

**TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from
Existing Pantex Plant Sources**

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
1,1,2-trichloroethane	1ppm = 5.55 mg/m ³	30-minute	10 ppm N ₂ O	3.12 x 10 ⁻³	1.73 x 10 ⁻²
		Annual		4.86 x 10 ⁻⁵	2.70 x 10 ⁻⁴
1,3-butadiene	1ppm = 2.25 mg/m ³	30-minute	1000 ppm ^O ; 10 ppm ACGIH	1.32 x 10 ⁻²	2.96 x 10 ⁻²
		Annual		4.36 x 10 ⁻⁴	9.80 x 10 ⁻⁴
2-nitropropane	1ppm = 3.70 mg/m ³	30-minute	25 ppm ^O	2.31 x 10 ⁻³	8.55 x 10 ⁻³
		Annual		3.51 x 10 ⁻⁵	1.30 x 10 ⁻⁴
Alcohol (Isopropyl)	1ppm = 2.50 mg/m ³	30-minute	500 ppm (ST) N ₂ O	1.15	2.87
		Annual		4.70 x 10 ⁻²	1.17 x 10 ⁻¹
Benzene	1ppm = 3.25 mg/m ³	30-minute	5 ppm (ST) ^O ; 1 ppm (ST) ^N	1.04 x 10 ⁻²	3.38 x 10 ⁻²
		Annual		3.48 x 10 ⁻⁴	1.13 x 10 ⁻³
Carbon Disulfide	1ppm = 3.16 mg/m ³	30-minute	10 ppm (ST) ^N	7.15 x 10 ⁻³	2.26 x 10 ⁻²
		Annual		1.11 x 10 ⁻⁴	3.51 x 10 ⁻⁴
Carbon Tetrachloride	1ppm = 6.39 mg/m ³	30-minute	2 ppm (ST) ^N	3.08 x 10 ⁻³	1.97 x 10 ⁻²
		Annual		4.79 x 10 ⁻⁵	3.06 x 10 ⁻⁴
Chlorobenzene	1ppm = 4.68 mg/m ³	30-minute	75 ppm ^O	4.17 x 10 ⁻³	1.95 x 10 ⁻²
		Annual		6.50 x 10 ⁻⁵	3.04 x 10 ⁻⁴
Chromium	NA	30-minute	0.5 mg/m ³ N ₂ O		4.44 x 10 ⁻⁴
		Annual			8.44 x 10 ⁻⁶
Cresols (all isomers)	1ppm = 4.50 mg/m ³	30-minute	5 ppm ^O ; 2.3 ppm ^N	1.14 x 10 ⁻⁴	5.13 x 10 ⁻⁴
		Annual		1.77 x 10 ⁻⁶	7.98 x 10 ⁻⁶
Cresylic Acid	1ppm = 4.50 mg/m ³	30-minute	2.3 ppm ^N ; 5 ppm ^O	1.14 x 10 ⁻⁴	5.13 x 10 ⁻⁴
		Annual		1.77 x 10 ⁻⁶	7.98 x 10 ⁻⁶
Dibenzofurans	NA	30-minute			4.39 x 10 ⁻⁶
		Annual			8.00 x 10 ⁻⁸

TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from Existing Pantex Plant Sources-Continued

