Appendix A. Criteria and Toxic Air Pollutant Emission Rates

This page intentionally left blank.

Table A-1. Criteria Pollutants Emission Rates and Comparison to De Minimis Levels.

Chemical	CAS #	Averaging Period	Emission Rate (g/s)	Emission Rate (lbs/yr)	De Minimis (lbs/yr)	Above De Minimis
Nitrogen oxides	10102-44-0	Year	1.59E-03	7,630	4,000	Yes
VOCs		Year	4.20E-03	20,132	4,000	Yes
SOx (Sulfur oxides)	7446-09-05	Year	3.52E-06	17	4,000	No
Lead	7439-92-1	Year	9.50E-07	5	10	No
Carbon monoxide	630-08-0	Year	5.40E-04	2,592	10,000	No

This page intentionally left blank.

Table A-2. Toxic Air Pollutant Emission Rates and Comparison to the WAC 173-460-150 de minimis, SQER, and ASIL Levels.

241-SY, 241-AP, and 241-AY/AZ Tank Farms **Emissions**

WAC 173-460-150 Name	Chemical ID	Avg. Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)	De Minimis (lbs/avg. period)	Above De Minimis ?	SQER (lb/avg. period)	Above SQER ?	Dispersed Conc. (µg/m3)	ASIL	Above ASIL?
Ethylbenzene	100-41-4	Year	1.41E-03	-	-	9.81E+01	3.84	Yes	76.8	Yes	1.06E-04	0.4	No
Styrene	100-42-5	24-hr	4.62E-04	-	8.81E-02	-	5.91	No	118	No	6.94E-04	900	No
Benzyl Chloride	100-44-7	Year	1.34E-05	-	-	9.32E-01	0.196	Yes	3.91	No	1.01E-06	0.0204	No
Nitrogen dioxide	10102-44-0	1-hr	5.51E-02	4.38E-01	-	-	0.457	No	1.03	No	8.82E-01	470	No
n-Nitroso-n-methylethylamine	10595-95-6	Year	1.94E-06	-	-	1.35E-01	0.00153	Yes	0.0305	Yes	1.45E-07	0.000159	No
p-Xylene	106-42-3	24-hr	1.63E-03	-	3.10E-01	-	1.45	No	29	No	2.44E-03	221	No
1,4-Dichlorobenzene	106-46-7	Year	6.21E-05	-	-	4.32E+00	0.872	Yes	17.4	No	4.66E-06	0.0909	No
1,2-Epoxybutane	106-88-7	24-hr	4.04E-05	-	7.69E-03	-	0.131	No	2.63	No	6.06E-05	20	No
1,2-Dibromoethane	106-93-4	Year	7.97E-05	-	-	5.54E+00	0.135	Yes	2.71	Yes	5.98E-06	0.0141	No
1,3-Butadiene	106-99-0	Year	1.99E-04	-	-	1.39E+01	0.0564	Yes	1.13	Yes	1.49E-05	0.00588	No
Acrolein	107-02-8	24-hr	2.98E-06	-	5.68E-04	-	0.000394	Yes	0.00789	No	4.47E-06	0.06	No
Allyl Chloride	107-05-1	Year	1.02E-05	-	-	7.09E-01	1.6	No	32	No	7.64E-07	0.167	No
1,2-Dichloroethane	107-06-2	Year	1.63E-03	-	-	1.13E+02	0.369	Yes	7.39	Yes	1.22E-04	0.0385	No
Acrylonitrile	107-13-1M	Year	1.23E-05	-	-	8.56E-01	0.0331	Yes	0.662	Yes	9.24E-07	0.00345	No
Vinyl acetate	108-05-4	24-hr	4.48E-07	-	8.53E-05	-	1.31	No	26.3	No	6.72E-07	200	No
Methyl Isobutyl Ketone	108-10-1	24-hr	2.77E-03	-	5.27E-01	-	19.7	No	394	No	4.15E-03	3000	No
m-Xylene	108-38-3M	24-hr	9.42E-04	-	1.79E-01	-	1.45	No	29	No	1.41E-03	221	No
3-Methylphenol	108-39-4	24-hr	4.74E-06	-	9.03E-04	-	3.94	No	78.9	No	7.11E-06	600	No
Toluene	108-88-3	24-hr	4.09E-02	-	7.78E+00	-	32.9	No	657	No	6.13E-02	5000	No
Chlorobenzene	108-90-7	24-hr	4.99E-04	-	9.51E-02	-	6.57	No	131	No	7.49E-04	1000	No
Phenol	108-95-2	24-hr	8.14E-03	-	1.55E+00	-	1.31	Yes	26.3	No	1.22E-02	200	No
n-Hexane	110-54-3	24-hr	5.16E-03	-	9.83E-01	-	4.6	No	92	No	7.74E-03	700	No
Cyclohexane	110-82-7	24-hr	1.58E-03	-	3.01E-01	-	39.4	No	789	No	2.37E-03	6001	No
Ethylene glycol monoethyl ether acetate	111-76-2	24-hr	1.52E-04	-	2.89E-02	-	85.4	No	1710	No	2.27E-04	13000	No
Propylene	115-07-1	24-hr	3.93E-03	-	7.48E-01	-	19.7	No	394	No	5.89E-03	3000	No
Di(2-ethylhexyl)phthalate	117-81-7	Year	7.46E-07	-	-	5.18E-02	0.4	No	8	No	5.59E-08	0.0417	No
1,4-Dioxane	123-91-1	Year	7.02E-04	-	-	4.88E+01	1.25	Yes	24.9	Yes	5.27E-05	0.13	No

Table A-2. Toxic Air Pollutant Emission Rates and Comparison to the WAC 173-460-150 de minimis, SQER, and ASIL Levels.

