AIR QUALITY PERMIT TO CONSTRUCT APPLICATION
MODELING PROTOCOL
Snake River Trailer Company
P.O. Box 879
Caldwell, Idaho 83605

February 13, 2007

Prepared for: Snake River Trailer Company
P.O. Box 879
Caldwell, Idaho 83605

For the Facility at: 315 Kit Avenue
Caldwell, Idaho 83605

Prepared by: TORF Environmental Management
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1.0 PROJECT DESCRIPTION AND PURPOSE OF MODELING

Snake River Trailer Company (Snake River) proposes to construct and operate a new horse and cargo trailer manufacturing facility at 315 Kit Avenue in Caldwell, Idaho. The plant is located in an industrial area, just south of Simplot Avenue (Highway ID-19), on the west side of Caldwell. UTM coordinates at the air emission source building are 523900 (X, Easting) and 4835300 (Y, Northing).

The facility is applying to receive an Idaho Air Quality Permit to Construct (PTC) as a synthetic minor. Snake River Trailer management currently operates a similar trailer manufacturing facility at 1508 Chicago Street in Caldwell. The Chicago Street facility operates under PTC No. 027-00069 issued June 7, 1999. The Chicago Street facility is a synthetic minor, with coating use rates limited to keep xylene emissions below 10 tons per year.

Emission sources at the facility include two paint booths and one dry room. Each booth and the dry room are equipped with natural gas fired air heaters. Emissions include criteria pollutants, hazardous air pollutants (HAPs), and toxic air pollutants (TAPs) associated with natural gas combustion and the application and drying of the liquid primer and topcoat applied to the trailer parts.

The two paint booths and drying room are located immediately adjacent to each other in a pull-through arrangement connected via drive-through, bi-fold doors. A facility plot plan is provided in Figure 1 and an equipment schematic is provided in Figure 2 (attached). Typically, the first booth will be used for primer application and the second booth for topcoat application. Coating and direct-fired heater emissions from each paint booth are emitted through a single source point from each booth (EP1 and EP2, see Figure 1). The drying room indirect-fired heater and booth air are emitted through separate sources (EP3 and EP4).

2.0 DESCRIPTION OF EMISSIONS QUANTITIES

In order to minimize emissions of xylene and volatile organic compounds, while maintaining product quality and maximizing production at the Kit Avenue facility, Snake River is planning on using a new "low VOC" primer or topcoat or possibly both. However, if product quality cannot be maintained with the new paints, Snake River would like to maintain the option of using the same paints that are permitted at the Chicago Street facility. This means there are three possible paint mixes that will be permitted at the Kit Avenue facility: "Delstar" (same as Chicago Street), "Essential" (low-VOC primer and topcoat), and "Combo" (Delstar primer and low-VOC topcoat). The Combo Mix is considered the most likely to be used.

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The criteria, HAP and TAP emissions associated with each paint mix are calculated in Tables A-1a thru A-3b (attached). The uncontrolled daily and annual emission rate bases are detailed in the Tables A-1a, A-2a and A-3a. All coating uncontrolled rates are based on maximum flow rate from two spray guns operating 24 hours per day, 365 days per week with an average coating retention of 57% (average coating efficiency as reported by equipment supplier). No emission reduction credit is taken for emission control equipment. The uncontrolled emission calculations demonstrate that emission control equipment must be used and coating use rates must be controlled in order to maintain minor facility status.

The controlled emissions from coating operations for the different paint mixes are calculated in Tables A-1b, A-2b and A-3b (attached). The controlled emission rate bases are detailed in those tables. Booth emission control equipment is assumed to be 98% efficient at controlling the coatings' solids content (manufacturer certified efficiency is 98.12%). The controlling pollutant in the Delstar Mix is xylene, limited to less than 10 tons per year. The controlling pollutant in the Essential and Combo mixes is parachlorobenzotrifluoride (PCBTF), a non-VOC chemical in the Essential acrylic topcoat mix. In November 2006, IDEQ (R. Wilcosz, C. Brown) determined that PCBTF should be considered a 585 Toxic Air Pollutant (TAP) and established an AAC of 0.253 mg/m^3.

Each booth and the drying room are equipped with natural gas fired air heaters. The heaters' uncontrolled criteria and TAP emissions are calculated in Tables A-4a and A-4b.

A facility-wide controlled emissions summary incorporating the proposed coating use limits and the heater emissions is provided in Table A-5.

3.0 MODELING APPLICABILITY ASSESSMENT

3.1 Criteria Pollutant Modeling Applicability

The criteria pollutants to be modeled are those with emissions above IDEQ modeling thresholds: NO_x and PM_{10}. The combined CO and SO_2 emissions from the gas-fired heaters do not exceed the IDEQ modeling thresholds and are, therefore, not included in air dispersion modeling (see Table A-4a). There are no other process sources of CO and SO_2 emissions.

The results of an air dispersion screening analysis of facility-wide PM_{10} and NO_x impacts using the proposed permit coating use rates and unrestricted emission rates from the three heaters are shown in Table A-5. Both the 24-hour and annual concentrations would appear to meet NAAQS standards, though the final impacts can not be calculated until background concentrations are obtained from IDEQ. The modeling run output files are provided in Appendix B (attached). Model inputs are discussed in Section 5, below.

3.2 TAPs Modeling Applicability

The uncontrolled emission rates of most TAPs are less than the emission screening levels listed in IDAPA 58.01.01.585 (see Tables A-1a, A-2a, and A-3a). According to Permit to Construct regulations provided in IDAPA 58.01.01.210.05, these TAPs do not require further analysis. The remaining TAPs are included in air dispersion modeling. Modeling of uncontrolled rates will determine those whose uncontrolled ambient concentrations are less than the Acceptable Ambient Concentrations (AACs) provided in 58.01.01.585. According to Permit to Construct regulations provided in IDAPA 58.01.01.210.06, these TAPs do not require further analysis. The controlled emissions of any remaining TAPs are analyzed to demonstrate that the controlled ambient concentrations are less than the AACs, in accordance with IDAPA 58.01.01.08.

The results of a screening analysis of TAP uncontrolled impacts from coating operations are shown in Tables A-1a, A-2a, and A-3a. The results of screening analysis of TAP controlled impacts are provided in Table A-1b, A-2b, and A-3b. Either the uncontrolled or controlled ambient concentration of all TAPs is below the AAC. The modeling run output files are provided in Appendix B (attached). Model inputs are discussed in Section 5, below.

Facility-wide controlled TAP emissions are summarized in Table A-5 based on the proposed permit coating use limits and include the comparatively small, unrestricted emission rates from the three heaters. The heaters' emissions include several IDAPA 58.01.01.586 carcinogenic TAPs. The results of a screening analysis show that the controlled facility-wide ambient concentrations of all TAPs are less than the applicable AACs and AACCs (AACs for carcinogens).

4.0 MODELING ANALYSES METHODOLOGY

4.1 Model Used

Screening modeling will be performed using SCREEN3, the United States Environmental Protection Agency (USEPA)- approved screening model for simple air pollution sources. The SCREEN3 model, applicable and very conservative for this analysis, was the model IDEQ chose to use in analyzing criteria pollutant and TAP impacts from the very similar Chicago Street facility. IDEQ recommended the use of SCREEN3, and provided draft modeling analyses (R. Hardy, November 2006) refined by the applicant.

4.2 Criteria Pollutant Modeling Methodology

A normalized emission rate rate of 1 lb/hr is to be used for the emission source. Actual predicted impacts for each pollutant will be calculated by multiplying the model predicted impact from 1 lb/hr emissions by the estimated actual emission rate, then applying persistence factors recommended in IDEQ's Air Quality Modeling Guidelines. Background concentrations to be used will be obtained from IDEQ.

4.3 TAPs Modeling Methodology

A normalized emission rate of 1 lb/hr is to be used for the emission source. Actual predicted impacts for each pollutant will be calculated by multiplying the model predicted impact from 1 lb/hr emissions by the estimated actual emission rate, then applying persistence factors recommended in IDEQ's Air Quality Modeling Guidelines. For non-carcinogenic TAPs, a persistence factor of 0.4 will be used. For carcinogenic TAPs, a persistence factor of 0.125 will be used.

5.0 MODEL INPUT DATA

5.1 Meteorological Data, Receptor Network

For the SCREEN3 modeling, flat terrain and rural dispersion coefficients (consistent with most Idaho applications) are assumed. The full meteorological data array was utilized. Receptors were placed from 1 meter to 10,000 meters via the SCREEN3 automated receptor array. SCREEN3 solved for the maximum impact within that receptor range.

5.3 Emissions Release Parameters

While there are four emission points at the Kit Avenue facility, the large majority of pollutants are emitted from the two spray booths during coating application and curing operations. Typically the first spray booth will be used for primer application and the second booth will be used for topcoat application. However, it is possible this could be switched or both booths could be used for a single purpose, depending on production needs. The booth stacks are approximately 34 feet apart. They are both at least 200 feet from the nearest fence line (see Figure x).

Given the close proximity of the two stacks and their identical configuration, they are effectively collocated as compared to the distance to potential receptors. Therefore, all emissions from the facility are considered for the SCREEN3 analysis to come from one stack. This includes the combustion emissions from the two spray booth inlet air heaters and the dry room heater.

The SCREEN3 model source data is as follows:
Stack Height = 36 feet (10.97 m)
Temperature = 70°F (293 K)
Exit Velocity = 31.72 ft/s (9.67 m/s)
Stack Diameter = 34" (0.867 m)

While the outlet air temperature can be increased to 140°F for curing operations, during spray operations the air temperature will be 70°F. The lower temperature is conservatively used for the SCREEN3 input. The exit velocity is based on 12,000 CFM blower rate. The stack outlet is equipped with a hinged flap that opens completely when the booth blower is on. Since the

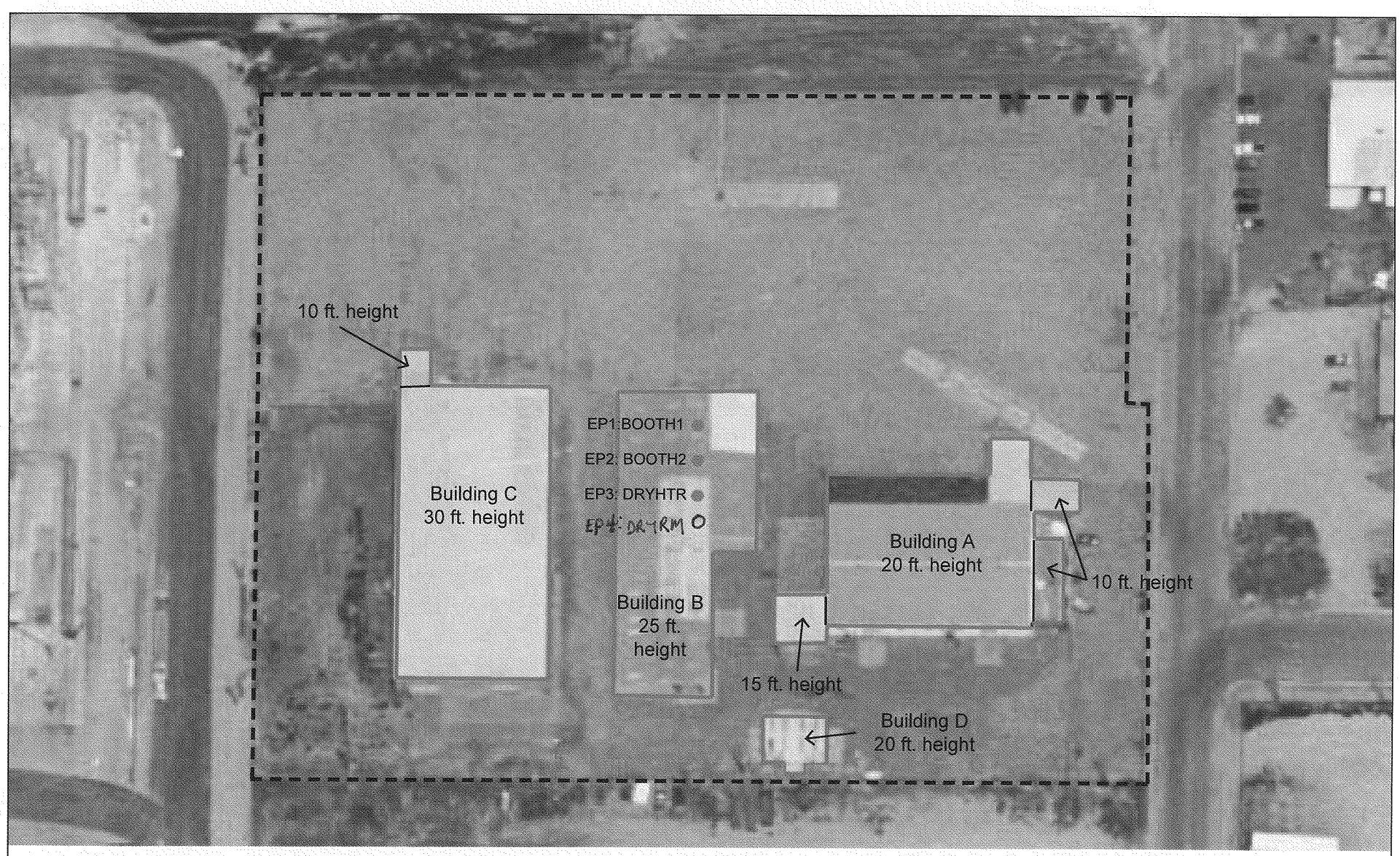
blower is always on during spraying and curing operations, the outlet flow can be considered unrestricted.

