Freedom Plastics, Inc

Table 2 - Actual Criteria Air Pollutant Emission Estimates

Point / Non-point Sources	Estimated Criteria Air Pollutants Emission Rate (ton/year)					
	PM	PM-10	NOx	SO2	CO	VOC
Glycol Tanks	0.03	0.03	0.38	0.00	0.32	0.02
Square Heaters	1.9E-03	1.9E-03	2.4E-02	1.5E-04	2.1E-02	1.3E-03
Wall Heater	4.6E-04	4.6E-04	6.1E-03	3.7E-05	5.1E-03	3.4E-04
Infrared Heaters	0.02	0.02	0.24	1.5E-03	0.21	0.01
Forced Air Furnaces	0.03	0.03	0.34	2.1E-03	0.29	0.02
Total Chemical Use	---	---	---	---	---	7.56
Total Point Sources	**0.1**	**0.1**	**1.0**	**0.0**	**0.8**	**7.6**
Significant Emission Rates (10%)	**2.5**	**1.5**	**4.0**	**4.0**	**10.0**	**4.0**
Exceeds Significant Threshold?	**No**	**No**	**No**	**No**	**No**	**Exceeds**

Table 3 - Actual Toxic Air Pollutant Emission Estimates

Toxic Air Pollutants[3]	CAS No.	Estimated Uncontrolled Air Toxic Pollutants Emission Rate (lb/hr)						Toxic Emission Totals (lb/hr)	IDAPA 58.01.01.585/586 - EL (lb/hr)	PTE Emission Rate vs. EL
		Glycol Tanks	Square Heaters	Wall Heater	Infrared Heaters	Forced-Air Furnaces	Total Chemical Use			
3-Methylchloranthrene	56-49-5	3.26E-09	2.12E-10	5.29E-11	2.12E-09	2.97E-09	---	8.62E-09	2.50E-06	Below
Acetone	67-64-1	---	---	---	---	---	2.10E-01	2.10E-01	1.19E+02	Below
Benzene	71-43-2	3.81E-06	2.47E-07	6.18E-08	2.47E-06	3.47E-06	---	1.01E-05	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	2.18E-09	1.41E-10	3.53E-11	1.41E-09	1.98E-09	---	5.75E-09	2.00E-06	Below
Benzoyl peroxide	91-36-0	---	---	---	---	---	1.21E-02	1.21E-02	3.33E-01	Below
Cyclohexanone	108-94-1	---	---	---	---	---	3.22E-01	3.22E-01	6.67E+00	Below
Formaldehyde	50-00-0	1.36E-04	8.82E-06	2.21E-06	8.82E-05	1.24E-04	---	3.59E-04	5.10E-04	Below
Hexane	110-54-3	3.26E-03	2.12E-04	5.29E-05	2.12E-03	2.97E-03	1.68E-08	8.62E-03	1.20E+01	Below
Methyl ethyl ketone	78-93-3	---	---	---	---	---	4.88E-01	4.88E-01	3.93E+01	Below
Methyl methacrylate	80-62-6	---	---	---	---	---	9.04E-02	9.04E-02	2.73E+01	Below
Naphthalene	91-20-3	1.11E-06	7.18E-08	1.79E-08	7.18E-07	1.01E-06	---	2.92E-06	3.33E+00	Below
Pentane	109-66-0	4.72E-03	3.06E-04	7.65E-05	3.06E-03	4.30E-03	---	1.25E-02	1.18E+02	Below
Toluene	108-88-3	6.17E-06	4.00E-07	1.00E-07	4.00E-06	5.62E-06	3.59E-08	1.63E-05	2.50E+01	Below
Tetrahydrofuran	109-99-9	---	---	---	---	---	1.39E+00	1.39E+00	3.93E+01	Below
POM[4]		2.07E-08	1.34E-09	3.35E-10	1.34E-08	1.88E-08	---	5.46E-08	2.00E-06	Below
Toxic Air Pollutants-Metals[5]										
Arsenic	7440-38-2	3.63E-07	2.35E-08	5.29E-11	2.12E-09	2.97E-09	---	3.91E-07	1.50E-06	Below
Barium	7440-39-3	7.98E-06	5.18E-07	6.18E-08	2.47E-06	3.47E-06	---	1.45E-05	3.30E-02	Below
Beryllium	7440-41-7	2.18E-08	1.41E-09	3.53E-11	1.41E-09	1.98E-09	---	2.66E-08	2.80E-05	Below
Cadmium	7440-43-9	2.00E-06	1.29E-07	2.21E-06	8.82E-05	1.24E-04	---	2.16E-04	3.70E-06	Below
Chromium	7440-47-3	2.54E-06	1.65E-07	5.29E-05	2.12E-03	2.97E-03	---	5.15E-03	3.30E-02	Below
Cobalt	7440-48-4	1.52E-07	9.88E-09	1.79E-08	7.18E-07	1.01E-06	---	1.91E-06	3.30E-03	Below
Copper	7440-50-8	1.54E-06	1.00E-07	7.65E-05	3.06E-03	4.30E-03	---	7.43E-03	1.30E-02	Below
Manganese	7439-96-5	6.89E-07	4.47E-08	1.00E-07	4.00E-06	5.62E-06	---	1.05E-05	6.70E-02	Below
Mercury	7439-97-6	4.72E-07	3.06E-08	7.06E-10	2.82E-08	3.96E-08	---	5.71E-07	1.00E-03	Below
Molybdenum	7439-98-7	2.00E-06	1.29E-07	4.71E-10	1.88E-08	2.64E-08	---	2.17E-06	3.33E-01	Below
Nickel	7440-02-0	3.81E-06	2.47E-07	5.29E-11	2.12E-09	2.97E-09	---	4.06E-06	2.75E-05	Below
Selenium	7782-49-2	4.35E-08	2.82E-09	5.29E-11	2.12E-09	2.97E-09	---	5.15E-08	1.30E-02	Below
Vanadium	1314-62-1	4.17E-06	2.71E-07	7.06E-11	2.82E-09	3.96E-09	---	4.45E-06	3.00E-03	Below
Zinc	7440-66-6	5.26E-05	3.41E-06	5.29E-11	2.12E-09	2.97E-09	---	5.60E-05	3.33E-01	Below

Notes:

[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[2] PM emission factor is assumed to equal PM_{10}.

[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
Actual Gylcol Tanks

Heat Output (MMBtu/hr)*	1.85
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)*	4,160
Heat Value of Fuel (Btu/scf)	1,020

*Assumes all burners operate 80 hr/wk all year

Criteria Pollutant[1]		Emission Factor (lb/10^6 scf)	Uncontrolled Actuals Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)
Total Particulate Matter (PM)[2]		7.6	0.014	57.34	0.03
Nitrogen Oxides (NOx)		100.0	0.181	754.51	0.38
Sulfur Oxides (SOx)		0.6	0.001	4.53	0.002
Carbon Monoxide (CO)		84.0	0.152	633.79	0.32
VOC		5.5	0.010	41.50	0.02

Toxic Air Pollutants[3]	CAS No.	Emission Factor (lb/10^6 scf)	Uncontrolled Actuals Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)	IDAPA 58.01.01.585/586 - EL (lb/hr)	PTE Emission Rate vs. EL
3-Methylchloranthrene	56-49-5	1.80E-06	3.26E-09	1.36E-05	6.79E-09	2.50E-06	Below
Benzene	71-43-2	2.10E-03	3.81E-06	1.58E-02	7.92E-06	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	2.18E-09	9.05E-06	4.53E-09	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	1.36E-04	5.66E-01	2.83E-04	5.10E-04	Below
Hexane	110-54-3	1.80E+00	3.26E-03	1.36E+01	6.79E-03	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	1.11E-06	4.60E-03	2.30E-06	3.33E+00	Below
Pentane	109-66-0	2.60E+00	4.72E-03	1.96E+01	9.81E-03	1.18E+02	Below
Toluene	108-88-3	3.40E-03	6.17E-06	2.57E-02	1.28E-05	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	4.35E-08	1.81E-04	9.05E-08		
7,12-Dimethylbenz(a)anthracene		1.60E-05	2.90E-08	1.21E-04	6.04E-08		
Acenaphthene	83-32-9	1.80E-06	3.26E-09	1.36E-05	6.79E-09		
Acenaphthylene	203-96-8	1.80E-06	3.26E-09	1.36E-05	6.79E-09		
Anthracene	120-12-7	2.40E-06	4.35E-09	1.81E-05	9.05E-09		
Benzo(a)anthracene*	56-55-3	1.80E-06	3.26E-09	1.36E-05	6.79E-09		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	3.26E-09	1.36E-05	6.79E-09		
Benzo(g,h,i)perylene	191-24-2	1.20E-06	2.18E-09	9.05E-06	4.53E-09		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	3.26E-09	1.36E-05	6.79E-09		
Chrysene*	218-01-9	1.80E-06	3.26E-09	1.36E-05	6.79E-09		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	2.18E-09	9.05E-06	4.53E-09		
Dichlorobenzene	25321-22-6	1.20E-03	2.18E-06	9.05E-03	4.53E-06		
Fluoranthene	206-44-0	3.00E-06	5.44E-09	2.26E-05	1.13E-08		
Flourene	86-73-7	2.80E-06	5.08E-09	2.11E-05	1.06E-08		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	3.26E-09	1.36E-05	6.79E-09		
Phenanathrene	85-01-8	1.70E-05	3.08E-08	1.28E-04	6.41E-08		
Pyrene	129-00-0	5.00E-06	9.07E-09	3.77E-05	1.89E-08		
POM[4]			2.07E-08			2.00E-06	Below