241-SY, 241-AP, and 241-AY/AZ Tank Farms **Emissions**

WAC 173-460-150 Name	Chemical ID	Avg. Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)	De Minimis (lbs/avg. period)	Above De Minimis ?	SQER (lb/avg. period)	Above SQER ?	Dispersed Conc. (µg/m3)	ASIL	Above ASIL?
Perchloroethylene	127-18-4	Year	1.62E-03	-	-	1.12E+02	1.62	Yes	32.4	Yes	1.21E-04	0.169	No
Vanadium Pentoxide	1314-62-1	1-hr	1.17E-04	9.30E-04	-	-	0.00329	No	0.0657	No	1.88E-03	30	No
Polychlorinated Biphenyls (PCBs)	1336-36-3	Year	2.04E-05	-	-	1.42E+00	0.0168	Yes	0.336	Yes	1.53E-06	0.00175	No
Trans-1,2-dichloroethene	156-60-5	24-hr	1.19E-07	-	2.27E-05	-	5.3	No	106	No	1.79E-07	807	No
Butylated hydroxyanisole	25013-16-5	Year	1.42E-06	-	-	9.89E-02	168	No	3360	No	1.07E-07	17.5	No
Formaldehyde	50-00-0	Year	2.35E-05	-	-	1.64E+00	1.6	Yes	32	No	1.76E-06	0.167	No
n-Nitrosodiethylamine	55-18-5	Year	1.94E-06	-	-	1.35E-01	0.000959	Yes	0.0192	Yes	1.45E-07	0.0001	No
Carbon Tetrachloride	56-23-5	Year	1.64E-03	-	-	1.14E+02	0.228	Yes	4.57	Yes	1.23E-04	0.0238	No
1,1-Dimethylhydrazine	57-14-7	24-hr	1.74E-06	-	3.32E-04	-	0.00329	No	0.0657	No	2.61E-06	0.5	No
Propylene Glycol	57-55-6	24-hr	2.25E-04	-	4.29E-02	-	0.187	No	3.75	No	3.38E-04	28.5	No
n-Nitrosomorpholine	59-89-2	Year	8.96E-06	-	-	6.23E-01	0.00505	Yes	0.101	Yes	6.72E-07	0.000526	No
Dimethyl Mercury	593-74-8	24-hr	4.12E-08	-	7.85E-06	-	1E-99	Yes	1E-99	Yes	6.18E-08	1E-99	Yes
Acetamide	60-35-5	Year	6.05E-06	-	-	4.21E-01	0.48	No	9.59	No	4.54E-07	0.05	No
n-Nitrosodimethylamine	62-75-9	Year	2.65E-03	-	-	1.84E+02	0.00208	Yes	0.0416	Yes	1.98E-04	0.000217	No
n-Nitrosodi-n-propylamine	621-64-7	Year	1.94E-06	-	-	1.35E-01	0.0048	Yes	0.0959	Yes	1.45E-07	0.0005	No
Methyl Isocyanate	624-83-9	24-hr	1.77E-06	-	3.37E-04	-	0.00657	No	0.131	No	2.65E-06	1	No
Carbon monoxide	630-08-0	1-hr	3.73E-02	2.96E-01	-	-	1.14	No	50.4	No	5.97E-01	23000	No
Methyl Alcohol	67-56-1	24-hr	7.11E-02	-	1.35E+01	-	26.3	No	526	No	1.07E-01	4000	No
Isopropyl Alcohol	67-63-0	1-hr	3.37E-03	2.68E-02	-	-	0.35	No	7.01	No	5.40E-02	3200	No
Chloroform	67-66-3	Year	1.64E-03	-	-	1.14E+02	0.417	Yes	8.35	Yes	1.23E-04	0.0435	No
Hexachloroethane	67-72-1	Year	1.68E-03	-	-	1.17E+02	0.872	Yes	17.4	Yes	1.26E-04	0.0909	No
Benzene	71-43-2	Year	1.63E-03	-	-	1.13E+02	0.331	Yes	6.62	Yes	1.22E-04	0.0345	No
1,1,1-Trichloroethane	71-55-6	24-hr	6.74E-05	-	1.28E-02	-	6.57	No	131	No	1.01E-04	1000	No
Methyl Bromide	74-83-9	24-hr	6.42E-05	-	1.22E-02	-	0.0629	No	0.657	No	9.62E-05	5	No
Methyl Chloride	74-87-3	24-hr	2.24E-04	-	4.26E-02	-	0.591	No	11.8	No	3.35E-04	90	No
Hydrogen Cyanide	74-90-8	24-hr	5.69E-06	-	1.08E-03	-	0.0591	No	1.18	No	8.54E-06	9	No
Lead and compounds (NOS)	7439-92-1	Year	6.55E-05	-	-	4.56E+00	10	No	16	No	4.92E-06	0.0833	No

Table A-2. Toxic Air Pollutant Emission Rates and Comparison to the WAC 173-460-150 de minimis, SQER, and ASIL Levels.

