

Sea Ray Boats, Inc.

Cape Canaveral Plant  
1200 Sea Ray Drive  
Merritt Island, FL 32953

SUPPLEMENT TO  
APPLICATION FOR AIR PERMIT – LONG FORM

April 1999

*Volume 2 of 3*  
*Application for Air Permit - Long Form*

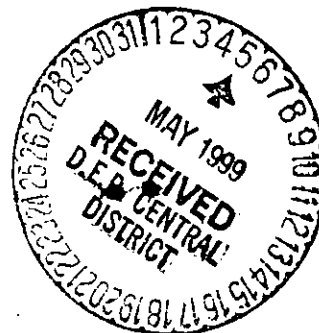
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## **1. INTRODUCTION**

This supplement represents a discussion of the proposed Sea Ray Boats, Inc. complex (Cape Canaveral Plant) to be located on Merritt Island in Brevard County, Florida.

Volumes 1, 2, and 3 (a) & (b) contain the completed construction application on DEP Form No. 62-210-900(1) as required by the State of Florida Department of Environmental Protection, Division of Air Resources Management.

Sea Ray Boats, Inc. proposes to construct improvements and begin the manufacture of boats. This production will create the emission of air pollutants. The quantity of air pollutants emitted into the atmosphere is projected to be approximately 242 tons per year.

The purpose of this document is to present background information and data regarding these proposed improvements.

### **a. FACILITY DESCRIPTION**

Sea Ray Boats, Inc. manufacturing complex is proposed to be located on Merritt Island, 0.54 miles west of the intersection of Banana River Drive and Sea Ray Drive and adjacent to the Barge Canal in Brevard County.

The principal activity conducted by Sea Ray Boats, Inc., at this location, will be the production of high quality, fiberglass pleasure boats.

The manufacturing process at this facility will generate volatile organic compound (VOC) emissions to the atmosphere. The primary emission will be that of styrene, it occurs during the application of gelcoat and polyester resin in the lamination of the product. There are other compounds, which comprise the total emissions, but they are minor compared to styrene. All compounds used in the manufacturing process will be discussed and presented later in the materials list and emissions summary in Chapter 3, Sections e and f.

**b. FACILITY IMPROVEMENTS**

Market demand for Sea Ray's product has given rise for the need to increase production and this site has been selected as the location to provide additional space for the new operations.

**1. Construction**

The proposed improvements are shown graphically in Exhibit 3. The construction of this facility is planned to occur in three phases. First, the proposed construction in Phase 1 will be that of 3 buildings, the lamination/assembly building, the fabrication building, and the accessory structures, and 291 asphalt-parking spaces. The proposed construction for Phase 2 will be an additional building and required parking spaces.

The lamination/assembly building is designed as a 72,000 square feet facility, with the addition of 4,800 square feet of

factory engineering offices, a lunchroom, and restrooms for the plant employees. There will also be the addition of an approximately 12,000 square foot overhang of for the final finish of boats after water testing. The 72,000 square feet of main factory area will contain 21,000 square feet of gelcoat and lamination area, with ventilation as required by OSHA, 36,000 square feet of assembly space, and approximately 15,000 square feet for parts inspection and hole cutting. Furthermore, the facility will be equipped with ventilation, dust collection, and lifting equipment in all areas required.

The fabrication building is designed as a 43,000 square foot facility, with the addition of 5,000 square feet of administrative offices and employee restrooms. The main portion of the building contains a 5,400 square foot lamination woodshop, a 1,200 square foot upholstery shop, a 1,000 square foot lectra room, and a 900 square foot hose, insulation, and wirepull room. It also contains 14,400 square feet of warehouse area with loading docks and 20,100 square feet dedicated to fabrication operations.

The accessory structures to be constructed are a guardhouse, a resin and materials storage building, and a marine fueling station.

## 2. MANUFACTURING PROCESS

### a. Process Description (General)

This section will discuss the fiberglass reinforced plastic boat building techniques to be employed by Sea Ray at the complex on Merritt Island.

This facility is classified within SIC Code 3732, *Boat Building and Repair*, and primarily utilizes the process called "contact open molding" in the manufacture of its product. There are air emissions released from the raw materials used, polyester resin, gel coats, paints, carpet glue, wood glue, and various solvents. These products are component to other processes that carry their own individual Source Classification Codes (SCC). The flow diagrams that represent these various classifications are shown in Sections b and c of this chapter. However, for the purpose of this study, only the SCC Code 31401501 (Misc. Ind., Transportation Equipment General, Boat Manufacturing, General Manufacture of Fiberglass Pleasure Boats) will be used.

In the literature that the Radian Corporation presented, a thorough discussion of the boat manufacturing process for fiberglass boats was presented. The following is an adaptation of that work:

The "contact open molding" method consists of applying layers of impregnated fiberglass reinforcement (laminated) on an open female or male mold. The laminate is built up to the required thickness and is then allowed to cure. After the cure is completed, the part is removed and the

mold is reused. A male mold is convex leaving a smooth inner surface and a female mold is concave leaving a smooth outer surface on the product. Since smooth outer surfaces are normally desired, female molds are most commonly used in fiberglass boat production.

The primary type of resin used in fiberglass boat production is polyester resin. Polyester resins used by Sea Ray typically consist of styrene monomer and polyester solids. Before applying the resin, the necessary catalyst and accelerator are added to initiate curing. During curing, the styrene monomer polymerizes forming a thermo-setting plastic. This is an exothermic process, and because styrene monomer reacts more rapidly at elevated temperatures, the reaction is autocatalytic.

The production process steps used by Sea Ray in the manufacturing of fiberglass boats are shown in Section b of this chapter. The different parts of the boat (deck, hull, and small parts) are fabricated in the lamination area. The first step in the production process is coating the mold with a releasing agent such as wax. A gel coat is usually applied on the mold with a spray gun in a ventilated spray booth. The gel coat is a pigmented polyester resin, which forms the outer smooth surface of the molded part. After spraying, the gel coat hardens or cures with a smooth surface against the mold and a tacky outer surface, which enhances later bonding of the first layer of laminate.

After the gel coat cures, the first layer of resin and fiberglass laminate is applied using one of the lamination methods described below. The lamination procedure is repeated until the desired thickness is achieved. Structural reinforcements such as wood, plastic, and metal are also added during lamination. Lamination is a batch process with time between laminates dependent on cure time of the resin. After the final lamination has cured, the excess is trimmed from the part and the part is removed from the mold.

After the parts are removed from the mold, they are then taken to the grinding area where they are sanded, inspected and repaired if required. Once removed from the inspection area parts are delivered to the assembly area where carpet and accessories are installed to produce the finished product.

There are two methods of lamination used by Sea Ray in the manufacturing process. These are hand lay-up and spray-up. Each method offers advantages and disadvantages over the other and a combination of the two is used.

In the hand lay-up method, resin is applied with a resin gun. A brush or other device is usually employed to even out the resin. After a thin coat of resin has been applied to the gel coat or previous layer of laminate, fiberglass chop or other reinforcement is placed over the wet resin. The primary fiberglass reinforcements used in hand lay-up are woven roving, cloth, and mat. Squeegees or metal rollers are then used



to force the resin up through the reinforcement and remove any entrapped air (wet out). The resin is allowed to gel and the lamination process is repeated until the desired thickness of fiberglass laminate is obtained.

Catalyst injection resin guns are used at Sea Ray, they mix accelerated resin and the catalyst to the proper proportion inside the gun spray head and then spray the mixture through a single spray nozzle.

The spray-up method is an alternative to hand lay-up for hull and deck fabrication and is the most common method of small parts production. The spray-up method employs a chopper gun to simultaneously apply resin and chopped strands of glass reinforcement. Brushes and rollers are then used to spread the mixture and remove entrapped air. This process is repeated until the desired thickness is obtained.

The spray-up method is restricted to laminates using chopped glass strand as the reinforcement. Due to the type of reinforcement, laminates produced in spray-up have lower glass to resin ratios than the woven roving or cloth laminates produced in hand lay-up. Because the strength to weight ratio is proportional to the glass to resin ratio, laminates produced in spray-up also have lower strength to weight ratios than woven roving or cloth laminates. Laminates produced in hand lay-up with mat reinforcement are similar to the laminates produced in spray-up because mat reinforcement is just chopped strand with a binder.

The advantage of using hand lay-up with woven roving or cloth laminate over spray-up is that a product with a higher strength to weight ratio is produced. However, the fabrication process takes longer when the hand lay-up method is used. A common practice of Sea Ray is to combine these two methods. With this combination, parts of a boat that need to be strongest are fabricated using hand lay-up while parts that do not need as much strength, such as small parts, are fabricated using spray-up. This results in a lightweight boat that is produced in the minimum amount of time.

