



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Combined Cycle Combustion Turbine Facility - Gas Firing

Instructions

Stack Parameter Units: English

Stack Height = 150 ft

Minimum Distance from Stack to Property Line = 188 ft

Exhaust Stack Flow Rate = 1,369,559 acfm

Hazard Limiting Values (HLV) Averaging Times = 8-Hour

Adjustments to the MASC for Time Periods < 8 hrs = No

Notes:

Maximum gas firing rate and duct firing rate at - 14.2F

Additional HAPs
Clear All

Print
Footnotes

Hazardous Air Pollutant(s)	CAS No.	HLV (µg/m ³)	Proposed Allowable Emission Rate (lb/hr)	MASC (µg/m ³)	ASC (µg/m ³)	Complies?
Acetaldehyde	75-07-0	3600	1.09E-01	9.60E+04	2.12E+01	yes
Acrolein	107-02-8	5	1.74E-02	1.33E+02	3.40E+00	yes
Benzene	71-43-2	150	3.27E-02	4.00E+03	6.37E+00	yes
Butadiene (1,3-butadiene)	106-99-0	22000	1.17E-03	5.86E+05	2.28E-01	yes
Ethyl benzene	100-41-4	8700	8.72E-02	2.32E+05	1.70E+01	yes
Formaldehyde	50-00-0	12	3.47E-01	3.20E+02	6.77E+01	yes
Propylene oxide	75-56-9	1000	7.90E-02	2.67E+04	1.54E+01	yes
Toluene	108-88-3	7500	3.54E-01	2.00E+05	6.90E+01	yes
o-Xylene	1330-20-7	8680	1.74E-01	2.31E+05	3.40E+01	yes
Naphthalene	91-20-3	1000	3.54E-03	2.67E+04	6.90E-01	yes
Sulfuric acid	7664-93-9	20	2.70E+00	5.33E+02	5.26E+02	yes
Arsenic & compounds (as As)	7440-38-2	0.05	5.45E-04	1.33E+00	1.06E-01	yes
Beryllium	7440-41-7	0.01	3.27E-05	2.67E-01	6.37E-03	yes
Cadmium	7440-43-9	0.4	3.00E-03	1.07E+01	5.84E-01	yes
Chromium, metal	7440-47-3	2.5	3.81E-03	6.66E+01	7.43E-01	yes
Cobalt metal, dust & fume (as Co)	7440-48-4	2	2.23E-04	5.33E+01	4.35E-02	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	3	1.33E-03	8.00E+01	2.60E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	1.01E-03	--	1.96E-01	--
Mercury vapor	--	1	6.81E-04	2.67E+01	1.33E-01	yes
Nickel (metal)	7440-02-0	5	5.72E-03	1.33E+02	1.11E+00	yes
Selenium compounds (as Se)	--	4	6.54E-05	1.07E+02	1.27E-02	yes



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Combined Cycle Combustion Turbine Facility - Gas Firing

Instructions

Stack Parameter Units: English

Stack Height = ft

Minimum Distance from Stack to Property Line = ft

Exhaust Stack Flow Rate = acfm

Hazard Limiting Values (HLV) Averaging Times = 30-Minute

No

Notes:

Maximum gas firing rate and duct firing rate at -14.2F

Additional HAPs Clear All
Print Footnotes

Hazardous Air Pollutant(s)	CAS No.	HLV (µg/m ³)	Proposed Allowable Emission Rate (lb/hr)	MASC (µg/m ³)	ASC (µg/m ³)	Complies?
Acetaldehyde	75-07-0	18000	1.09E-01	4.80E+05	2.12E+01	yes
Acrolein	107-02-8	25	1.74E-02	6.66E+02	3.40E+00	yes
Benzene	71-43-2	750	3.27E-02	2.00E+04	6.37E+00	yes
Butadiene (1,3-butadiene)	106-99-0	110000	1.17E-03	2.93E+06	2.28E-01	yes
Ethyl benzene	100-41-4	43500	8.72E-02	1.16E+06	1.70E+01	yes
Formaldehyde	50-00-0	60	3.47E-01	1.60E+03	6.77E+01	yes
Propylene oxide	75-56-9	5000	7.90E-02	1.33E+05	1.54E+01	yes
Toluene	108-88-3	37500	3.54E-01	1.00E+06	6.90E+01	yes
o-Xylene	1330-20-7	43400	1.74E-01	1.16E+06	3.40E+01	yes
Naphthalene	91-20-3	5000	3.54E-03	1.33E+05	6.90E-01	yes
Sulfuric acid	7664-93-9	100	2.70E+00	2.67E+03	5.26E+02	yes
Arsenic & compounds (as As)	7440-38-2	0.25	5.45E-04	6.66E+00	1.06E-01	yes
Beryllium	7440-41-7	0.05	3.27E-05	1.33E+00	6.37E-03	yes
Cadmium	7440-43-9	2	3.00E-03	5.33E+01	5.84E-01	yes
Chromium, metal	7440-47-3	12.5	3.81E-03	3.33E+02	7.43E-01	yes
Cobalt metal, dust & fume (as Co)	7440-48-4	10	2.23E-04	2.67E+02	4.35E-02	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	15	1.33E-03	4.00E+02	2.60E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	1.01E-03	--	1.96E-01	--
Mercury vapor	--	5	6.81E-04	1.33E+02	1.33E-01	yes
Nickel (metal)	7440-02-0	25	5.72E-03	6.66E+02	1.11E+00	yes
Selenium compounds (as Se)	--	20	6.54E-05	5.33E+02	1.27E-02	yes