5.3 Elevation Data

For the SCREEN3 modeling, flat terrain and rural dispersion coefficients (consistent with most Idaho applications) are assumed.

There are three large buildings at the facility (see Figure 1). The building roofs are either flat or with a very shallow pitch. The spray booths are located in the 25′ high center building, Building B. The building to the west (Building C) is 30′ tall, and the building to the east (Building A) is 20′ tall.

Two SCREEN3 preliminary analysis runs were made. The first used Building B dimensions to establish the minimum and maximum horizontal building dimensions. The second preliminary SCREEN3 run used the combined footprint of Buildings A, B and C to establish the minimum and maximum horizontal building dimensions. The estimated emission impacts were the same in both cases, with the maximum impact found at 90 meters. The modeling runs output are attached in Appendix B.



Legend

N

0 50
Scale - feet

Tier Edge
Building Edge
Fence

TORF
ENVIRONMENTAL
MANAGEMENT

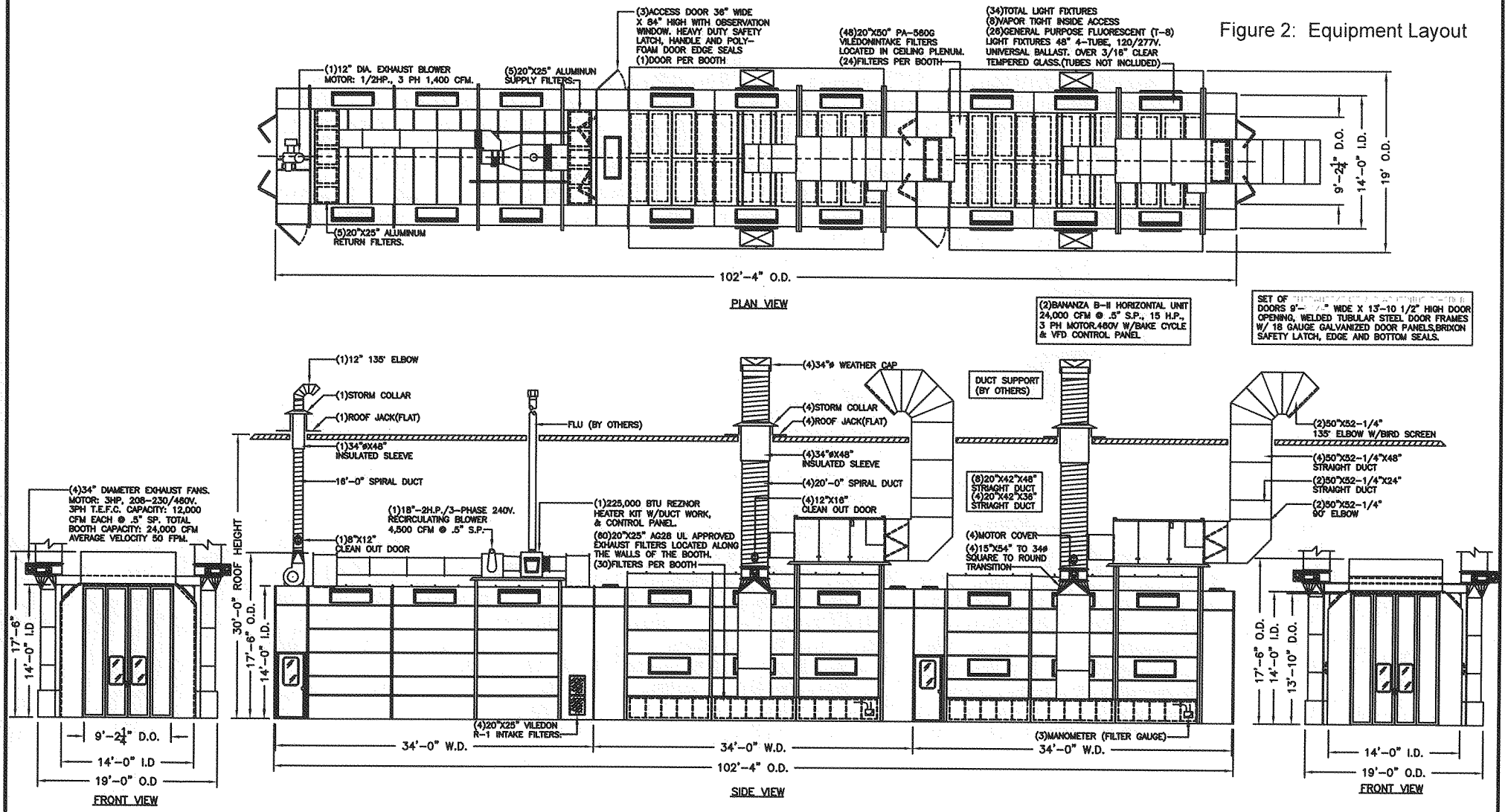
Figure 1 Plot Plan

315 Kit Ave
Caldwell, Idaho

February 2007

REV.	DESCRIPTION	BY	DATE

Figure 2: Equipment Layout



NOTES:
1.) BOOTH CONSTRUCTION TO MEET REQUIREMENTS OF FIRE, AIR POLLUTION, AND O.S.H.A. CODES.LOCAL CODES WILL REQUIRE FIRE SPRINKLERS IN BOOTH.
2.) PANEL: PRE-FAB 18 GAUGE GALVANIZED STEEL PRE-PUNCHED FOR NUT AND BOLT CONSTRUCTION.

APPROVAL DRAWING

APVD BY: | DATE APVD:

MODEL NO. MD-1000-DT | DIST: FINISHING CONSULTANTS

JOB NO. 8147 | CUST: SNAKE RIVER TRAILER

SPRAY SYSTEMS INC.
1363 E. GRAND AVE.
POMONA, CA 91766
(909) 623-6944

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TITLE: CUSTOM MODIFIED DOWNDRAFT INLINE BOOTH W/ATTACHED DRY ROOM MODEL MD-1000-DT

DRAWN BY: BORIS ORELLANA | DATE: 06/01/06 | DWG NO. 063023

SHEET: 1 OF 1 | SCALE: DRAWN TO SCALE

Appendix A:
Emission Calculations

Table A-1b:
Controlled Emissions with Delstar Paint Mix

Product ID Name Manufacturer	2006 Chicago Street Usage (gal/yr)	Usage Rate Basis[1] Daily	Usage Rate Basis[1] Annual	Kit Avenue Proposed Usage gal/day	Kit Avenue Proposed Usage gal/yr	Product Specific Gravity (MSDS)	Kit Avenue Proposed Usage lb/day	Kit Avenue Proposed Usage lb/yr	Solids Content (MSDS wt%)	Volatile Content (wt%)	Controlled VOC Emissions[2] (tons/yr)	Component	CAS Number	Component Concentration (MSDS, wt%) min[2]	Component Concentration (MSDS, wt%) max	Coating Retention (%)[3]	Spray Booth Filter Efficiency (%)[8]	Estimated Controlled Emissions lb/day	Estimated Controlled Emissions lb/yr
DAR-Acrylic Enamels PPG	2800	11.25 gph of enamel, DTR reducer and hardener	Limit xylene emissions to 9.9 tons/yr	144	3075	0.948	1139	24312	44.79%	55.21%	6.71	Carbon Black	1333-86-4		5%	57.0%	98.0%	0.490	10.45
												Ethyl Benzene	100-41-4		7%	0.0%	0.0%	79.696	1701.84
												Methyl Ethyl Ketone	78-93-3		7%	0.0%	0.0%	79.696	1701.84
												Titanium Dioxide	13463-67-7		30%	57.0%	98.0%	2.937	62.72
												Xylenes	1330-20-7		70%	0.0%	0.0%	796.96	17018.35
DP50LF Gray DP90LF Black Epoxy Primers PPG	1024	11.25 gph of primer and catalyst	2.5:1 Enamel Mix to Primer Mix	180	1538	1.338	2009	17157	62.27%	37.73%	3.24	Barium Sulfate	7727-43-7		30%	57.0%	98.0%	5.182	44.26
												2-Butoxy Ethanol	111-76-2		5%	0.0%	0.0%	100.430	857.84
												Calcium Carbonate	1317-65-3		30%	57.0%	98.0%	5.182	44.26
												Carbon Black	1333-86-4		5%	57.0%	98.0%	0.864	7.38
												Epoxy Resin	25068-38-6		30%	57.0%	98.0%	5.182	44.26
												Ethyl Benzene	100-41-4		1%	0.0%	0.0%	20.086	171.57
												Methyl n-Amyl Ketone	110-43-0		13%	0.0%	0.0%	261.119	2230.39
												Methyl Isobutyl Ketone	108-10-1		7%	0.0%	0.0%	140.602	1200.98
												Naphtha (Aromatic)	64742-95-6		5%	0.0%	0.0%	100.430	857.84
												Silica- amorphous	112926-00-8		1.5%	57.0%	98.0%	0.259	2.21
												Silica- crystalline	14808-60-7		1.0%	57.0%	98.0%	0.173	1.48
												Talc	14807-96-6		5%	57.0%	98.0%	0.864	7.38
												Titanium Dioxide	13463-67-7		10%	57.0%	98.0%	1.727	14.75
												Toluene	108-88-3		7%	0.0%	0.0%	140.602	1200.98
												1,2,4-Trimethyl Benzene	95-63-6		5%	0.0%	0.0%	100.430	857.84
												Vinyl Resin	25086-48-0		5%	57.0%	98.0%	0.864	7.38
												Xylenes	1330-20-7		5%	0.0%	0.0%	100.430	857.84
DP401LF Epoxy Primer Catalyst PPG	515	2:1 Primer to Catalyst		90	769	0.880	661	5642	29.77%	70.23%	1.98	2-Butoxy Ethanol	111-76-2		10%	0.0%	0.0%	66.053	564.20
												Isopropyl Alcohol	67-63-0		7%	0.0%	0.0%	46.237	394.94
												Naphtha (Aromatic)	64742-95-6		13%	0.0%	0.0%	85.869	733.46
												Polyamide Resin	80100337-5132		30%	57.0%	98.0%	1.704	14.56
												Propyl Alcohol	71-23-8		30%	0.0%	0.0%	198.158	1692.60
												1,2,4-Trimethyl Benzene	95-63-6		7%	0.0%	0.0%	46.237	394.94
												Xylenes	1330-20-7		30%	0.0%	0.0%	198.158	1692.60
DT870 Reducer PPG	306	2:1 Enamel to Reducer	500 gal per year (Note 1)	72	500	0.829	498	3457	0.00%	100.00%	1.73	n-Heptane	142-82-5		5%	0.0%	0.0%	24.890	172.85
												1-Methoxy 2-Propyl	108-65-6		30%	0.0%	0.0%	149.339	1037.08
												2-Methoxy 2-Propyl Acetate	70657-70-4		1%	0.0%	0.0%	4.978	34.57
												Methylcyclohexane	108-87-2		5%	0.0%	0.0%	24.890	172.85
												Methyl Ethyl Ketone	78-93-3		40%	0.0%	0.0%	199.119	1382.77
												Naphtha	64742-89-8		5%	0.0%	0.0%	24.890	172.85
												Naphtha (V.M. & P.)	8032-32-4		30%	0.0%	0.0%	149.339	1037.08
												Toluene	108-88-3		30%	0.0%	0.0%	149.339	1037.08
DTL10 Laquer Thinner PPG	1040	15 gal per day (Note 5)	30 gal per week (Note 5)	15	1560	0.80	100	10408	0.00%	100.0%	4.68	Acetone	67-64-1	10%	30%	0.0%	0.0%	30.024	3122.50
												i-Hexane	107-83-5		5%	0.0%	0.0%	5.004	520.42
												n-Hexane	110-54-3		7%	0.0%	0.0%	7.006	728.58
												Isopropyl Alcohol	67-63-0		30%	0.0%	0.0%	30.024	3122.50
												1-Methoxy 2-Propyl Acetate	108-65-6		5%	0.0%	0.0%	5.004	520.42
												3-Methylpentane	96-14-0		5%	0.0%	0.0%	5.004	520.42
												Naphtha	64742-89-8		5%	0.0%	0.0%	5.004	520.42
												Toluene	108-88-3		70%	0.0%	0.0%	70.056	7285.82
DTR600 DTR602 Reducers PPG	1600	4:3 Enamel to Reducer		108.0	2306	0.812	731	15618	0.00%	100.00%	7.03	Acetone	67-64-1	10%	40%	0.0%	0.0%	292.554	6247.24
												Aromatic Hydrocarbon	64742-94-5		13%	0.0%	0.0%	95.080	2030.35
												n-Butyl Acetate	123-86-4		10%	0.0%	0.0%	73.138	1561.81
												n-Heptane	142-82-5		13%	0.0%	0.0%	95.080	2030.35
												i-Hexane	107-83-5		7%	0.0%	0.0%	51.197	1093.27
												n-Hexane	110-54-3		10%	0.0%	0.0%	73.138	1561.81
												Methylcyclohexane	108-87-2		13%	0.0%	0.0%	95.080	2030.35
												3-Methylpentane	96-14-0		7%	0.0%	0.0%	51.197	1093.27
												Naphtha	64742-89-8		30%	0.0%	0.0%	219.415	4685.43
												Naphtha (Aromatic)	64742-95-6		7%	0.0%	0.0%	51.197	1093.27
												Naphthalene	91-20-3		1.5%	0.0%	0.0%	10.971	234.27
												1,2,4-Trimethyl Benzene	95-63-6		5%	0.0%	0.0%	36.569	780.91
												Toluene	108-88-3		30%	0.0%	0.0%	219.415	4685.43
												Xylenes	1330-20-7		1.0%	0.0%	0.0%	7.314	156.18
DXR80 Ultra Urethane Hardener PPG	335	8:1 Enamel to Hardener		18.0	384	1.110	167	3558	83.39%	16.61%	0.30	n-Butyl Acetate	123-86-4		5%	0.0%	0.0%	8.332	177.92
												Hexamethylene Diisocyanate (Note 4)	822-06-0		0.17%	85.0%	0.0%	0.042	0.89
												Hexane-1,6-Diisocyanate Polymer	28182-81-2		100%	57.0%	98.0%	1.433	30.60
												1-Methoxy 2-Propyl	108-65-6		10%	0.0%	0.0%	16.663	355.83
												2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.0%	1.666	35.58
												Naphtha (Aromatic)	64742-95-6		5%	0.0%	0.0%	8.332	177.92
												1,2,4-Trimethyl Benzene	95-63-6		1.5%	0.0%	0.0%	2.499	53.37
												Xylene	1330-20-7		1.0%	0.0%	0.0%	1.666	35.58