241-SY, 241-AP, and 241-AY/AZ Tank Farms **Emissions**

WAC 173-460-150 Name	Chemical ID	Avg. Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)	De Minimis (lbs/avg. period)	Above De Minimis ?	SQER (lb/avg. period)	Above SQER ?	Dispersed Conc. (µg/m3)	ASIL	Above ASIL?
Manganese & Compounds	7439-96-5	24-hr	6.55E-05	-	1.25E-02	-	0.000263	Yes	0.00526	Yes	9.83E-05	0.04	No
Mercury, Elemental	7439-97-6	24-hr	1.99E-05	-	3.78E-03	-	0.000591	Yes	0.0118	No	2.98E-05	0.09	No
Arsenic & Inorganic Arsenic Compounds	7440-38-2	Year	6.55E-05	-	-	4.56E+00	0.00291	Yes	0.0581	Yes	4.92E-06	0.000303	No
Beryllium & Compounds (NOS)	7440-41-7	Year	3.28E-06	-	-	2.28E-01	0.004	Yes	0.08	Yes	2.46E-07	0.000417	No
Cadmium & Compounds	7440-43-9	Year	3.28E-05	-	-	2.28E+00	0.00228	Yes	0.0457	Yes	2.46E-06	0.000238	No
Chromium Hexavalent: Soluble, except Chromic Trioxide	7440-47-3	Year	1.00E-04	-	-	6.98E+00	0.000064	Yes	0.00128	Yes	7.53E-06	0.00000667	Yes
Cobalt	7440-48-4	24-hr	6.55E-05	-	1.25E-02	-	0.000657	Yes	0.013	No	9.83E-05	0.1	No
Copper & Compounds	7440-50-8	1-hr	3.28E-05	2.61E-04	-	-	0.011	No	0.219	No	5.26E-04	100	No
Sulfur dioxide	7446-09-05	1-hr	2.43E-04	1.93E-03	-	-	0.457	No	1.45	No	3.88E-03	660	No
Ethyl Chloride	75-00-3	24-hr	2.87E-04	-	5.46E-02	-	197	No	3940	No	4.30E-04	30000	No
Vinyl Chloride	75-01-4	Year	1.64E-03	-	-	1.14E+02	0.123	Yes	2.46	Yes	1.23E-04	0.0128	No
Acetonitrile	75-05-8	Year	3.83E-03	-	-	2.66E+02	576	No	11500	No	2.87E-04	60	No
Acetaldehyde	75-07-0	Year	4.10E-03	-	-	2.85E+02	3.55	Yes	71	Yes	3.08E-04	0.37	No
Dichloromethane	75-09-2	Year	1.11E-02	-	-	7.73E+02	9.59	Yes	192	Yes	8.34E-04	1	No
Carbon disulfide	75-15-0	24-hr	4.01E-04	-	7.63E-02	-	5.26	No	105	No	6.01E-04	800	No
Ethylene oxide	75-21-8	Year	7.73E-06	-	-	5.38E-01	0.109	Yes	2.19	No	5.80E-07	0.0114	No
Bromoform	75-25-2	Year	8.76E-06	-	-	6.09E-01	8.72	No	174	No	6.57E-07	0.909	No
1,1-Dichloroethane	75-34-3	Year	2.72E-05	-	-	1.89E+00	6	No	120	No	2.04E-06	0.625	No
1,1-Dichloroethylene	75-35-4	24-hr	3.13E-03	-	5.95E-01	-	1.31	No	26.3	No	4.69E-03	200	No
Chlorodifluoromethane	75-45-6	24-hr	9.98E-04	-	1.90E-01	-	328	No	6570	No	1.50E-03	50000	No
1-Chloro-1,1-difluoroethane	75-68-3	24-hr	1.08E-03	-	2.06E-01	-	329	No	6570	No	1.62E-03	50000	No
Ammonia	7664-41-7	24-hr	1.00E+00	-	1.91E+02	-	0.465	Yes	9.31	Yes	1.50E+00	70.8	No
Selenium & Selenium Compounds (other than Hydrogen Selenide)	7782-49-2	24-hr	5.70E-06	-	1.09E-03	-	0.131	No	2.63	No	8.55E-06	20	No
1,2-Dichloropropane	78-87-5	Year	4.78E-05	-	-	3.32E+00	0.959	Yes	19.2	No	3.59E-06	0.1	No

Table A-2. Toxic Air Pollutant Emission Rates and Comparison to the WAC 173-460-150 de minimis, SQER, and ASIL Levels.

241-SY, 241-AP, and 241-AY/AZ Tank Farms **Emissions**

WAC 173-460-150 Name	Chemical ID	Avg. Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)	De Minimis (lbs/avg. period)	Above De Minimis ?	SQER (lb/avg. period)	Above SQER ?	Dispersed Conc. (µg/m3)	ASIL	Above ASIL?
Methyl Ethyl Ketone	78-93-3	24-hr	9.59E-03	-	1.83E+00	-	32.9	No	657	No	1.44E-02	5000	No
1,1,2-Trichloroethane	79-00-5	Year	5.92E-04	-	-	4.11E+01	0.6	Yes	12	Yes	4.44E-05	0.0625	No
Trichloroethylene	79-01-6	Year	1.63E-03	-	-	1.13E+02	4.8	Yes	95.9	Yes	1.22E-04	0.5	No
Acrylic Acid	79-10-7	24-hr	6.51E-04	-	1.24E-01	-	0.00657	Yes	0.131	No	9.77E-04	1	No
1,1,2,2-Tetrachloroethane	79-34-5	Year	7.45E-04	-	-	5.18E+01	0.165	Yes	3.3	Yes	5.58E-05	0.0172	No
2-Nitropropane	79-46-9M	24-hr	1.91E-04	-	3.65E-02	-	0.131	No	2.63	No	2.87E-04	20	No
Hexachlorobutadiene	87-68-3	Year	1.16E-03	-	-	8.08E+01	0.437	Yes	8.73	Yes	8.71E-05	0.0455	No
Naphthalene	91-20-3M	Year	1.30E-05	-	-	9.03E-01	0.282	Yes	5.64	No	9.74E-07	0.0294	No
n-Nitroso-di-n-butylamine	924-16-3	Year	1.94E-06	-	-	1.35E-01	0.0031	Yes	0.062	Yes	1.45E-07	0.000323	No
n-Nitrosopyrrolidine	930-55-2	Year	1.94E-06	-	-	1.35E-01	0.016	Yes	0.32	No	1.45E-07	0.00167	No
o-Xylene	95-47-6	24-hr	1.61E-03	-	3.06E-01	-	1.45	No	29	No	2.41E-03	221	No
2-Methylphenol	95-48-7M	24-hr	2.85E-05	-	5.42E-03	-	3.94	No	78.9	No	4.27E-05	600	No
Cumene	98-82-8	24-hr	7.03E-05	-	1.34E-02	-	2.63	No	52.6	No	1.06E-04	400	No