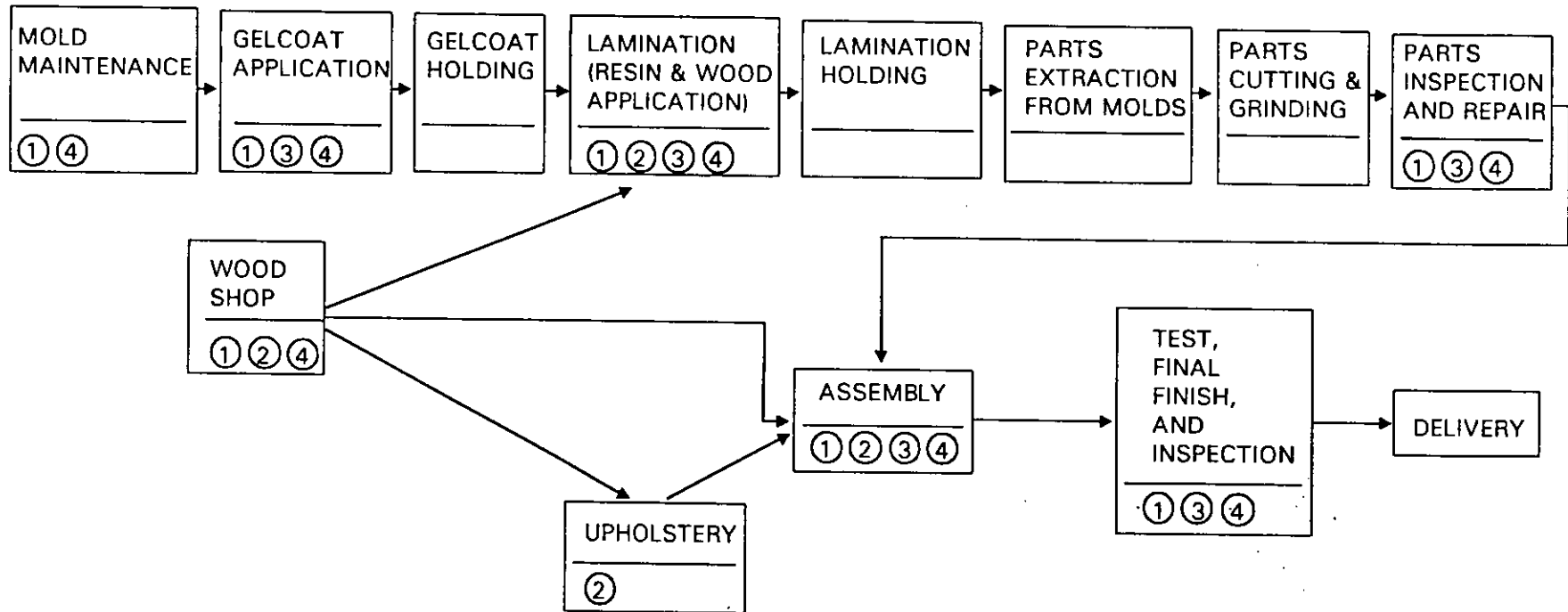
**b. Boat Manufacturing Process Flow Diagram**

The flow diagram contained on the following page defines the process steps taken by Sea Ray as the boats are manufactured.

The numbers shown beneath the process description on the diagram indicate the individual activities that are a component to that process. These individual activities are further classified with their own Source Classification Codes (SCC). Section c, within this chapter, contains the charts that illustrate these activities.

SEA RAY BOATS, INC.

BOAT MANUFACTURING FLOW DIAGRAM  
(Indicating Various Processes Involved)



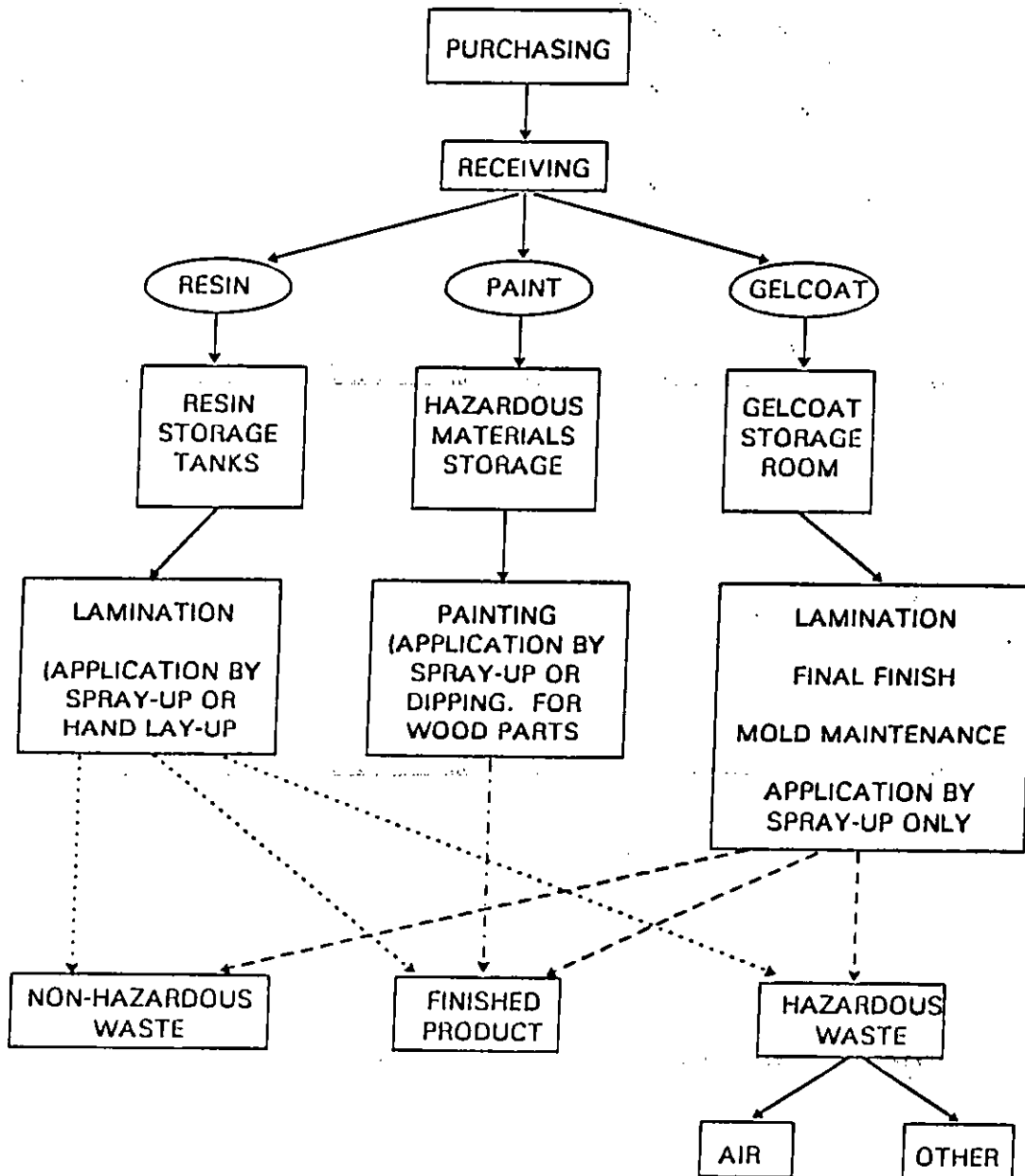
- NOTE:
- ① Surface Coating
  - ② Adhesives
  - ③ Thinners
  - ④ Cleaners, Lubricants, Waxes