Toxic Air Pollutants - Paint Application	TAP Type (24 hr or Annual Averaging)	Allowable Ambient Conc. (AAC, mg/m3)	Estimated Controlled Emissions (lb/hr)	Impact at 1 lb/hr Emissions (mg/m3)[6]	Persistence Factor	Controlled Ambient Conc. (mg/m3)	Controlled Conc. (% of AAC)
Acetone	585 (24 hr)	89	13.44	0.093	0.4	No controlled TAP analysis required (see Table A-1a)	
2-Butoxy Ethanol	585 (24 hr)	6	6.94				
n-Butyl Acetate	585 (24 hr)	35.5	3.39				
Calcium Carbonate	585 (24 hr)	0.5	0.216				
Carbon Black	585 (24 hr)	0.18	0.056				
Ethyl Benzene	585 (24 hr)	21.8	4.16				
n-Heptane	585 (24 hr)	82	5.00				
Hexamethylene diisocyanate	585 (24 hr)	0.0015	0.00174				
n-Hexane	585 (24 hr)	9	3.34				
Isopropyl Alcohol	585 (24 hr)	49	3.18				
1-Methoxy 2-Propyl Acetate	585 (24 hr)	3.6	7.13				
Methyl n-Amyl Ketone	585 (24 hr)	11.8	10.88				
Methylcyclohexane	585 (24 hr)	80.5	5.00				
MEK	585 (24 hr)	29.5	11.62				
MIBK	585 (24 hr)	10.3	5.86				
Naphthalene	585 (24 hr)	2.5	0.46				
Propyl Alcohol	585 (24 hr)	25	8.26				
Silica- amorphous	585 (24 hr)	0.5	0.0108				
Silica- crystalline	585 (24 hr)	0.005	0.00720				
Toluene	585 (24 hr)	18.8	24.14				
1,2,4-Trimethyl Benzene	585 (24 hr)	6.15	7.74				
Xylene	585 (24 hr)	21.8	46.0				

Criteria Pollutants	Averaging Period	NAAQS Standard (ug/m3)	Controlled Emissions (lb/hr)	Impact at 1 lb/hr Emissions (ug/m3)[6]	Persistence Factor	Controlled Ambient Conc. (ug/m3)	Controlled Conc. (% of NAAQS)
PM_{10}	24-hr	150	0.75	92.6	0.4	27.82	18.5%
	Annual	50	0.03		0.08	0.19	0.4%

Hazardous Air Pollutants	Controlled Emissions (tons/yr)	Major Facility Threshold (tons/yr)
Ethyl Benzene	0.94	10
Hexamethylene diisocyanate	0.00045	10
n-Hexane	1.15	10
MEK	1.5	10
MIBK	0.60	10
Naphthalene	0.12	10
Toluene	7.1	10
Xylene	9.9	10
Total	**21.3**	25

Criteria Pollutants	Controlled Emissions (tons/yr)	Major Facility Threshhold (tons/yr)
PM_{10} (Note 7)	0.11	100
VOC (Note 2)	19.0	100

Preliminary for
Pre-application Mtg
and Modeling Protocol

Note 1: Rated capacity of Sames MIV gun is 12 fl. ounces per minute 5.625 gallon/hour.
Topcoat Mix: 8 parts enamel, 6 parts DTR reducer, 1 part hardener. DT870 reducer only used occasionally in winter.
Primer Mix: 2 parts primer, 1 part catalyst.
Note 2: All volatile material counted as VOC except for acetone.
Note 3: Electrostatic coating retention rate is reported to be 50-65% by the gun supplier in the Snake River application system.
For the non-volatile constituents in these calculations, 57% average coating retention was assumed.
Note 4: Per PPG, the maximum concentration of hexamethylene diisocyanate in the hardener is 0.17%, and 85-95% is chemically reduced upon mixing with paint prior to spraying.

Note 5: DTL10 used for equipment cleaning.

Note 6: Based on Screen3 modeling.

Note 7: Based on combined coatings' solids content adjusted for coating retention and control equipment efficiency.
Note 8: American Filter AG-28 rated removal efficiency = 98.13%. 98% used for calculating controlled emissions of non-volatile components.

Table A-1a:
Uncontrolled Emissions with Delstar Paint Mix

Product ID Name Manufacturer	Usage Rate Basis[1]		Kit Avenue Unrestricted Usage		Product Specific Gravity (MSDS)	Kit Avenue Annual Usage (lbs)	Solids Content (MSDS wt%)	Volatile Content (wt%)	VOC PTE[2] (tons/yr)	Component	CAS Number	Component Concentration (MSDS, wt%)		Coating Retention (%)[3]	Component Potential to Emit (lb/hr)
	Daily	Annual	gal/hr	gal/yr								min[2]	max		
DAR-Acrylic Enamels PPG	11.25 gph of enamel, DTR reducer and hardener	Continuous two gun operation (98550 gal/yr) 2.5:1 Enamel Mix to Primer Mix	6.00	37543	0.948	296826	44.79%	55.21%	81.94	Carbon Black	1333-86-4		5%	57.0%	0.729
										Ethyl Benzene	100-41-4		7%	0.0%	2.372
										Methyl Ethyl Ketone	78-93-3		7%	0.0%	2.372
										Titanium Dioxide	13463-67-7		30%	57.0%	4.371
										Xylenes	1330-20-7		70%	0.0%	23.719
DP50LF Gray DP90LF Black Epoxy Primers PPG	11.25 gph of primer and catalyst		7.50	18771	1.338	209469	62.27%	37.73%	39.52	Barium Sulfate	7727-43-7		30%	57.0%	3.085
										2-Butoxy Ethanol	111-76-2		5%	0.0%	1.196
										Calcium Carbonate	1317-65-3		30%	57.0%	3.085
										Carbon Black	1333-86-4		5%	57.0%	0.514
										Epoxy Resin	25068-38-6		30%	57.0%	3.085
										Ethyl Benzene	100-41-4		1%	0.0%	0.239
										Methyl n-Amyl Ketone	110-43-0		13%	0.0%	3.109
										Methyl Isobutyl Ketone	108-10-1		7%	0.0%	1.674
										Naphtha (Aromatic)	64742-95-6		5%	0.0%	1.196
										Silica- amorphous	112926-00-8		1.5%	57.0%	0.154
										Silica- crystalline	14808-60-7		1.0%	57.0%	0.103
										Talc	14807-96-6		5%	57.0%	0.514
										Titanium Dioxide	13463-67-7		10%	57.0%	1.028
										Toluene	108-88-3		7%	0.0%	1.674
										1,2,4-Trimethyl Benzene	95-63-6		5%	0.0%	1.196
										Vinyl Resin	25086-48-0		5%	57.0%	0.514
										Xylenes	1330-20-7		5%	0.0%	1.196
DP401LF Epoxy Primer Catalyst PPG	2:1 Primer to Catalyst		3.750	9386	0.880	68884	29.77%	70.23%	24.19	2-Butoxy Ethanol	111-76-2		10%	0.0%	0.786
										Isopropyl Alcohol	67-63-0		7%	0.0%	0.550
										Naphtha (Aromatic)	64742-95-6		13%	0.0%	1.022
										Polyamide Resin	80100337-5132		30%	57.0%	1.014
										Propyl Alcohol	71-23-8		30%	0.0%	2.359
										1,2,4-Trimethyl Benzene	95-63-6		7%	0.0%	0.550
										Xylenes	1330-20-7		30%	0.0%	2.359
DT870 Reducer PPG	2:1 Enamel to Reducer (Note 1)		3.00	18771	0.829	129783	0.00%	100.00%	64.89	n-Heptane	142-82-5		5%	0.0%	0.741
										1-Methoxy 2-Propyl Acetate	108-65-6		30%	0.0%	4.445
										2-Methoxy 2-Propyl Acetate	70657-70-4		1%	0.0%	0.148
										Methylcyclohexane	108-87-2		5%	0.0%	0.741
										Methyl Ethyl Ketone	78-93-3		40%	0.0%	5.926
										Naphtha	64742-89-8		5%	0.0%	0.741
										Naphtha (V.M. & P.)	8032-32-4		30%	0.0%	4.445
										Toluene	108-88-3		30%	0.0%	4.445
DTL10 Laquer Thinner PPG	15 gallons per day (Note 5)		0.625	5475	0.80	36529	0.00%	100.0%	16.44	Acetone	67-64-1	10%	30%	0.0%	1.251
										i-Hexane	107-83-5		5%	0.0%	0.209
										n-Hexane	110-54-3		7%	0.0%	0.292
										Isopropyl Alcohol	67-63-0		30%	0.0%	1.251
										1-Methoxy 2-Propyl Acetate	108-65-6		5%	0.0%	0.209
										3-Methylpentane	96-14-0		5%	0.0%	0.209
										Naphtha	64742-89-8		5%	0.0%	0.209
										Toluene	108-88-3		70%	0.0%	2.919
DTR600 DTR602 Reducers PPG	4:3 Enamel to Reducer		4.50	28157	0.812	190682	0.00%	100.00%	85.81	Acetone	67-64-1	10%	40%	0.0%	8.707
										Aromatic Hydrocarbon	64742-94-5		13%	0.0%	2.830
										n-Butyl Acetate	123-86-4		10%	0.0%	2.177
										n-Heptane	142-82-5		13%	0.0%	2.830
										i-Hexane	107-83-5		7%	0.0%	1.524
										n-Hexane	110-54-3		10%	0.0%	2.177
										Methylcyclohexane	108-87-2		13%	0.0%	2.830
										3-Methylpentane	96-14-0		7%	0.0%	1.524
										Naphtha	64742-89-8		30%	0.0%	6.530
										Naphtha (Aromatic)	64742-95-6		7%	0.0%	1.524
										Naphthalene	91-20-3		1.5%	0.0%	0.327
										1,2,4-Trimethyl Benzene	95-63-6		5%	0.0%	1.088
										Toluene	108-88-3		30%	0.0%	6.530
										Xylenes	1330-20-7		1.0%	0.0%	0.218
DXR80 Ultra Urethane Hardener PPG	8:1 Enamel to Hardener		0.750	4693	1.110	43444	83.39%	16.61%	3.61	n-Butyl Acetate	123-86-4		5%	0.0%	0.248
										Hexamethylene Diisocyanate (Note 4)	822-06-0		0.17%	85.0%	0.00124
										Hexane-1,6-Diisocyanate Polymer	28182-81-2		100%	57.0%	2.133
										1-Methoxy 2-Propyl Acetate	108-65-6		10%	0.0%	0.496
										2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.050
										Naphtha (Aromatic)	64742-95-6		5%	0.0%	0.248
										1,2,4-Trimethyl Benzene	95-63-6		1.5%	0.0%	0.074
										Xylene	1330-20-7		1.0%	0.0%	0.050

