



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Auxiliary Boiler

Instructions

Stack Parameter Units: English

Stack Height = 125 ft

Minimum Distance from Stack to Property Line = 136 ft

Exhaust Stack Flow Rate = 19,579 acfm

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

No

Notes:

Maximum gas firing rate

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?
Benzene	71-43-2	750	1.94E-04	6.61E+05	2.65E+00	yes
o-Dichlorobenzene	95-50-1	--	1.11E-04	--	1.51E+00	--
Formaldehyde	50-00-0	60	6.84E-03	5.29E+04	9.32E+01	yes
Hexan (n-hexane)	110-54-3	18000	1.66E-01	1.59E+07	2.27E+03	yes
Toluene	108-88-3	37500	3.05E-04	3.31E+07	4.16E+00	yes
Naphthalene	91-20-3	5000	5.73E-05	4.41E+06	7.81E-01	yes
Arsenic & compounds (as As)	7440-38-2	0.25	1.85E-05	2.20E+02	2.52E-01	yes
Beryllium	7440-41-7	0.05	1.11E-06	4.41E+01	1.51E-02	yes
Cadmium	7440-43-9	2	1.02E-04	1.76E+03	1.39E+00	yes
Chromium, metal	7440-47-3	12.5	1.29E-04	1.10E+04	1.76E+00	yes
Cobalt metal, dust & fume (as Co)	7440-48-4	10	7.58E-06	8.81E+03	1.03E-01	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	15	4.53E-05	1.32E+04	6.17E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	3.42E-05	--	4.66E-01	--
Mercury vapor	--	5	2.31E-05	4.41E+03	3.15E-01	yes
Nickel (metal)	7440-02-0	25	1.94E-04	2.20E+04	2.65E+00	yes
Selenium compounds (as Se)	--	20	2.22E-06	1.76E+04	3.02E-02	yes



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Auxiliary Boiler

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

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?
Benzene	71-43-2	150	1.94E-04	1.32E+05	2.65E+00	yes
o-Dichlorobenzene	95-50-1	--	1.11E-04	--	1.51E+00	--
Formaldehyde	50-00-0	12	6.84E-03	1.06E+04	9.32E+01	yes
Hexan (n-hexane)	110-54-3	3600	1.66E-01	3.17E+06	2.27E+03	yes
Toluene	108-88-3	7500	3.05E-04	6.61E+06	4.16E+00	yes
Naphthalene	91-20-3	1000	5.73E-05	8.81E+05	7.81E-01	yes
Arsenic & compounds (as As)	7440-38-2	0.05	1.85E-05	4.41E+01	2.52E-01	yes
Beryllium	7440-41-7	0.01	1.11E-06	8.81E+00	1.51E-02	yes
Cadmium	7440-43-9	0.4	1.02E-04	3.53E+02	1.39E+00	yes
Chromium, metal	7440-47-3	2.5	1.29E-04	2.20E+03	1.76E+00	yes
Cobalt metal, dust & fume (as Co)	7440-48-4	2	7.58E-06	1.76E+03	1.03E-01	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	3	4.53E-05	2.64E+03	6.17E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	3.42E-05	--	4.66E-01	--
Mercury vapor	--	1	2.31E-05	8.81E+02	3.15E-01	yes
Nickel (metal)	7440-02-0	5	1.94E-04	4.41E+03	2.65E+00	yes
Selenium compounds (as Se)	--	4	2.22E-06	3.53E+03	3.02E-02	yes



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Emergency Fire Pump Engine

Instructions

Stack Parameter Units: English

Stack Height = 17.5 ft

Minimum Distance from Stack to Property Line = 275 ft

Exhaust Stack Flow Rate = 1,877 acfm

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

No

Notes:

Maximum firing rate

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	1.88E-03	1.83E+07	2.67E+02	yes
Acrolein	107-02-8	25	2.27E-04	2.55E+04	3.22E+01	yes
Benzene	71-43-2	750	2.29E-03	7.64E+05	3.25E+02	yes
Butadiene (1,3-butadiene)	106-99-0	110000	9.58E-05	1.12E+08	1.36E+01	yes
Formaldehyde	50-00-0	60	2.89E-03	6.11E+04	4.11E+02	yes
Propylene oxide	75-56-9	5000	8.72E-03	5.09E+06	1.24E+03	yes
Toluene	108-88-3	37500	1.00E-03	3.82E+07	1.43E+02	yes
o-Xylene	1330-20-7	43400	6.98E-04	4.42E+07	9.93E+01	yes
Naphthalene	91-20-3	5000	2.08E-04	5.09E+06	2.95E+01	yes
Arsenic & compounds (as As)	7440-38-2	0.25	1.13E-07	2.55E+02	1.61E-02	yes
Cadmium	7440-43-9	2	1.26E-08	2.04E+03	1.79E-03	yes
Chromium, metal	7440-47-3	12.5	3.04E-05	1.27E+04	4.32E+00	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	15	1.88E-06	1.53E+04	2.68E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	6.91E-07	--	9.83E-02	--
Mercury vapor	--	5	2.52E-08	5.09E+03	3.59E-03	yes
Nickel (metal)	7440-02-0	25	3.63E-06	2.55E+04	5.16E-01	yes
Selenium compounds (as Se)	--	20	6.27E-07	2.04E+04	8.92E-02	yes