**c. Process Flow Diagrams**

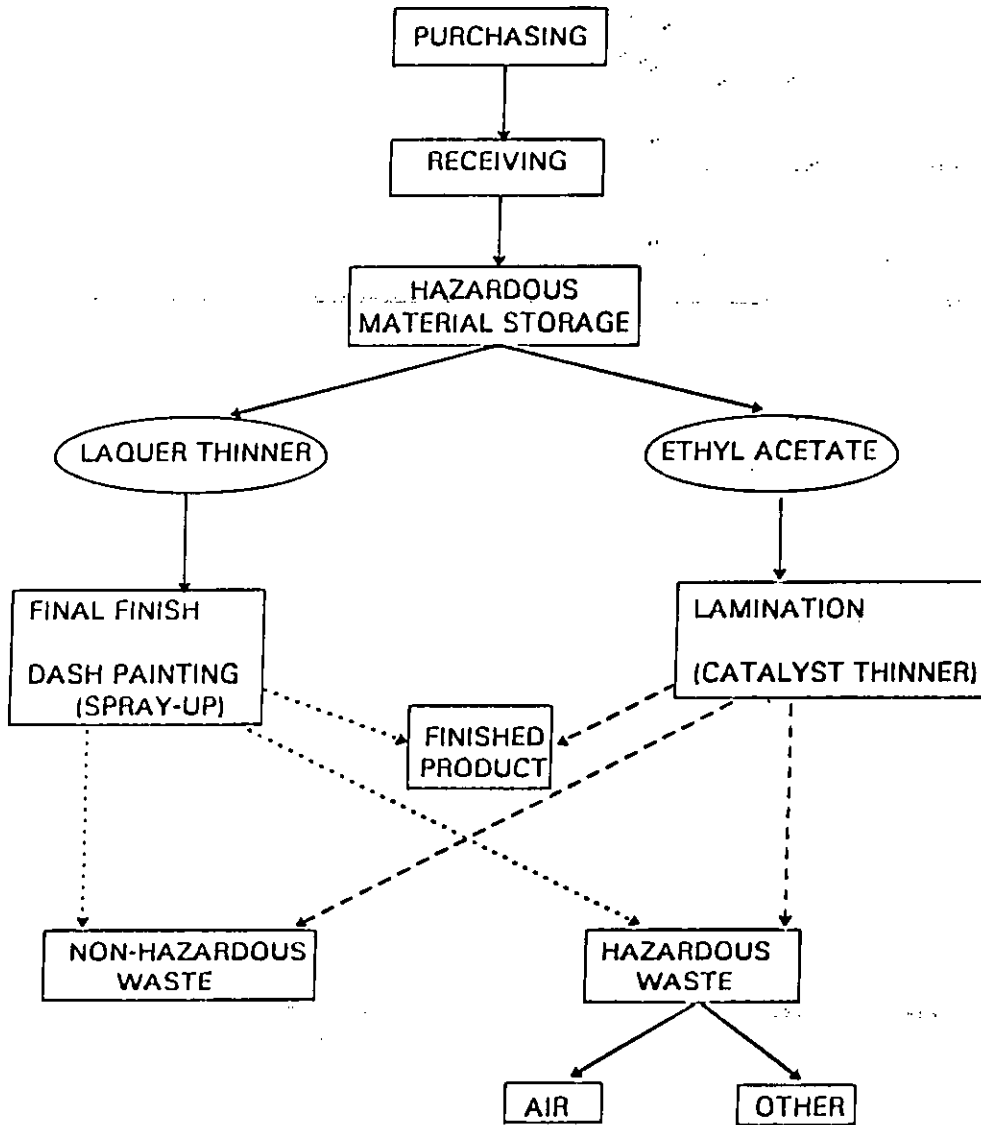
The diagrams contained within this section illustrate the relationship of use of a particular material to the department in which the process occurs. Refer to the preceding section to determine the association of the individual activity to the general manufacturing process.

**SURFACE COATING**  
**PROCESS FLOW DIAGRAM**

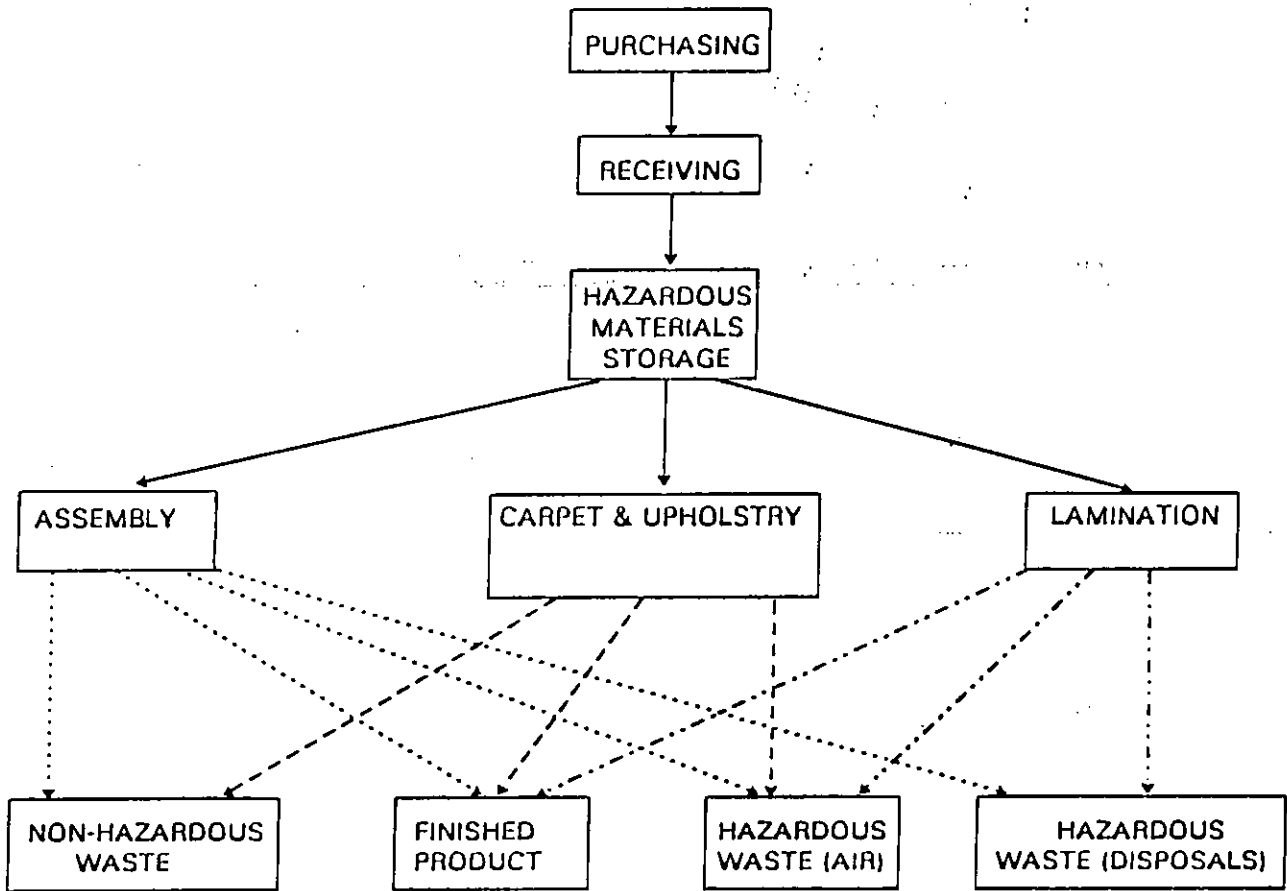
(This process is similar for gelcoat, paint, and resin)