Toxic Air Pollutants - Paint Application	TAP Type (24 hr or Annual Averaging)	TAP Screening Level (lb/hr)	Uncontrolld Emissions (lb/hr)	Uncontrolld Emissions (% of EL)	Allowable Ambient Conc. (AAC, mg/m³)	Impact at 1 lb/hr Emissions (mg/m³)[6]	Persistence Factor	Uncontrolld Ambient Conc. (mg/m³)	Uncontrolld Conc. (% of AAC)
Acetone	585 (24 hr)	119	9.96	8.4%	89	0.093	0.400		
2-Butoxy Ethanol	585 (24 hr)	8	1.98	24.8%	6				
n-Butyl Acetate	585 (24 hr)	47.3	2.42	5.1%	35.5				
Calcium Carbonate	585 (24 hr)	0.667	3.085	462%	0.5			0.115	22.9%
Carbon Black	585 (24 hr)	0.23	1.24	540%	0.175			0.046	26.4%
Ethyl Benzene	585 (24 hr)	29	2.61	9.0%	21.75				
n-Heptane	585 (24 hr)	109	3.57	3.3%	82				
Hexamethylene diisocyanate	585 (24 hr)	0.002	0.00124	62.0%	0.0015				
n-Hexane	585 (24 hr)	12	2.47	20.6%	9				
Isopropyl Alcohol	585 (24 hr)	65.3	1.80	2.8%	49				
1-Methoxy 2-Propyl Acetate	585 (24 hr)	24	5.15	21.5%	3.6				
Methyl n-Amyl Ketone	585 (24 hr)	15.7	3.11	19.8%	11.75				
Methylcyclohexane	585 (24 hr)	107	3.57	3.3%	80.5				
MEK	585 (24 hr)	39.3	8.30	21.1%	29.5				
MIBK	585 (24 hr)	13.7	1.67	12.2%	10.25				
Naphthalene	585 (24 hr)	3.33	0.33	9.8%	2.5				
Propyl Alcohol	585 (24 hr)	33.3	2.36	7.1%	25				
Silica- amorphous	585 (24 hr)	0.667	0.15	23.1%	0.5				
Silica- crystalline	585 (24 hr)	0.0067	0.10	1535%	0.005			0.004	76%
Toluene	585 (24 hr)	25	15.57	62.3%	18.75				
1,2,4-Trimethyl Benzene	585 (24 hr)	8.2	2.91	35.5%	6.15				
Xylene	585 (24 hr)	29	27.54	95.0%	21.75				

Hazardous Air Pollutants	Potential to Emit (tons/yr)
Ethyl Benzene	11.4
Hexamethylene diisocyanate	0.0054
n-Hexane	10.8
MEK	36.3
MIBK	7.3
Naphthalene	1.4
Toluene	68.2
Xylene	120.6
Total	**256.2**

Criteria Pollutants	Potential to Emit (tons/yr)
PM_{10} (Note 7)	68.8
VOC (Note 2)	234.4

Note 1: Rated capacity of Sames MIV gun is 12 fl. ounces per minute = 5.625 gallon/hour. Uncontrolled emissions based on continuous operation.
Topcoat Mix: 8 parts enamel, 6 parts DTR reducer, 1 part hardener. DT870 Reducer only used occasionally in winter.
Primer Mix: 2 parts primer, 1 part catalyst.

Note 2: All volatile material counted as VOC except for acetone.

Note 3: Electrostatic coating retention rate is reported to be 50-65% by the gun supplier in the Snake River application system.
For the non-volatile constituents in these calculations, 57% average coating retention was assumed.

Note 4: Per PPG, the maximum concentration of hexamethylene diisocyanate in the hardener is 0.17%, and 85-95% is chemically reduced and retained in the coating upon mixing with acrylic paint prior to spraying.

Note 5: DTL10 used for equipment cleaning.

Note 6: Based on Screen3 modeling.

Note 7: Based on combined coatings' solids content adjusted for coating retention.

Preliminary for
Pre-application Mtg
and Modeling Protocol

Table A-2a:
Uncontrolled Emissions with Essential Paint Mix

Product ID Name Manufacturer	Usage Rate Basis[1] Daily	Usage Rate Basis[1] Annual	Kit Avenue Unrestricted Usage gal/hr	Kit Avenue Unrestricted Usage gal/yr	Product Specific Gravity (MSDS)	Kit Avenue Annual Usage (lbs)	Solids Content (MSDS wt%)	Volatile Content (wt%)	VOC PTE[2] (tons/yr)	Component	CAS Number	Component Concentration (MSDS, wt%) min[2]	Component Concentration (MSDS, wt%) max	Coating Retention (%)[3]	Component Potential to Emit (lb/hr)
ASP-435 Gray ASP-901 Black 3.5/2.8 VOC Shop Primers PPG	11.25 gph primer	Continuous two gun operation (98550 gal/yr) 2.5:1 Topcoat Mix to Primer	11.25	28157	1.393	327119	70.12%	29.88%	48.87	Calcium Carbonate	1317-65-3		40%	57.0%	6.42
										Carbon Black	1333-86-4		5%	57.0%	0.803
										Methyl Ethyl Ketoxime	96-29-7		1.0%	0.0%	0.373
										Naphtha (Stoddard Solvent)	8052-41-3		30%	0.0%	11.203
										Naphtha (V.M. & P.)	8032-32-4		30%	0.0%	11.203
										Petroleum Distillates	64741-84-0		10%	0.0%	3.734
										Silica- crystalline	14808-60-7		1.0%	57.0%	0.161
										Talc	14807-96-6		30%	57.0%	4.817
										Titanium Dioxide	13463-67-7		5%	57.0%	0.803
										Xylenes	1330-20-7		1.0%	0.0%	0.373
DTL10 Laquer Thinner PPG	15 gallons per day (Note 5)		0.625	5475	0.80	36529	0.00%	100.00%	16.44	Acetone	67-64-1	10%	30%	0.0%	1.251
										i-Hexane	107-83-5		5%	0.0%	0.209
										n-Hexane	110-54-3		7%	0.0%	0.292
										Isopropyl Alcohol	67-63-0		30%	0.0%	1.251
										1-Methoxy 2-Propyl Acetate	108-65-6		5%	0.0%	0.209
										3-Methylpentane	96-14-0		5%	0.0%	0.209
										Naphtha	64742-89-8		5%	0.0%	0.209
										Toluene	108-88-3		70%	0.0%	2.919
ESH200 Single Stage Hardener PPG	6:1 Topcoat to Hardener		1.406	8799	1.142	83805	89.03%	10.97%	4.60	Hexamethylene Diisocyanate (Note 4)	822-06-0		0.18%	85.0%	0.0026
										Hexane-1,6-Diisocyanate Polymer	28182-81-2		100%	57.0%	4.114
ESSS9000 Black Acrylic Polyester PPG	11.25 gph of topcoat, activator and hardener	Continuous two gun operation (98550 gal/yr)	8.44	47515	0.971	384785	54.91%	45.09%	67.51	Acetone	67-64-1	10%	30%	0.0%	13.178
										n-Butyl Acetate	123-86-4		13%	0.0%	5.710
										Carbon Black	1333-86-4		1.5%	57.0%	0.283
										1-Methoxy 2-Propyl Acetate	108-65-6		7%	0.0%	3.075
										2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.439
										Methyl n-Amyl Ketone	110-43-0		10%	0.0%	4.393
ESSS903653 White Acrylic Polyester PPG	11.25 gph of topcoat, activator and hardener.	2.5:1 Topcoat Mix to Primer 90% of annual topcoat black 10% of annual topcoat white	8.44	5279	1.277	56227	69.70%	30.30%	7.39	Acetone	67-64-1	3%	7%	0.0%	0.449
										Barium Sulfate	7727-43-7		5.0%	57.0%	0.138
										n-Butyl Acetate	123-86-4		7%	0.0%	0.449
										1-Methoxy 2-Propyl Acetate	108-65-6		10%	0.0%	0.642
										2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.064
										Methyl n-Amyl Ketone	110-43-0		5%	0.0%	0.321
										Naphtha (Aromatic)	64742-95-6		5%	0.0%	0.321
										Parachlorobenzotrifluoride	98-56-6	1%	5%	0.0%	0.321
										Titanium Dioxide	13463-67-7		30%	57.0%	0.828
										Xylenes	1330-20-7		1.0%	0.0%	0.064
										Zinc Sulfide	1314-98-3		5%	57.0%	0.138
ESX510 Standard Activator PPG	6:1 Topcoat to Activator		1.406	8799	1.145	84025	0.29%	99.71%	22.14	Acetone	67-64-1	7%	13%	0.0%	1.247
										Acetylacetone	123-54-6		30%	0.0%	2.878
										Parachlorobenzotrifluoride	98-56-6	40%	70%	0.0%	6.714

Toxic Air Pollutants - Paint Application	TAP Type (24 hr or Annual Averaging)	TAP Screening Level (lb/hr)	Uncontrolld Emissions (lb/hr)	PTE (% of EL)	Allowable Ambient Conc. (AAC, mg/m3)	Impact at 1 lb/hr Emissions (mg/m3)	Persistence Factor	Uncontrolld Ambient Conc. (mg/m3)	Uncontrolld Conc. (% of AAC)
Acetone	585 (24 hr)	119	16.12	13.6%	89	0.093	0.400		
n-Butyl Acetate	585 (24 hr)	47.3	6.16	13.0%	35.5				
Calcium Carbonate	585 (24 hr)	0.667	6.42	963%	0.5			0.239	48%
Carbon Black	585 (24 hr)	0.23	1.09	472%	0.175			0.040	23%
Hexamethylene diisocyanate	585 (24 hr)	0.002	0.0026	129.2%	0.0015				
n-Hexane	585 (24 hr)	12	0.292	2.4%	9				
Isopropyl Alcohol	585 (24 hr)	65.3	1.25	1.9%	49				
1-Methoxy 2-Propyl Acetate	585 (24 hr)	24	3.93	16.4%	3.6				
Naphtha (Stoddard Solvent)	585 (24 hr)	35	11.20	32.0%	26.25				
Parachlorobenzotrifluoride[8]	585 (24 hr)	NOTE 8	7.04	NOTE 8	0.253			0.262	103%
Silica- crystalline	585 (24 hr)	0.0067	0.1606	2397%	0.005			0.0060	119%
Toluene	585 (24 hr)	25	2.92	11.7%	18.75				
Xylene	585 (24 hr)	29	0.44	1.5%	21.75				

Hazardous Air Pollutants	Potential to Emit (tons/yr)
Hexamethylene diisocyanate	0.0113
n-Hexane	1.3
Toluene	12.8
Xylene	1.9
Total	**16.0**

Criteria Pollutants	Potential to Emit (tons/yr)
PM_{10} (Note 7)	119.3
VOC (Note 2)	167.0

Preliminary for
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Note 1: Rated capacity of Sames MIV gun is 12 fl. ounces per minute 5.625 gallon/hour. Uncontrolled emissions based on continuous operation.
Topcoat Mix: 6 parts acrylic, 1 part activator, 1 part hardener.
Primer Mix: no additive to primer.
Note 2: All volatile material counted as VOC except for acetone and parachlorobenzotrifluoride.
Note 3: Electrostatic coating retention rate is reported to be 50-65% by the gun supplier in the Snake River application system.
For the non-volatile constituents in these calculations, 57% average coating retention was assumed.
Note 4: Per PPG, the maximum concentration of hexamethylene diisocyanate in the hardener is 0.18%, and 85-95% is chemically reduced and retained in the coating upon mixing with acrylic paint prior to spraying.
Note 5: DTL10 used for equipment cleaning.
Note 6: Based on Screen3 modeling.
Note 7: Based on combined coatings' solids content adjusted for coating retention.
Note 8: No EL available for PCBTF. AAC for PCBTF provided by IDEQ.