Toxic Air Pollutants-Metals[5]	CAS Number	Emission Factor (lb/10^6 scf)	Uncontrolled Potential to Emit Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)	IDAPA 58.01.01.585/586 - EL (lb/hr)	PTE Emission Rate vs. EL
Arsenic	7440-38-2	2.00E-04	3.63E-07	1.51E-03	7.55E-07	1.50E-06	Below
Barium	7440-39-3	4.40E-03	7.98E-06	3.32E-02	1.66E-05	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	2.18E-08	9.05E-05	4.53E-08	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	2.00E-06	8.30E-03	4.15E-06	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	2.54E-06	1.06E-02	5.28E-06	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	1.52E-07	6.34E-04	3.17E-07	3.30E-03	Below
Copper	7440-50-8	8.50E-04	1.54E-06	6.41E-03	3.21E-06	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	6.89E-07	2.87E-03	1.43E-06	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	4.72E-07	1.96E-03	9.81E-07	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	2.00E-06	8.30E-03	4.15E-06	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	3.81E-06	1.58E-02	7.92E-06	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	4.35E-08	1.81E-04	9.05E-08	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	4.17E-06	1.74E-02	8.68E-06	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	5.26E-05	2.19E-01	1.09E-04	3.33E-01	Below

HAPs	0.007

Notes:
[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).
[2] PM emission factor is assumed to equal PM_{10}.
[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).
[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *
[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
Actual Square Heaters

Heat Output (MMBtu/hr)*	0.12
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)	4,160
Heat Value of Fuel (Btu/scf)	1,020

*Assumes all burners operate 80 hr/wk all year

		Uncontrolled Actuals			
Criteria Pollutant[1]		Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)
Total Particulate Matter (PM)[2]		7.6	0.001	3.72	0.002
Nitrogen Oxides (NOx)		100.0	0.012	48.94	0.02
Sulfur Oxides (SOx)		0.6	0.0001	0.29	0.0001
Carbon Monoxide (CO)		84.0	0.010	41.11	0.02
VOC		5.5	0.001	2.69	0.001

			Uncontrolled Actuals				
Toxic Air Pollutants[3]	CAS No.	Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)	IDAPA 58.01.01.585/ 586 - EL (lb/hr)	PTE Emission Rate vs. EL
3-Methylchloranthrene	56-49-5	1.80E-06	2.12E-10	8.81E-07	4.40E-10	2.50E-06	Below
Benzene	71-43-2	2.10E-03	2.47E-07	1.03E-03	5.14E-07	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	1.41E-10	5.87E-07	2.94E-10	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	8.82E-06	3.67E-02	1.84E-05	5.10E-04	Below
Hexane	110-54-3	1.80E+00	2.12E-04	8.81E-01	4.40E-04	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	7.18E-08	2.99E-04	1.49E-07	3.33E+00	Below
Pentane	109-66-0	2.60E+00	3.06E-04	1.27E+00	6.36E-04	1.18E+02	Below
Toluene	108-88-3	3.40E-03	4.00E-07	1.66E-03	8.32E-07	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	2.82E-09	1.17E-05	5.87E-09		
7,12-Dimethylbenz(a)anthracene		1.60E-05	1.88E-09	7.83E-06	3.92E-09		
Acenaphthene	83-32-9	1.80E-06	2.12E-10	8.81E-07	4.40E-10		
Acenaphthylene	203-96-8	1.80E-06	2.12E-10	8.81E-07	4.40E-10		
Anthracene	120-12-7	2.40E-06	2.82E-10	1.17E-06	5.87E-10		
Benzo(a)anthracene*	56-55-3	1.80E-06	2.12E-10	8.81E-07	4.40E-10		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	2.12E-10	8.81E-07	4.40E-10		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	1.41E-10	5.87E-07	2.94E-10		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	2.12E-10	8.81E-07	4.40E-10		
Chrysene*	218-01-9	1.80E-06	2.12E-10	8.81E-07	4.40E-10		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	1.41E-10	5.87E-07	2.94E-10		
Dichlorobenzene	25321-22-6	1.20E-03	1.41E-07	5.87E-04	2.94E-07		
Fluoranthene	206-44-0	3.00E-06	3.53E-10	1.47E-06	7.34E-10		
Flourene	86-73-7	2.80E-06	3.29E-10	1.37E-06	6.85E-10		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	2.12E-10	8.81E-07	4.40E-10		
Phenanathrene	85-01-8	1.70E-05	2.00E-09	8.32E-06	4.16E-09		
Pyrene	129-00-0	5.00E-06	5.88E-10	2.45E-06	1.22E-09		
POM[4]			1.34E-09			2.00E-06	Below

			Uncontrolled Potential to Emit				
Toxic Air Pollutants-Metals[5]	CAS Number	Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)	IDAPA 58.01.01.585/ 586 - EL (lb/hr)	PTE Emission Rate vs. EL
Arsenic	7440-38-2	2.00E-04	2.35E-08	9.79E-05	4.89E-08	1.50E-06	Below
Barium	7440-39-3	4.40E-03	5.18E-07	2.15E-03	1.08E-06	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	1.41E-09	5.87E-06	2.94E-09	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	1.29E-07	5.38E-04	2.69E-07	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	1.65E-07	6.85E-04	3.43E-07	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	9.88E-09	4.11E-05	2.06E-08	3.30E-03	Below
Copper	7440-50-8	8.50E-04	1.00E-07	4.16E-04	2.08E-07	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	4.47E-08	1.86E-04	9.30E-08	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	3.06E-08	1.27E-04	6.36E-08	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	1.29E-07	5.38E-04	2.69E-07	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	2.47E-07	1.03E-03	5.14E-07	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	2.82E-09	1.17E-05	5.87E-09	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	2.71E-07	1.13E-03	5.63E-07	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	3.41E-06	1.42E-02	7.10E-06	3.33E-01	Below
HAPs					**0.000**		

Notes:
[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).
[2] PM emission factor is assumed to equal PM_{10}.
[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).
[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *
[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
Actual Wall Heater

Heat Output (MMBtu/hr)*	0.03
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)	4,160
Heat Value of Fuel (Btu/scf)	1,020

*Assumes all burners operate 80 hr/wk all year

Criteria Pollutant[1]		Uncontrolled Actuals			
		Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)
Total Particulate Matter (PM)[2]		7.6	2.2E-04	0.93	4.6E-04
Nitrogen Oxides (NOx)		100.0	2.9E-03	12.24	6.1E-03
Sulfur Oxides (SOx)		0.6	1.8E-05	0.07	3.7E-05
Carbon Monoxide (CO)		84.0	2.5E-03	10.28	5.1E-03
VOC		5.5	1.6E-04	0.67	3.4E-04

Toxic Air Pollutants[3]	CAS No.	Uncontrolled Actuals				IDAPA 58.01.01.585/ 586 - EL (lb/hr)	PTE Emission Rate vs. EL
		Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)		
3-Methylchloranthrene	56-49-5	1.80E-06	5.29E-11	2.20E-07	1.10E-10	2.50E-06	Below
Benzene	71-43-2	2.10E-03	6.18E-08	2.57E-04	1.28E-07	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	3.53E-11	1.47E-07	7.34E-11	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	2.21E-06	9.18E-03	4.59E-06	5.10E-04	Below
Hexane	110-54-3	1.80E+00	5.29E-05	2.20E-01	1.10E-04	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	1.79E-08	7.46E-05	3.73E-08	3.33E+00	Below
Pentane	109-66-0	2.60E+00	7.65E-05	3.18E-01	1.59E-04	1.18E+02	Below
Toluene	108-88-3	3.40E-03	1.00E-07	4.16E-04	2.08E-07	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	7.06E-10	2.94E-06	1.47E-09		
7,12-Dimethylbenz(a)anthracene		1.60E-05	4.71E-10	1.96E-06	9.79E-10		
Acenaphthene	83-32-9	1.80E-06	5.29E-11	2.20E-07	1.10E-10		
Acenaphthylene	203-96-8	1.80E-06	5.29E-11	2.20E-07	1.10E-10		
Anthracene	120-12-7	2.40E-06	7.06E-11	2.94E-07	1.47E-10		
Benzo(a)anthracene*	56-55-3	1.80E-06	5.29E-11	2.20E-07	1.10E-10		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	5.29E-11	2.20E-07	1.10E-10		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	3.53E-11	1.47E-07	7.34E-11		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	5.29E-11	2.20E-07	1.10E-10		
Chrysene*	218-01-9	1.80E-06	5.29E-11	2.20E-07	1.10E-10		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	3.53E-11	1.47E-07	7.34E-11		
Dichlorobenzene	25321-22-6	1.20E-03	3.53E-08	1.47E-04	7.34E-08		
Fluoranthene	206-44-0	3.00E-06	8.82E-11	3.67E-07	1.84E-10		
Flourene	86-73-7	2.80E-06	8.24E-11	3.43E-07	1.71E-10		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	5.29E-11	2.20E-07	1.10E-10		
Phenanathrene	85-01-8	1.70E-05	5.00E-10	2.08E-06	1.04E-09		
Pyrene	129-00-0	5.00E-06	1.47E-10	6.12E-07	3.06E-10		
POM[4]			3.35E-10			2.00E-06	Below

Toxic Air Pollutants-Metals[5]	CAS Number	Uncontrolled Potential to Emit				IDAPA 58.01.01.585/ 586 - EL (lb/hr)	PTE Emission Rate vs. EL
		Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)		
Arsenic	7440-38-2	2.00E-04	5.88E-09	2.45E-05	1.22E-08	1.50E-06	Below
Barium	7440-39-3	4.40E-03	1.29E-07	5.38E-04	2.69E-07	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	3.53E-10	1.47E-06	7.34E-10	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	3.24E-08	1.35E-04	6.73E-08	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	4.12E-08	1.71E-04	8.56E-08	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	2.47E-09	1.03E-05	5.14E-09	3.30E-03	Below
Copper	7440-50-8	8.50E-04	2.50E-08	1.04E-04	5.20E-08	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	1.12E-08	4.65E-05	2.32E-08	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	7.65E-09	3.18E-05	1.59E-08	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	3.24E-08	1.35E-04	6.73E-08	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	6.18E-08	2.57E-04	1.28E-07	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	7.06E-10	2.94E-06	1.47E-09	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	6.76E-08	2.81E-04	1.41E-07	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	8.53E-07	3.55E-03	1.77E-06	3.33E-01	Below
HAPs					**0.000**		