THINNERS  
PROCESS FLOW DIAGRAM

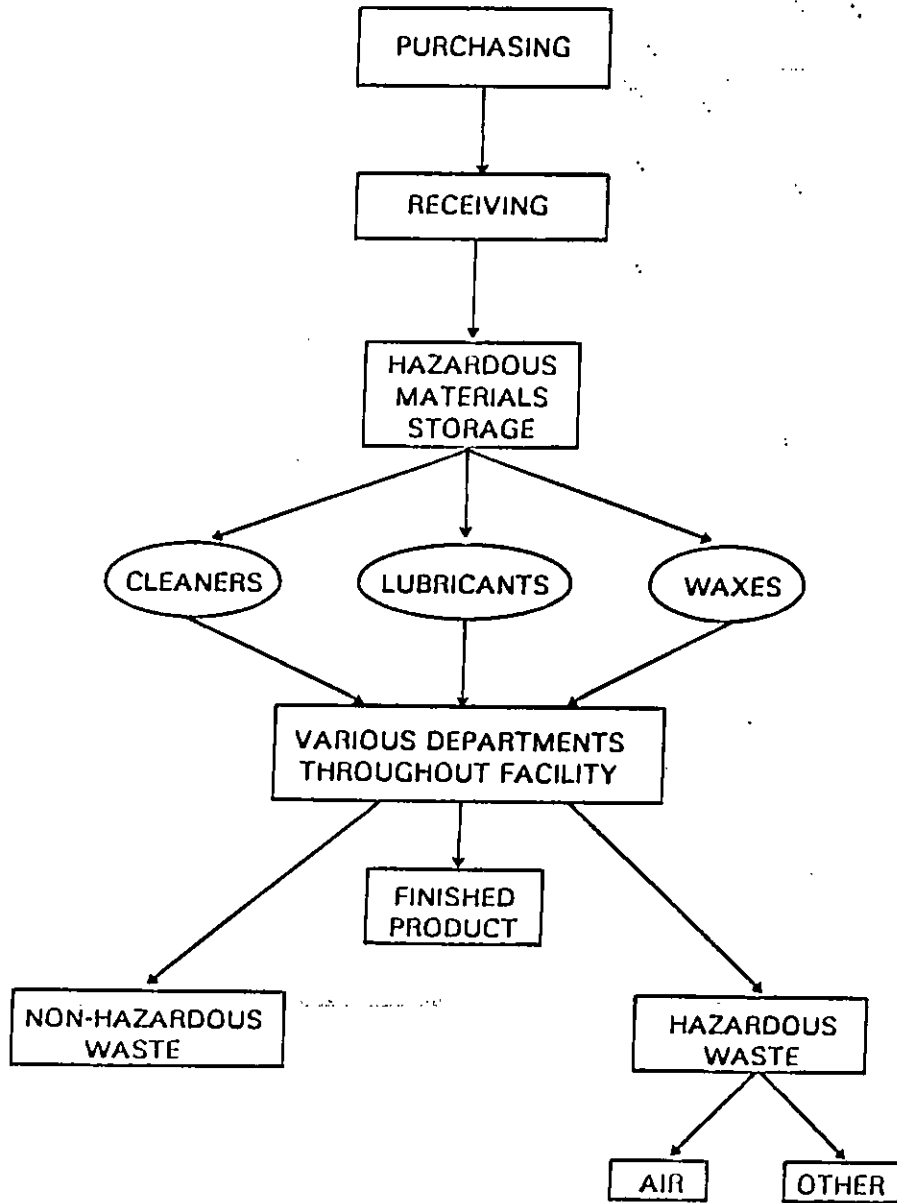


ADHESIVE OPERATION  
PROCESS FLOW DIAGRAM





CLEANERS, LUBRICANTS, WAXES  
PROCESS FLOW DIAGRAM



### **3. AIR EMISSIONS DESCRIPTION**

#### **a. Introduction**

The manufacture of boats within this Sea Ray facility produces air contaminants. These contaminants are exhausted to the atmosphere via plant ventilation systems or through minor fugitive emissions.

The following sections will indicate the location and basis for determining the estimated emissions from points identified as belonging to the facilities air emission source. Quantities of emissions applicable to the source are summarized in Table One.

Table One. Emissions Listed by Chemical and/or Category

Chemical	CAS #	FL ID	Projected (lbs)	Projected (tons)
<b>TOTAL VOC</b>		VOC	483,412.76	241.71
<b>TOTAL HAPs</b>		HAP	360,509.84	180.25
Butane	106-97-8	F005	315.90	0.16
Isobutane	75-28-5	F030	385.76	0.19
Pentane	109-66-0	F043	3,106.87	1.55
Propane	74-98-6	F048	3,132.84	1.57
Dimethyl Phthalate	131-11-3	H075	0.00	0.00
Ethyl Benzene	100-41-4	H085	12.54	0.01
Ethylene Glycol	107-21-1	H090	771.03	0.39
Formaldehyde	50-00-0	H095	0.24	0.00
2-Butoxyethanol	111-76-2	H096	570.19	0.29
Dipropylene glycol methyl ether	34950-94-8	H096	6,338.59	3.17
Dipropylene Glycol Monobutyl Ether	29911-28-2	H096	95.04	0.05
Propylene Glycol Monomethyl Ether Acetate	108-65-6	H096	10.38	0.01
Hexachloroethane	67-72-1	H101	18.12	0.01
Hexane	110-54-3	H104	11,403.99	5.70
Hydroquinone	123-31-6	H108	0.02	0.00
Methyl Alcohol	67-56-1	H115	3,949.92	1.97
Methyl Ethyl Ketone	78-93-3	H120	767.75	0.38
Methyl Isobutyl Ketone	108-10-1	H123	1,844.70	0.92
Methyl Methacrylate	80-62-6	H125	11,184.85	5.59
Methylene Chloride	75-09-2	H128	24.78	0.01
MDI	101-68-8	H129	0.00	0.00
Phenol	108-95-2	H144	19.24	0.01
Styrene	100-42-5	H163	310,231.53	155.12
Perchloroethylene	127-18-4	H167	3.15	0.00
Toluene	108-88-3	H169	5,349.49	2.67
Trichloroethylene	79-01-6	H176	5.95	0.00
Xylene	1330-20-7	H186	7,908.34	3.95

**b. Mold Maintenance Area**

The Mold Maintenance Area is located in the lamination building, See Exhibit C. The molds are repaired, cleaned, waxed, and readied for production in this area. Emissions from this location result during repair as damaged surfaces receive spot applications of tooling resin and gel; during cleaning, volatile solvents evaporate when the surface of the mold is wiped; and during waxing, solvents within the wax evaporate as it dries. Minor quantities of particulate emissions are generated during the spray application of resin and tooling gel. They are also generated during the polishing process after the wax has dried.

The molds are then moved into production to be used in the fabrication of decks, hulls and small parts.

The total amount of raw materials projected to be consumed in the repair and maintenance of molds are used to calculate the estimated emissions, as shown in the summary. See Section f, within this chapter.

**c. Fiberglass Parts Production**

**1. Lamination**

At this Sea Ray complex, fiberglass parts are fabricated in the lamination area. See Exhibit C, which indicates the lamination area within the plant.

At the location described in the exhibit, gel coat is applied in a spray booth or other space designated for that activity. The gel

coat is sprayed into freshly prepared molds, which are brought into production from the mold maintenance area.

Once the gel coat has cured, resin and/or resin with chopped fiberglass is applied by spray methods, then other reinforcements of woven fiberglass and wood are applied with resin in successive applications. This is called the lamination process and it creates the structural skeleton and form of the boat.

Emissions from the processes described above occur when the material (resin and gel coat) is sprayed into the mold. As the material is sprayed, the Volatile Organic Compound (VOC), styrene, evaporates from the overspray.

Additionally, emissions are created as the styrene monomer evaporates from the surface of the applied material before polymerization completely occurs. Minor particulate emissions are also created when the materials are sprayed (overspray), however, efficient filters are placed and maintained at exhaust locations as a method of control.

The total amount of resin and gel coat consumed in the fiberglass parts production process is used to calculate the estimated quantities of emissions as shown in the summary. See Section f, within this chapter.

## **2. Grinding**

Once the lamination process has been completed, and the plastic part has "cured" and removed from the mold, excess gel coat and laminate is trimmed. This trimming operation is normally accomplished by cutting the material with an abrasive wheel. This process is called "grinding". Grinding of the boat parts occurs in an enclosed booth.

Particulate emissions are generated as the material is sanded or "ground" by the abrasive wheel. The booth in which this operation takes place is specifically designed to collect these particulates, also to filter and recirculate the air within the building. The system through which the air from the booth passes is calculated to be 99.7% + efficient for 0.5 micron particles and is touted by the manufacturer to produce an exhaust air stream of higher quality with respect to particulates than ambient.

Therefore, with this method of control, particulate emissions from grinding are considered negligible.

## **3. Parts Inspection**

Repairs to all defects detected are made in the parts inspection area. Parts are inspected, patched, sanded and gelcoat and/or putty are used to repair defects. Hole cutting is also performed in parts inspection before the boat goes to the assembly area.

**d. Boat Assembly Operations**

There are many activities that take place as a boat is being assembled from its component parts. However, there are a few processes that create emissions of VOCs that cannot be classified as insignificant.

**1. Carpet and Upholstery**

The boat with fiberglass structural parts assembled receives carpet and upholstered articles. Sea Ray manufactures its own seating and other fabric covered parts. These items are usually prepared in the upholstery shop and consist of foam material applied to a wood frame then covered with vinyl or other fabrics.

Emissions associated with this process emanate from the use of glue to adhere the carpet, foam, and fabric. After the application of glue, the solvent evaporates into the building air as the glue dries and is exhausted to the outside via the plant ventilation system.

**2. Cleanup**

Cleanup is involved in almost every area of the facility and includes cleaning and flushing of application spray guns, cleaning of rollers, and cleanup of personnel.

**3. Final Finish**

During final finish the carpet is installed in the boats. The boat is then water tested, cleaned, and prepared for delivery.

e. **Throughput Materials and Projected Usage**

This section contains an itemization of each raw material along with the quantity projected to be consumed on an annual basis for this facility, Table Two.

The first three columns shown on the following table represent Sea Ray's inventory control numbers. The Description column indicates the product used. Usage and UOM columns indicate the quantity of the raw material planned to be used in one year.