Table A-2b:
Controlled Emissions with Essential Paint Mix

Product ID Name Manufacturer	Usage Rate Basis[1]		Kit Avenue Proposed Usage		Product Specific Gravity (MSDS)	Kit Avenue Proposed Usage		Solids Content (MSDS wt%)	Volatile Content (wt%)	Controlled VOC Emissions[2] (tons/yr)	Component	CAS Number	Component Concentration (MSDS, wt%)		Coating Retention (%)[4]	Spray Booth Filter Efficiency (%)[5]	Estimated Controlled Emissions	
	Daily	Annual	gal/day	gal/yr		lb/day	lb/yr						min[2]	max			lb/day	lb/yr
ASP-435 Gray ASP-901 Black 3.5/2.8 VOC Shop Primers PPG	11.25 gph primer	2.5:1 Topcoat to Primer	270	4000	1.393	3137	46470	70.12%	29.88%	6.94	Calcium Carbonate	1317-65-3		40%	57.0%	98.0%	10.790	159.86
											Carbon Black	1333-86-4		5%	57.0%	98.0%	1.349	19.98
											Methyl Ethyl Ketoxime	96-29-7		1.0%	0.0%	0.0%	31.368	464.70
											Naphtha (Stoddard Solvent)	8052-41-3		30%	0.0%	0.0%	941.0	13941.1
											Naphtha (V.M. & P.)	8032-32-4		30%	0.0%	0.0%	941.0	13941.1
											Petroleum Distillates	64741-84-0		10%	0.0%	0.0%	313.676	4647.05
											Silica- crystalline	14808-60-7		1.0%	57.0%	98.0%	0.270	4.00
											Talc	14807-96-6		30%	57.0%	98.0%	8.093	119.89
											Titanium Dioxide	13463-67-7		5%	57.0%	98.0%	1.349	19.98
											Xylenes	1330-20-7		1.0%	0.0%	0.0%	31.368	464.70
DTL10 Laquer Thinner PPG	15 gal per day (Note 5)	30 gal per week (Note 5)	15	1560	0.80	100	10408	0.00%	100.00%	4.68	Acetone	67-64-1	10%	30%	0.0%	0.0%	30.02	3122.5
											i-Hexane	107-83-5		5%	0.0%	0.0%	5.004	520.42
											n-Hexane	110-54-3		7%	0.0%	0.0%	7.006	728.58
											Isopropyl Alcohol	67-63-0		30%	0.0%	0.0%	30.024	3122.50
											1-Methoxy 2-Propyl Acetate	108-65-6		5%	0.0%	0.0%	5.004	520.42
											3-Methylpentane	96-14-0		5%	0.0%	0.0%	5.004	520.42
											Naphtha	64742-89-8		5%	0.0%	0.0%	5.004	520.42
											Toluene	108-88-3		70%	0.0%	0.0%	70.056	7285.82
ESH200 Single Stage Hardener PPG	6:1 Topcoat to Hardener		17	1667	1.142	161	15874	89.03%	10.97%	0.87	Hexamethylene Diisocyanate (NOTE 6)	822-06-0		0.18%	85.0%	0.0%	0.043	4.3
											Hexane-1,6-Diisocyanate Polymer	28182-81-2		100%	57.0%	98.0%	1.382	136.5
ESSS9000 Black Acrylic Polyester PPG	11.25 gph of topcoat, activator and hardener for 8 hours per day.	300% of Chicago St. Facility	68	9000	0.971	547	72883	54.91%	45.09%	12.79	Acetone	67-64-1	10%	30%	0.0%	0.0%	163.987	21865.0
											n-Butyl Acetate	123-86-4		13%	0.0%	0.0%	71.061	9474.8
											Carbon Black	1333-86-4		1.5%	57.0%	98.0%	0.071	9.4
											1-Methoxy 2-Propyl Acetate	108-65-6		7%	0.0%	0.0%	38.264	5101.8
											2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.0%	5.466	728.8
											Methyl n-Amyl Ketone	110-43-0		10%	0.0%	0.0%	54.662	7288.3
ESSS903653 White Acrylic Polyester PPG	5.625 gph of topcoat, activator and hardener for 8 hours per day	10% of total topcoat	34	1000	1.277	359	10650	69.70%	30.30%	1.40	Acetone	67-64-1	3%	7%	0.0%	0.0%	25.161	745.5
											Barium Sulfate	7727-43-7		5.0%	57.0%	98.0%	0.155	4.6
											n-Butyl Acetate	123-86-4		7%	0.0%	0.0%	25.161	745.5
											1-Methoxy 2-Propyl Acetate	108-65-6		10%	0.0%	0.0%	35.944	1065.0
											2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.0%	3.594	106.5
											Methyl n-Amyl Ketone	110-43-0		5%	0.0%	0.0%	17.972	532.5
											Naphtha (Aromatic)	64742-95-6		5%	0.0%	0.0%	17.972	532.5
											Parachlorobenzotrifluoride	98-56-6	1%	5%	0.0%	0.0%	17.972	532.5
											Titanium Dioxide	13463-67-7		30%	57.0%	98.0%	0.927	27.5
											Xylenes	1330-20-7		1.0%	0.0%	0.0%	3.594	106.5
											Zinc Sulfide	1314-98-3		5%	57.0%	98.0%	0.155	4.6
ESX510 Standard Activator PPG	6:1 Topcoat to Activator		17	1667	1.145	161	15916	0.29%	99.71%	4.19	Acetone	67-64-1	7%	13%	0.0%	0.0%	20.949	2069.0
											Acetylacetone	123-54-6		30%	0.0%	0.0%	48.343	4774.7
											Parachlorobenzotrifluoride	98-56-6	40%	70%	0.0%	0.0%	112.801	11140.9

Toxic Air Pollutants - Paint Application	TAP Type (24 hr or Annual Averaging)	Allowable Ambient Conc. (AAC, mg/m3)	Controlled Emissions (lb/hr)	Impact at 1 lb/hr Emissions (mg/m3)	Persistence Factor	Controlled Ambient Conc. (mg/m3)	Controlled Conc. (% of AAC)
Acetone	585 (24 hr)	89	10.01	0.093	0.4		
n-Butyl Acetate	585 (24 hr)	35.5	4.01				
Calcium Carbonate	585 (24 hr)	0.5	0.450				
Carbon Black	585 (24 hr)	0.175	0.06				
Hexamethylene diisocyanate	585 (24 hr)	0.0015	0.0018				
n-Hexane	585 (24 hr)	9	0.29				
Isopropyl Alcohol	585 (24 hr)	49	1.25				
1-Methoxy 2-Propyl Acetate	585 (24 hr)	3.6	3.30				
Naphtha (Stoddard Solvent)	585 (24 hr)	26.25	39.21				
Parachlorobenzotrifluoride[7]	585 (24 hr)	0.253	5.45			0.20270	80.1%
Silica- crystalline	585 (24 hr)	0.005	0.0112			0.00042	8.4%
Toluene	585 (24 hr)	18.75	2.92				
Xylene	585 (24 hr)	21.75	1.46				

Criteria Pollutants	Averaging Period	NAAQS Standard (ug/m3)	Controlled Emissions (lb/hr)	Impact at 1 lb/hr Emissions (ug/m3)[6]	Persistence Factor	Controlled Emissions Impact (ug/m3)	Controlled Conc. (% of NAAQS)
PM_{10} [7]	24-hr	150	1.04	92.6	0.4	38.4	25.6%
	Annual	50	0.092		0.08	0.69	1.4%

Hazardous Air Pollutants (HAPs)-	Controlled Emissions (tons/yr)	Major Facility Threshold (tons//yr)
Hexamethylene diisocyanate	0.0021	10
n-Hexane	0.36	10
Toluene	3.6	10
Xylene	0.29	10
Total	**4.3**	**25**

Criteria Pollutants	Controlled Emissions (tons/yr)	Major Facility Threshhold (tons/yr)
PM_{10} (Note 7)	0.4	100
VOC (Note 2)	30.9	100

Preliminary for Pre-application Mtg and Modeling Protocol

Note 1: Rated capacity of Sames MIV gun is 12 fl. ounces per minute = 5.625 gallon/hour. Uncontrolled emissions base
Topcoat Mix: 6 parts acrylic, 1 part activator, 1 part hardener.
Primer Mix: no additive to primer.
Note 2: All volatile material counted as VOC except for acetone and parachlorobenzotrifluoride.
Note 3: Electrostatic coating retention rate is reported to be 50-65% by the gun supplier in the Snake River application system.
For the non-volatile constituents in these calculations, 57% average coating retention was assumed.
Note 4: Per PPG, the maximum concentration of hexamethylene diisocyanate in the hardener is 0.18%, and 85-95% is chemically reduced and retained in the coating upon mixing with paint prior to spraying.
Note 5: DTL10 used for equipment cleaning.
Note 6: Based on Screen3 modeling.
Note 7: Based on combined coatings' solids content adjusted for coating retention and filter equipment efficiency.

Table A-3a:
Uncontrolled Emissions with Combo Paint Mix

Product ID Name Manufacturer	Usage Rate Basis[1] Daily	Usage Rate Basis[1] Annual	Kit Avenue Unrestricted Usage gal/hr	Kit Avenue Unrestricted Usage gal/yr	Product Specific Gravity (MSDS)	Kit Avenue Annual Usage (lbs)	Solids Content (MSDS wt%)	Volatile Content (wt%)	VOC PTE[2] (tons/yr)	Component	CAS Number	Component Concentration (MSDS, wt%) min[2]	Component Concentration (MSDS, wt%) max	Coating Retention (%)[3]	Component Potential to Emit (lb/hr)
DP50LF Gray DP90LF Black Epoxy Primers PPG	11.25 gph of primer and catalyst	Continuous two gun operation (98550 gal/yr) 2.5:1 acrylic Mix to Primer 90% of annual acrylic black 10% of annual acrylic white	7.5	18771	1.338	209469	62.27%	37.73%	39.52	Barium Sulfate	7727-43-7		30%	57.0%	3.085
										2-Butoxy Ethanol	111-76-2		5%	0.0%	1.196
										Calcium Carbonate	1317-65-3		30%	57.0%	3.085
										Carbon Black	1333-86-4		5%	57.0%	0.514
										Epoxy Resin	25068-38-6		30%	57.0%	3.085
										Ethyl Benzene	100-41-4		1%	0.0%	0.239
										Methyl n-Amyl Ketone	110-43-0		13%	0.0%	3.109
										Methyl Isobutyl Ketone	108-10-1		7%	0.0%	1.674
										Naphtha (Aromatic)	64742-95-6		5%	0.0%	1.196
										Silica- amorphous	112926-00-8		1.5%	57.0%	0.154
										Silica- crystalline	14808-60-7		1.0%	57.0%	0.103
										Talc	14807-96-6		5%	57.0%	0.514
										Titanium Dioxide	13463-67-7		10%	57.0%	1.028
										Toluene	108-88-3		7%	0.0%	1.674
										1,2,4-Trimethyl Benzene	95-63-6		5%	0.0%	1.196
										Vinyl Resin	25086-48-0		5%	57.0%	0.514
										Xylenes	1330-20-7		5%	0.0%	1.196
DP401LF Epoxy Primer Catalyst PPG	2:1 Primer to Catalyst		3.75	9386	0.880	68884	29.77%	70.23%	24.19	2-Butoxy Ethanol	111-76-2		10%	0.0%	0.786
										Isopropyl Alcohol	67-63-0		7%	0.0%	0.550
										Naphtha (Aromatic)	64742-95-6		13%	0.0%	1.022
										Polyamide Resin	80100337-5132		30%	57.0%	1.014
										Propyl Alcohol	71-23-8		30%	0.0%	2.359
										1,2,4-Trimethyl Benzene	95-63-6		7%	0.0%	0.550
										Xylenes	1330-20-7		30%	0.0%	2.359
DTL10 Laquer Thinner PPG	15 gallons per day (Note 5)		0.625	5475	0.80	36529	0.00%	100.00%	16.44	Acetone	67-64-1	10%	30%	0.0%	1.251
										i-Hexane	107-83-5		5%	0.0%	0.209
										n-Hexane	110-54-3		7%	0.0%	0.292
										Isopropyl Alcohol	67-63-0		30%	0.0%	1.251
										1-Methoxy 2-Propyl Acetate	108-65-6		5%	0.0%	0.209
										3-Methylpentane	96-14-0		5%	0.0%	0.209
										Naphtha	64742-89-8		5%	0.0%	0.209
										Toluene	108-88-3		70%	0.0%	2.919
ESH200 Single Stage Hardener PPG	6:1 acrylic to Hardener		2.813	8799	1.142	83805	89.03%	10.97%	4.60	Hexamethylene Diisocyanate (NOTE 6)	822-06-0		0.18%	85.0%	0.0026
										Hexane-1,6-Diisocyanate Polymer	28182-81-2		100%	80.0%	1.913
ESSS9000 Black Acrylic Polyester PPG	11.25 gph of acrylic, activator and hardener.	Continuous two gun operation (98550 gal/yr) 2.5:1 acrylic Mix to Primer 90% of annual acrylic black 10% of annual acrylic white	8.44	47515	0.971	384785	54.91%	45.09%	67.51	Acetone	67-64-1	10%	30%	0.0%	13.178
										n-Butyl Acetate	123-86-4		13%	0.0%	5.710
										Carbon Black	1333-86-4		1.5%	80.0%	0.132
										1-Methoxy 2-Propyl Acetate	108-65-6		7%	0.0%	3.075
										2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.439
										Methyl n-Amyl Ketone	110-43-0		10%	0.0%	4.393
ESSS903653 White Acrylic Polyester PPG	11.25 gph of acrylic, activator and hardener.		8.44	5279	1.277	56227	69.70%	30.30%	7.39	Acetone	67-64-1	3%	7%	0.0%	0.449
										Barium Sulfate	7727-43-7		5.0%	80.0%	0.064
										n-Butyl Acetate	123-86-4		7%	0.0%	0.449
										1-Methoxy 2-Propyl Acetate	108-65-6		10%	0.0%	0.642
										2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.064
										Methyl n-Amyl Ketone	110-43-0		5%	0.0%	0.321
										Naphtha (Aromatic)	64742-95-6		5%	0.0%	0.321
										Parachlorobenzotrifluoride	98-56-6	1%	5%	0.0%	0.321
										Titanium Dioxide	13463-67-7		30%	80.0%	0.385
										Xylenes	1330-20-7		1.0%	0.0%	0.064
										Zinc Sulfide	1314-98-3		5%	80.0%	0.064
ESX510 Standard Activator PPG	6:1 acrylic to Activator		1.406	8799	1.145	84025	0.29%	99.71%	22.14	Acetone	67-64-1	7%	13%	0.0%	1.247
										Acetylacetone	123-54-6		30%	0.0%	2.878
										Parachlorobenzotrifluoride	98-56-6	40%	70%	0.0%	6.714