Notes:
[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).
[2] PM emission factor is assumed to equal PM_{10}.
[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).
[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *
[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
Actual Infrared Heaters

Heat Output (MMBtu/hr)*	**1.20**
Fuel Type	**Natural Gas**
Maximum Operation Limit (hrs/yr)*	**4,160**
Heat Value of Fuel (Btu/scf)	**1,020**

*Assumes all burners operate 80 hr/wk all year

			Uncontrolled Actuals		
Criteria Pollutant[1]		**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**
Total Particulate Matter (PM)[2]		7.6	8.9E-03	37.20	0.02
Nitrogen Oxides (NOx)		100.0	0.12	489.41	0.24
Sulfur Oxides (SOx)		0.6	7.1E-04	2.94	1.5E-03
Carbon Monoxide (CO)		84.0	0.10	411.11	0.21
VOC		5.5	6.5E-03	26.92	0.01

			Uncontrolled Actuals				
Toxic Air Pollutants[3]	**CAS No.**	**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
3-Methylchloranthrene	56-49-5	1.80E-06	2.12E-09	8.81E-06	4.40E-09	2.50E-06	Below
Benzene	71-43-2	2.10E-03	2.47E-06	1.03E-02	5.14E-06	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	1.41E-09	5.87E-06	2.94E-09	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	8.82E-05	3.67E-01	1.84E-04	5.10E-04	Below
Hexane	110-54-3	1.80E+00	2.12E-03	8.81E+00	4.40E-03	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	7.18E-07	2.99E-03	1.49E-06	3.33E+00	Below
Pentane	109-66-0	2.60E+00	3.06E-03	1.27E+01	6.36E-03	1.18E+02	Below
Toluene	108-88-3	3.40E-03	4.00E-06	1.66E-02	8.32E-06	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	2.82E-08	1.17E-04	5.87E-08		
7,12-Dimethylbenz(a)anthracene		1.60E-05	1.88E-08	7.83E-05	3.92E-08		
Acenaphthene	83-32-9	1.80E-06	2.12E-09	8.81E-06	4.40E-09		
Acenaphthylene	203-96-8	1.80E-06	2.12E-09	8.81E-06	4.40E-09		
Anthracene	120-12-7	2.40E-06	2.82E-09	1.17E-05	5.87E-09		
Benzo(a)anthracene*	56-55-3	1.80E-06	2.12E-09	8.81E-06	4.40E-09		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	2.12E-09	8.81E-06	4.40E-09		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	1.41E-09	5.87E-06	2.94E-09		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	2.12E-09	8.81E-06	4.40E-09		
Chrysene*	218-01-9	1.80E-06	2.12E-09	8.81E-06	4.40E-09		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	1.41E-09	5.87E-06	2.94E-09		
Dichlorobenzene	25321-22-6	1.20E-03	1.41E-06	5.87E-03	2.94E-06		
Fluoranthene	206-44-0	3.00E-06	3.53E-09	1.47E-05	7.34E-09		
Flourene	86-73-7	2.80E-06	3.29E-09	1.37E-05	6.85E-09		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	2.12E-09	8.81E-06	4.40E-09		
Phenanathrene	85-01-8	1.70E-05	2.00E-08	8.32E-05	4.16E-08		
Pyrene	129-00-0	5.00E-06	5.88E-09	2.45E-05	1.22E-08		
POM[4]			1.34E-08			2.00E-06	Below

			Uncontrolled Potential to Emit				
Toxic Air Pollutants-Metals[5]	**CAS Number**	**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
Arsenic	7440-38-2	2.00E-04	2.35E-07	9.79E-04	4.89E-07	1.50E-06	Below
Barium	7440-39-3	4.40E-03	5.18E-06	2.15E-02	1.08E-05	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	1.41E-08	5.87E-05	2.94E-08	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	1.29E-06	5.38E-03	2.69E-06	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	1.65E-06	6.85E-03	3.43E-06	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	9.88E-08	4.11E-04	2.06E-07	3.30E-03	Below
Copper	7440-50-8	8.50E-04	1.00E-06	4.16E-03	2.08E-06	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	4.47E-07	1.86E-03	9.30E-07	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	3.06E-07	1.27E-03	6.36E-07	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	1.29E-06	5.38E-03	2.69E-06	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	2.47E-06	1.03E-02	5.14E-06	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	2.82E-08	1.17E-04	5.87E-08	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	2.71E-06	1.13E-02	5.63E-06	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	3.41E-05	1.42E-01	7.10E-05	3.33E-01	Below

HAPs	**0.005**

Notes:

[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[2] PM emission factor is assumed to equal PM_{10}.

[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
Actual Forced Air Furnaces

Heat Output (MMBtu/hr)*	**1.69**
Fuel Type	**Natural Gas**
Maximum Operation Limit (hrs/yr)*	**4,160**
Heat Value of Fuel (Btu/scf)	**1,020**

*Assumes all burners operate 80 hr/wk all year

			Uncontrolled Actuals		
Criteria Pollutant[1]		**Emission Factor (lb/10^6 scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**
Total Particulate Matter (PM)[2]		7.6	0.01	52.23	0.03
Nitrogen Oxides (NOx)		100.0	0.17	687.22	0.34
Sulfur Oxides (SOx)		0.6	9.9E-04	4.12	2.1E-03
Carbon Monoxide (CO)		84.0	0.14	577.26	0.29
VOC		5.5	9.1E-03	37.80	0.02

			Uncontrolled Actuals				
Toxic Air Pollutants[3]	**CAS No.**	**Emission Factor (lb/10^6 scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
3-Methylchloranthrene	56-49-5	1.80E-06	2.97E-09	1.24E-05	6.18E-09	2.50E-06	Below
Benzene	71-43-2	2.10E-03	3.47E-06	1.44E-02	7.22E-06	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	1.98E-09	8.25E-06	4.12E-09	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	1.24E-04	5.15E-01	2.58E-04	5.10E-04	Below
Hexane	110-54-3	1.80E+00	2.97E-03	1.24E+01	6.18E-03	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	1.01E-06	4.19E-03	2.10E-06	3.33E+00	Below
Pentane	109-66-0	2.60E+00	4.30E-03	1.79E+01	8.93E-03	1.18E+02	Below
Toluene	108-88-3	3.40E-03	5.62E-06	2.34E-02	1.17E-05	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	3.96E-08	1.65E-04	8.25E-08		
7,12-Dimethylbenz(a)anthracene		1.60E-05	2.64E-08	1.10E-04	5.50E-08		
Acenaphthene	83-32-9	1.80E-06	2.97E-09	1.24E-05	6.18E-09		
Acenaphthylene	203-96-8	1.80E-06	2.97E-09	1.24E-05	6.18E-09		
Anthracene	120-12-7	2.40E-06	3.96E-09	1.65E-05	8.25E-09		
Benzo(a)anthracene*	56-55-3	1.80E-06	2.97E-09	1.24E-05	6.18E-09		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	2.97E-09	1.24E-05	6.18E-09		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	1.98E-09	8.25E-06	4.12E-09		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	2.97E-09	1.24E-05	6.18E-09		
Chrysene*	218-01-9	1.80E-06	2.97E-09	1.24E-05	6.18E-09		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	1.98E-09	8.25E-06	4.12E-09		
Dichlorobenzene	25321-22-6	1.20E-03	1.98E-06	8.25E-03	4.12E-06		
Fluoranthene	206-44-0	3.00E-06	4.96E-09	2.06E-05	1.03E-08		
Flourene	86-73-7	2.80E-06	4.63E-09	1.92E-05	9.62E-09		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	2.97E-09	1.24E-05	6.18E-09		
Phenanathrene	85-01-8	1.70E-05	2.81E-08	1.17E-04	5.84E-08		
Pyrene	129-00-0	5.00E-06	8.26E-09	3.44E-05	1.72E-08		
POM[4]			1.88E-08			2.00E-06	Below

			Uncontrolled Potential to Emit				
Toxic Air Pollutants-Metals[5]	**CAS Number**	**Emission Factor (lb/10^6 scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
Arsenic	7440-38-2	2.00E-04	3.30E-07	1.37E-03	6.87E-07	1.50E-06	Below
Barium	7440-39-3	4.40E-03	7.27E-06	3.02E-02	1.51E-05	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	1.98E-08	8.25E-05	4.12E-08	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	1.82E-06	7.56E-03	3.78E-06	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	2.31E-06	9.62E-03	4.81E-06	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	1.39E-07	5.77E-04	2.89E-07	3.30E-03	Below
Copper	7440-50-8	8.50E-04	1.40E-06	5.84E-03	2.92E-06	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	6.28E-07	2.61E-03	1.31E-06	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	4.30E-07	1.79E-03	8.93E-07	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	1.82E-06	7.56E-03	3.78E-06	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	3.47E-06	1.44E-02	7.22E-06	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	3.96E-08	1.65E-04	8.25E-08	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	3.80E-06	1.58E-02	7.90E-06	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	4.79E-05	1.99E-01	9.96E-05	3.33E-01	Below

HAPs	**0.006**

Notes:

[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[2] PM emission factor is assumed to equal PM_{10}.