Table Two. List of Materials  
List of Proposed Materials and Projected Usage

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM
10	120	100073	Orange Tooling					54.00	lbs
10	120	101139	Gelcoat, Black					60.00	lbs
10	120	101154	Bilge Grey Gc					184,765.00	lbs
10	190	101410	Polygard 33-441					2,438.00	lbs
10	120	101436	Black Tooling					162.00	lbs
15	60	101485	Paint, Latex Black (Delta Labs)	1,246.00	gal	10.1	#/gl	12,584.60	lbs
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs
15	10	102491	Additive, Retardant Butyl Cellulose	20.40	gal	7.48	#/gl	152.59	lbs
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs
10	110	102574	Flexbond Putty	984.00	gal	9.17	#/gl	9,023.28	lbs
25	120	102665	Silicon, Lubricant (Wd-40)	5.00	gal	6.68	#/gl	33.40	lbs
25	110	156984	Sealant, Silicone	7,897.00	ea	10.3	oz	5,083.69	lbs
195	35	164939	Compound, Edge Wax Fin-Kare	13.00	ea (gal)	6.65	#/gt	86.45	lbs
10	30	166488	Contact Disc Cement	148.00	ea	5	oz	46.25	lbs
195	35	179341	Compound Sealer Glaze	11.00	gal	8.75	#/gl	48.13	lbs
195	35	179358	Compound, Mold Release TR Hi-Tem	310.00	can	14	oz	271.25	lbs
15	80	181255	Paint, Spray Pt (Black)	4,430.00	can	11	oz	3,045.63	lbs
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs
10	30	191569	Adhesive, Threadlocker	89.00	ea	1.69	oz	9.40	lbs
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs
10	30	191718	Adhesive, Pvc Cement	203.00	qt	7.99	#/gl	405.49	lbs
195	65	191734	Silicone Spray Lubricant	2,668.00	can	24	oz	4,002.00	lbs
175	15	191742	Cleaner, Glass Spartan	125.00	btl	20	oz	156.25	lbs
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs
195	35	192864	Super Polyglaze	86.00	cn (2 qt)	7.92	#/gl	340.56	lbs
195	35	192872	Imperial Hand Glaze	16.00	cn (qt)	7.92	#/gl	31.68	lbs
175	15	192898	Bilge Cleaner	2.00	ea	16	oz	2.00	lbs
175	15	192922	Cleaner, Vinyl Formula Lr	5.00	can	14	oz	4.38	lbs
195	35	194274	Cpd Polishing Lackryl	72.00	gal	11.68	#/gl	840.96	lbs
195	35	194282	Compound, Polishing Dixtler	20.00	gal	10.81	#/gl	216.20	lbs
25	30	194308	Dykem Co	11.00	gal	7.18	#/gl	78.98	lbs
25	30	194415	Denatured Alcohol	685.00	gal	6.7	#/gl	4,589.50	lbs
25	110	209106	Sealant, Silicone	43.00	ea	3	8.72	8.79	lbs
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs
25	110	257600	Sealant, Pipe (PVC) w/Teflon	10.00	ea (50 ml)	9.51	#/gl	0.25	lbs
25	110	257907	Sealant, Urethane White Sikaflex	362.00	ea	10.5	oz	237.56	lbs
25	30	270009	Chemical, Mineral Spirits	161.00	gal	6.43	#/gl	1,035.23	lbs
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs
25	110	277731	Sealant, Silicone White	92.00	ea	8	oz	46.00	lbs
10	140	308205	Clear Mekp-9H					14,822.00	lbs
10	140	308213	Red Mekp9-H					39,302.00	lbs
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs
25	110	352443	Sealant, Silicone	1,093.00	ea	3	8.7	222.87	lbs
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs

Table Two. List of Materials  
List of Proposed Materials and Projected Usage

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM
10	120	437145	Webbing Solution	128.00	gal	7	#/gl	896.00	lbs
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs
175	15	440727	Cleaner, All Purpose	36.00	can	19	oz	42.75	lbs
10	120	556944	Antique White Gel					37,055.00	lbs
10	110	581975	Polyester Putty	1,602.00	gal	13.27	#/gl	21,258.54	lbs
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs
15	120	592899	Bottom Paint Thinner	48.00	gal	7.3	#/gl	350.40	lbs
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12.00	gal	7.5	#/gl	90.00	lbs
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18.00	gal	12.9	#/gl	232.20	lbs
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/10	19.00	gal	8.1	#/gl	153.90	lbs
10	190	619981	Alpha Altek 80602F					3,552,635.00	lbs
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs
175	15	662437	Cleaner, Super Blue Resin	2,112.00	gal	8.8	#/gl	18,585.60	lbs
25	100	662445	Solvent, Super Flush S-280	6,006.00	gal	8.88	#/gl	53,333.28	lbs
10	190	666057	Hydropell A35					210,060.00	lbs
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs
15	10	667451	Additive, Activator Imron	12.00	qt	8.01	#/gl	24.03	lbs
10	120	677732	Arctic White Gel Coat					483,374.00	lbs
10	120	680751	Bilge Grey Gel Coat					55,290.00	lbs
10	60	699553	Gel Patch, Slow Patchaid					168.00	lbs
195	35	715581	Cpd Polishing Lackryl 5 gal	101.00	pl (5 gl)	11.68	#/gl	5,898.40	lbs
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs
10	120	721126	Gelcoat, Zephyr Armorcote					18,773.00	lbs
10	120	721548	Airless Tooling Gel Coat					1,296.00	lbs
10	110	723080	Hvy Wt Bonding Putty					74,204.00	lbs
25	160	761346	Poly vinyl Alcohol	74.00	gal	7.63	#/gl	564.62	lbs
10	110	761643	Hvy Wt Bond Putty Low					90,540.00	lbs
15	120	789719	Thinner, Dykem Blue	191.00	gal	6.88	#/gl	1,314.08	lbs
25	100	790477	Isopropyl Acetate					24,480.00	lbs
195	65	810820	Lubricant, Protecto-Flex	1,282.00	ea	15	oz	1,201.88	lbs
25	110	813220	Sealant, Silicone Lt Gray Starbrite RT	5.00	ea (10.3 fl oz)	8.68	#/gl	3.49	lbs
15	20	825745	Paint, Acrylic Black Fast Drying	144.00	gal	8.345	#/gl	1,201.68	lbs
10	120	830893	Gelcoat, Teal Essence					624.00	lbs
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs
10	30	863142	Adhesive, Glue Instabond	527.00	ea	1.75	oz	57.64	lbs
10	30	863159	Adhesive, Primer 48	335.00	ea	1	oz	20.94	lbs
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716.00	gal	19.9	#/gl	14,248.40	lbs
15	70	868885	Paint, Primer Sandless	238.00	gal	7.8	#/gl	1,856.40	lbs
15	120	868901	Thinner, Btm Paint Brushing Dewaxer	64.00	gal	7.1	#/gl	454.40	lbs
10	120	893420	Gelcoat, Black Backcoat					1,380.00	lbs
10	120	894782	Gelcoat, Sandstone					1,920.00	lbs
10	120	894790	Gelcoat, Bone Backcoat					2,580.00	lbs
10	110	896886	Gunk, Hvy Wt Bonding Putty Lg					56,654.00	lbs
175	15	900381	Cleaner, Dishsoap	8.00	gal	8.6	#/gl	68.80	lbs
25	110	911859	Sealant, Silicone Clear (Corian)	170.00	ea	1.5	oz	15.94	lbs
25	110	918706	Sealant, Joint Compound Bone/Bisque	302.00	ea	1.5	oz	28.31	lbs
15	80	945980	Primer, Beataseal #43518	55.00	30 cc btl	6.9	#/gl	3.01	lbs
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs
10	30	946012	Adhesive, Beataseal #58702	223.00	10.5 fl oz	9.93	#/gl	181.65	lbs

Table Two. List of Materials  
List of Proposed Materials and Projected Usage

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM
10	120	946327	Gelcoat, Black					648.00	lbs
15	60	983130	Paint, Latex Cream Touch-Up Btl w/Br	36.00	ea	0.6	oz	1.35	lbs
10	120	987792	Gelcoat, Aurora (Granicoat)					15,780.00	lbs
10	120	992677	Gelcoat, Burnt Amber (Granicoat)					900.00	lbs
10	120	992685	Gelcoat, Oceanic (Granicoat)					300.00	lbs
10	120	1003250	Gelcoat, Tan Backcoat					300.00	lbs
175	15	1004217	Cleaner, PVC Klean-N-Prime	26.00	ea	0.88	oz	1.43	lbs
25	110	1019231	Sealant, Pipe (PST)	26.00	ea (10 ml)	9.18	#/gl	0.63	lbs
25	110	1081694	Sealant, Silicone Cream Starbrite RTV	133.00	bx (10.3 fl oz)	8.68	#/gl	92.90	lbs
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs
25	110	1096072	Sealant, Silicone Zephyr RTV	484.00	bx (10.3 fl oz)	8.68	#/gl	338.06	lbs
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs
195	35	1105485	Wax, Gruber Care X-Wax Soft	26.00	bx (2.5 gal)	7.93	#/gl	515.45	lbs
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs
25	100	1151588	Safety Clean Solvent	330.00	gal	6.65	#/gl	2,194.50	lbs
10	30	1209303	Adhesive, Spray Whisper	714.00	gal	9.89	#/gl	7,061.46	lbs
10	190	1226638	Resin, Hydropell A-35					23,220.00	lbs
10	110	1235316	Gunk, Lt Wt Bonding Putty LV					51,840.00	lbs
10	110	1235324	Gunk, Lt Wt Bonding Putty LG					48,000.00	lbs
			<b>TOTAL</b>					5,245,034.88	lbs
								2,622.52	tons

**f. Summary of Emissions**

The summary contained herein represents the manufacturing facility's projected emissions based on the annual usage of each material listed in the previous section. See Section e, within this chapter.