Toxic Air Pollutants - Paint Application	TAP Type (24 hr or Annual Averaging)	TAP Screening Level (lb/hr)	Uncontrolld Emissions (lb/hr)	Uncontrolled Emissions (% of EL)	Allowable Ambient Conc. (AAC, mg/m^3)	Impact at 1 lb/hr Emissions (mg/m^3)[6]	Persistence Factor	Uncontrolld Ambient Conc. (mg/m^3)	Uncontrolld Conc. (% of AAC)
Acetone	585 (24 hr)	119	16.12	13.6%	89	0.093	0.400		
2-Butoxy Ethanol	585 (24 hr)	8	1.982	24.8%	6				
n-Butyl Acetate	585 (24 hr)	47.3	6.16	13.0%	35.5				
Calcium Carbonate	585 (24 hr)	0.667	3.085	462.5%	0.5			0.115	22.9%
Carbon Black	585 (24 hr)	0.23	1.33	577.1%	0.175			0.049	28.2%
Ethyl Benzene	585 (24 hr)	29	0.24	0.8%	21.75				
Hexamethylene diisocyanate	585 (24 hr)	0.002	0.0026	129.2%	0.0015			0.000	6.4%
n-Hexane	585 (24 hr)	12	0.29	2.4%	9				
Isopropyl Alcohol	585 (24 hr)	65.3	1.80	2.8%	49				
1-Methoxy 2-Propyl Acetate	585 (24 hr)	24	3.93	16.4%	3.6				
Methyl n-Amyl Ketone	585 (24 hr)	15.7	7.82	49.8%	11.75				
MIBK	585 (24 hr)	13.7	1.67	12.2%	10.25				
Parachlorobenzotrifluoride[9]	585 (24 hr)	NOTE 8	7.04	NOTE 8	0.253			0.262	103.4%
Propyl Alcohol	585 (24 hr)	33.3	2.36	7.1%	25				
Silica- amorphous	585 (24 hr)	0.667	0.154	23.1%	0.5				
Silica- crystalline	585 (24 hr)	0.0067	0.1028	1534.6%	0.005			0.004	76.5%
Toluene	585 (24 hr)	25	4.59	18.4%	18.75				
1,2,4-Trimethyl Benzene	585 (24 hr)	8.2	1.75	21.3%	6.15				
Xylene	585 (24 hr)	29	3.62	12.5%	21.75				

Hazardous Air Pollutants	Uncontrolled PTE (tons/yr)
Ethyl Benzene	1.0
Hexamethylene diisocyanate	0.011
n-Hexane	1.3
MIBK	7.3
Toluene	20.1
Xylene	15.9
Total	**45.6**

Criteria Pollutants	Uncontrolled PTE (tons/yr)
PM_{10} (Note 7)	102.4
VOC (Note 2)	181.8

Preliminary for
Pre-application Mtg
and Modeling Protocol

Note 1: Rated capacity of Sames MIV gun is 12 fl. ounces per minute = 5.625 gallon/hour. Uncontrolled emissions based on continuous operation.
Topcoat Mix: 6 parts acrylic, 1 part activator, 1 part hardener.
Primer Mix: 2 parts primer, 1 part catalyst.
Note 2: All volatile material counted as VOC except for acetone and parachlorobenzotrifluoride.
Note 3: Electrostatic coating retention rate is reported to be 50-65% by the gun supplier in the Snake River application system.
For the non-volatile constituents in these calculations, 57% average coating retention was assumed.
Note 4: Per PPG, the maximum concentration of hexamethylene diisocyanate in the hardener is 0.18%, and 85-95% is chemically reduced and retained in the coating upon mixing with acrylic paint prior to sprayi
Note 5: DTL10 used for equipment cleaning.
Note 6: Based on Screen3 modeling.
Note 7: Based on combined coatings' solids content adjusted for coating retention.

Table A-3b:
Controlled Emissions with Combo Paint Mix

Product ID Name Manufacturer	Usage Rate Basis[1]		Kit Avenue Proposed Usage		Product Specific Gravity (MSDS)	Kit Avenue Proposed Usage		Solids Content (MSDS wt%)	Volatile Content (wt%)	VOC PTE[2] (tons/yr)	Component	CAS Number	Component Concentration (MSDS, wt%)		Coating Retention (%)[4]	Spray Booth Filter Efficiency (%)[5]	Estimated Controlled Emissions	
	Daily	Annual	gal/day	gal/yr		lb/day	lb/yr						min[2]	max			lb/day	lb/yr
DP50LF Gray DP90LF Black Epoxy Primers PPG	11.25 gph of primer and catalyst	2.5:1 acrylic Mix to Primer Mix	180	3556	1.338	2009	39676	62.27%	37.73%	7.48	Barium Sulfate	7727-43-7		30%	57.0%	98.0%	5.18	102.36
											2-Butoxy Ethanol	111-76-2		5%	0.0%	0.0%	100.43	1983.81
											Calcium Carbonate	1317-65-3		30%	57.0%	98.0%	5.18	102.36
											Carbon Black	1333-86-4		5%	57.0%	98.0%	0.86	17.06
											Epoxy Resin	25068-38-6		30%	57.0%	98.0%	5.18	102.36
											Ethyl Benzene	100-41-4		1%	0.0%	0.0%	20.09	396.76
											Methyl n-Amyl Ketone	110-43-0		13%	0.0%	0.0%	261.12	5157.90
											Methyl Isobutyl Ketone	108-10-1		7%	0.0%	0.0%	140.60	2777.33
											Naphtha (Aromatic)	64742-95-6		5%	0.0%	0.0%	100.43	1983.81
											Silica- amorphous	112926-00-8		1.5%	57.0%	98.0%	0.26	5.12
											Silica- crystalline	14808-60-7		1.0%	57.0%	98.0%	0.17	3.41
											Talc	14807-96-6		5%	57.0%	98.0%	0.86	17.06
											Titanium Dioxide	13463-67-7		10%	57.0%	98.0%	1.73	34.12
											Toluene	108-88-3		7%	0.0%	0.0%	140.60	2777.33
											1,2,4-Trimethyl Benzene	95-63-6		5%	0.0%	0.0%	100.43	1983.81
											Vinyl Resin	25086-48-0		5%	57.0%	98.0%	0.86	17.06
											Xylenes	1330-20-7		5%	0.0%	0.0%	100.43	1983.81
DP401LF Epoxy Primer Catalyst PPG	2:1 Primer to Catalyst		90	1778	0.880	661	13047	29.77%	70.23%	4.58	2-Butoxy Ethanol	111-76-2		10%	0.0%	0.0%	66.05	1304.75
											Isopropyl Alcohol	67-63-0		7%	0.0%	0.0%	46.24	913.32
											Naphtha (Aromatic)	64742-95-6		13%	0.0%	0.0%	85.87	1696.17
											Polyamide Resin	80100337-5132		30%	57.0%	98.0%	1.70	33.66
											Propyl Alcohol	71-23-8		30%	0.0%	0.0%	198.16	3914.24
											1,2,4-Trimethyl Benzene	95-63-6		7%	0.0%	0.0%	46.24	913.32
											Xylenes	1330-20-7		30%	0.0%	0.0%	198.16	3914.24
DTL10 Laquer Thinner PPG	15 gal per day (Note 5)	30 gal per week (Note 5)	15	1560	0.80	100	10408	0.00%	100.00%	4.68	Acetone	67-64-1	10%	30%	0.0%	0.0%	30.02	3122.50
											i-Hexane	107-83-5		5%	0.0%	0.0%	5.00	520.42
											n-Hexane	110-54-3		7%	0.0%	0.0%	7.01	728.58
											Isopropyl Alcohol	67-63-0		30%	0.0%	0.0%	30.02	3122.50
											1-Methoxy 2-Propyl Acetate	108-65-6		5%	0.0%	0.0%	5.00	520.42
											3-Methylpentane	96-14-0		5%	0.0%	0.0%	5.00	520.42
											Naphtha	64742-89-8		5%	0.0%	0.0%	5.00	520.42
											Toluene	108-88-3		70%	0.0%	0.0%	70.06	7285.82
ESH200 Single Stage Hardener PPG	6:1 acrylic to Hardener		6	1667	1.142	54	15874	89.03%	10.97%	0.87	Hexamethylene Diisocyanate (NOTE 6)	822-06-0		0.18%	85.0%	0.0%	0.01	4.29
											Hexane-1,6-Diisocyanate Polymer	28182-81-2		100%	57.0%	98.0%	0.46	136.51
ESSS9000 Black Acrylic Polyester PPG	11.25 gph of acrylic, activator and hardener for 8 hours per day.	300% of Chicago St. Facility	68	9000	0.971	547	72883	54.91%	45.09%	12.79	Acetone	67-64-1	10%	30%	0.0%	0.0%	163.99	21864.98
											n-Butyl Acetate	123-86-4		13%	0.0%	0.0%	71.06	9474.82
											Carbon Black	1333-86-4		1.5%	57.0%	98.0%	0.07	9.40
											1-Methoxy 2-Propyl Acetate	108-65-6		7%	0.0%	0.0%	38.26	5101.83
											2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.0%	5.47	728.83
											Methyl n-Amyl Ketone	110-43-0		10%	0.0%	0.0%	54.66	7288.33
ESSS903653 White Acrylic Polyester PPG	5.625 gph of acrylic, activator and hardener for 8 hours per day	10% of total acrylic	34	1000	1.277	359	10650	69.70%	30.30%	1.40	Acetone	67-64-1	3%	7%	0.0%	0.0%	25.16	745.51
											Barium Sulfate	7727-43-7		5.0%	57.0%	98.0%	0.15	4.58
											n-Butyl Acetate	123-86-4		7%	0.0%	0.0%	25.16	745.51
											1-Methoxy 2-Propyl Acetate	108-65-6		10%	0.0%	0.0%	35.94	1065.02
											2-Methoxy 2-Propyl Acetate	70657-70-4		1.0%	0.0%	0.0%	3.59	106.50
											Methyl n-Amyl Ketone	110-43-0		5%	0.0%	0.0%	17.97	532.51
											Naphtha (Aromatic)	64742-95-6		5%	0.0%	0.0%	17.97	532.51
											Parachlorobenzotrifluoride	98-56-6	1%	5%	0.0%	0.0%	17.97	532.51
											Titanium Dioxide	13463-67-7		30%	57.0%	98.0%	0.93	27.48
											Xylenes	1330-20-7		1.0%	0.0%	0.0%	3.59	106.50
											Zinc Sulfide	1314-98-3		5%	57.0%	98.0%	0.15	4.58
ESX510 Standard Activator PPG	6:1 acrylic to Activator		17	1667	1.145	161	15916	0.29%	99.71%	4.19	Acetone	67-64-1	7%	13%	0.0%	0.0%	20.95	2069.02
											Acetylacetone	123-54-6		30%	0.0%	0.0%	48.34	4774.65
											Parachlorobenzotrifluoride	98-56-6	40%	70%	0.0%	0.0%	112.80	11140.85

Toxic Air Pollutants - Paint Application	TAP Type (24 hr or Annual Averaging)	Allowable Ambient Conc. (AAC, mg/m3)	Controlled Emissions (lb/hr)	Impact at 1 lb/hr Emissions (mg/m3)	Persistence Factor	Controlled Ambient Conc. (mg/m3)	Controlled Conc. (% of AAC)
Acetone	585 (24 hr)	89	10.01	0.093	0.4		
2-Butoxy Ethanol	585 (24 hr)	6	6.937				
n-Butyl Acetate	585 (24 hr)	35.5	4.01				
Calcium Carbonate	585 (24 hr)	0.5	0.216				
Carbon Black	585 (24 hr)	0.175	4.19				
Ethyl Benzene	585 (24 hr)	21.75	0.84				
Hexamethylene diisocyanate	585 (24 hr)	0.0015	0.0006				
n-Hexane	585 (24 hr)	9	0.29				
Isopropyl Alcohol	585 (24 hr)	49	3.18				
1-Methoxy 2-Propyl Acetate	585 (24 hr)	3.6	3.30				
Methyl n-Amyl Ketone	585 (24 hr)	11.75	13.91				
MIBK	585 (24 hr)	10.25	5.86				
Parachlorobenzotrifluoride[8]	585 (24 hr)	0.253	5.45			0.20270	80.1%
Propyl Alcohol	585 (24 hr)	25	8.26				
Silica- amorphous	585 (24 hr)	0.5	0.011				
Silica- crystalline	585 (24 hr)	0.005	0.0072				
Toluene	585 (24 hr)	18.75	8.78				
1,2,4-Trimethyl Benzene	585 (24 hr)	6.15	6.11				
Xylene	585 (24 hr)	21.75	12.59				

Criteria Pollutants	Averaging Period	NAAQS Standard (ug/m3)	Controlled Emissions (lb/hr)	Impact at 1 lb/hr Emissions (ug/m3)[6]	Persistence Factor	Controlled Emissions Impact (ug/m3)	Controlled Conc. (% of Sig.)
PM_{10} [7]	24-hr	150	0.73	92.6	0.4	27.2	18%
	Annual	50	0.089		0.08	0.66	1%

Hazardous Air Pollutants	Controlled Emissions (tons/yr)	Major Facility Threshold (tons//yr)
Ethyl Benzene	0.20	10
Hexamethylene diisocyanate	0.0021	10
n-Hexane	0.36	10
MIBK	1.4	10
Toluene	3.6	10
Xylene	3.0	10
Total	**8.6**	**25**

Criteria Pollutants	Estimated Controlled Emissions (tons/yr)	Major Facility Threshhold (tons/yr)
PM_{10} (Note 7)	0.39	100
VOC (Note 2)	36	100

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Note 1: Rated capacity of Sames MIV gun is 12 fl. ounces per minute = 5.625 gallon/hour.
Topcoat Mix: 6 parts acrylic, 1 part activator, 1 part hardener.
Primer Mix: 2 parts primer, 1 part catalyst.
Note 2: All volatile material counted as VOC except for acetone and parachlorobenzotrifluoride.
Note 3: Electrostatic coating retention rate is reported to be 50-65% by the gun supplier in the Snake River application system.
For the non-volatile constituents in these calculations, 57% average coating retention was assumed.
Note 4: Per PPG, the maximum concentration of hexamethylene diisocyanate in the hardener is 0.18%, and 85-95% is chemically reduced and retained in the coating upon mixing with paint prior to sprayir
Note 5: DTL10 used for equipment cleaning.
Note 6: Based on Screen3 modeling.
Note 7: Based on combined coatings' solids content adjusted for coating retention and control equipment efficiency.