[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Summary of Actual Toxic Air Pollutants - Chemical Use

Toxic Air Pollutants	CAS No.	Emission Estimates P-70 Primer lb/hr	Emission Estimates 811 A-B Epoxy lb/hr	Emission Estimates AA-2304 Contact Cement lb/hr	Emission Estimates 1969 Green Glue lb/hr	Emission Estimates 711 White Glue lb/hr	Emission Estimates 711 Grey Glue lb/hr	Emission Estimates 719 Grey Glue lb/hr	Emission Estimates 719 White Glue lb/hr	Toxic Emission Totals lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	0.62			0.09	0.05	0.01	0.07	0.54	1.39	39.3	No
Methyl ethyl ketone	78-93-3	0.30	0.07		0.01	0.01	0.00	0.01	0.08	0.49	39.3	No
Cyclohexanone	108-94-1	0.16			0.02	0.01	0.00	0.02	0.12	0.32	6.67	No
Acetone	67-64-1	0.21		1.13E-07						0.21	119	No
Methyl methacrylate	80-62-6		0.09							0.09	27.3	No
Benzoyl peroxide	91-36-0		0.01							0.01	0.333	No
Hexane	110-54-3			1.68E-08						1.68E-08	12	No
Toluene	108-88-3			3.59E-08						3.59E-08	25	No

Summary of Actual Criteria Air Pollutants - Chemical Use

Criteria Air Pollutants	Emission Estimates P-70 Primer tpy	Emission Estimates 811 A-B Epoxy tpy	Emission Estimates 1969 Green Glue tpy	Emission Estimates 711 White Glue tpy	Emission Estimates 711 Grey Glue tpy	Emission Estimates 719 Grey Glue tpy	Emission Estimates 719 White Glue tpy	VOC Emission Totals tpy	10% of Sig. Threshold tpy	Exceeds?
VOC	4.05	0.00	0.27	0.17	0.03	0.24	2.81	7.6	4.0	Exceeds

Freedom Plastics - Idaho
Summary of Usage by Year

Part Number	Description	2004	2005	2006	2007	Units
928-145	711 Grey Glue	**14**	8	8	7	gal
928-147	711 White Glue	75	54	60	**75**	gal
928-171	Primer P-70	1604	**1764**	1455	1525	gal
928-190	1969 Green Glue	55	**140**	105	115	gal
931-45	719 White Glue	1095	1098	1055	**1245**	gal
931-500	719 Grey Glue	35	**105**	21	12	gal
Misc	AA-2304 Contact Cement				48	gal
	Totals	2878	**3169**	2704	3027	gal
928-188	811 A-B Epoxy Tubes	32	**32**	12	13	470 ml tubes
	Totals	32	**32**	12	13	470 ml tubes

Note: **Bold** = highest usage in 4 year period

P-70 Primer for PVC

Actual Quantity: 1764 gal/yr

Manufacturer: IPS Corporation
Chemical Name: Mixture of Organic Solvents, Adhesive Primer for Plastic
Percent Volatile by Volume: 100.0%
Maximum VOC content: 550 gram/liter
VOC density 4.59 lb/gal
Hourly Average Basis: 4160 hrs/yr *assumes two shifts 2080 hr/yr*

Criteria Pollutant:	Emission Estimates lb/yr	tpy	10% of Sig Threshold tpy	Exceeds?
VOC	8095.87	4.05	4.0	Yes

Toxic Air Pollutants:	CAS No.	Wt % Range Min	Max	Emission Estimates lb/yr	lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	45	59	4776.57	1.15	39.3	No
Methyl ethyl ketone	78-93-3	19	29	2347.80	0.56	39.3	No
Cyclohexanone	108-94-1	5	15	1214.38	0.29	6.67	No
Acetone	67-64-1	5	20	1619.17	0.39	119	No

719 White Glue

Actual Quantity: 1245 gal/yr

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 90.0%
Maximum VOC content: 600 gram/liter
VOC density 5.01 lb/gal
Hourly Average Basis: 4160 hrs/yr *assumes two shifts 2080 hr/yr*

Criteria Pollutant:	Emission Estimates lb/yr	tpy	10% of Sig Threshold tpy	Exceeds?
VOC	5610.03	2.81	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range Min	Max	Emission Estimates lb/yr	lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	25	70	3927.02	0.94	39.3	No
Methyl ethyl ketone	78-93-3	5	10	561.00	0.13	39.3	No
Cyclohexanone	108-94-1	1	15	841.51	0.20	6.67	No

811 A-B Epoxy Tubes

Actual Quantity: 15 liter/yr *32 tubes each at 470 ml*

Manufacturer:	IPS Corporation	
Chemical Name:	Acrylic Reactive Cement	
Percent Volatile by Volume:	70.0%	
Maximum VOC content:	75 gram/liter	
VOC density	0.63 lb/gal	
Hourly Average Basis:	4160 hrs/yr	*assumes two shifts 2080 hr/yr*

Criteria Pollutant:	Emission Estimates lb/yr	Emission Estimates tpy	10% of Sig Threshold tpy	10% of Sig Threshold Exceeds?
VOC	1.74	0.001	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range Min	Wt % Range Max	Emission Estimates lb/yr	Emission Estimates lb/hr	Emission Screening Levels (EL) lb/hr	Emission Screening Levels (EL) Exceeds?
Methyl methacrylate	80-62-6	45	75	1.30	0.02	27.3	No
Methyl ethyl ketone	78-93-3	25	60	1.04	0.02	39.3	No
Benzoyl peroxide	91-36-0	2	10	0.17	0.003	0.333	No

AA-2304 Contact Cement

Actual Quantity: 48 gal/yr

Manufacturer: Arrow Adhesives Company
Chemical Name: Contact Cement
VOC Content: Not listed in MSDS
Hourly Average Basis: 4160 hrs/yr *assumes two shifts 2080 hr/yr*

Toxic Air Pollutants:	CAS No.	MW gas g/mol	ACGIH TLV ppm	Emission Estimates lb/yr	lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Acetone	67-64-1	58.08	500	4.76E-04	1.14E-07	119	No
Hexane	110-54-3	86.18	50	7.06E-05	1.70E-08	12	No
Toluene	108-88-3	92.13	100	1.51E-04	3.63E-08	25	No

Note:
Conversion from ppm by volume to ug/L: (ppm by volume) x (MW gas/24.45) = ug/L

1969 Green Glue

Actual Quantity: 140 gal/yr

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 80.0%
Maximum VOC content: 580 gram/liter
VOC density 4.84 lb/gal
Hourly Average Basis: 4160 hrs/yr *assumes two shifts 2080 hr/yr*

Criteria Pollutant:	Emission Estimates lb/yr	tpy	10% of Sig Threshold tpy	Exceeds?
VOC	542.06	0.27	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range Min	Max	Emission Estimates lb/yr	lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	50	70	379.44	0.09	39.3	No
Methyl ethyl ketone	78-93-3	3	11	59.63	0.01	39.3	No
Cyclohexanone	108-94-1	5	15	81.31	0.02	6.67	No

711 White Glue

Actual Quantity: 75 gal/yr

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 90.0%
Maximum VOC content: 600 gram/liter
VOC density 5.01 lb/gal
Hourly Average Basis: 4160 hrs/yr *assumes two shifts 2080 hr/yr*

Criteria Pollutant:	Emission Estimates lb/yr	tpy	10% of Sig Threshold tpy	Exceeds?
VOC	337.95	0.17	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range Min	Max	Emission Estimates lb/yr	lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	25	70	236.57	0.06	39.3	No
Methyl ethyl ketone	78-93-3	5	10	33.80	0.01	39.3	No
Cyclohexanone	108-94-1	1	15	50.69	0.01	6.67	No

711 Grey Glue

Actual Quantity: 14 gal/yr

Manufacturer:	IPS Corporation
Chemical Name:	Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume:	90.0%
Maximum VOC content:	600 gram/liter
VOC density	5.01 lb/gal
Hourly Average Basis:	4160 hrs/yr *assumes two shifts 2080 hr/yr*

Criteria Pollutant:	Emission Estimates lb/yr	Emission Estimates tpy	10% of Sig Threshold tpy	10% of Sig Threshold Exceeds?
VOC	63.08	0.03	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range Min	Wt % Range Max	Emission Estimates lb/yr	Emission Estimates lb/hr	Emission Screening Levels (EL) lb/hr	Emission Screening Levels (EL) Exceeds?
Tetrahydrofuran	109-99-9	25	70	44.16	0.01	39.3	No
Methyl ethyl ketone	78-93-3	5	10	6.31	0.002	39.3	No
Cyclohexanone	108-94-1	1	15	9.46	0.002	6.67	No

719 Grey Glue

Actual Quantity: 105 gal/yr

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 90.0%
Maximum VOC content: 600 gram/liter
VOC density 5.01 lb/gal
Hourly Average Basis: 4160 hrs/yr *assumes two shifts 2080 hr/yr*

Criteria Pollutant:	Emission Estimates		10% of Sig Threshold	
	lb/yr	tpy	tpy	Exceeds?
VOC	473.14	0.24	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range		Emission Estimates		Emission Screening Levels (EL)	
		Min	Max	lb/yr	lb/hr	lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	25	70	331.19	0.08	39.3	No
Methyl ethyl ketone	78-93-3	5	10	47.31	0.01	39.3	No
Cyclohexanone	108-94-1	1	15	70.97	0.02	6.67	No