Material Safety Data Sheets for the specific item listed in the Description column were reviewed. These Material Safety Data Sheets are contained in Volume 3 (a) & Volume 3 (b) and represent the products used by the facility in their respective processes. After inspection of each of these sheets, the material is divided into its volatile organic chemical constituents. The organic compounds, so determined, are listed under the column shown Chemical, then further classified as Volatile Organic Compounds (VOC), Hazardous Air Pollutants (HAP), or other and are enumerated under the columns VOC, HAP, RFS (Regulated Flammable Substance), and Ace (acetone). The emission attributable to each chemical in a specific material is calculated to determine its annual contribution and those values are listed in the column, Emissions.

This value is derived by multiplying the annual usage of the material by the percentage of the chemical contributing to the emission, with the resultant being multiplied again by its emission factor. The emission factors used in these calculations, Table Three, are obtained using the *Interim Styrene Emission Factors for Boat Manufacturing* provided by the Florida Department of Environmental Protection and information contained within the Material Safety Data Sheet for the product under

consideration. The proposed emissions calculations are then sorted by chemical, Exhibit D, so the annual usage of each chemical can be determined.

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	A c % Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
10	120	100073	Orange Tooling					54.00	lbs	Styrene	100-42-5	x	x		40.8%	22.01	54%	11.89	0.01
10	120	100073	Orange Tooling					54.00	lbs	Methyl Methacrylate	80-62-6	x	x		5.0%	2.70	54%	1.46	0.00
10	120	101139	Gelcoat, Black					60.00	lbs	Styrene	100-42-5	x	x		33.4%	20.01	48%	9.60	0.00
10	120	101139	Gelcoat, Black					60.00	lbs	Methyl Methacrylate	80-62-6	x	x		4.6%	2.78	48%	1.33	0.00
10	120	101154	Blige Grey Gc					184,765.00	lbs	Styrene	100-42-5	x	x		34.4%	63,562.86	16.5%	10,487.87	5.24
10	190	101410	Polygard 33-441					2,438.00	lbs	Styrene	100-42-5	x	x		37.2%	906.69	18%	163.20	0.08
10	190	101410	Polygard 33-441					2,438.00	lbs	Hexachloroethane	67-72-1	x	x		4.1%	100.69	18%	18.12	0.01
10	120	101436	Black Tooling					162.00	lbs	Styrene	100-42-5	x	x		42.5%	68.79	54%	37.15	0.02
10	120	101436	Black Tooling					162.00	lbs	Methyl Methacrylate	80-62-6	x	x		4.4%	7.12	54%	3.84	0.00
15	60	101485	Paint, Latex Black (Delta Labs)	1,246.00	gal	10.1	#/gl	12,584.60	lbs	Ethylene Glycol	107-21-1	x	x		2.9%	364.95	100%	364.95	0.18
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Toluene	108-88-3	x	x		15.0%	1.04	100%	1.04	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Methyl Ethyl Ketone	78-93-3	x	x		8.0%	0.55	100%	0.55	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Hexane	110-54-3	x	x		18.0%	1.24	100%	1.24	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Other VOC					33.0%	2.28	100%	2.28	0.00
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Toluene	108-88-3	x	x		3.0%	4.00	100%	4.00	0.00
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Xylene	1330-20-7	x	x		4.0%	5.33	100%	5.33	0.00
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Methyl Ethyl Ketone	78-93-3	x	x		3.0%	4.00	100%	4.00	0.00
15	10	102491	Addtive, Retardant Butyl Cellulose	20.40	gal	7.48	#/gl	152.59	lbs	2-Butoxyethanol	111-76-2	x	x		65.5%	87.25	100%	87.25	0.04
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Toluene	108-88-3	x	x		15.0%	171.47	100%	171.47	0.09
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Xylene	1330-20-7	x	x		3.9%	44.01	100%	44.01	0.02
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Methyl Alcohol	67-56-1	x	x		3.9%	44.01	100%	44.01	0.02
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Methyl Ethyl Ketone	78-93-3	x	x		15.0%	171.47	100%	171.47	0.09
10	110	102574	Flexbond Putty	984.00	gal	9.17	#/gl	9,023.28	lbs	Other VOC					42.7%	488.10	100%	488.10	0.24
25	120	102665	Silicon, Lubricant (Wd-40)	5.00	gal	6.68	#/gl	33.40	lbs	Other VOC					71.0%	23.71	100%	23.71	0.01
25	110	156984	Sealant, Silicone	7,897.00	ea	10.3	oz	5,083.69	lbs	Other VOC					3.7%	188.10	100%	188.10	0.09
25	110	156992	Sealant, Silicone	238.00	ea	10.3	oz	153.21	lbs	Other VOC					3.7%	5.67	100%	5.67	0.00
25	110	157008	Sealant, Silicone	15,437.00	ea	10.3	oz	9,937.57	lbs	Other VOC					3.7%	367.69	100%	367.69	0.18
195	35	164939	Compound, Edge Wax Fin-Kare	13.00	ea (gal)	6.65	#/gl	86.45	lbs	Other VOC					44.7%	38.64	100%	38.64	0.02
10	30	166488	Contact Disc Cement	148.00	ea	5	oz	46.25	lbs	Hexane	110-54-3	x	x		37.5%	17.34	100%	17.34	0.01
10	30	166488	Contact Disc Cement	148.00	ea	5	oz	46.25	lbs	Other VOC					27.5%	12.72	100%	12.72	0.01
195	35	179341	Compound Sealer Glaze	11.00	gal	8.75	#/gl	48.13	lbs	Formaldehyde	50-00-0	x	x		0.5%	0.24	100%	0.24	0.00
195	35	179341	Compound Sealer Glaze	11.00	gal	8.75	#/gl	48.13	lbs	Other VOC					33.0%	15.88	100%	15.88	0.01
195	35	179358	Compound, Mold Release TR Hi-Te	310.00	can	14	oz	271.25	lbs	Other VOC					70.0%	189.88	100%	189.88	0.09
15	80	181255	Paint, Spray Pt (Black)	4,430.00	can	11	oz	3,045.63	lbs	Xylene	1330-20-7	x	x		12.5%	380.70	100%	380.70	0.19
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Propane	74-98-6	x	x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Toluene	108-88-3	x	x		25.0%	634.56	100%	634.56	0.32
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Butane	106-97-8	x	x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Isobutane	75-28-5	x	x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Other VOC					8.1%	206.61	100%	206.61	0.10
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracor	74.00	gal	7.31	#/gl	540.94	lbs	Xylene	1330-20-7	x	x		3.0%	16.23	100%	16.23	0.01
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracor	74.00	gal	7.31	#/gl	540.94	lbs	Methyl Ethyl Ketone	78-93-3	x	x		4.0%	21.64	100%	21.64	0.01
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracor	74.00	gal	7.31	#/gl	540.94	lbs	Other VOC					69.0%	373.25	100%	373.25	0.19
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Acetone	67-64-1			x	14.5%	1,861.56	100%	1,861.56	0.93
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Pentane	109-66-0	x	x		24.2%	3,106.87	100%	3,106.87	1.55