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Combined Cycle Combustion Turbine Facility - Oil Firing

Instructions

Stack Parameter Units:

Stack Height = ft

Minimum Distance from Stack to Property Line = ft

Exhaust Stack Flow Rate = acfm

Hazard Limiting Values (HLV) Averaging Times =

Adjustments to the MASC for Time Periods < 8 hrs =

Notes:
Maximum gas firing rate and duct firing rate at - 14.2F. CT1 is 188 ft to property line, CT2 is 324 ft to property line.

Hazardous Air Pollutant(s)	CAS No.	HLV (µg/m ³)	Proposed Allowable Emission Rate (lb/hr)	MASC (µg/m ³)	ASC (µg/m ³)	Complies?
Ammonia	7664-41-7	360	1.92E+01	8.13E+03	3.14E+03	yes
Benzene	71-43-2	150	1.39E-01	3.39E+03	2.27E+01	yes
Butadiene (1,3-butadiene)	106-99-0	22000	4.04E-02	4.97E+05	6.60E+00	yes
Formaldehyde	50-00-0	12	7.07E-01	2.71E+02	1.15E+02	yes
Sulfuric acid	7664-93-9	20	2.31E+00	4.52E+02	3.77E+02	yes
Naphthalene	91-20-3	1000	8.83E-02	2.26E+04	1.44E+01	yes
Ammonia	7664-41-7	360	1.92E+01	8.13E+03	3.14E+03	yes
Arsenic & compounds (as As)	7440-38-2	0.05	4.65E-03	1.13E+00	7.60E-01	yes
Beryllium	7440-41-7	0.01	7.82E-04	2.26E-01	1.28E-01	yes
Cadmium	7440-43-9	0.4	1.21E-02	9.03E+00	1.98E+00	yes
Chromium, metal	7440-47-3	2.5	2.78E-02	5.65E+01	4.54E+00	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	3	3.53E-02	6.78E+01	5.77E+00	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	1.99E+00	--	3.26E+02	--
Mercury vapor	--	1	3.03E-03	2.26E+01	4.95E-01	yes
Nickel (metal)	7440-02-0	5	1.16E-02	1.13E+02	1.90E+00	yes
Selenium compounds (as Se)	--	4	6.31E-02	9.03E+01	1.03E+01	yes



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Instructions

Stack Parameter Units:

Stack Height = ft

Minimum Distance from Stack to Property Line = ft

Exhaust Stack Flow Rate = acfm

Hazard Limiting Values (HLV) Averaging Times =

No

Notes:
Maximum gas firing rate and duct firing rate at -14.2F. CT1 is 188 ft to property line, CT2 is 324 ft to property line.

Additional HAPs	Clear All
Print	Footnotes

Hazardous Air Pollutant(s)	CAS No.	HLV (µg/m ³)	Proposed Allowable Emission Rate (lb/hr)	MASC (µg/m ³)	ASC (µg/m ³)	Complies?
Ammonia	7664-41-7	1800	1.92E+01	4.07E+04	3.14E+03	yes
Benzene	71-43-2	750	1.39E-01	1.69E+04	2.27E+01	yes
Butadiene (1,3-butadiene)	106-99-0	110000	4.04E-02	2.48E+06	6.60E+00	yes
Formaldehyde	50-00-0	60	7.07E-01	1.36E+03	1.15E+02	yes
Sulfuric acid	7664-93-9	100	2.31E+00	2.26E+03	3.77E+02	yes
Naphthalene	91-20-3	5000	8.83E-02	1.13E+05	1.44E+01	yes
Ammonia	7664-41-7	1800	1.92E+01	4.07E+04	3.14E+03	yes
Arsenic & compounds (as As)	7440-38-2	0.25	4.65E-03	5.65E+00	7.60E-01	yes
Beryllium	7440-41-7	0.05	7.82E-04	1.13E+00	1.28E-01	yes
Cadmium	7440-43-9	2	1.21E-02	4.52E+01	1.98E+00	yes
Chromium, metal	7440-47-3	12.5	2.78E-02	2.82E+02	4.54E+00	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	15	3.53E-02	3.39E+02	5.77E+00	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	1.99E+00	--	3.26E+02	--
Mercury vapor	--	5	3.03E-03	1.13E+02	4.95E-01	yes
Nickel (metal)	7440-02-0	25	1.16E-02	5.65E+02	1.90E+00	yes
Selenium compounds (as Se)	--	20	6.31E-02	4.52E+02	1.03E+01	yes