Appendix C

PTE Emission Estimates

Freedom Plastics, Inc

Table 4 - Potential to Emit Criteria Air Pollutant Emission Estimates

Point / Non-point Sources	Estimated Criteria Air Pollutants Emission Rate (ton/year)					
	PM	PM-10	NOx	SO2	CO	VOC
Glycol Tanks	0.06	0.06	0.79	0.00	0.67	0.04
Square Heaters	3.9E-03	3.9E-03	0.05	3.1E-04	0.04	2.8E-03
Wall Heater	9.8E-04	9.8E-04	1.3E-02	7.7E-05	1.1E-02	7.1E-04
Infrared Heaters	0.04	0.04	0.52	3.1E-03	0.43	0.03
Forced Air Furnaces	0.05	0.05	0.72	4.3E-03	0.61	0.04
Total Chemical Use	---	---	---	---	---	9.41
Total Point Sources	0.2	0.2	2.1	0.0	1.8	9.5
Significant Emission Rates (10%)	2.5	1.5	4.0	4.0	10.0	4.0
Exceeds Significant Threshold?	No	No	No	No	No	Exceeds

Table 5 - Potential to Emit Toxic Air Pollutant Emission Estimates

Toxic Air Pollutants[3]	CAS No.	Estimated Uncontrolled Air Toxic Pollutants Emission Rate (lb/hr)						Toxic Emission Totals (lb/hr)	IDAPA 58.01.01.585/586 - EL (lb/hr)	PTE Emission Rate vs. EL
		Glycol Tanks	Square Heaters	Wall Heater	Infrared Heaters	Forced-Air Furnaces	Total Chemical Use			
3-Methylchloranthrene	56-49-5	3.26E-09	2.12E-10	5.29E-11	2.12E-09	2.97E-09	---	8.62E-09	2.50E-06	Below
Acetone	67-64-1	---	---	---	---	---	4.19E-01	4.19E-01	1.19E+02	Below
Benzene	71-43-2	3.81E-06	2.47E-07	6.18E-08	2.47E-06	3.47E-06	---	1.01E-05	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	2.18E-09	1.41E-10	3.53E-11	1.41E-09	1.98E-09	---	5.75E-09	2.00E-06	Below
Benzoyl peroxide	91-36-0	---	---	---	---	---	1.21E-02	1.21E-02	3.33E-01	Below
Cyclohexanone	108-94-1	---	---	---	---	---	5.56E-01	5.56E-01	6.67E+00	Below
Formaldehyde	50-00-0	1.36E-04	8.82E-06	2.21E-06	8.82E-05	1.24E-04	---	3.59E-04	5.10E-04	Below
Hexane	110-54-3	3.26E-03	2.12E-04	5.29E-05	2.12E-03	2.97E-03	1.68E-08	8.62E-03	1.20E+01	Below
Methyl ethyl ketone	78-93-3	---	---	---	---	---	8.43E-01	8.43E-01	3.93E+01	Below
Methyl methacrylate	80-62-6	---	---	---	---	---	9.04E-02	9.04E-02	2.73E+01	Below
Naphthalene	91-20-3	1.11E-06	7.18E-08	1.79E-08	7.18E-07	1.01E-06	---	2.92E-06	3.33E+00	Below
Pentane	109-66-0	4.72E-03	3.06E-04	7.65E-05	3.06E-03	4.30E-03	---	1.25E-02	1.18E+02	Below
Toluene	108-88-3	6.17E-06	4.00E-07	1.00E-07	4.00E-06	5.62E-06	3.59E-08	1.63E-05	2.50E+01	Below
Tetrahydrofuran	109-99-9	---	---	---	---	---	2.37E+00	2.37E+00	3.93E+01	Below
POM[4]		2.07E-08	1.34E-09	3.35E-10	1.34E-08	1.88E-08	---	5.46E-08	2.00E-06	Below
Toxic Air Pollutants-Metals[5]										
Arsenic	7440-38-2	3.63E-07	2.35E-08	5.29E-11	2.12E-09	2.97E-09	---	3.91E-07	1.50E-06	Below
Barium	7440-39-3	7.98E-06	5.18E-07	6.18E-08	2.47E-06	3.47E-06	---	1.45E-05	3.30E-02	Below
Beryllium	7440-41-7	2.18E-08	1.41E-09	3.53E-11	1.41E-09	1.98E-09	---	2.66E-08	2.80E-05	Below
Cadmium	7440-43-9	2.00E-06	1.29E-07	2.21E-06	8.82E-05	1.24E-04	---	2.16E-04	3.70E-06	Below
Chromium	7440-47-3	2.54E-06	1.65E-07	5.29E-05	2.12E-03	2.97E-03	---	5.15E-03	3.30E-02	Below
Cobalt	7440-48-4	1.52E-07	9.88E-09	1.79E-08	7.18E-07	1.01E-06	---	1.91E-06	3.30E-03	Below
Copper	7440-50-8	1.54E-06	1.00E-07	7.65E-05	3.06E-03	4.30E-03	---	7.43E-03	1.30E-02	Below
Manganese	7439-96-5	6.89E-07	4.47E-08	1.00E-07	4.00E-06	5.62E-06	---	1.05E-05	6.70E-02	Below
Mercury	7439-97-6	4.72E-07	3.06E-08	7.06E-10	2.82E-08	3.96E-08	---	5.71E-07	1.00E-03	Below
Molybdenum	7439-98-7	2.00E-06	1.29E-07	4.71E-10	1.88E-08	2.64E-08	---	2.17E-06	3.33E-01	Below
Nickel	7440-02-0	3.81E-06	2.47E-07	5.29E-11	2.12E-09	2.97E-09	---	4.06E-06	2.75E-05	Below
Selenium	7782-49-2	4.35E-08	2.82E-09	5.29E-11	2.12E-09	2.97E-09	---	5.15E-08	1.30E-02	Below
Vanadium	1314-62-1	4.17E-06	2.71E-07	7.06E-11	2.82E-09	3.96E-09	---	4.45E-06	3.00E-03	Below
Zinc	7440-66-6	5.26E-05	3.41E-06	5.29E-11	2.12E-09	2.97E-09	---	5.60E-05	3.33E-01	Below

Notes:

[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[2] PM emission factor is assumed to equal PM_{10}.

[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
PTE Glycol Tanks

Heat Output (MMBtu/hr)*	1.85
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)*	8,760
Heat Value of Fuel (Btu/scf)	1,020

*Assumes all burners operate 24 hrs/day all year

		Uncontrolled Potential to Emit			
Criteria Pollutant[1]		**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**
Total Particulate Matter (PM)[2]		7.6	0.014	120.75	0.06
Nitrogen Oxides (NOx)		100.0	0.181	1,588.82	0.79
Sulfur Oxides (SOx)		0.6	0.001	9.53	0.005
Carbon Monoxide (CO)		84.0	0.152	1,334.61	0.67
VOC		5.5	0.010	87.39	0.04

		Uncontrolled Potential to Emit					
Toxic Air Pollutants[3]	**CAS No.**	**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
3-Methylchloranthrene	56-49-5	1.80E-06	3.26E-09	2.86E-05	1.43E-08	2.50E-06	Below
Benzene	71-43-2	2.10E-03	3.81E-06	3.34E-02	1.67E-05	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	2.18E-09	1.91E-05	9.53E-09	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	1.36E-04	1.19E+00	5.96E-04	5.10E-04	Below
Hexane	110-54-3	1.80E+00	3.26E-03	2.86E+01	1.43E-02	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	1.11E-06	9.69E-03	4.85E-06	3.33E+00	Below
Pentane	109-66-0	2.60E+00	4.72E-03	4.13E+01	2.07E-02	1.18E+02	Below
Toluene	108-88-3	3.40E-03	6.17E-06	5.40E-02	2.70E-05	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	4.35E-08	3.81E-04	1.91E-07		
7,12-Dimethylbenz(a)anthracene		1.60E-05	2.90E-08	2.54E-04	1.27E-07		
Acenaphthene	83-32-9	1.80E-06	3.26E-09	2.86E-05	1.43E-08		
Acenaphthylene	203-96-8	1.80E-06	3.26E-09	2.86E-05	1.43E-08		
Anthracene	120-12-7	2.40E-06	4.35E-09	3.81E-05	1.91E-08		
Benzo(a)anthracene*	56-55-3	1.80E-06	3.26E-09	2.86E-05	1.43E-08		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	3.26E-09	2.86E-05	1.43E-08		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	2.18E-09	1.91E-05	9.53E-09		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	3.26E-09	2.86E-05	1.43E-08		
Chrysene*	218-01-9	1.80E-06	3.26E-09	2.86E-05	1.43E-08		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	2.18E-09	1.91E-05	9.53E-09		
Dichlorobenzene	25321-22-6	1.20E-03	2.18E-06	1.91E-02	9.53E-06		
Fluoranthene	206-44-0	3.00E-06	5.44E-09	4.77E-05	2.38E-08		
Flourene	86-73-7	2.80E-06	5.08E-09	4.45E-05	2.22E-08		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	3.26E-09	2.86E-05	1.43E-08		
Phenanathrene	85-01-8	1.70E-05	3.08E-08	2.70E-04	1.35E-07		
Pyrene	129-00-0	5.00E-06	9.07E-09	7.94E-05	3.97E-08		
POM[4]			2.07E-08			2.00E-06	Below

		Uncontrolled Potential to Emit					
Toxic Air Pollutants-Metals[5]	**CAS Number**	**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
Arsenic	7440-38-2	2.00E-04	3.63E-07	3.18E-03	1.59E-06	1.50E-06	Below
Barium	7440-39-3	4.40E-03	7.98E-06	6.99E-02	3.50E-05	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	2.18E-08	1.91E-04	9.53E-08	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	2.00E-06	1.75E-02	8.74E-06	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	2.54E-06	2.22E-02	1.11E-05	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	1.52E-07	1.33E-03	6.67E-07	3.30E-03	Below
Copper	7440-50-8	8.50E-04	1.54E-06	1.35E-02	6.75E-06	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	6.89E-07	6.04E-03	3.02E-06	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	4.72E-07	4.13E-03	2.07E-06	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	2.00E-06	1.75E-02	8.74E-06	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	3.81E-06	3.34E-02	1.67E-05	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	4.35E-08	3.81E-04	1.91E-07	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	4.17E-06	3.65E-02	1.83E-05	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	5.26E-05	4.61E-01	2.30E-04	3.33E-01	Below

HAPs	**0.015**

Notes:

[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[2] PM emission factor is assumed to equal PM_{10}.