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	V	H	R	A	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
												O	A	F	C					
												C	P	S	e					
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Other.VOC		x				39.3%	5,045.46	100%	5,045.46	2.52
10	30	191569	Adhesive, Threadlocker	89.00	ea	1.69	oz	9.40	lbs	Methyl Alcohol	67-56-1	x	x			2.0%	0.19	100%	0.19	0.00
10	30	191569	Adhesive, Threadlocker	89.00	ea	1.69	oz	9.40	lbs	Other.VOC		x				11.3%	1.06	100%	1.06	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Acetone	67-64-1				x	70.00%	0.53	100%	0.53	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Other.VOC		x				2.96%	0.02	100%	0.02	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Isobutane	75-28-5	x	x			22.50%	0.17	100%	0.17	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Isopropyl Alcohol	67-63-0	x				10.00%	0.08	100%	0.08	0.00
10	30	191718	Adhesive, Pvc Cement	203.00	qt	7.99	#/gl	405.49	lbs	Other.VOC		x				66.5%	269.65	40%	107.86	0.05
10	30	191718	Adhesive, Pvc Cement	203.00	qt	7.99	#/gl	405.49	lbs	Methyl Ethyl Ketone	78-93-3	x	x			15.0%	60.82	40%	24.33	0.01
195	65	191734	Silicone Spray Lubricant	2,668.00	can	24	oz	4,002.00	lbs	Hexane	110-54-3	x	x			15.0%	600.30	100%	600.30	0.30
195	65	191734	Silicone Spray Lubricant	2,668.00	can	24	oz	4,002.00	lbs	Other.VOC		x				80.0%	3201.60	100%	3,201.60	1.60
175	15	191742	Cleaner, Glass	125.00	btl	20	oz	156.25	lbs	2-Butoxyethanol	111-76-2	x	x			5.7%	8.95	100%	8.95	0.00
175	15	191742	Cleaner, Glass Spartan	125.00	btl	20	oz	156.25	lbs	Isobutane	75-28-5	x	x			5.7%	8.95	100%	8.95	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Toluene	108-88-3	x	x			3.0%	5.40	100%	5.40	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Xylene	1330-20-7	x	x			1.0%	1.80	100%	1.80	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Methyl Alcohol	67-56-1	x	x			1.0%	1.80	100%	1.80	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Acetone	67-64-1				x	49.0%	88.20	100%	88.20	0.04
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			1.0%	1.80	100%	1.80	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Propane	74-98-6	x	x			15.0%	27.00	100%	27.00	0.01
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Other.VOC		x				17.0%	30.60	100%	30.60	0.02
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Propane	74-98-6	x	x			3.0%	0.18	100%	0.18	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Toluene	108-88-3	x	x			10.0%	0.60	100%	0.60	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Acetone	67-64-1				x	45.0%	2.70	100%	2.70	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			11.0%	0.66	100%	0.66	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Other.VOC		x				31.0%	1.86	100%	1.86	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Acetone	67-64-1				x	36.0%	13.23	100%	13.23	0.01
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Propylene Glycol Methyl Ether Acetate	108-65-6	x	x			12.5%	4.59	100%	4.59	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Xylene	1330-20-7	x	x			12.0%	4.41	100%	4.41	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Other.VOC		x				1.0%	0.37	100%	0.37	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Butane	106-97-8	x	x			8.0%	2.94	100%	2.94	0.00
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs	Propane	74-98-6	x	x			16.0%	5.88	100%	5.88	0.00
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs	Xylene	1330-20-7	x	x			1.0%	7.70	100%	7.70	0.00
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Other.VOC		x				50.8%	391.00	100%	391.00	0.20
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Other.VOC		x				8.1%	10.30	100%	10.30	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Butane	106-97-8	x	x			11.7%	14.75	100%	14.75	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Isobutane	75-28-5	x	x			11.7%	14.75	100%	14.75	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Xylene	1330-20-7	x	x			12.5%	15.81	100%	15.81	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Propane	74-98-6	x	x			11.7%	14.75	100%	14.75	0.01
195	35	192864	Super Polyglaze	86.00	cn (2 qt)	7.92	#/gl	340.56	lbs	Toluene	108-88-3	x	x			25.0%	31.63	100%	31.63	0.02
195	35	192872	Imperial Hand Glaze	16.00	cn (qt)	7.92	#/gl	31.68	lbs	Other.VOC		x				65.0%	221.36	100%	221.36	0.11
175	15	192898	Bilge Cleaner	2.00	ea	16	oz	2.00	lbs	Other.VOC		x				14.3%	4.53	100%	4.53	0.00
175	15	192922	Cleaner, Vinyl Formula Lr	5.00	can	14	oz	4.38	lbs	Other.VOC		x				1.0%	0.02	100%	0.02	0.00
195	35	194274	Cpd Polishing Lacknrl	72.00	gal	11.68	#/gl	840.96	lbs	Other.VOC		x				95.0%	4.16	100%	4.16	0.00
195	35	194282	Compound, Polishing Dxtler	20.00	gal	10.61	#/gl	216.20	lbs	Other.VOC		x				2.4%	20.18	100%	20.18	0.01
												x				33.3%	72.06	100%	72.06	0.04

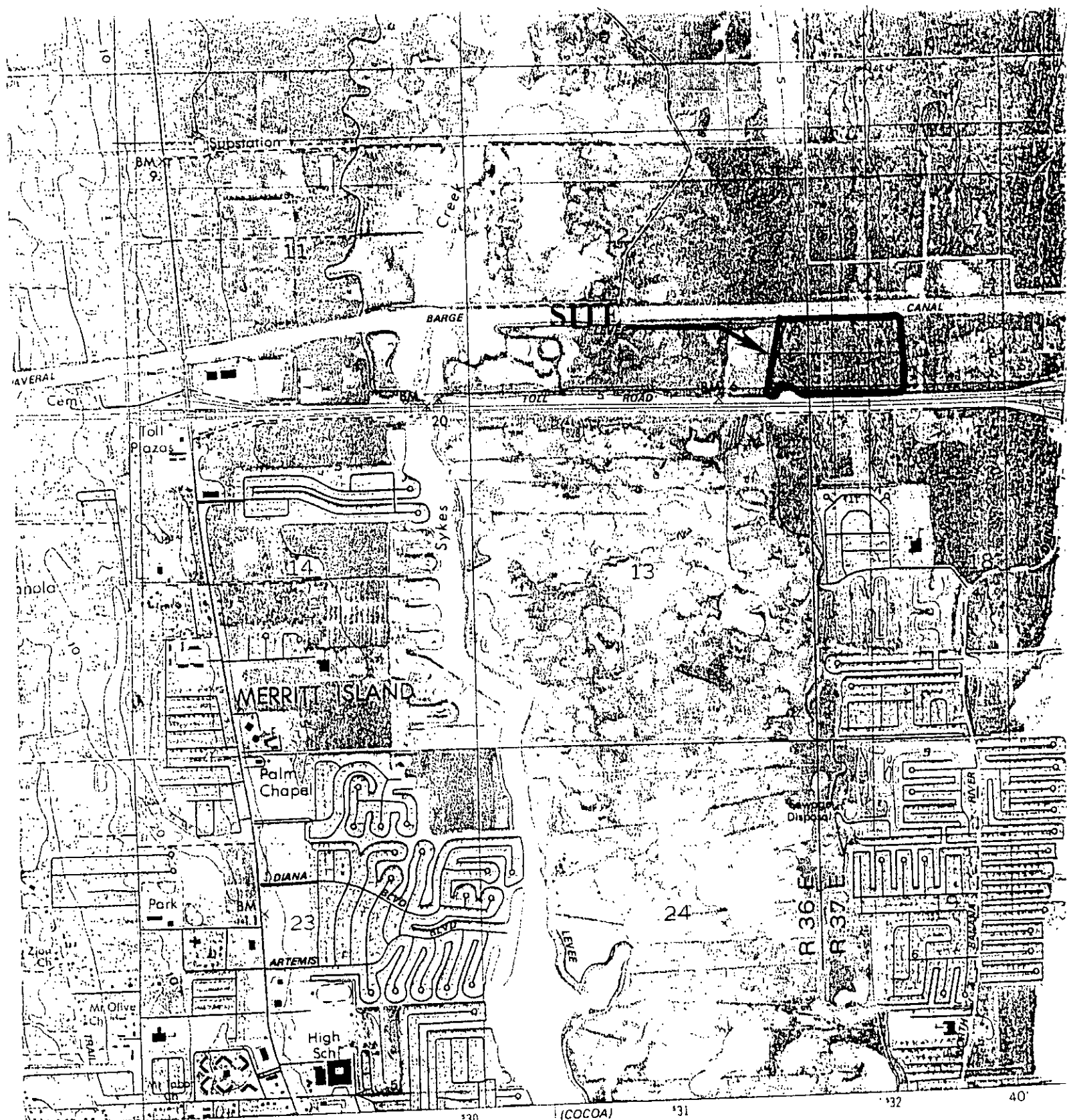
CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	A/c	% Chem	Chemical (lbs)	Emiss Fctr	Emissions #/Yr	Emissions Tons/Yr
25	30	194308	Dykem Co	11.00	gal	7.18	#/gl	78.98	lbs	Other VOC		x				89.4%	70.61	100%	70.61	0.04
25	30	194415	Denatured Alcohol	685.00	gal	6.7	#/gl	4,589.50	lbs	Methyl Alcohol	67-56-1	x	x			50.0%	2294.75	100%	2,294.75	1.15
25	30	194415	Denatured Alcohol	685.00	gal	6.7	#/gl	4,589.50	lbs	Other VOC		x				47.5%	2180.01	100%	2,180.01	1.09
25	110	209106	Sealant, Silicone	43.00	ea	3	8.72	8.79	lbs	Other VOC		x				5.2%	0.46	100%	0.46	0.00
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Hexane	110-54-3	x	x			34.6%	5,656.24	100%	5,656.24	2.83
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Acetone	67-64-1			x		17.3%	2,833.02	100%	2,833.02	1.42
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Propane	74-98-6	x	x			15.2%	2,478.28	100%	2,478.28	1.24
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Other VOC		x				15.2%	2,478.28	100%	2,478.28	1.24
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs	Propane	74-98-6	x	x			20.0%	303.40	100%	303.40	0.15
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs	Other VOC		x				80.0%	1,213.60	100%	1,213.60	0.61
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Perchloroethylene	127-18-4	x	x			22.5%	3.15	100%	3.15	0.00
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Trichloroethylene	79-01-6	x	x			42.5%	5.95	100%	5.95	0.00
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Other VOC		x				32.5%	4.55	100%	4.55	0.00
25	110	257600	Sealant, Pipe (PVC) w/Teflon	10.00	ea (50 ml)	9.51	#/gl	0.25	lbs	Other VOC		x				8.6%	0.02	100%	0.02	0.00
25	110	257907	Sealant, Urethane White Sikaflex	362.00	ea	10.5	oz	237.56	lbs	Ethyl Benzene	100-41-4	x	x			4.5%	10.69	100%	10.69	0.01
25	110	257907	Sealant, Urethane White Sikaflex	362.00	ea	10.5	oz	237.56	lbs	Xylene	1330-20-7	x	x			4.5%	10.69	100%	10.69	0.01
25	30	270009	Chemical, Mineral Spirits	161.00	gal	6.43	#/gl	1,035.23	lbs	Other VOC		x				100.0%	1035.23	100%	1,035.23	0.52
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Acetone	67-64-1			x		13.7%	1.11	100%	1.11	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Methyl Ethyl Ketone	78-93-3	x	x			9.1%	0.74	100%	0.74	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Xylene	1330-20-7	x	x			13.7%	1.11	100%	1.11	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Other VOC		x				63.5%	5.16	100%	5.16	0.00
25	110	277731	Sealant, Silicone White	92.00	ea	8	oz	46.00	lbs	Other VOC		x				4.0%	1.84	100%	1.84	0.00
10	140	308205	Clear Mekp-9H					14,822.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			2.0%	296.44	48%	142.29	0.07
10	140	308205	Clear Mekp-9H					14,822.00	lbs	Dimethyl Phthalate	131-11-3	x	x			43.0%	6,373.46	na	neg	0.00
10	140	308213	Red Mekp9-H					39,302.00	lbs	Xylene	1330-20-7	x	x			17.5%	6,877.85	100%	6,877.85	3.44
10	140	308213	Red Mekp9-H					39,302.00	lbs	Dimethyl Phthalate	131-11-3	x	x			50.0%	19,651.00	na	neg	0.00
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Acetone	67-64-1			x		26.5%	7,078.90	100%	7,078.90	3.54
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Methyl Alcohol	67-56-1	x	x			2.5%	667.82	100%	667.82	0.33
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Toluene	108-88-3	x	x			13.0%	3,472.67	100%	3,472.67	1.74
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Hexane	110-54-3	x	x			19.2%	5,128.87	100%	5,128.87	2.56
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Other VOC		x				19.2%	5,128.87	100%	5,128.87	2.56
25	110	352443	Sealant, Silicone	1,093.00	ea	3	8.7	222.87	lbs	Other VOC		x				5.2%	11.59	100%	11.59	0.01
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Xylene	1330-20-7	x	x			0.1%	0.61	100%	0.61	0.00
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Ethylbenzene	100-41-4	x	x			0.1%	0.61	100%	0.61	0.00
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Other VOC		x				22.8%	139.37	100%	139.37	0.07
10	120	437145	Webbing Solution	128.00	gal	7	#/gl	896.00	lbs	Acetone	67-64-1			x		85.0%	761.60	100%	761.60	0.38
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Toluene	108-88-3	x	x			35.0%	959.62	100%	959.62	0.48
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Acetone	67-64-1			x		5.0%	137.09	100%	137.09	0.07
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Methyl Ethyl Ketone	78-93-3	x	x			10.0%	274.18	100%	274.18	0.14
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			25.0%	685.44	100%	685.44	0.34
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Other VOC		x				25.0%	685.44	100%	685.44	0.34
175	15	440727	Cleaner, All Purpose	36.00	can	19	oz	42.75	lbs	Propane	74-98-6	x	x			5.0%	2.14	100%	2.14	0.00
175	15	440727	Cleaner, All Purpose	36.00	can	19	oz	42.75	lbs	2-Butoxyethanol	111-76-2	x	x			6.0%	2.57	100%	2.57	0.00
10	120	556944	Antique White Gel					37,055.00	lbs	Styrene	100-42-5	x	x			35.0%	12,959.25	48%	6,225.24	3.11
10	120	556944	Antique White Gel					37,055.00	lbs	Methyl Methacrylate	80-62-6	x	x			3.0%	1,111.65	48%	533.59	0.27



