	1.24E-04	lbs/MMcf
4548	Turbine	Natural gas	20200203	COC/SCR	91-58-7	2-Chloronaphthalene	4.69E-07	2.72E-07	1.74E-07	lbs/MMcf
4553	Turbine	Natural gas	20200203	COC/SCR	91-57-6	2-Methylnaphthalene	6.30E-06	5.29E-06	5.07E-06	lbs/MMcf
4558	Turbine	Natural gas	20200203	COC/SCR	83-32-9	Acenaphthene	1.22E-04	1.90E-05	5.23E-06	lbs/MMcf
4563	Turbine	Natural gas	20200203	COC/SCR	208-96-8	Acenaphthylene	8.25E-05	1.47E-05	2.88E-06	lbs/MMcf
4568	Turbine	Natural gas	20200203	COC/SCR	75-07-0	Acetaldehyde	5.11E-01	1.37E-01	5.38E-02	lbs/MMcf
4573	Turbine	Natural gas	20200203	COC/SCR	107-02-8	Acrolein	6.93E-02	1.89E-02	1.09E-02	lbs/MMcf
4578	Turbine	Natural gas	20200203	COC/SCR	120-12-7	Anthracene	1.53E-04	3.38E-05	9.38E-06	lbs/MMcf
4584	Turbine	Natural gas	20200203	COC/SCR	71-43-2	Benzene	4.72E-02	1.33E-02	1.01E-02	lbs/MMcf
4593	Turbine	Natural gas	20200203	COC/SCR	56-55-6	Benzo(a)anthracene	1.34E-04	2.26E-05	3.61E-06	lbs/MMcf
4598	Turbine	Natural gas	20200203	COC/SCR	50-32-8	Benzo(a)pyrene	9.16E-05	1.39E-05	2.57E-06	lbs/MMcf
4603	Turbine	Natural gas	20200203	COC/SCR	205-99-2	Benzo(b)fluoranthene	6.72E-05	1.13E-05	2.87E-06	lbs/MMcf
4608	Turbine	Natural gas	20200203	COC/SCR	192-97-2	Benzo(e)pyrene	7.33E-07	5.44E-07	4.63E-07	lbs/MMcf
4613	Turbine	Natural gas	20200203	COC/SCR	191-24-2	Benzo(g,h,i)perylene	8.25E-05	1.37E-05	3.03E-06	lbs/MMcf
4618	Turbine	Natural gas	20200203	COC/SCR	207-08-9	Benzo(k)fluoranthene	6.72E-05	1.10E-05	2.87E-06	lbs/MMcf
4623	Turbine	Natural gas	20200203	COC/SCR	218-01-9	Chrysene	1.50E-04	2.52E-05	4.99E-06	lbs/MMcf
4653	Turbine	Natural gas	20200203	COC/SCR	110-54-3	Hexane	3.82E-01	2.59E-01	2.19E-01	lbs/MMcf
4658	Turbine	Natural gas	20200203	COC/SCR	193-39-5	Indeno(1,2,3-cd)pyrene	1.34E-04	2.35E-05	2.87E-06	lbs/MMcf
4663	Turbine	Natural gas	20200203	COC/SCR	91-20-3	Naphthalene	7.88E-03	1.66E-03	9.26E-04	lbs/MMcf
4628	Turbine	Natural gas	20200203	COC/SCR	53-70-3	Dibenz(a,h)anthracene	1.34E-04	2.35E-05	3.03E-06	lbs/MMcf
4633	Turbine	Natural gas	20200203	COC/SCR	100-41-4	Ethylbenzene	5.70E-02	1.79E-02	9.74E-03	lbs/MMcf
4638	Turbine	Natural gas	20200203	COC/SCR	206-44-0	Fluoranthene	3.05E-04	4.32E-05	1.07E-05	lbs/MMcf
4643	Turbine	Natural gas	20200203	COC/SCR	86-73-7	Fluorene	4.58E-04	5.80E-05	1.56E-05	lbs/MMcf
4648	Turbine	Natural gas	20200203	COC/SCR	50-00-0	Formaldehyde	6.87E+00	9.17E-01	1.12E-01	lbs/MMcf

Green cells indicate compound is part of POM also.

CATEF DATA FOR DISTILLATE-FIRED TURBINES (DOWNLOADED 5/25/10)