[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
PTE Square Heaters

Heat Output (MMBtu/hr)*	0.12
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)	8,760
Heat Value of Fuel (Btu/scf)	1,020

*Assumes all burners operate 24 hrs/day all year

			Uncontrolled Potential to Emit		
Criteria Pollutant[1]		Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)
Total Particulate Matter (PM)[2]		7.6	0.001	7.83	0.004
Nitrogen Oxides (NOx)		100.0	0.012	103.06	0.05
Sulfur Oxides (SOx)		0.6	0.0001	0.62	0.0003
Carbon Monoxide (CO)		84.0	0.010	86.57	0.04
VOC		5.5	0.001	5.67	0.003

			Uncontrolled Potential to Emit				
Toxic Air Pollutants[3]	CAS No.	Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)	IDAPA 58.01.01.585/ 586 - EL (lb/hr)	PTE Emission Rate vs. EL
3-Methylchloranthrene	56-49-5	1.80E-06	2.12E-10	1.86E-06	9.28E-10	2.50E-06	Below
Benzene	71-43-2	2.10E-03	2.47E-07	2.16E-03	1.08E-06	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	1.41E-10	1.24E-06	6.18E-10	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	8.82E-06	7.73E-02	3.86E-05	5.10E-04	Below
Hexane	110-54-3	1.80E+00	2.12E-04	1.86E+00	9.28E-04	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	7.18E-08	6.29E-04	3.14E-07	3.33E+00	Below
Pentane	109-66-0	2.60E+00	3.06E-04	2.68E+00	1.34E-03	1.18E+02	Below
Toluene	108-88-3	3.40E-03	4.00E-07	3.50E-03	1.75E-06	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	2.82E-09	2.47E-05	1.24E-08		
7,12-Dimethylbenz(a)anthracene		1.60E-05	1.88E-09	1.65E-05	8.24E-09		
Acenaphthene	83-32-9	1.80E-06	2.12E-10	1.86E-06	9.28E-10		
Acenaphthylene	203-96-8	1.80E-06	2.12E-10	1.86E-06	9.28E-10		
Anthracene	120-12-7	2.40E-06	2.82E-10	2.47E-06	1.24E-09		
Benzo(a)anthracene*	56-55-3	1.80E-06	2.12E-10	1.86E-06	9.28E-10		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	2.12E-10	1.86E-06	9.28E-10		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	1.41E-10	1.24E-06	6.18E-10		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	2.12E-10	1.86E-06	9.28E-10		
Chrysene*	218-01-9	1.80E-06	2.12E-10	1.86E-06	9.28E-10		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	1.41E-10	1.24E-06	6.18E-10		
Dichlorobenzene	25321-22-6	1.20E-03	1.41E-07	1.24E-03	6.18E-07		
Fluoranthene	206-44-0	3.00E-06	3.53E-10	3.09E-06	1.55E-09		
Flourene	86-73-7	2.80E-06	3.29E-10	2.89E-06	1.44E-09		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	2.12E-10	1.86E-06	9.28E-10		
Phenanathrene	85-01-8	1.70E-05	2.00E-09	1.75E-05	8.76E-09		
Pyrene	129-00-0	5.00E-06	5.88E-10	5.15E-06	2.58E-09		
POM[4]			1.34E-09			2.00E-06	Below

			Uncontrolled Potential to Emit				
Toxic Air Pollutants-Metals[5]	CAS Number	Emission Factor (lb/10^6 scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)	IDAPA 58.01.01.585/ 586 - EL (lb/hr)	PTE Emission Rate vs. EL
Arsenic	7440-38-2	2.00E-04	2.35E-08	2.06E-04	1.03E-07	1.50E-06	Below
Barium	7440-39-3	4.40E-03	5.18E-07	4.53E-03	2.27E-06	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	1.41E-09	1.24E-05	6.18E-09	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	1.29E-07	1.13E-03	5.67E-07	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	1.65E-07	1.44E-03	7.21E-07	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	9.88E-09	8.66E-05	4.33E-08	3.30E-03	Below
Copper	7440-50-8	8.50E-04	1.00E-07	8.76E-04	4.38E-07	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	4.47E-08	3.92E-04	1.96E-07	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	3.06E-08	2.68E-04	1.34E-07	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	1.29E-07	1.13E-03	5.67E-07	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	2.47E-07	2.16E-03	1.08E-06	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	2.82E-09	2.47E-05	1.24E-08	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	2.71E-07	2.37E-03	1.19E-06	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	3.41E-06	2.99E-02	1.49E-05	3.33E-01	Below

HAPs	0.001

Notes:

[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[2] PM emission factor is assumed to equal PM_{10}.

[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
PTE Wall Heater

Heat Output (MMBtu/hr)*	0.03
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)	8,760
Heat Value of Fuel (Btu/scf)	1,020

*Assumes all burners operate 24 hrs/day all year

Criteria Pollutant[1]		Uncontrolled Potential to Emit			
		Emission Factor ($lb/10^6$ scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)
Total Particulate Matter (PM)[2]		7.6	2.2E-04	1.96	9.8E-04
Nitrogen Oxides (NOx)		100.0	2.9E-03	25.76	1.3E-02
Sulfur Oxides (SOx)		0.6	1.8E-05	0.15	7.7E-05
Carbon Monoxide (CO)		84.0	2.5E-03	21.64	1.1E-02
VOC		5.5	1.6E-04	1.42	7.1E-04

Toxic Air Pollutants[3]	CAS No.	Uncontrolled Potential to Emit				IDAPA 58.01.01.585/ 586 - EL (lb/hr)	PTE Emission Rate vs. EL
		Emission Factor ($lb/10^6$ scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)		
3-Methylchloranthrene	56-49-5	1.80E-06	5.29E-11	4.64E-07	2.32E-10	2.50E-06	Below
Benzene	71-43-2	2.10E-03	6.18E-08	5.41E-04	2.71E-07	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	3.53E-11	3.09E-07	1.55E-10	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	2.21E-06	1.93E-02	9.66E-06	5.10E-04	Below
Hexane	110-54-3	1.80E+00	5.29E-05	4.64E-01	2.32E-04	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	1.79E-08	1.57E-04	7.86E-08	3.33E+00	Below
Pentane	109-66-0	2.60E+00	7.65E-05	6.70E-01	3.35E-04	1.18E+02	Below
Toluene	108-88-3	3.40E-03	1.00E-07	8.76E-04	4.38E-07	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	7.06E-10	6.18E-06	3.09E-09		
7,12-Dimethylbenz(a)anthracene		1.60E-05	4.71E-10	4.12E-06	2.06E-09		
Acenaphthene	83-32-9	1.80E-06	5.29E-11	4.64E-07	2.32E-10		
Acenaphthylene	203-96-8	1.80E-06	5.29E-11	4.64E-07	2.32E-10		
Anthracene	120-12-7	2.40E-06	7.06E-11	6.18E-07	3.09E-10		
Benzo(a)anthracene*	56-55-3	1.80E-06	5.29E-11	4.64E-07	2.32E-10		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	5.29E-11	4.64E-07	2.32E-10		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	3.53E-11	3.09E-07	1.55E-10		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	5.29E-11	4.64E-07	2.32E-10		
Chrysene*	218-01-9	1.80E-06	5.29E-11	4.64E-07	2.32E-10		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	3.53E-11	3.09E-07	1.55E-10		
Dichlorobenzene	25321-22-6	1.20E-03	3.53E-08	3.09E-04	1.55E-07		
Fluoranthene	206-44-0	3.00E-06	8.82E-11	7.73E-07	3.86E-10		
Flourene	86-73-7	2.80E-06	8.24E-11	7.21E-07	3.61E-10		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	5.29E-11	4.64E-07	2.32E-10		
Phenanathrene	85-01-8	1.70E-05	5.00E-10	4.38E-06	2.19E-09		
Pyrene	129-00-0	5.00E-06	1.47E-10	1.29E-06	6.44E-10		
POM[4]			3.35E-10			2.00E-06	Below

Toxic Air Pollutants-Metals[5]	CAS Number	Uncontrolled Potential to Emit				IDAPA 58.01.01.585/ 586 - EL (lb/hr)	PTE Emission Rate vs. EL
		Emission Factor ($lb/10^6$ scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)		
Arsenic	7440-38-2	2.00E-04	5.88E-09	5.15E-05	2.58E-08	1.50E-06	Below
Barium	7440-39-3	4.40E-03	1.29E-07	1.13E-03	5.67E-07	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	3.53E-10	3.09E-06	1.55E-09	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	3.24E-08	2.83E-04	1.42E-07	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	4.12E-08	3.61E-04	1.80E-07	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	2.47E-09	2.16E-05	1.08E-08	3.30E-03	Below
Copper	7440-50-8	8.50E-04	2.50E-08	2.19E-04	1.10E-07	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	1.12E-08	9.79E-05	4.90E-08	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	7.65E-09	6.70E-05	3.35E-08	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	3.24E-08	2.83E-04	1.42E-07	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	6.18E-08	5.41E-04	2.71E-07	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	7.06E-10	6.18E-06	3.09E-09	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	6.76E-08	5.93E-04	2.96E-07	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	8.53E-07	7.47E-03	3.74E-06	3.33E-01	Below
HAPs					0.000		

Notes:
[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).
[2] PM emission factor is assumed to equal PM_{10}.
[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).
[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *
[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
PTE Infrared Heaters