Table A-3. TAP Emission Rates from 241-SY Farm

S41-SY Farm WAC 173-460-150 Name	Chemical ID	Averaging Period	Emissions Rate for Averaging Period (g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Ethylbenzene	100-41-4	Year	4.29E-04	-	-	2.99E+01
Styrene	100-42-5	24-hr	1.41E-04	-	2.68E-02	-
Benzyl Chloride	100-44-7	Year	4.08E-06	-	-	2.84E-01
Nitrogen dioxide	10102-44-0	1-hr	1.68E-02	1.33E-01	-	-
n-Nitroso-n-methylethylamine	10595-95-6	Year	5.90E-07	-	-	4.10E-02
p-Xylene	106-42-3	24-hr	4.96E-04	-	9.44E-02	-
1,4-Dichlorobenzene	106-46-7	Year	1.89E-05	-	-	1.31E+00
1,2-Epoxybutane	106-88-7	24-hr	1.23E-05	-	2.34E-03	-
1,2-Dibromoethane	106-93-4	Year	2.43E-05	-	-	1.69E+00
1,3-Butadiene	106-99-0	Year	6.06E-05	-	-	4.22E+00
Acrolein	107-02-8	24-hr	9.07E-07	-	1.73E-04	-
Allyl Chloride	107-05-1	Year	3.10E-06	-	-	2.16E-01
1,2-Dichloroethane	107-06-2	Year	4.96E-04	-	-	3.45E+01
Acrylonitrile	107-13-1M	Year	3.75E-06	-	-	2.61E-01
Vinyl acetate	108-05-4	24-hr	1.36E-07	-	2.60E-05	-
Methyl Isobutyl Ketone	108-10-1	24-hr	8.42E-04	-	1.60E-01	-
m-Xylene	108-38-3M	24-hr	2.87E-04	-	5.46E-02	-
3-Methylphenol	108-39-4	24-hr	1.44E-06	-	2.75E-04	-
Toluene	108-88-3	24-hr	1.24E-02	-	2.37E+00	-
Chlorobenzene	108-90-7	24-hr	1.52E-04	-	2.89E-02	-
Phenol	108-95-2	24-hr	2.48E-03	-	4.72E-01	-
n-Hexane	110-54-3	24-hr	1.57E-03	-	2.99E-01	-
Cyclohexane	110-82-7	24-hr	4.81E-04	-	9.17E-02	-
Ethylene glycol monoethyl ether acetate	111-76-2	24-hr	4.61E-05	-	8.79E-03	-
Propylene	115-07-1	24-hr	1.20E-03	-	2.28E-01	-
Di(2-ethylhexyl)phthalate	117-81-7	Year	2.27E-07	-	-	1.58E-02
1,4-Dioxane	123-91-1	Year	2.14E-04	-	-	1.49E+01

Table A-3. TAP Emission Rates from 241-SY Farm

S41-SY Farm WAC 173-460-150 Name	Chemical ID	Averaging Period	Emissions Rate for Averaging Period (g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Perchloroethylene	127-18-4	Year	4.92E-04	-	-	3.42E+01
Vanadium Pentoxide	1314-62-1	1-hr	3.57E-05	2.83E-04	-	-
Polychlorinated Biphenyls (PCBs)	1336-36-3	Year	6.19E-06	-	-	4.31E-01
Trans-1,2-dichloroethene	156-60-5	24-hr	3.63E-08	-	6.92E-06	-
Butylated hydroxyanisole	25013-16-5	Year	4.33E-07	-	-	3.01E-02
Formaldehyde	50-00-0	Year	7.16E-06	-	-	4.98E-01
n-Nitrosodiethylamine	55-18-5	Year	5.90E-07	-	-	4.10E-02
Carbon Tetrachloride	56-23-5	Year	4.99E-04	-	-	3.47E+01
1,1-Dimethylhydrazine	57-14-7	24-hr	5.30E-07	-	1.01E-04	-
Propylene Glycol	57-55-6	24-hr	6.85E-05	-	1.31E-02	-
n-Nitrosomorpholine	59-89-2	Year	2.73E-06	-	-	1.89E-01
Dimethyl Mercury	593-74-8	24-hr	1.25E-08	-	2.39E-06	-
Acetamide	60-35-5	Year	1.84E-06	-	-	1.28E-01
n-Nitrosodimethylamine	62-75-9	Year	8.05E-04	-	-	5.60E+01
n-Nitrosodi-n-propylamine	621-64-7	Year	5.90E-07	-	-	4.10E-02
Methyl Isocyanate	624-83-9	24-hr	5.38E-07	-	1.03E-04	-
Carbon monoxide	630-08-0	1-hr	1.13E-02	9.01E-02	-	-
Methyl Alcohol	67-56-1	24-hr	2.16E-02	-	4.12E+00	-
Isopropyl Alcohol	67-63-0	1-hr	1.03E-03	8.15E-03	-	-
Chloroform	67-66-3	Year	4.99E-04	-	-	3.47E+01
Hexachloroethane	67-72-1	Year	5.12E-04	-	-	3.56E+01
Benzene	71-43-2	Year	4.96E-04	-	-	3.45E+01
1,1,1-Trichloroethane	71-55-6	24-hr	2.05E-05	-	3.91E-03	-
Methyl Bromide	74-83-9	24-hr	1.95E-05	-	3.72E-03	-
Methyl Chloride	74-87-3	24-hr	6.81E-05	-	1.30E-02	-
Hydrogen Cyanide	74-90-8	24-hr	1.73E-06	-	3.30E-04	-
Lead and compounds (NOS)	7439-92-1	Year	1.99E-05	-	-	1.39E+00