SOURCEI	SYSTEM	MATERIAL	SCC	CAS	SUBSTANCE	MAXIMUM	MEAN	MEDIAN	UNIT
4389	Turbine	No. 2 Distillate oil	20100101	83-32-9	Acenaphthene	3.06E-04	9.69E-05	3.93E-05	lbs/Mgal
4393	Turbine	No. 2 Distillate oil	20100101	208-96-8	Acenaphthylene	3.06E-04	8.61E-05	6.19E-06	lbs/Mgal
4397	Turbine	No. 2 Distillate oil	20100101	120-12-7	Anthracene	3.06E-04	9.80E-05	4.94E-05	lbs/Mgal
4401	Turbine	No. 2 Distillate oil	20100101	56-55-6	Benzo(a)anthracene	3.06E-04	8.53E-05	7.48E-06	lbs/Mgal
4405	Turbine	No. 2 Distillate oil	20100101	50-32-8	Benzo(a)pyrene	3.06E-04	8.33E-05	4.31E-06	lbs/Mgal
4437	Turbine	No. 2 Distillate oil	20100101	193-39-5	Indeno(1,2,3-cd)pyrene	3.06E-04	8.26E-05	2.59E-06	lbs/Mgal
4441	Turbine	No. 2 Distillate oil	20100101	91-20-3	Naphthalene	2.77E-02	1.08E-02	6.53E-03	lbs/Mgal
4445	Turbine	No. 2 Distillate oil	20100101	85-01-8	Phenanthrene	2.04E-03	4.12E-04	2.49E-04	lbs/Mgal
4449	Turbine	No. 2 Distillate oil	20100101	129-00-0	Pyrene	3.06E-04	1.01E-04	4.25E-05	lbs/Mgal
4408	Turbine	No. 2 Distillate oil	20100101	205-99-2	Benzo(b)fluoranthene	3.06E-04	1.32E-04	1.03E-04	lbs/Mgal
4413	Turbine	No. 2 Distillate oil	20100101	191-24-2	Benzo(g,h,i)perylene	3.06E-04	8.26E-05	2.74E-06	lbs/Mgal
4416	Turbine	No. 2 Distillate oil	20100101	207-08-9	Benzo(k)fluoranthene	3.06E-04	1.30E-04	1.07E-04	lbs/Mgal
4419	Turbine	No. 2 Distillate oil	20100101	218-01-9	Chrysene	3.06E-04	1.03E-04	8.11E-05	lbs/Mgal
4423	Turbine	No. 2 Distillate oil	20100101	53-70-3	Dibenz(a,h)anthracene	3.06E-04	8.25E-05	2.59E-06	lbs/Mgal
4427	Turbine	No. 2 Distillate oil	20100101	206-44-0	Fluoranthene	3.06E-04	1.25E-04	7.73E-05	lbs/Mgal
4431	Turbine	No. 2 Distillate oil	20100101	86-73-7	Fluorene	3.06E-04	1.27E-04	1.07E-04	lbs/Mgal
4495	Turbine	No. 2 Distillate oil	20100101	7439-92-1	Lead	7.18E-04	6.08E-04	7.04E-04	lbs/Mgal
4496	Turbine	No. 2 Distillate oil	20100101	7439-96-5	Manganese	1.43E-02	1.03E-02	8.96E-03	lbs/Mgal
4497	Turbine	No. 2 Distillate oil	20100101	7439-97-6	Mercury	5.14E-06	2.71E-06	1.64E-06	lbs/Mgal
4500	Turbine	No. 2 Distillate oil	20100101	7440-02-0	Nickel	1.42E-01	4.88E-02	2.71E-03	lbs/Mgal
4505	Turbine	No. 2 Distillate oil	20100101	7782-49-2	Selenium	9.13E-06	8.39E-06	8.96E-06	lbs/Mgal
4506	Turbine	No. 2 Distillate oil	20100101	7440-66-6	Zinc	1.42E-01	5.38E-02	1.35E-02	lbs/Mgal
4457	Turbine	No. 2 Distillate oil	20100101	7440-38-2	Arsenic	2.72E-04	2.02E-04	2.56E-04	lbs/Mgal
4458	Turbine	No. 2 Distillate oil	20100101	71-43-2	Benzene	1.18E-02	1.13E-02	1.13E-02	lbs/Mgal
4464	Turbine	No. 2 Distillate oil	20100101		Benzo(b+k)fluoranthene	3.65E-06	3.23E-06	3.14E-06	lbs/Mgal
4468	Turbine	No. 2 Distillate oil	20100101	7440-41-7	Beryllium	1.37E-04	5.43E-05	1.69E-05	lbs/Mgal
4469	Turbine	No. 2 Distillate oil	20100101	7440-43-9	Cadmium	3.56E-04	3.25E-04	3.49E-04	lbs/Mgal
4470	Turbine	No. 2 Distillate oil	20100101	18540-29-	Chromium (Hex)	1.64E-05	1.08E-05	1.04E-05	lbs/Mgal
4471	Turbine	No. 2 Distillate oil	20100101	7440-47-3	Chromium (Total)	5.60E-04	4.24E-04	4.10E-04	lbs/Mgal
4474	Turbine	No. 2 Distillate oil	20100101	7440-50-8	Copper	1.48E-03	9.98E-04	1.00E-03	lbs/Mgal
4486	Turbine	No. 2 Distillate oil	20100101	50-00-0	Formaldehyde	1.56E-01	7.05E-02	5.93E-02	lbs/Mgal
4492	Turbine	No. 2 Distillate oil	20100101	7647-01-0	HCl	8.61E-02	8.09E-02	8.22E-02	lbs/Mgal

Green cells indicate compound is part of POM also.

This attachment is on disk.