Heat Output (MMBtu/hr)*	1.20
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)*	8,760
Heat Value of Fuel (Btu/scf)	1,020

*Assumes all burners operate 24 hrs/day all year

			Uncontrolled Potential to Emit		
Criteria Pollutant[1]		**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**
Total Particulate Matter (PM)[2]		7.6	8.9E-03	78.32	0.04
Nitrogen Oxides (NOx)		100.0	0.12	1,030.59	0.52
Sulfur Oxides (SOx)		0.6	7.1E-04	6.18	3.1E-03
Carbon Monoxide (CO)		84.0	0.10	865.69	0.43
VOC		5.5	6.5E-03	56.68	0.03

			Uncontrolled Potential to Emit				
Toxic Air Pollutants[3]	**CAS No.**	**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
3-Methylchloranthrene	56-49-5	1.80E-06	2.12E-09	1.86E-05	9.28E-09	2.50E-06	Below
Benzene	71-43-2	2.10E-03	2.47E-06	2.16E-02	1.08E-05	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	1.41E-09	1.24E-05	6.18E-09	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	8.82E-05	7.73E-01	3.86E-04	5.10E-04	Below
Hexane	110-54-3	1.80E+00	2.12E-03	1.86E+01	9.28E-03	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	7.18E-07	6.29E-03	3.14E-06	3.33E+00	Below
Pentane	109-66-0	2.60E+00	3.06E-03	2.68E+01	1.34E-02	1.18E+02	Below
Toluene	108-88-3	3.40E-03	4.00E-06	3.50E-02	1.75E-05	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	2.82E-08	2.47E-04	1.24E-07		
7,12-Dimethylbenz(a)anthracene		1.60E-05	1.88E-08	1.65E-04	8.24E-08		
Acenaphthene	83-32-9	1.80E-06	2.12E-09	1.86E-05	9.28E-09		
Acenaphthylene	203-96-8	1.80E-06	2.12E-09	1.86E-05	9.28E-09		
Anthracene	120-12-7	2.40E-06	2.82E-09	2.47E-05	1.24E-08		
Benzo(a)anthracene*	56-55-3	1.80E-06	2.12E-09	1.86E-05	9.28E-09		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	2.12E-09	1.86E-05	9.28E-09		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	1.41E-09	1.24E-05	6.18E-09		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	2.12E-09	1.86E-05	9.28E-09		
Chrysene*	218-01-9	1.80E-06	2.12E-09	1.86E-05	9.28E-09		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	1.41E-09	1.24E-05	6.18E-09		
Dichlorobenzene	25321-22-6	1.20E-03	1.41E-06	1.24E-02	6.18E-06		
Fluoranthene	206-44-0	3.00E-06	3.53E-09	3.09E-05	1.55E-08		
Flourene	86-73-7	2.80E-06	3.29E-09	2.89E-05	1.44E-08		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	2.12E-09	1.86E-05	9.28E-09		
Phenanathrene	85-01-8	1.70E-05	2.00E-08	1.75E-04	8.76E-08		
Pyrene	129-00-0	5.00E-06	5.88E-09	5.15E-05	2.58E-08		
POM[4]			1.34E-08			2.00E-06	Below

			Uncontrolled Potential to Emit				
Toxic Air Pollutants-Metals[5]	**CAS Number**	**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
Arsenic	7440-38-2	2.00E-04	2.35E-07	2.06E-03	1.03E-06	1.50E-06	Below
Barium	7440-39-3	4.40E-03	5.18E-06	4.53E-02	2.27E-05	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	1.41E-08	1.24E-04	6.18E-08	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	1.29E-06	1.13E-02	5.67E-06	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	1.65E-06	1.44E-02	7.21E-06	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	9.88E-08	8.66E-04	4.33E-07	3.30E-03	Below
Copper	7440-50-8	8.50E-04	1.00E-06	8.76E-03	4.38E-06	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	4.47E-07	3.92E-03	1.96E-06	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	3.06E-07	2.68E-03	1.34E-06	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	1.29E-06	1.13E-02	5.67E-06	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	2.47E-06	2.16E-02	1.08E-05	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	2.82E-08	2.47E-04	1.24E-07	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	2.71E-06	2.37E-02	1.19E-05	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	3.41E-05	2.99E-01	1.49E-04	3.33E-01	Below

HAPs	**0.010**

Notes:

[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[2] PM emission factor is assumed to equal PM_{10}.

[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Freedom Plastics
Natural Gas Burning Equipment
PTE Forced Air Furnaces

Heat Output (MMBtu/hr)*	1.69
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)*	8,760
Heat Value of Fuel (Btu/scf)	1,020

*Assumes all burners operate 24 hrs/day all year

			Uncontrolled Potential to Emit		
Criteria Pollutant[1]		**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**
Total Particulate Matter (PM)[2]		7.6	0.01	109.98	0.05
Nitrogen Oxides (NOx)		100.0	0.17	1447.12	0.72
Sulfur Oxides (SOx)		0.6	9.9E-04	8.68	4.3E-03
Carbon Monoxide (CO)		84.0	0.14	1215.58	0.61
VOC		5.5	9.1E-03	79.59	0.04

			Uncontrolled Potential to Emit				
Toxic Air Pollutants[3]	**CAS No.**	**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
3-Methylchloranthrene	56-49-5	1.80E-06	2.97E-09	2.60E-05	1.30E-08	2.50E-06	Below
Benzene	71-43-2	2.10E-03	3.47E-06	3.04E-02	1.52E-05	8.00E-04	Below
Benzo(a)pyrene*	50-32-8	1.20E-06	1.98E-09	1.74E-05	8.68E-09	2.00E-06	Below
Formaldehyde	50-00-0	7.50E-02	1.24E-04	1.09E+00	5.43E-04	5.10E-04	Below
Hexane	110-54-3	1.80E+00	2.97E-03	2.60E+01	1.30E-02	1.20E+01	Below
Naphthalene	91-20-3	6.10E-04	1.01E-06	8.83E-03	4.41E-06	3.33E+00	Below
Pentane	109-66-0	2.60E+00	4.30E-03	3.76E+01	1.88E-02	1.18E+02	Below
Toluene	108-88-3	3.40E-03	5.62E-06	4.92E-02	2.46E-05	2.50E+01	Below
2-Methylnaphthalene	91-57-6	2.40E-05	3.96E-08	3.47E-04	1.74E-07		
7,12-Dimethylbenz(a)anthracene		1.60E-05	2.64E-08	2.32E-04	1.16E-07		
Acenaphthene	83-32-9	1.80E-06	2.97E-09	2.60E-05	1.30E-08		
Acenaphthylene	203-96-8	1.80E-06	2.97E-09	2.60E-05	1.30E-08		
Anthracene	120-12-7	2.40E-06	3.96E-09	3.47E-05	1.74E-08		
Benzo(a)anthracene*	56-55-3	1.80E-06	2.97E-09	2.60E-05	1.30E-08		
Benzo(b)fluoranthene*	205-82-3	1.80E-06	2.97E-09	2.60E-05	1.30E-08		
Benzo(g,h,I)perylene	191-24-2	1.20E-06	1.98E-09	1.74E-05	8.68E-09		
Benzo(k)fluoranthene*	205-82-3	1.80E-06	2.97E-09	2.60E-05	1.30E-08		
Chrysene*	218-01-9	1.80E-06	2.97E-09	2.60E-05	1.30E-08		
Dibenzo(a,h)anthracene*	53-70-3	1.20E-06	1.98E-09	1.74E-05	8.68E-09		
Dichlorobenzene	25321-22-6	1.20E-03	1.98E-06	1.74E-02	8.68E-06		
Fluoranthene	206-44-0	3.00E-06	4.96E-09	4.34E-05	2.17E-08		
Flourene	86-73-7	2.80E-06	4.63E-09	4.05E-05	2.03E-08		
Indeno(1,2,3-cd)pyrene*	193-39-5	1.80E-06	2.97E-09	2.60E-05	1.30E-08		
Phenanathrene	85-01-8	1.70E-05	2.81E-08	2.46E-04	1.23E-07		
Pyrene	129-00-0	5.00E-06	8.26E-09	7.24E-05	3.62E-08		
POM[4]			1.88E-08			2.00E-06	Below

			Uncontrolled Potential to Emit				
Toxic Air Pollutants-Metals[5]	**CAS Number**	**Emission Factor ($lb/10^6$ scf)**	**Emission Rate (lb/hr)**	**Emission Rate (lb/yr)**	**Emission Rate (ton/yr)**	**IDAPA 58.01.01.585/ 586 - EL (lb/hr)**	**PTE Emission Rate vs. EL**
Arsenic	7440-38-2	2.00E-04	3.30E-07	2.89E-03	1.45E-06	1.50E-06	Below
Barium	7440-39-3	4.40E-03	7.27E-06	6.37E-02	3.18E-05	3.30E-02	Below
Beryllium	7440-41-7	1.20E-05	1.98E-08	1.74E-04	8.68E-08	2.80E-05	Below
Cadmium	7440-43-9	1.10E-03	1.82E-06	1.59E-02	7.96E-06	3.70E-06	Below
Chromium	7440-47-3	1.40E-03	2.31E-06	2.03E-02	1.01E-05	3.30E-02	Below
Cobalt	7440-48-4	8.40E-05	1.39E-07	1.22E-03	6.08E-07	3.30E-03	Below
Copper	7440-50-8	8.50E-04	1.40E-06	1.23E-02	6.15E-06	1.30E-02	Below
Manganese	7439-96-5	3.80E-04	6.28E-07	5.50E-03	2.75E-06	6.70E-02	Below
Mercury	7439-97-6	2.60E-04	4.30E-07	3.76E-03	1.88E-06	1.00E-03	Below
Molybdenum	7439-98-7	1.10E-03	1.82E-06	1.59E-02	7.96E-06	3.33E-01	Below
Nickel	7440-02-0	2.10E-03	3.47E-06	3.04E-02	1.52E-05	2.75E-05	Below
Selenium	7782-49-2	2.40E-05	3.96E-08	3.47E-04	1.74E-07	1.30E-02	Below
Vanadium	1314-62-1	2.30E-03	3.80E-06	3.33E-02	1.66E-05	3.00E-03	Below
Zinc	7440-66-6	2.90E-02	4.79E-05	4.20E-01	2.10E-04	3.33E-01	Below

HAPs	**0.014**

Notes:

[1] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[2] PM emission factor is assumed to equal PM_{10}.