Table A-3. TAP Emission Rates from 241-SY Farm

S41-SY Farm WAC 173-460-150 Name	Chemical ID	Averaging Period	Emissions Rate for Averaging Period (g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Manganese & Compounds	7439-96-5	24-hr	1.99E-05	-	3.80E-03	-
Mercury, Elemental	7439-97-6	24-hr	6.05E-06	-	1.15E-03	-
Arsenic & Inorganic Arsenic Compounds	7440-38-2	Year	1.99E-05	-	-	1.39E+00
Beryllium & Compounds (NOS)	7440-41-7	Year	1.00E-06	-	-	6.95E-02
Cadmium & Compounds	7440-43-9	Year	1.00E-05	-	-	6.95E-01
Chromium Hexavalent: Soluble, except Chromic Trioxide	7440-47-3	Year	3.06E-05	-	-	2.13E+00
Cobalt	7440-48-4	24-hr	1.99E-05	-	3.80E-03	-
Copper & Compounds	7440-50-8	1-hr	1.00E-05	7.93E-05	-	-
Sulfur dioxide	7446-09-05	1-hr	7.39E-05	5.86E-04	-	-
Ethyl Chloride	75-00-3	24-hr	8.72E-05	-	1.66E-02	-
Vinyl Chloride	75-01-4	Year	4.99E-04	-	-	3.47E+01
Acetonitrile	75-05-8	Year	1.16E-03	-	-	8.10E+01
Acetaldehyde	75-07-0	Year	1.25E-03	-	-	8.68E+01
Dichloromethane	75-09-2	Year	3.39E-03	-	-	2.35E+02
Carbon disulfide	75-15-0	24-hr	1.22E-04	-	2.32E-02	-
Ethylene oxide	75-21-8	Year	2.35E-06	-	-	1.64E-01
Bromoform	75-25-2	Year	2.67E-06	-	-	1.85E-01
1,1-Dichloroethane	75-34-3	Year	8.28E-06	-	-	5.76E-01
1,1-Dichloroethylene	75-35-4	24-hr	9.51E-04	-	1.81E-01	-
Chlorodifluoromethane	75-45-6	24-hr	3.04E-04	-	5.79E-02	-
1-Chloro-1,1-difluoroethane	75-68-3	24-hr	3.30E-04	-	6.28E-02	-
Ammonia	7664-41-7	24-hr	3.05E-01	-	5.81E+01	-
Selenium & Selenium Compounds (other than Hydrogen Selenide)	7782-49-2	24-hr	1.73E-06	-	3.30E-04	-
1,2-Dichloropropane	78-87-5	Year	1.46E-05	-	-	1.01E+00
Methyl Ethyl Ketone	78-93-3	24-hr	2.92E-03	-	5.56E-01	-
1,1,2-Trichloroethane	79-00-5	Year	1.80E-04	-	-	1.25E+01
Trichloroethylene	79-01-6	Year	4.96E-04	-	-	3.45E+01

Table A-3. TAP Emission Rates from 241-SY Farm

S41-SY Farm WAC 173-460-150 Name	Chemical ID	Averaging Period	Emissions Rate for Averaging Period (g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Acrylic Acid	79-10-7	24-hr	1.98E-04	-	3.78E-02	-
1,1,2,2-Tetrachloroethane	79-34-5	Year	2.27E-04	-	-	1.58E+01
2-Nitropropane	79-46-9M	24-hr	5.83E-05	-	1.11E-02	-
Hexachlorobutadiene	87-68-3	Year	3.53E-04	-	-	2.46E+01
Naphthalene	91-20-3M	Year	3.95E-06	-	-	2.75E-01
n-Nitroso-di-n-butylamine	924-16-3	Year	5.90E-07	-	-	4.10E-02
n-Nitrosopyrrolidine	930-55-2	Year	5.90E-07	-	-	4.10E-02
o-Xylene	95-47-6	24-hr	4.89E-04	-	9.31E-02	-
2-Methylphenol	95-48-7M	24-hr	8.66E-06	-	1.65E-03	-
Cumene	98-82-8	24-hr	2.14E-05	-	4.08E-03	-

Table A-4. TAP Emission Rates from 241-AP Farm

241-AP Farm			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Ethylbenzene	100-41-4	Year	5.32E-04	-	-	3.70E+01
Styrene	100-42-5	24-hr	1.74E-04	-	3.32E-02	-
Benzyl Chloride	100-44-7	Year	5.05E-06	-	-	3.51E-01
Nitrogen dioxide	10102-44-0	1-hr	2.08E-02	1.65E-01	-	-
n-Nitroso-n-methylethylamine	10595-95-6	Year	7.30E-07	-	-	5.08E-02
p-Xylene	106-42-3	24-hr	6.14E-04	-	1.17E-01	-
1,4-Dichlorobenzene	106-46-7	Year	2.34E-05	-	-	1.63E+00
1,2-Epoxybutane	106-88-7	24-hr	1.52E-05	-	2.90E-03	-
1,2-Dibromoethane	106-93-4	Year	3.00E-05	-	-	2.09E+00
1,3-Butadiene	106-99-0	Year	7.51E-05	-	-	5.22E+00
Acrolein	107-02-8	24-hr	1.12E-06	-	2.14E-04	-
Allyl Chloride	107-05-1	Year	3.84E-06	-	-	2.67E-01
1,2-Dichloroethane	107-06-2	Year	6.14E-04	-	-	4.27E+01
Acrylonitrile	107-13-1M	Year	4.64E-06	-	-	3.23E-01
Vinyl acetate	108-05-4	24-hr	1.69E-07	-	3.21E-05	-
Methyl Isobutyl Ketone	108-10-1	24-hr	1.04E-03	-	1.99E-01	-
m-Xylene	108-38-3M	24-hr	3.55E-04	-	6.76E-02	-
3-Methylphenol	108-39-4	24-hr	1.79E-06	-	3.40E-04	-
Toluene	108-88-3	24-hr	1.54E-02	-	2.93E+00	-
Chlorobenzene	108-90-7	24-hr	1.88E-04	-	3.58E-02	-
Phenol	108-95-2	24-hr	3.07E-03	-	5.84E-01	-
n-Hexane	110-54-3	24-hr	1.94E-03	-	3.70E-01	-
Cyclohexane	110-82-7	24-hr	5.96E-04	-	1.14E-01	-
Ethylene glycol monoethyl ether acetate	111-76-2	24-hr	5.71E-05	-	1.09E-02	-
Propylene	115-07-1	24-hr	1.48E-03	-	2.82E-01	-