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
Dimethylformamide	1ppm = 3.04 mg/m ³	30-minute		8.49 x 10 ⁻¹	2.58
		Annual	10 ppm N ₂ O	7.55 x 10 ⁻³	2.30 x 10 ⁻²
Ester Glycol Ethers	NA	30-minute			3.59 x 10 ⁻²
		Annual			5.59 x 10 ⁻⁴
Ethyl Acetate	1ppm=3.36 mg/m ³	30-minute		5.27	1.77 x 10 ¹
		Annual	400 ppm N ₂ O	3.35 x 10 ⁻¹	1.12
Ethyl Benzene	1ppm = 4.41 mg/m ³	30-minute	125 ppm (ST) ^N	7.05 x 10 ⁻³	3.11 x 10 ⁻²
		Annual	100 ppm O	1.10 x 10 ⁻⁴	4.84 x 10 ⁻⁴
Ethylene Dichloride	1ppm = 4.11 mg/m ³	30-minute	2 ppm (ST) ^N	2.33 x 10 ⁻³	9.58 x 10 ⁻³
		Annual	50 ppm O; 1 ppm ^N	3.63 x 10 ⁻⁵	1.49 x 10 ⁻⁴
Formaldehyde	1ppm = 1.25 mg/m ³	30-minute	2 ppm (ST) ^O	6.18 x 10 ⁻⁴	7.72 x 10 ⁻⁴
		Annual	0.75 ppm O; 0.016 ppm ^N	2.14 x 10 ⁻⁵	2.67 x 10 ⁻⁵
Hydrogen Chloride	1ppm = 1.52 mg/m ³	30-minute		3.93 x 10 ⁻²	5.98 x 10 ⁻²
		Annual	5 ppm (C) ^{N₂O}	4.01 x 10 ⁻⁴	6.10 x 10 ⁻⁴
Hydrogen Fluoride	1ppm = 0.83 mg/m ³	3 hours		7.83 x 10 ⁻³	6.50 x 10 ⁻³
		12 hours		1.95 x 10 ⁻³	1.62 x 10 ⁻³
		24 hours			1.27 x 10 ⁻³
Lead	NA	Calendar Quarter	0.100 mg/m ³ ^N		3.46 x 10 ⁻⁴
			0.050 mg/m ³ ^O		0.00
Mercury	1ppm = 8.34 mg/m ³	30-minute	Hg Vapor 0.05 mg/m ³ ^O	0.00	0.00
		Annual	0.01 mg/m ³ (C) ^O	0.00	0.00

**TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from
Existing Pantex Plant Sources-Continued**

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
Methane, Dichloro (Methylene Chloride)	1ppm = 3.53 mg/m ³	30-minute	1000 ppm (C) O	4.54 x 10 ⁻¹	1.60
		Annual	500 ppm O	2.89 x 10 ⁻²	1.02 x 10 ⁻¹
Methanol (Methyl Alcohol)	1ppm = 1.33 mg/m ³	30-minute	250 ppm (ST) N	1.70 x 10 ¹	2.26 x 10 ¹
		Annual	200 ppm N,O	1.51 x 10 ⁻¹	2.01 x 10 ⁻¹
Methyl Cyanide	NA	30-minute			0.00
		Annual			0.00
Methyl Ethyl Ketone (2- Butanone)	1ppm = 3.00 mg/m ³	30-minute	300 ppm (ST) N	4.23	1.27 x 10 ¹
		Annual	200 ppm N,O	2.65 x 10 ⁻¹	7.95 x 10 ⁻¹
Methyl Isobutyl Ketone (Hexone)	1ppm = 4.17 mg/m ³	30-minute	75 ppm (ST) N	1.07 x 10 ⁻³	4.45 x 10 ⁻³
		Annual	100 ppm O ; 50 ppm N	1.66 x 10 ⁻⁵	6.91 x 10 ⁻⁵
Naphthalene	1ppm = 5.33 mg/m ³	30-minute	15 ppm (ST) N	4.69 x 10 ⁻⁶	2.50 x 10 ⁻⁵
		Annual	10 ppm N, O	9.01 x 10 ⁻⁸	4.80 x 10 ⁻⁷
Nitrobenzene	1ppm = 5.12 mg/m ³	30-minute		1.00 x 10 ⁻⁴	5.13 x 10 ⁻⁴
		Annual	1 ppm N, O	1.52 x 10 ⁻⁶	7.80 x 10 ⁻⁶
Phenol	1ppm = 3.91 mg/m ³	30-minute	15.6 ppm (C) N	3.40 x 10 ⁻⁵	1.33 x 10 ⁻⁴
		Annual	5 ppm N, O	6.50 x 10 ⁻⁷	2.54 x 10 ⁻⁶
Tetrachloroethylene (Perchloroethylene)	1ppm = 6.89 mg/m ³	30-minute	200 ppm (C) O	2.55 x 10 ⁻³	1.76 x 10 ⁻²
		Annual	100 ppm O	3.98 x 10 ⁻⁵	2.74 x 10 ⁻⁴
Toluene	1ppm = 3.83 mg/m ³	30-minute	150 ppm (ST) N	1.13 x 10 ¹	4.33 x 10 ¹
		Annual	200 ppm O ; 100 ppm N	1.32 x 10 ⁻¹	5.07 x 10 ⁻¹

TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from Existing Pantex Plant Sources-Continued