[3] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[4] Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. Designated by *

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4).

Summary of PTE Toxic Air Pollutants - Chemical Use

Toxic Air Pollutants	CAS No.	Emission Estimates P-70 Primer lb/hr	Emission Estimates 811 A-B Epoxy lb/hr	Emission Estimates AA-2304 Contact Cement lb/hr	Emission Estimates 1969 Green Glue lb/hr	Emission Estimates 711 White Glue lb/hr	Emission Estimates 711 Grey Glue lb/hr	Emission Estimates 719 Grey Glue lb/hr	Emission Estimates 719 White Glue lb/hr	Toxic Emission Totals lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	1.15			0.09	0.06	0.01	0.08	0.94	2.3	39.3	No
Methyl ethyl ketone	78-93-3	0.56	0.02		0.01	0.01	0.002	0.01	0.13	0.8	39.3	No
Cyclohexanone	108-94-1	0.29			0.02	0.01	0.002	0.02	0.20	0.5	6.67	No
Acetone	67-64-1	0.39		1.14E-07						0.4	119	No
Methyl methacrylate	80-62-6		0.02							0.02	27.3	No
Benzoyl peroxide	91-36-0		0.003							0.003	0.333	No
Hexane	110-54-3			1.70E-08						1.70E-08	12	No
Toluene	108-88-3			3.63E-08						3.63E-08	25	No

Summary of PTE Criteria Air Pollutants - Chemical Use

Criteria Air Pollutants	Emission Estimates P-70 Primer tpy	Emission Estimates 811 A-B Epoxy tpy	Emission Estimates 1969 Green Glue tpy	Emission Estimates 711 White Glue tpy	Emission Estimates 711 Grey Glue tpy	Emission Estimates 719 Grey Glue tpy	Emission Estimates 719 White Glue tpy	VOC Emission Totals	10% of Sig. Threshold tpy	Exceeds?
VOC	4.59	0.00	0.58	0.34	0.07	0.45	3.38	9.4	4.0	Exceeds

P-70 Primer for PVC

PTE Quantity: 2000 gal/yr

Manufacturer:	IPS Corporation
Chemical Name:	Mixture of Organic Solvents, Adhesive Primer for Plastic
Percent Volatile by Volume:	100.0%
Maximum VOC content:	550 gram/liter
VOC density	4.59 lb/gal
Hourly Average Basis:	8760 hrs/yr *assumes 24hr/day all yr*

Criteria Pollutant:	Emission Estimates			10% of Sig Threshold	
	lb/yr	lb/hr	tpy	tpy	Exceeds?
VOC	9178.99	1.05	4.59	4.0	Yes

Toxic Air Pollutants:	CAS No.	Wt % Range		Emission Estimates		Emission Screening Levels (EL)	
		Min	Max	lb/yr	lb/hr	lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	45	59	5415.61	0.62	39.3	No
Methyl ethyl ketone	78-93-3	19	29	2661.91	0.30	39.3	No
Cyclohexanone	108-94-1	5	15	1376.85	0.16	6.67	No
Acetone	67-64-1	5	20	1835.80	0.21	119	No

719 White Glue

PTE Quantity: 1500 gal/yr *assumes double actual usage*

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 90.0%
Maximum VOC content: 600 gram/liter
VOC density 5.01 lb/gal
Hourly Average Basis: 8760 hrs/yr *assumes 24hr/day all yr*

Criteria Pollutant:	Emission Estimates			10% of Sig Threshold	
	lb/yr	lb/hr	tpy	tpy	Exceeds?
VOC	6759.08	0.77	3.38	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range		Emission Estimates		Emission Screening Levels (EL)	
		Min	Max	lb/yr	lb/hr	lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	25	70	4731.35	0.54	39.3	No
Methyl ethyl ketone	78-93-3	5	10	675.91	0.08	39.3	No
Cyclohexanone	108-94-1	1	15	1013.86	0.12	6.67	No

811 A-B Epoxy Tubes

PTE Quantity: 30 liter/yr *assumes double actual usage*

Manufacturer: IPS Corporation
Chemical Name: Acrylic Reactive Cement
Percent Volatile by Volume: 70.0%
Maximum VOC content: 75 gram/liter
VOC density 0.63 lb/gal
Hourly Average Basis: 8760 hrs/yr *assumes 24hr/day all yr*

Criteria Pollutant:	Emission Estimates lb/yr	lb/hr	tpy	10% of Sig Threshold tpy	Exceeds?
VOC	3.47	0.0004	0.002	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range Min	Max	Emission Estimates lb/yr	lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Methyl methacrylate	80-62-6	45	75	2.60	0.09	27.3	No
Methyl ethyl ketone	78-93-3	25	60	2.08	0.07	39.3	No
Benzoyl peroxide	91-36-0	2	10	0.35	0.012	0.333	No

AA-2304 Contact Cement

PTE Quantity: 100 gal/yr *assumes double actual usage*

Manufacturer: Arrow Adhesives Company
Chemical Name: Contact Cement
VOC Content: Not listed in MSDS
Hourly Average Basis: 8760 hrs/yr *assumes 24hr/day all yr*

Toxic Air Pollutants:	CAS No.	MW gas g/mol	ACGIH TLV ppm	Emission Estimates lb/yr	lb/hr	Emission Screening Levels (EL) lb/hr	Exceeds?
Acetone	67-64-1	58.08	500	9.91E-04	1.13E-07	119	No
Hexane	110-54-3	86.18	50	1.47E-04	1.68E-08	12	No
Toluene	108-88-3	92.13	100	3.14E-04	3.59E-08	25	No

Note:
Conversion from ppm by volume to ug/L: (ppm by volume) x (MW gas/24.45) = ug/L

1969 Green Glue

PTE Quantity: 300 gal/yr *assumes double actual usage*

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 80.0%
Maximum VOC content: 580 gram/liter
VOC density 4.84 lb/gal
Hourly Average Basis: 8760 hrs/yr *assumes 24hr/day all yr*

Criteria Pollutant:	Emission Estimates			10% of Sig Threshold	
	lb/yr	lb/hr	tpy	tpy	Exceeds?
VOC	1161.56	0.13	0.58	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range		Emission Estimates		Emission Screening Levels (EL)	
		Min	Max	lb/yr	lb/hr	lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	50	70	813.09	0.09	39.3	No
Methyl ethyl ketone	78-93-3	3	11	127.77	0.01	39.3	No
Cyclohexanone	108-94-1	5	15	174.23	0.02	6.67	No

711 White Glue

PTE Quantity: 150 gal/yr *assumes double actual usage*

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 90.0%
Maximum VOC content: 600 gram/liter
VOC density 5.01 lb/gal
Hourly Average Basis: 8760 hrs/yr *assumes 24hr/day all yr*

Criteria Pollutant:	Emission Estimates			10% of Sig Threshold	
	lb/yr	lb/hr	tpy	tpy	Exceeds?
VOC	675.91	0.08	0.34	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range		Emission Estimates		Emission Screening Levels (EL)	
		Min	Max	lb/yr	lb/hr	lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	25	70	473.14	0.05	39.3	No
Methyl ethyl ketone	78-93-3	5	10	67.59	0.01	39.3	No
Cyclohexanone	108-94-1	1	15	101.39	0.01	6.67	No

711 Grey Glue

PTE Quantity: 30 gal/yr *assumes double actual usage*

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 90.0%
Maximum VOC content: 600 gram/liter
VOC density 5.01 lb/gal
Hourly Average Basis: 8760 hrs/yr *assumes 24hr/day all yr*

Criteria Pollutant:	Emission Estimates			10% of Sig Threshold	
	lb/yr	lb/hr	tpy	tpy	Exceeds?
VOC	135.18	0.02	0.07	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range		Emission Estimates		Emission Screening Levels (EL)	
		Min	Max	lb/yr	lb/hr	lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	25	70	94.63	0.01	39.3	No
Methyl ethyl ketone	78-93-3	5	10	13.52	0.002	39.3	No
Cyclohexanone	108-94-1	1	15	20.28	0.002	6.67	No

719 Grey Glue

PTE Quantity: 200 gal/yr *assumes double actual usage*

Manufacturer: IPS Corporation
Chemical Name: Solvent Cement for PVC Plastic Pipe, Mixture of PVC Resin and Organic Solvents
Percent Volatile by Volume: 90.0%
Maximum VOC content: 600 gram/liter
VOC density 5.01 lb/gal
Hourly Average Basis: 8760 hrs/yr *assumes 24hr/day all yr*

Criteria Pollutant:	Emission Estimates			10% of Sig Threshold	
	lb/yr	lb/hr	tpy	tpy	Exceeds?
VOC	901.21	0.10	0.45	4.0	No

Toxic Air Pollutants:	CAS No.	Wt % Range		Emission Estimates		Emission Screening Levels (EL)	
		Min	Max	lb/yr	lb/hr	lb/hr	Exceeds?
Tetrahydrofuran	109-99-9	25	70	630.85	0.07	39.3	No
Methyl ethyl ketone	78-93-3	5	10	90.12	0.01	39.3	No
Cyclohexanone	108-94-1	1	15	135.18	0.02	6.67	No