Table A-4. TAP Emission Rates from 241-AP Farm

241-AP Farm			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Di(2-ethylhexyl)phthalate	117-81-7	Year	2.81E-07	-	-	1.95E-02
1,4-Dioxane	123-91-1	Year	2.65E-04	-	-	1.84E+01
Perchloroethylene	127-18-4	Year	6.09E-04	-	-	4.24E+01
Vanadium Pentoxide	1314-62-1	1-hr	4.42E-05	3.51E-04	-	-
Polychlorinated Biphenyls (PCBs)	1336-36-3	Year	7.67E-06	-	-	5.33E-01
Trans-1,2-dichloroethene	156-60-5	24-hr	4.50E-08	-	8.57E-06	-
Butylated hydroxyanisole	25013-16-5	Year	5.36E-07	-	-	3.73E-02
Formaldehyde	50-00-0	Year	8.87E-06	-	-	6.16E-01
n-Nitrosodiethylamine	55-18-5	Year	7.30E-07	-	-	5.08E-02
Carbon Tetrachloride	56-23-5	Year	6.18E-04	-	-	4.29E+01
1,1-Dimethylhydrazine	57-14-7	24-hr	6.56E-07	-	1.25E-04	-
Propylene Glycol	57-55-6	24-hr	8.48E-05	-	1.62E-02	-
n-Nitrosomorpholine	59-89-2	Year	3.37E-06	-	-	2.35E-01
Dimethyl Mercury	593-74-8	24-hr	1.55E-08	-	2.96E-06	-
Acetamide	60-35-5	Year	2.28E-06	-	-	1.59E-01
n-Nitrosodimethylamine	62-75-9	Year	9.97E-04	-	-	6.93E+01
n-Nitrosodi-n-propylamine	621-64-7	Year	7.30E-07	-	-	5.08E-02
Methyl Isocyanate	624-83-9	24-hr	6.66E-07	-	1.27E-04	-
Carbon monoxide	630-08-0	1-hr	1.40E-02	1.12E-01	-	-
Methyl Alcohol	67-56-1	24-hr	2.68E-02	-	5.10E+00	-
Isopropyl Alcohol	67-63-0	1-hr	1.27E-03	1.01E-02	-	-
Chloroform	67-66-3	Year	6.18E-04	-	-	4.29E+01
Hexachloroethane	67-72-1	Year	6.34E-04	-	-	4.41E+01
Benzene	71-43-2	Year	6.14E-04	-	-	4.27E+01
1,1,1-Trichloroethane	71-55-6	24-hr	2.54E-05	-	4.84E-03	-

Table A-4. TAP Emission Rates from 241-AP Farm

241-AP Farm			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Methyl Bromide	74-83-9	24-hr	2.42E-05	-	4.61E-03	-
Methyl Chloride	74-87-3	24-hr	8.43E-05	-	1.60E-02	-
Hydrogen Cyanide	74-90-8	24-hr	2.14E-06	-	4.09E-04	-
Lead and compounds (NOS)	7439-92-1	Year	2.47E-05	-	-	1.72E+00
Manganese & Compounds	7439-96-5	24-hr	2.47E-05	-	4.70E-03	-
Mercury, Elemental	7439-97-6	24-hr	7.49E-06	-	1.43E-03	-
Arsenic & Inorganic Arsenic Compounds	7440-38-2	Year	2.47E-05	-	-	1.72E+00
Beryllium & Compounds (NOS)	7440-41-7	Year	1.24E-06	-	-	8.61E-02
Cadmium & Compounds	7440-43-9	Year	1.24E-05	-	-	8.61E-01
Chromium Hexavalent: Soluble, except Chromic Trioxide	7440-47-3	Year	3.79E-05	-	-	2.63E+00
Cobalt	7440-48-4	24-hr	2.47E-05	-	4.70E-03	-
Copper & Compounds	7440-50-8	1-hr	1.24E-05	9.82E-05	-	-
Sulfur dioxide	7446-09-05	1-hr	9.15E-05	7.26E-04	-	-
Ethyl Chloride	75-00-3	24-hr	1.08E-04	-	2.06E-02	-
Vinyl Chloride	75-01-4	Year	6.18E-04	-	-	4.29E+01
Acetonitrile	75-05-8	Year	1.44E-03	-	-	1.00E+02
Acetaldehyde	75-07-0	Year	1.55E-03	-	-	1.07E+02
Dichloromethane	75-09-2	Year	4.19E-03	-	-	2.91E+02
Carbon disulfide	75-15-0	24-hr	1.51E-04	-	2.87E-02	-
Ethylene oxide	75-21-8	Year	2.91E-06	-	-	2.03E-01
Bromoform	75-25-2	Year	3.30E-06	-	-	2.29E-01
1,1-Dichloroethane	75-34-3	Year	1.03E-05	-	-	7.13E-01
1,1-Dichloroethylene	75-35-4	24-hr	1.18E-03	-	2.24E-01	-
Chlorodifluoromethane	75-45-6	24-hr	3.76E-04	-	7.16E-02	-
1-Chloro-1,1-difluoroethane	75-68-3	24-hr	4.08E-04	-	7.77E-02	-

Table A-4. TAP Emission Rates from 241-AP Farm

241-AP Farm			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Ammonia	7664-41-7	24-hr	3.78E-01	-	7.19E+01	-
Selenium & Selenium Compounds (other than Hydrogen Selenide)	7782-49-2	24-hr	2.15E-06	-	4.09E-04	-
1,2-Dichloropropane	78-87-5	Year	1.80E-05	-	-	1.25E+00
Methyl Ethyl Ketone	78-93-3	24-hr	3.61E-03	-	6.88E-01	-
1,1,2-Trichloroethane	79-00-5	Year	2.23E-04	-	-	1.55E+01
Trichloroethylene	79-01-6	Year	6.14E-04	-	-	4.27E+01
Acrylic Acid	79-10-7	24-hr	2.45E-04	-	4.67E-02	-
1,1,2,2-Tetrachloroethane	79-34-5	Year	2.81E-04	-	-	1.95E+01
2-Nitropropane	79-46-9M	24-hr	7.21E-05	-	1.37E-02	-
Hexachlorobutadiene	87-68-3	Year	4.38E-04	-	-	3.04E+01
Naphthalene	91-20-3M	Year	4.90E-06	-	-	3.40E-01
n-Nitroso-di-n-butylamine	924-16-3	Year	7.30E-07	-	-	5.08E-02
n-Nitrosopyrrolidine	930-55-2	Year	7.30E-07	-	-	5.08E-02
o-Xylene	95-47-6	24-hr	6.05E-04	-	1.15E-01	-
2-Methylphenol	95-48-7M	24-hr	1.07E-05	-	2.04E-03	-
Cumene	98-82-8	24-hr	2.65E-05	-	5.05E-03	-

Table A-5. TAP Emission Rates from 241-AY/AZ Farms.