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
Trichloroethylene	1ppm = 5.46 mg/m ³	30-minute	200 ppm ^O	1.86 x 10 ⁻²	1.01 x 10 ⁻¹
		Annual	50 ppm ^O	2.89 x 10 ⁻⁴	1.58 x 10 ⁻³
Triethylamine	1ppm = 4.21 mg/m ³	30-minute	15 ppm (ST) ^N	2.35 x 10 ⁻²	9.91 x 10 ⁻²
		Annual	25 ppm ^O ; 10 ppm ^N	2.09 x 10 ⁻⁴	8.81 x 10 ⁻⁴
Xylene (all isomers)	1ppm = 4.41 mg/m ³	30-minute	150 ppm (ST) ^N	8.88 x 10 ⁻¹	3.92
		Annual	100 ppm ^{N,O}	3.48 x 10 ⁻²	1.54 x 10 ⁻¹
TNRCC LISTED AIR POLLUTANTS ^d					
1,1,1-chloroethane (ethyl chloride)	1ppm = 2.68 mg/m ³	30-minute		4.74 x 10 ⁻⁴	1.27 x 10 ⁻³
		Annual	1000ppm ^O	7.35 x 10 ⁻⁴	1.97 x 10 ⁻³
1,3,5-trinitrobenzene	N/A	30-minute			9.00 x 10 ⁻⁸
		Annual			0.00
1-butanol	1 ppm = 3.08 mg/m ³	30-minute		1.56 x 10 ⁻³	4.79 x 10 ⁻³
		Annual	50 ppm ^{N,O}	2.40 x 10 ⁻⁵	7.40 x 10 ⁻⁵
2,4,6-trinitrotoluene	N/A	30-minute			1.58 x 10 ⁻⁶
		Annual	0.5 mg/m ³		0.00
2,4-dinitrotoluene	N/A	30-minute			2.72 x 10 ⁻⁶
		Annual	1.5 mg/m ³ N ₂ O		8.00 x 10 ⁻⁸
2,6-dinitrotoluene	N/A	30-minute			2.30 x 10 ⁻⁵
		Annual	1.5 mg/m ³ N ₂ O		0.00
2-ethoxyethanol	1ppm = 3.75 mg/m ³	30-minute		2.51 x 10 ⁻³	9.42 x 10 ⁻³
		Annual	200 ppm ^O	3.89 x 10 ⁻⁵	1.46 x 10 ⁻⁴

**TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from
Existing Pantex Plant Sources-Continued**

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
2-nitronaphthalene	N/A	30-minute			1.40 x 10 ⁻⁶
		Annual			9.00 x 10 ⁻⁸
Acetone	1ppm = 2.42 mg/m ³	30-minute	1000 ppm (ST) ^O	2.74 x 10 ¹	6.62 x 10 ¹
		Annual	250 ppm ^N ; 750 ppm ^O	2.44 x 10 ⁻¹	5.91 x 10 ⁻¹
Acetylene	N/A	30-minute			1.76 x 10 ⁻²
		Annual			1.04 x 10 ⁻³
Aluminum (metal dust)	N/A	30-minute			3.80 x 10 ⁻⁴
		Annual	10 ppm ACGIH		9.50 x 10 ⁻⁶
Ammonia	1 ppm = 0.71 mg/m ³	30-minute	35 ppm (ST) ^{N,O}	1.70	1.21
		Annual	25 ppm ^N	1.51 x 10 ⁻²	1.07 x 10 ⁻²
Barium (soluble compounds)	N/A	30-minute			5.90 x 10 ⁻⁵
		Annual	0.5 mg/m ³ N ₂ O		1.60 x 10 ⁻⁴
Benzo(a)anthracene	N/A	30-minute			1.20 x 10 ⁻⁶
		Annual			7.00 x 10 ⁻⁸
Benzo(a)pyrene	N/A	30-minute			1.36 x 10 ⁻⁶
		Annual	0.1 mg/m ³ ; 0.2 mg/m ³ O		8.00 x 10 ⁻⁸
Bismuth	N/A	30-minute			1.40 x 10 ⁻⁶
		Annual			5.00 x 10 ⁻⁸
Butane	N/A	30-minute			1.94 x 10 ⁻²
		Annual	800 ppm ACGIH		6.30 x 10 ⁻⁴
Butene	N/A	30-minute			2.03 x 10 ⁻¹
		Annual			6.56 x 10 ⁻³

TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from Existing Pantex Plant Sources-Continued