TABLE A-4a: Paint Booths Natural Gas Fired Air Heaters Criteria Emissions

Natural Gas-Fired Equipment	Make	Rated Output (MMBtu/hr)	On-Line Rating (hrs/yr)		Fuel Rate[1] (scfh)	Emission Factors			Potential Emissions from Gas Combustion		Modeling Threshold		Source ID
	Model		Actual	Used for PTE			AP-42	lb/10^6 scf	lb/hr	tons/yr	lb/hr	tons/yr	
Spray Booth 1 Air Supply Heater	Bananza	2.295	3120	8760	2813	NO_x	Table 1.4-1.	94	0.26	1.16	--	1.0	BOOTH1
						CO	Table 1.4-1.	40	0.11	0.49	14	--	
						SO_2	Table 1.4-2.	0.6	0.0017	0.0074	0.2	1.0	
						PM_{10}	Table 1.4-2.	7.6	0.0214	0.0936	0.2	1.0	BOOTH1
						VOC	Table 1.4-2.	5.5	0.0155	0.0678	--	--	
Spray Booth 2 Air Supply Heater	Bananza	2.295	3120	8760	2813	NO_x	Table 1.4-1.	94	0.26	1.16	--	1.0	BOOTH2
						CO	Table 1.4-1.	40	0.11	0.49	14	--	
						SO_2	Table 1.4-2.	0.6	0.0017	0.0074	0.2	1.0	
						PM_{10}	Table 1.4-2.	7.6	0.0214	0.0936	0.2	1.0	BOOTH2
						VOC	Table 1.4-2.	5.5	0.0155	0.0678	--	--	
Dry Room Recirculation Heater	Reznor	0.180	3120	8760	221	NO_x	Table 1.4-1.	94	0.021	0.091	--	1.0	AIRHTR3
						CO	Table 1.4-1.	40	0.009	0.039	14	--	
						SO_2	Table 1.4-2.	0.6	0.00	0.00	0.2	1.0	
						PM_{10}	Table 1.4-2.	7.6	0.00	0.01	0.2	1.0	AIRHTR3
						VOC	Table 1.4-2.	5.5	0.0012	0.0053	--	--	

Note 1: Assume 80% efficiency, natural gas heating value of 1020 Btu/scf.

Preliminary for
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Table A-4b: Booth Heaters Combined
TAP Emissions

Unit ID	Rated Input	On-line Rating Used (hrs/ yr)	Emission Factor AP-42 Tables 1.4-3 and 1.4-4		Uncontrolled Combustion Emissions
	MMBtu per Hr		Toxic Air Pollutant	lb/ MMBtu	lbs/hr
Booth Heaters (3)	5.963	8760	Arsenic	2.0E-07	1.2E-06
			Barium	4.3E-06	2.6E-05
			Benzene	2.1E-06	1.2E-05
			Cadmium	1.1E-06	6.4E-06
			Chromium	1.4E-06	8.2E-06
			Cobalt	8.2E-08	4.9E-07
			Copper	8.3E-07	5.0E-06
			Dichlorobenzene	1.2E-06	7.0E-06
			Formaldehyde	7.4E-05	4.4E-04
			Hexane	1.8E-03	0.011
			Manganese	3.7E-07	2.2E-06
			Mercury	2.5E-07	1.5E-06
			Molybdenum	1.1E-06	6.4E-06
			Naphthalene	6.0E-07	3.6E-06
			Nickel	2.1E-06	1.2E-05
			Pentane	2.5E-03	1.5E-02
			Toluene	3.3E-06	2.0E-05
			Vanadium	2.3E-06	1.3E-05
			Zinc	2.8E-05	1.7E-04

Preliminary for
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and Modeling Protocol

Table A-5:
Facility-Wide Controlled Emissions (Proposed Paint Limits and Unrestricted Heater Operations)

Product ID Name Manufacturer	Kit Avenue Proposed Permit Limits[1]	
	gal/day	gal/yr
ASP-435 Gray ASP-901 Black 3.5/2.8 VOC Shop Primers PPG	270	4000
DAR-Acrylic Enamels PPG	144	3075
DP50LF Gray DP90LF Black Epoxy Primers PPG	180	3556
DP401LF Epoxy Primer Catalyst PPG	90	1778
DT870 Reducer PPG	72	500
DTL10 Laquer Thinner PPG	15	1560
DTR600 DTR602 Reducers PPG	108	2306
DXR80 Ultra Urethane Hardener PPG	18	384
ESH200 Single Stage Hardener PPG	17	1667
ESSS9000 Black Acrylic Polyester PPG	68	9000
ESSS903653 White Acrylic Polyester PPG	34	1000
ESX510 Standard Activator PPG	17	1667

Kit Avenue Toxic Air Pollutants - Total (including heaters)[3]	TAP Type (24 hr or Annual Averaging)	Allowable Ambient Conc. (AAC, mg/m3)	Controlled Emissions (lb/hr)	Impact at 1 lb/hr Emissions (mg/m3)[5]	Persistence Factor	Controlled Ambient Conc. (mg/m3)	Controlled Conc. (% of AAC)
Acetone	585 (24 hr)	89	22.19	0.093	0.4	0.82565	0.9%
Arsenic	586 (Annual)	0.00023	1.17E-06		0.125	1.36E-08	0.0%
Barium	585 (24 hr)	0.025	2.57E-05		0.4	9.57E-07	0.0%
Benzene	586 (Annual)	0.12	1.23E-05		0.125	1.43E-07	0.0%
2-Butoxy Ethanol	585 (24 hr)	6	6.94		0.4	0.25805	4.3%
n-Butyl Acetate	585 (24 hr)	35.5	7.40		0.4	0.27542	0.8%
Cadmium	586 (Annual)	0.00056	6.43E-06		0.125	7.48E-08	0.0%
Calcium Carbonate	585 (24 hr)	0.5	0.666		0.4	0.02476	5.0%
Carbon Black	585 (24 hr)	0.175	0.113		0.4	0.00419	2.4%
Chromium	585 (24 hr)	0.025	8.18E-06		0.4	3.04E-07	0.0%
Cobalt	585 (24 hr)	0.0025	4.91E-07		0.4	1.83E-08	0.0%
Copper	585 (24 hr)	0.05	4.97E-06		0.4	1.85E-07	0.0%
Dichlorobenzene	585 (24 hr)	15	7.01E-06		0.4	2.61E-07	0.0%
Ethyl Benzene	585 (24 hr)	21.75	4.16		0.4	0.15466	0.7%
Formaldehyde	586 (Annual)	0.077	4.38E-04		0.125	5.10E-06	0.0%
n-Heptane	585 (24 hr)	82	5.00		0.4	0.18595	0.2%
Hexamethylene diisocyanate	585 (24 hr)	0.0015	0.00355		0.4	0.00013	8.8%
n-Hexane	585 (24 hr)	9	3.35		0.4	0.12461	1.4%
Isopropyl Alcohol	585 (24 hr)	49	3.18		0.4	0.11820	0.2%
Manganese	585 (24 hr)	0.025	2.22E-06		0.4	8.26E-08	0.0%
Mercury	585 (24 hr)	0.0005	1.52E-06		0.4	5.65E-08	0.0%
1-Methoxy 2-Propyl Acetate	585 (24 hr)	3.6	10.22		0.4	0.38008	10.6%
Methyl n-Amyl Ketone	585 (24 hr)	11.75	13.91		0.4	0.51732	4.4%
Methylcyclohexane	585 (24 hr)	80.5	5.00		0.4	0.18595	0.2%
MEK	585 (24 hr)	29.5	11.62		0.4	0.43216	1.5%
MIBK	585 (24 hr)	10.25	5.86		0.4	0.21793	2.1%
Molybdenum	585 (24 hr)	0.25	6.43E-06		0.4	2.39E-07	0.0%
Naphtha (Stoddard Solvent)	585 (24 hr)	26.25	39.21		0.4	1.45859	5.6%
Naphthalene	585 (24 hr)	2.5	0.46		0.4	0.01700	0.7%
Nickel	586 (Annual)	0.0042	1.23E-05		0.125	1.43E-07	0.0%
Parachlorobenzotrifluoride[4]	585 (24 hr)	0.253	5.45		0.4	0.20270	80.1%
Pentane	585 (24 hr)	88.5	0.015		0.4	0.00057	0.0%
Propyl Alcohol	585 (24 hr)	25	8.26		0.4	0.30715	1.2%
Silica- amorphous	585 (24 hr)	0.5	0.0108		0.4	0.00040	0.1%
Silica- crystalline	585 (24 hr)	0.005	0.01844		0.4	0.00069	13.7%
Toluene	585 (24 hr)	18.75	24.14		0.4	0.89809	4.8%
1,2,4-Trimethyl Benzene	585 (24 hr)	6.15	7.74		0.4	0.28789	4.7%
Vanadium	585 (24 hr)	0.0025	1.34E-05		0.4	5.00E-07	0.0%
Xylene	585 (24 hr)	21.75	47.5		0.4	1.76621	8.1%
Zinc	585 (24 hr)	0.05	1.70E-04		0.4	6.31E-06	0.0%

Kit Avenue Criteria Pollutants - Total	Averaging Period	NAAQS Standard (ug/m3)	Controlled Emissions (lb/hr)	Impact at 1 lb/hr Emissions (ug/m3)[5]	Persistence Factor	Controlled Ambient Conc. (ug/m3)	Background Conc. (ug/m3)	Total Impact (ug/m3)	Controlled Conc. (% of NAAQS)
NO_x	Annual	100	0.55	92.6	0.08	4.07		4.1	4.1%
PM_{10}	24-hr	150	1.83		0.40	67.9		67.9	45.3%
	Annual	50	0.18		0.08	1.32		1.3	2.6%

Kit Avenue HAPs - Total	Controlled Emissions (tons/yr)	Major Facility Threshold (tons//yr)
Arsenic	5.12E-06	10
Benzene	5.38E-05	10
Cadmium	2.82E-05	10
Chromium	3.58E-05	10
Cobalt	2.15E-06	10
Dichlorobenzene	3.07E-05	10
Ethyl Benzene	1.0	10
Formaldehyde	1.92E-03	10
Hexamethylene diisocyanate	0.00259	10
n-Hexane	2.4	10
Manganese	9.73E-06	10
Mercury	6.66E-06	10
MEK	1.5	10
MIBK	1.4	10
Naphthalene	0.12	10
Nickel	5.38E-05	10
Toluene	7.9	10
Xylene (Note 6)	11.8	10
Total (Note 6)	**26.2**	25

Kit Avenue Criteria Pollutants - Total	Controlled Emissions (tons/yr)	Major Facility Threshhold (tons/yr)
PM_{10} (Note 7)	0.8	100
VOC (Note 2)	58.9	100

Preliminary for
Pre-application Mtg
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Note 1: See Tables A-1b, A-2b, A-3b for permit limit bases.
Note 2: All coating volatile content counted as VOC except for acetone and parachlorobenzotrifluoride. Includes booth and dry room heaters' unrestricted emissions.
Note 3: See Table A-4a for booth and dry room heaters' criteria pollutant emission calculations. See Table A-4b for booth and dry room heaters' TAP and HAP emission calculations.
Note 4: AAC for PCBTF provided by IDEQ.
Note 5: Based on Screen3 modeling.
Note 6: Major thresholds exceeded due to cumulative effect of the different paint mixes. In reality, not all paint mixes will be used. To maintain synthetic minor facility status, xylene to be permit limited to less than 10 tons/year. This will keep Total HAPs below 25 tons per year.
Note 7: Based on combined coatings' solids content adjusted for coating retention (57%) and control equipment efficiency (98%) and unrestricted booth and dry room heaters' emissions.