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Emergency Fire Pump Engine

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 firing rate

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	1.88E-03	3.67E+06	2.67E+02	yes
Acrolein	107-02-8	5	2.27E-04	5.09E+03	3.22E+01	yes
Benzene	71-43-2	150	2.29E-03	1.53E+05	3.25E+02	yes
Butadiene (1,3-butadiene)	106-99-0	22000	9.58E-05	2.24E+07	1.36E+01	yes
Formaldehyde	50-00-0	12	2.89E-03	1.22E+04	4.11E+02	yes
Propylene oxide	75-56-9	1000	8.72E-03	1.02E+06	1.24E+03	yes
Toluene	108-88-3	7500	1.00E-03	7.64E+06	1.43E+02	yes
o-Xylene	1330-20-7	8680	6.98E-04	8.84E+06	9.93E+01	yes
Naphthalene	91-20-3	1000	2.08E-04	1.02E+06	2.95E+01	yes
Arsenic & compounds (as As)	7440-38-2	0.05	1.13E-07	5.09E+01	1.61E-02	yes
Cadmium	7440-43-9	0.4	1.26E-08	4.08E+02	1.79E-03	yes
Chromium, metal	7440-47-3	2.5	3.04E-05	2.55E+03	4.32E+00	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	3	1.88E-06	3.06E+03	2.68E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	6.91E-07	--	9.83E-02	--
Mercury vapor	--	1	2.52E-08	1.02E+03	3.59E-03	yes
Nickel (metal)	7440-02-0	5	3.63E-06	5.09E+03	5.16E-01	yes
Selenium compounds (as Se)	--	4	6.27E-07	4.08E+03	8.92E-02	yes



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Emergency Generator Engine

Instructions

Stack Parameter Units: English

Stack Height = 14.5 ft

Minimum Distance from Stack to Property Line = 295 ft

Exhaust Stack Flow Rate = 10,909 acfm

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

No

Notes:

Maximum firing rate

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	3.64E-04	3.64E+06	8.90E+00	yes
Acrolein	107-02-8	25	1.14E-04	5.06E+03	2.78E+00	yes
Benzene	71-43-2	750	1.12E-02	1.52E+05	2.74E+02	yes
Formaldehyde	50-00-0	60	1.14E-03	1.21E+04	2.79E+01	yes
Propylene oxide	75-56-9	5000	5.56E-02	1.01E+06	1.36E+03	yes
Toluene	108-88-3	37500	4.06E-03	7.59E+06	9.92E+01	yes
o-Xylene	1330-20-7	43400	2.79E-03	8.78E+06	6.82E+01	yes
Naphthalene	91-20-3	5000	1.22E-03	1.01E+06	2.99E+01	yes
Arsenic & compounds (as As)	7440-38-2	0.25	6.67E-07	5.06E+01	1.63E-02	yes
Cadmium	7440-43-9	2	7.41E-08	4.05E+02	1.81E-03	yes
Chromium, metal	7440-47-3	12.5	1.79E-04	2.53E+03	4.38E+00	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	15	1.11E-05	3.03E+03	2.72E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	4.07E-06	--	9.96E-02	--
Mercury vapor	--	5	1.49E-07	1.01E+03	3.64E-03	yes
Nickel (metal)	7440-02-0	25	2.14E-05	5.06E+03	5.23E-01	yes
Selenium compounds (as Se)	--	20	3.70E-06	4.05E+03	9.04E-02	yes



CT DEEP Maximum Allowable Stack Concentration (MASC) Calculator

Company Name:	CPV Towantic Energy, LLC
Source Description:	Emergency Generator Engine