241-AY/AZ Farms			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Ethylbenzene	100-41-4	Year	4.50E-04	-	-	3.13E+01
Styrene	100-42-5	24-hr	1.47E-04	-	2.81E-02	-
Benzyl Chloride	100-44-7	Year	4.27E-06	-	-	2.97E-01
Nitrogen dioxide	10102-44-0	1-hr	1.76E-02	1.40E-01	-	-
n-Nitroso-n-methylethylamine	10595-95-6	Year	6.18E-07	-	-	4.30E-02
p-Xylene	106-42-3	24-hr	5.19E-04	-	9.89E-02	-
1,4-Dichlorobenzene	106-46-7	Year	1.98E-05	-	-	1.38E+00
1,2-Epoxybutane	106-88-7	24-hr	1.29E-05	-	2.45E-03	-
1,2-Dibromoethane	106-93-4	Year	2.54E-05	-	-	1.77E+00
1,3-Butadiene	106-99-0	Year	6.35E-05	-	-	4.42E+00
Acrolein	107-02-8	24-hr	9.50E-07	-	1.81E-04	-
Allyl Chloride	107-05-1	Year	3.25E-06	-	-	2.26E-01
1,2-Dichloroethane	107-06-2	Year	5.19E-04	-	-	3.61E+01
Acrylonitrile	107-13-1M	Year	3.93E-06	-	-	2.73E-01
Vinyl acetate	108-05-4	24-hr	1.43E-07	-	2.72E-05	-
Methyl Isobutyl Ketone	108-10-1	24-hr	8.83E-04	-	1.68E-01	-
m-Xylene	108-38-3M	24-hr	3.00E-04	-	5.72E-02	-
3-Methylphenol	108-39-4	24-hr	1.51E-06	-	2.88E-04	-
Toluene	108-88-3	24-hr	1.30E-02	-	2.48E+00	-
Chlorobenzene	108-90-7	24-hr	1.59E-04	-	3.03E-02	-
Phenol	108-95-2	24-hr	2.60E-03	-	4.94E-01	-
n-Hexane	110-54-3	24-hr	1.65E-03	-	3.13E-01	-
Cyclohexane	110-82-7	24-hr	5.04E-04	-	9.61E-02	-
Ethylene glycol monoethyl ether acetate	111-76-2	24-hr	4.83E-05	-	9.21E-03	-
Propylene	115-07-1	24-hr	1.25E-03	-	2.39E-01	-

Table A-5. TAP Emission Rates from 241-AY/AZ Farms.

241-AY/AZ Farms			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Ethylbenzene	100-41-4	Year	4.50E-04	-	-	3.13E+01
Styrene	100-42-5	24-hr	1.47E-04	-	2.81E-02	-
Benzyl Chloride	100-44-7	Year	4.27E-06	-	-	2.97E-01
Nitrogen dioxide	10102-44-0	1-hr	1.76E-02	1.40E-01	-	-
n-Nitroso-n-methylethylamine	10595-95-6	Year	6.18E-07	-	-	4.30E-02
p-Xylene	106-42-3	24-hr	5.19E-04	-	9.89E-02	-
1,4-Dichlorobenzene	106-46-7	Year	1.98E-05	-	-	1.38E+00
1,2-Epoxybutane	106-88-7	24-hr	1.29E-05	-	2.45E-03	-
1,2-Dibromoethane	106-93-4	Year	2.54E-05	-	-	1.77E+00
1,3-Butadiene	106-99-0	Year	6.35E-05	-	-	4.42E+00
Acrolein	107-02-8	24-hr	9.50E-07	-	1.81E-04	-
Allyl Chloride	107-05-1	Year	3.25E-06	-	-	2.26E-01
1,2-Dichloroethane	107-06-2	Year	5.19E-04	-	-	3.61E+01
Acrylonitrile	107-13-1M	Year	3.93E-06	-	-	2.73E-01
Vinyl acetate	108-05-4	24-hr	1.43E-07	-	2.72E-05	-
Methyl Isobutyl Ketone	108-10-1	24-hr	8.83E-04	-	1.68E-01	-
m-Xylene	108-38-3M	24-hr	3.00E-04	-	5.72E-02	-
3-Methylphenol	108-39-4	24-hr	1.51E-06	-	2.88E-04	-
Toluene	108-88-3	24-hr	1.30E-02	-	2.48E+00	-
Chlorobenzene	108-90-7	24-hr	1.59E-04	-	3.03E-02	-
Phenol	108-95-2	24-hr	2.60E-03	-	4.94E-01	-
n-Hexane	110-54-3	24-hr	1.65E-03	-	3.13E-01	-
Cyclohexane	110-82-7	24-hr	5.04E-04	-	9.61E-02	-
Ethylene glycol monoethyl ether acetate	111-76-2	24-hr	4.83E-05	-	9.21E-03	-
Propylene	115-07-1	24-hr	1.25E-03	-	2.39E-01	-

Table A-5. TAP Emission Rates from 241-AY/AZ Farms.