Appendix B;
SCREEN3 Preliminary Analysis Modeling Reports

11/09/06
19:32:20

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

TEM PCTBF screening analysis

SIMPLE TERRAIN INPUTS:
SOURCE TYPE = POINT
EMISSION RATE (G/S) = .126000
STACK HEIGHT (M) = 10.9700
STK INSIDE DIAM (M) = .8635
STK EXIT VELOCITY (M/S)= 9.6708
STK GAS EXIT TEMP (K) = 293.0000
AMBIENT AIR TEMP (K) = 293.0000
RECEPTOR HEIGHT (M) = 1.5000
URBAN/RURAL OPTION = RURAL
BUILDING HEIGHT (M) = 9.1400
MIN HORIZ BLDG DIM (M) = 18.9000
MAX HORIZ BLDG DIM (M) = 48.7700

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 12000.000 (ACFM)

BUOY. FLUX = .000 M**4/S**3; MOM. FLUX = 17.434 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	35.86	1.89	1.86	NO
100.	92.56	6	4.0	4.2	10000.0	11.65	4.07	7.29	SS
200.	59.85	6	3.5	3.7	10000.0	12.05	7.73	8.25	SS

300.	46.67	6	3.0	3.2	10000.0	12.80	11.23	9.07	SS
400.	39.21	6	3.0	3.2	10000.0	12.80	14.64	10.34	SS
500.	32.87	6	3.0	3.2	10000.0	12.80	17.97	11.12	SS
600.	29.21	6	2.5	2.6	10000.0	14.28	21.24	11.65	SS
700.	26.13	6	2.5	2.6	10000.0	14.28	24.46	12.67	SS
800.	23.40	6	2.5	2.6	10000.0	14.28	27.63	13.65	SS
900.	21.05	6	2.5	2.6	10000.0	14.28	30.78	14.31	SS
1000.	19.33	6	2.0	2.1	10000.0	17.18	33.88	14.63	SS
1100.	18.01	6	2.0	2.1	10000.0	17.18	36.96	15.48	SS
1200.	16.78	6	2.0	2.1	10000.0	17.18	40.01	16.29	SS
1300.	15.63	6	2.0	2.1	10000.0	17.18	43.04	17.09	SS
1400.	14.59	6	2.0	2.1	10000.0	17.18	46.05	17.86	SS
1500.	13.63	6	2.0	2.1	10000.0	17.18	49.03	18.62	SS
1600.	12.76	6	2.0	2.1	10000.0	17.18	51.99	19.36	SS
1700.	12.21	6	1.0	1.1	10000.0	28.58	54.94	19.52	SS
1800.	12.04	6	1.0	1.1	10000.0	28.58	57.87	20.23	SS
1900.	11.82	6	1.0	1.1	10000.0	28.58	60.78	20.94	SS
2000.	11.58	6	1.0	1.1	10000.0	28.58	63.68	21.63	SS
2100.	11.28	6	1.0	1.1	10000.0	28.58	66.56	22.21	SS
2200.	10.98	6	1.0	1.1	10000.0	28.58	69.42	22.78	SS
2300.	10.69	6	1.0	1.1	10000.0	28.58	72.28	23.34	SS
2400.	10.39	6	1.0	1.1	10000.0	28.58	75.12	23.89	SS
2500.	10.10	6	1.0	1.1	10000.0	28.58	77.95	24.42	SS
2600.	9.821	6	1.0	1.1	10000.0	28.58	80.76	24.95	SS
2700.	9.546	6	1.0	1.1	10000.0	28.58	83.57	25.47	SS
2800.	9.279	6	1.0	1.1	10000.0	28.58	86.36	25.98	SS
2900.	9.021	6	1.0	1.1	10000.0	28.58	89.15	26.48	SS
3000.	8.771	6	1.0	1.1	10000.0	28.58	91.92	26.98	SS
3500.	7.654	6	1.0	1.1	10000.0	28.58	105.65	28.98	SS
4000.	6.749	6	1.0	1.1	10000.0	28.58	119.17	30.84	SS
4500.	6.008	6	1.0	1.1	10000.0	28.58	132.50	32.57	SS
5000.	5.394	6	1.0	1.1	10000.0	28.58	145.67	34.21	SS
5500.	4.879	6	1.0	1.1	10000.0	28.58	158.69	35.76	SS
6000.	4.442	6	1.0	1.1	10000.0	28.58	171.58	37.23	SS
6500.	4.069	6	1.0	1.1	10000.0	28.58	184.34	38.64	SS
7000.	3.746	6	1.0	1.1	10000.0	28.58	196.99	40.00	SS
7500.	3.471	6	1.0	1.1	10000.0	28.58	209.54	41.16	SS
8000.	3.231	6	1.0	1.1	10000.0	28.58	221.98	42.28	SS
8500.	3.018	6	1.0	1.1	10000.0	28.58	234.34	43.36	SS
9000.	2.829	6	1.0	1.1	10000.0	28.58	246.61	44.40	SS
9500.	2.660	6	1.0	1.1	10000.0	28.58	258.79	45.41	SS
10000.	2.508	6	1.0	1.1	10000.0	28.58	270.90	46.38	SS

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

```
  90.  94.49      6    4.0    4.2 10000.0  11.65    3.73    6.97    SS

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****************************************
   *** REGULATORY (Default) ***
  PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
      (BRODE, 1988)
****************************************


 *** CAVITY CALCULATION - 1 ***      *** CAVITY CALCULATION - 2 ***
  CONC (UG/M**3)     =   20.77       CONC (UG/M**3)     =   .0000
  CRIT WS @10M (M/S) =   17.81       CRIT WS @10M (M/S) =   99.99
  CRIT WS @ HS (M/S) =   18.14       CRIT WS @ HS (M/S) =   99.99
  DILUTION WS (M/S)  =    9.07       DILUTION WS (M/S)  =   99.99
  CAVITY HT (M)      =   10.13       CAVITY HT (M)      =    9.14
  CAVITY LENGTH (M)  =   36.57       CAVITY LENGTH (M)  =   21.80
  ALONGWIND DIM (M)  =   18.90       ALONGWIND DIM (M)  =   48.77

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S.  CONC SET = 0.0

****************************************
    END OF CAVITY CALCULATIONS
****************************************


   ****************************************
   *** SUMMARY OF SCREEN MODEL RESULTS ***
   ****************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)   MAX (M)    HT (M)
--------------   -----------  -------   -------
SIMPLE TERRAIN      94.49        90.       0.

BLDG. CAVITY-1      20.77        37.     -- (DIST = CAVITY LENGTH)

BLDG. CAVITY-2      .0000        22.     -- (DIST = CAVITY LENGTH)
```

11/09/06
19:39:29

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

TEM PCBTF screening analysis all 3 bldgs

SIMPLE TERRAIN INPUTS:
SOURCE TYPE = POINT
EMISSION RATE (G/S) = .126000
STACK HEIGHT (M) = 10.9700
STK INSIDE DIAM (M) = .8635
STK EXIT VELOCITY (M/S)= 9.6708
STK GAS EXIT TEMP (K) = 293.0000
AMBIENT AIR TEMP (K) = 293.0000
RECEPTOR HEIGHT (M) = 1.5000
URBAN/RURAL OPTION = RURAL
BUILDING HEIGHT (M) = 9.1400
MIN HORIZ BLDG DIM (M) = 48.7700
MAX HORIZ BLDG DIM (M) = 152.4000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 12000.000 (ACFM)

BUOY. FLUX = .000 M**4/S**3; MOM. FLUX = 17.434 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	35.86	1.89	1.86	NO
100.	92.56	6	4.0	4.2	10000.0	11.65	4.07	7.29	SS
200.	59.85	6	3.5	3.7	10000.0	12.05	7.73	8.25	SS

300.	46.67	6	3.0	3.2	10000.0	12.80	11.23	9.07	SS
400.	39.21	6	3.0	3.2	10000.0	12.80	14.64	10.34	SS
500.	32.87	6	3.0	3.2	10000.0	12.80	17.97	11.12	SS
600.	29.21	6	2.5	2.6	10000.0	14.28	21.24	11.65	SS
700.	26.13	6	2.5	2.6	10000.0	14.28	24.46	12.67	SS
800.	23.40	6	2.5	2.6	10000.0	14.28	27.63	13.65	SS
900.	21.05	6	2.5	2.6	10000.0	14.28	30.78	14.31	SS
1000.	19.33	6	2.0	2.1	10000.0	17.18	33.88	14.63	SS
1100.	18.01	6	2.0	2.1	10000.0	17.18	36.96	15.48	SS
1200.	16.78	6	2.0	2.1	10000.0	17.18	40.01	16.29	SS
1300.	15.63	6	2.0	2.1	10000.0	17.18	43.04	17.09	SS
1400.	14.59	6	2.0	2.1	10000.0	17.18	46.05	17.86	SS
1500.	13.63	6	2.0	2.1	10000.0	17.18	49.03	18.62	SS
1600.	12.76	6	2.0	2.1	10000.0	17.18	51.99	19.36	SS
1700.	12.21	6	1.0	1.1	10000.0	28.58	54.94	19.52	SS
1800.	12.04	6	1.0	1.1	10000.0	28.58	57.87	20.23	SS
1900.	11.82	6	1.0	1.1	10000.0	28.58	60.78	20.94	SS
2000.	11.58	6	1.0	1.1	10000.0	28.58	63.68	21.63	SS
2100.	11.28	6	1.0	1.1	10000.0	28.58	66.56	22.21	SS
2200.	10.98	6	1.0	1.1	10000.0	28.58	69.42	22.78	SS
2300.	10.69	6	1.0	1.1	10000.0	28.58	72.28	23.34	SS
2400.	10.39	6	1.0	1.1	10000.0	28.58	75.12	23.89	SS
2500.	10.10	6	1.0	1.1	10000.0	28.58	77.95	24.42	SS
2600.	9.821	6	1.0	1.1	10000.0	28.58	80.76	24.95	SS
2700.	9.546	6	1.0	1.1	10000.0	28.58	83.57	25.47	SS
2800.	9.279	6	1.0	1.1	10000.0	28.58	86.36	25.98	SS
2900.	9.021	6	1.0	1.1	10000.0	28.58	89.15	26.48	SS
3000.	8.771	6	1.0	1.1	10000.0	28.58	91.92	26.98	SS
3500.	7.654	6	1.0	1.1	10000.0	28.58	105.65	28.98	SS
4000.	6.749	6	1.0	1.1	10000.0	28.58	119.17	30.84	SS
4500.	6.008	6	1.0	1.1	10000.0	28.58	132.50	32.57	SS
5000.	5.394	6	1.0	1.1	10000.0	28.58	145.67	34.21	SS
5500.	4.879	6	1.0	1.1	10000.0	28.58	158.69	35.76	SS
6000.	4.442	6	1.0	1.1	10000.0	28.58	171.58	37.23	SS
6500.	4.069	6	1.0	1.1	10000.0	28.58	184.34	38.64	SS
7000.	3.746	6	1.0	1.1	10000.0	28.58	196.99	40.00	SS
7500.	3.471	6	1.0	1.1	10000.0	28.58	209.54	41.16	SS
8000.	3.231	6	1.0	1.1	10000.0	28.58	221.98	42.28	SS
8500.	3.018	6	1.0	1.1	10000.0	28.58	234.34	43.36	SS
9000.	2.829	6	1.0	1.1	10000.0	28.58	246.61	44.40	SS
9500.	2.660	6	1.0	1.1	10000.0	28.58	258.79	45.41	SS
10000.	2.508	6	1.0	1.1	10000.0	28.58	270.90	46.38	SS

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

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  90.  94.49      6    4.0    4.2 10000.0  11.65    3.73    6.97    SS

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****************************************
   *** REGULATORY (Default) ***
  PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
      (BRODE, 1988)
****************************************


 *** CAVITY CALCULATION - 1 ***      *** CAVITY CALCULATION - 2 ***
  CONC (UG/M**3)    =   .0000       CONC (UG/M**3)    =   .0000
  CRIT WS @10M (M/S) =   99.99       CRIT WS @10M (M/S) =   99.99
  CRIT WS @ HS (M/S) =   99.99       CRIT WS @ HS (M/S) =   99.99
  DILUTION WS (M/S)  =   99.99       DILUTION WS (M/S)  =   99.99
  CAVITY HT (M)      =    9.14       CAVITY HT (M)      =    9.14
  CAVITY LENGTH (M)  =   51.60       CAVITY LENGTH (M)  =   36.57
  ALONGWIND DIM (M)  =   48.77       ALONGWIND DIM (M)  =  152.40

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S.  CONC SET = 0.0

****************************************
    END OF CAVITY CALCULATIONS
****************************************


   ****************************************
   *** SUMMARY OF SCREEN MODEL RESULTS ***
   ****************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE       (UG/M**3)   MAX (M)    HT (M)
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SIMPLE TERRAIN      94.49        90.       0.


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** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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