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
Calcium	N/A	30-minute			4.80×10^{-4}
		Annual			1.30×10^{-5}
Chlorinated Fluorocarbon	N/A	30-minute			6.99×10^{-2}
		Annual			1.09×10^{-3}
Copper (Dust)	N/A	30-minute			1.91×10^{-3}
		Annual	$1 \text{ mg/m}^3 \text{ N}_2\text{O}$		5.20×10^{-5}
Cyanogen	N/A	30-minute			9.30×10^{-7}
		Annual	10 ppm ACGIH		0.00
Cyclohexane	1 ppm = 3.50 mg/m ³	30-minute		2.39×10^{-1}	8.38×10^{-1}
		Annual	300 ppm N ₂ O	1.52×10^{-2}	5.33×10^{-2}
Cyclohexanone	1 ppm = 4.08 mg/m ³	30-minute		1.43×10^{-2}	5.85×10^{-2}
		Annual	25 ppm N ₂ O	1.57×10^{-4}	6.40×10^{-4}
Dioxane	1 ppm = 3.36 mg/m ³	30-minute		9.78×10^{-1}	3.29
		Annual	1 ppm ^N ; 25 ppm ^O	8.70×10^{-3}	2.92×10^{-2}
Ethyl Ether	1 ppm = 3.28 mg/m ³	30-minute	500 ppm (ST) ^O	2.43×10^{-2}	7.96×10^{-2}
		Annual	400 ppm ^O	3.78×10^{-4}	1.24×10^{-3}
Ethylene	N/A	30-minute			4.37×10^{-1}
		Annual			1.41×10^{-2}
Formic Acid	1 ppm = 1.91 mg/m ³	30-minute		1.41×10^{-7}	2.70×10^{-7}
		Annual	5 ppm N ₂ O	0.00	0.00
Iron (oxide dust & fumes)	N/A	30-minute			3.04×10^{-3}
		Annual	$5 \text{ mg/m}^3 \text{ N}_2$; $10 \text{ mg/m}^3 \text{ O}$		1.20×10^{-4}
Isobutane	N/A	30-minute			2.56×10^{-1}
		Annual			2.96×10^{-3}

**TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from
Existing Pantex Plant Sources-Continued**

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
Isobutanol	1 ppm = 3.08 mg/m ³	30-minute		1.78 x 10 ⁻³	5.47 x 10 ⁻³
		Annual	50 ppm N ₂ O	2.40 x 10 ⁻⁴	7.40 x 10 ⁻⁴
Ketene	1 ppm = 1.75 mg/m ³	30-minute	1.5 ppm (ST) N ₂ O	0.00	0.00
		Annual	0.5 ppm N ₂ O	0.00	0.00
Ketone	N/A	30-minute			3.35 x 10 ⁻²
		Annual			5.20 x 10 ⁻⁴
Lithium (Hydride)	N/A	30-minute			2.30 x 10 ⁻⁶
		Annual	0.25 mg/m ³ N ₂ O		9.00 x 10 ⁻⁸
Magnesium (Oxide)	N/A	30-minute			5.70 x 10 ⁻⁵
		Annual	10 mg/m ³ O		2.00 x 10 ⁻⁶
Methane	N/A	30-minute			1.41
		Annual			2.72 x 10 ⁻²
N-butyl Alcohol	1 ppm = 3.08 mg/m ³	30-minute		1.06 x 10 ⁻³	3.25 x 10 ⁻³
		Annual	50 ppm N ₂ O	1.66 x 10 ⁻⁵	5.10 x 10 ⁻⁵
Non-F Listed Solvents	N/A	30-minute			2.30 x 10 ⁻⁴
		Annual			3.50 x 10 ⁻⁶
Ortho-dichlorobenzene	1 ppm = 6.11 mg/m ³	30-minute		2.50 x 10 ⁻²	1.53 x 10 ⁻¹
		Annual	50 ppm N ₂ O	3.90 x 10 ⁻⁴	2.38 x 10 ⁻³
Propane	1 ppm = 1.83 mg/m ³	30-minute		1.31 x 10 ⁻¹	2.40 x 10 ⁻¹
		Annual	1000 ppm N ₂ O	1.52 x 10 ⁻³	2.78 x 10 ⁻³
Propene	N/A	30-minute			2.69 x 10 ⁻¹
		Annual			8.68 x 10 ⁻³

**TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from
Existing Pantex Plant Sources-Continued**

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
Isobutanol	1 ppm = 3.08 mg/m ³	30-minute		1.78 x 10 ⁻³	5.47 x 10 ⁻³
		Annual	50 ppm N ₂ O	2.40 x 10 ⁻⁴	7.40 x 10 ⁻⁴
Ketene	1 ppm = 1.75 mg/m ³	30-minute	1.5 ppm (ST) N ₂ O	0.00	0.00
		Annual	0.5 ppm N ₂ O	0.00	0.00
Ketone	N/A	30-minute			3.35 x 10 ⁻²
		Annual			5.20 x 10 ⁻⁴
Lithium (Hydride)	N/A	30-minute			2.30 x 10 ⁻⁶
		Annual	0.25 mg/m ³ N ₂ O		9.00 x 10 ⁻⁸
Magnesium (Oxide)	N/A	30-minute			5.70 x 10 ⁻⁵
		Annual	10 mg/m ³ O		2.00 x 10 ⁻⁶
Methane	N/A	30-minute			1.41
		Annual			2.72 x 10 ⁻²
N-butyl Alcohol	1 ppm = 3.08 mg/m ³	30-minute		1.06 x 10 ⁻³	3.25 x 10 ⁻³
		Annual	50 ppm N ₂ O	1.66 x 10 ⁻⁵	5.10 x 10 ⁻⁵
Non-F Listed Solvents	N/A	30-minute			2.30 x 10 ⁻⁴
		Annual			3.50 x 10 ⁻⁶
Ortho-dichlorobenzene	1 ppm = 6.11 mg/m ³	30-minute		2.50 x 10 ⁻²	1.53 x 10 ⁻¹
		Annual	50 ppm N ₂ O	3.90 x 10 ⁻⁴	2.38 x 10 ⁻³
Propane	1 ppm = 1.83 mg/m ³	30-minute		1.31 x 10 ⁻¹	2.40 x 10 ⁻¹
		Annual	1000 ppm N ₂ O	1.52 x 10 ⁻³	2.78 x 10 ⁻³
Propene	N/A	30-minute			2.69 x 10 ⁻¹
		Annual			8.68 x 10 ⁻³

TABLE 4.14.1.2-3.—Maximum Potential Onsite Ambient Concentration of Pollutants Resulting from Existing Pantex Plant Sources-Continued

POLLUTANT	CONVERSION FACTOR	AVERAGING TIME	EXPOSURE LIMITS time weighted average (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (ppm)	PANTEX PLANT MAXIMUM POTENTIAL CONCENTRATION (mg/m ³)
Pyrene	N/A	30-minute Annual			5.20 x 10 ⁻⁶ 1.50 x 10 ⁻⁷
Pyridine	1 ppm = 3.29 mg/m ³	30-minute Annual	5 ppm N,O	2.76 x 10 ⁻³ 4.26 x 10 ⁻⁵	9.09 x 10 ⁻³ 1.40 x 10 ⁻⁴
Silicone	N/A	30-minute Annual	10 mg/m ³ ACGIH		3.90 x 10 ⁻⁶ 3.00 x 10 ⁻⁸
Silver (Dust)	N/A	30-minute Annual			7.90 x 10 ⁻⁵ 2.90 x 10 ⁻⁶
Tetrahydrofuran	1 ppm = 3.00 mg/m ³	30-minute Annual	250 ppm (ST) N,O 200 ppm N,O	1.05 x 10 ⁻¹ 9.34 x 10 ⁻²	3.15 x 10 ⁻¹ 2.80 x 10 ⁻¹
Trichlorofluoromethane	N/A	30-minute Annual	1000 ppm ACGIH		1.01 x 10 ⁻¹ 1.58 x 10 ⁻³
Trichlorotrifluoroethane	1 ppm = 7.79 mg/m ³	30-minute Annual	1250 ppm (ST) N,O 1000 ppm N,O	6.08 x 10 ⁻² 8.38 x 10 ⁻⁴	4.74 x 10 ⁻¹ 6.53 x 10 ⁻³
Zinc (Oxide fumes)	N/A	30-minute Annual	10 mg/m ³ (ST) N,O 5 mg/m ³ N,O		2.90 x 10 ⁻⁴ 8.00 x 10 ⁻⁶

ACGIH - American Conference of Governmental Industrial Hygienists

C - Ceiling: Concentration should not be exceeded at any time during workplace exposure.

N - National Institute of Occupational Safety and Health

NA - No conversion factor

O - Occupational Safety and Health Administration

ST - STEL: 15-minute time weighted average exposure which should not be exceeded at any time during the workday, even if the 8-hour weighted average is within the threshold limit.

Sources: NIOSH 1994, ACGIH 1994; Calculated values.