241-AY/AZ Farms			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Di(2-ethylhexyl)phthalate	117-81-7	Year	2.38E-07	-	-	1.65E-02
1,4-Dioxane	123-91-1	Year	2.24E-04	-	-	1.56E+01
Perchloroethylene	127-18-4	Year	5.16E-04	-	-	3.59E+01
Vanadium Pentoxide	1314-62-1	1-hr	3.74E-05	2.97E-04	-	-
Polychlorinated Biphenyls (PCBs)	1336-36-3	Year	6.49E-06	-	-	4.51E-01
Trans-1,2-dichloroethene	156-60-5	24-hr	3.81E-08	-	7.25E-06	-
Butylated hydroxyanisole	25013-16-5	Year	4.54E-07	-	-	3.15E-02
Formaldehyde	50-00-0	Year	7.50E-06	-	-	5.22E-01
n-Nitrosodiethylamine	55-18-5	Year	6.18E-07	-	-	4.30E-02
Carbon Tetrachloride	56-23-5	Year	5.23E-04	-	-	3.63E+01
1,1-Dimethylhydrazine	57-14-7	24-hr	5.55E-07	-	1.06E-04	-
Propylene Glycol	57-55-6	24-hr	7.18E-05	-	1.37E-02	-
n-Nitrosomorpholine	59-89-2	Year	2.86E-06	-	-	1.99E-01
Dimethyl Mercury	593-74-8	24-hr	1.31E-08	-	2.50E-06	-
Acetamide	60-35-5	Year	1.93E-06	-	-	1.34E-01
n-Nitrosodimethylamine	62-75-9	Year	8.44E-04	-	-	5.87E+01
n-Nitrosodi-n-propylamine	621-64-7	Year	6.18E-07	-	-	4.30E-02
Methyl Isocyanate	624-83-9	24-hr	5.64E-07	-	1.07E-04	-
Carbon monoxide	630-08-0	1-hr	1.19E-02	9.44E-02	-	-
Methyl Alcohol	67-56-1	24-hr	2.27E-02	-	4.32E+00	-
Isopropyl Alcohol	67-63-0	1-hr	1.08E-03	8.54E-03	-	-
Chloroform	67-66-3	Year	5.23E-04	-	-	3.63E+01
Hexachloroethane	67-72-1	Year	5.36E-04	-	-	3.73E+01
Benzene	71-43-2	Year	5.19E-04	-	-	3.61E+01
1,1,1-Trichloroethane	71-55-6	24-hr	2.15E-05	-	4.09E-03	-

Table A-5. TAP Emission Rates from 241-AY/AZ Farms.

241-AY/AZ Farms			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Methyl Bromide	74-83-9	24-hr	2.05E-05	-	3.90E-03	-
Methyl Chloride	74-87-3	24-hr	7.13E-05	-	1.36E-02	-
Hydrogen Cyanide	74-90-8	24-hr	1.81E-06	-	3.46E-04	-
Lead and compounds (NOS)	7439-92-1	Year	2.09E-05	-	-	1.45E+00
Manganese & Compounds	7439-96-5	24-hr	2.09E-05	-	3.98E-03	-
Mercury, Elemental	7439-97-6	24-hr	6.33E-06	-	1.21E-03	-
Arsenic & Inorganic Arsenic Compounds	7440-38-2	Year	2.09E-05	-	-	1.45E+00
Beryllium & Compounds (NOS)	7440-41-7	Year	1.05E-06	-	-	7.28E-02
Cadmium & Compounds	7440-43-9	Year	1.05E-05	-	-	7.28E-01
Chromium Hexavalent: Soluble, except Chromic Trioxide	7440-47-3	Year	3.20E-05	-	-	2.23E+00
Cobalt	7440-48-4	24-hr	2.09E-05	-	3.98E-03	-
Copper & Compounds	7440-50-8	1-hr	1.05E-05	8.31E-05	-	-
Sulfur dioxide	7446-09-05	1-hr	7.74E-05	6.14E-04	-	-
Ethyl Chloride	75-00-3	24-hr	9.14E-05	-	1.74E-02	-
Vinyl Chloride	75-01-4	Year	5.23E-04	-	-	3.63E+01
Acetonitrile	75-05-8	Year	1.22E-03	-	-	8.48E+01
Acetaldehyde	75-07-0	Year	1.31E-03	-	-	9.10E+01
Dichloromethane	75-09-2	Year	3.55E-03	-	-	2.47E+02
Carbon disulfide	75-15-0	24-hr	1.28E-04	-	2.43E-02	-
Ethylene oxide	75-21-8	Year	2.47E-06	-	-	1.71E-01
Bromoform	75-25-2	Year	2.79E-06	-	-	1.94E-01
1,1-Dichloroethane	75-34-3	Year	8.68E-06	-	-	6.03E-01
1,1-Dichloroethylene	75-35-4	24-hr	9.97E-04	-	1.90E-01	-
Chlorodifluoromethane	75-45-6	24-hr	3.18E-04	-	6.06E-02	-
1-Chloro-1,1-difluoroethane	75-68-3	24-hr	3.45E-04	-	6.58E-02	-

Table A-5. TAP Emission Rates from 241-AY/AZ Farms.

241-AY/AZ Farms			Emissions Rate for Averaging Period			
WAC 173-460-150 Name	Chemical ID	Averaging Period	(g/sec)	(lbs/hr)	(lbs/24-hr)	(lbs/yr)
Ammonia	7664-41-7	24-hr	3.19E-01	-	6.08E+01	-
Selenium & Selenium Compounds (other than Hydrogen Selenide)	7782-49-2	24-hr	1.82E-06	-	3.46E-04	-
1,2-Dichloropropane	78-87-5	Year	1.52E-05	-	-	1.06E+00
Methyl Ethyl Ketone	78-93-3	24-hr	3.06E-03	-	5.82E-01	-
1,1,2-Trichloroethane	79-00-5	Year	1.89E-04	-	-	1.31E+01
Trichloroethylene	79-01-6	Year	5.19E-04	-	-	3.61E+01
Acrylic Acid	79-10-7	24-hr	2.08E-04	-	3.96E-02	-
1,1,2,2-Tetrachloroethane	79-34-5	Year	2.37E-04	-	-	1.65E+01
2-Nitropropane	79-46-9M	24-hr	6.10E-05	-	1.16E-02	-
Hexachlorobutadiene	87-68-3	Year	3.70E-04	-	-	2.57E+01
Naphthalene	91-20-3M	Year	4.14E-06	-	-	2.88E-01
n-Nitroso-di-n-butylamine	924-16-3	Year	6.18E-07	-	-	4.30E-02
n-Nitrosopyrrolidine	930-55-2	Year	6.18E-07	-	-	4.30E-02
o-Xylene	95-47-6	24-hr	5.12E-04	-	9.76E-02	-
2-Methylphenol	95-48-7M	24-hr	9.07E-06	-	1.73E-03	-
Cumene	98-82-8	24-hr	2.24E-05	-	4.27E-03	-