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 firing rate

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	3.64E-04	7.28E+05	8.90E+00	yes
Acrolein	107-02-8	5	1.14E-04	1.01E+03	2.78E+00	yes
Benzene	71-43-2	150	1.12E-02	3.03E+04	2.74E+02	yes
Formaldehyde	50-00-0	12	1.14E-03	2.43E+03	2.79E+01	yes
Propylene oxide	75-56-9	1000	5.56E-02	2.02E+05	1.36E+03	yes
Toluene	108-88-3	7500	4.06E-03	1.52E+06	9.92E+01	yes
o-Xylene	1330-20-7	8680	2.79E-03	1.76E+06	6.82E+01	yes
Naphthalene	91-20-3	1000	1.22E-03	2.02E+05	2.99E+01	yes
Arsenic & compounds (as As)	7440-38-2	0.05	6.67E-07	1.01E+01	1.63E-02	yes
Cadmium	7440-43-9	0.4	7.41E-08	8.09E+01	1.81E-03	yes
Chromium, metal	7440-47-3	2.5	1.79E-04	5.06E+02	4.38E+00	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	3	1.11E-05	6.07E+02	2.72E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	4.07E-06	--	9.96E-02	--
Mercury vapor	--	1	1.49E-07	2.02E+02	3.64E-03	yes
Nickel (metal)	7440-02-0	5	2.14E-05	1.01E+03	5.23E-01	yes
Selenium compounds (as Se)	--	4	3.70E-06	8.09E+02	9.04E-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:

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

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	4.77E+05	2.11E+01	yes
Acrolein	107-02-8	25	1.74E-02	6.63E+02	3.38E+00	yes
Benzene	71-43-2	750	3.27E-02	1.99E+04	6.34E+00	yes
Butadiene (1,3-butadiene)	106-99-0	110000	1.17E-03	2.92E+06	2.27E-01	yes
Ethyl benzene	100-41-4	43500	8.72E-02	1.15E+06	1.69E+01	yes
Formaldehyde	50-00-0	60	3.47E-01	1.59E+03	6.73E+01	yes
Propylene oxide	75-56-9	5000	7.90E-02	1.33E+05	1.53E+01	yes
Toluene	108-88-3	37500	3.54E-01	9.95E+05	6.87E+01	yes
o-Xylene	1330-20-7	43400	1.74E-01	1.15E+06	3.38E+01	yes
Naphthalene	91-20-3	5000	3.54E-03	1.33E+05	6.87E-01	yes
Arsenic & compounds (as As)	7440-38-2	0.25	5.45E-04	6.63E+00	1.06E-01	yes
Beryllium	7440-41-7	0.05	3.27E-05	1.33E+00	6.34E-03	yes
Cadmium	7440-43-9	2	3.00E-03	5.30E+01	5.81E-01	yes
Chromium, metal	7440-47-3	12.5	3.81E-03	3.32E+02	7.39E-01	yes
Cobalt metal, dust & fume (as Co)	7440-48-4	10	2.23E-04	2.65E+02	4.33E-02	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	15	1.33E-03	3.98E+02	2.59E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	1.01E-03	--	1.95E-01	--
Mercury vapor	--	5	6.81E-04	1.33E+02	1.32E-01	yes
Nickel (metal)	7440-02-0	25	5.72E-03	6.63E+02	1.11E+00	yes
Selenium compounds (as Se)	--	20	6.54E-05	5.30E+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 = 150 ft

Minimum Distance from Stack to Property Line = 188 ft

Exhaust Stack Flow Rate = 1,376,802 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 ($\mu\text{g}/\text{m}^3$)	Proposed Allowable Emission Rate (lb/hr)	MASC ($\mu\text{g}/\text{m}^3$)	ASC ($\mu\text{g}/\text{m}^3$)	Complies?
Acetaldehyde	75-07-0	3600	1.09E-01	9.55E+04	2.11E+01	yes
Acrolein	107-02-8	5	1.74E-02	1.33E+02	3.38E+00	yes
Benzene	71-43-2	150	3.27E-02	3.98E+03	6.34E+00	yes
Butadiene (1,3-butadiene)	106-99-0	22000	1.17E-03	5.84E+05	2.27E-01	yes
Ethyl benzene	100-41-4	8700	8.72E-02	2.31E+05	1.69E+01	yes
Formaldehyde	50-00-0	12	3.47E-01	3.18E+02	6.73E+01	yes
Propylene oxide	75-56-9	1000	7.90E-02	2.65E+04	1.53E+01	yes
Toluene	108-88-3	7500	3.54E-01	1.99E+05	6.87E+01	yes
o-Xylene	1330-20-7	8680	1.74E-01	2.30E+05	3.38E+01	yes
Naphthalene	91-20-3	1000	3.54E-03	2.65E+04	6.87E-01	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	2.65E-01	6.34E-03	yes
Cadmium	7440-43-9	0.4	3.00E-03	1.06E+01	5.81E-01	yes
Chromium, metal	7440-47-3	2.5	3.81E-03	6.63E+01	7.39E-01	yes
Cobalt metal, dust & fume (as Co)	7440-48-4	2	2.23E-04	5.30E+01	4.33E-02	yes
Lead, inorg., fumes & dusts (as Pb)	7439-92-1	3	1.33E-03	7.96E+01	2.59E-01	yes
Manganese dust & compounds (as Mn)	7489-96-5	--	1.01E-03	--	1.95E-01	--
Mercury vapor	--	1	6.81E-04	2.65E+01	1.32E-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	1.06E+02	1.27E-02	yes