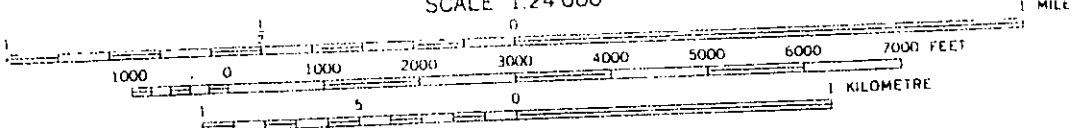
CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	V	O	H	R	A	F	C	P	S	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
10	110	581975	Polyester Putty	1,602.00	gal	13.27	#/gl	21,258.54	lbs	Styrene	100-42-5	x	x								15.0%	3,188.78	11.0%	350.77	0.18
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs	Xylene	1330-20-7	x	x								5.0%	110.26	100%	110.26	0.06
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs	Other.VOC											20.0%	441.04	100%	441.04	0.22
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs	Xylene	1330-20-7	x	x								5.0%	1.63	100%	1.63	0.00
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs	Other.VOC											17.0%	5.54	100%	5.54	0.00
15	120	592899	Bottom Paint Thinner	48.00	gal	7.3	#/gl	350.40	lbs	Xylene	1330-20-7	x	x								100.0%	350.40	100%	350.40	0.18
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12.00	gal	7.5	#/gl	90.00	lbs	Other.VOC											69.0%	62.10	100%	62.10	0.03
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12.00	gal	7.5	#/gl	90.00	lbs	Methyl Isobutyl Ketone	108-10-1	x	x								13.0%	11.70	100%	11.70	0.01
15	30	612077	Epoxy Btm Coat w/Hardener 2001	18.00	gal	7.3	#/gl	131.40	lbs	Other VOC											48.3%	63.52	100%	63.52	0.03
15	30	612077	Epoxy Btm Coat w/Hardener 2001	18.00	gal	7.3	#/gl	131.40	lbs	Xylene	1330-20-7	x	x								38.0%	49.93	100%	49.93	0.02
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18.00	gal	12.9	#/gl	232.20	lbs	Xylene	1330-20-7	x	x								7.7%	17.81	100%	17.81	0.01
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18.00	gal	12.9	#/gl	232.20	lbs	Methylene Chloride	75-09-2			x							10.7%	24.78	100%	24.78	0.01
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/1	19.00	gal	8.1	#/gl	153.90	lbs	Phenol	108-95-2	x	x								12.5%	19.24	100%	19.24	0.01
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/1	19.00	gal	8.1	#/gl	153.90	lbs	Other.VOC											35.5%	54.63	100%	54.63	0.03
10	190	619981	Alpha Alek 80602F					3,552,635.00	lbs	Styrene	100-42-5	x	x								35.0%	1,243,422.25	16%	198,947.56	99.47
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs	Xylene	1330-20-7	x	x								1.6%	1.84	100%	1.84	0.00
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs	Other.VOC											8.4%	9.65	100%	9.65	0.00
175	15	662437	Cleaner, Super Blue Resin	2,112.00	gal	8.8	#/gl	18,585.60	lbs	Dipropylene glycol methyl ether	34950-94-8	x	x								7.0%	1,300.99	100%	1,300.99	0.65
25	100	662445	Solvent, Super Flush S-280	6,006.00	gal	8.88	#/gl	53,333.28	lbs	Dipropylene Glycol Methyl Ether	34590-94-8	x	x								9.0%	4,800.00	100%	4,800.00	2.40
25	100	662445	Solvent, Super Flush S-280	6,006.00	gal	8.88	#/gl	53,333.28	lbs	Other VOC											90.9%	48,479.95	100%	48,479.95	24.24
10	190	666057	Hydropell A35					210,060.00	lbs	Styrene	100-42-5	x	x								35.0%	73,521.00	16%	11,763.36	5.88
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Toluene	108-88-3	x	x								3.7%	2.72	100%	2.72	0.00
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Xylene	3330-20-7	x	x								1.4%	1.03	100%	1.03	0.00
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Propylene Glycol Monomethyl Ether	108-65-6	x	x								7.2%	5.29	100%	5.29	0.00
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Other.VOC											43.5%	31.95	100%	31.95	0.02
15	10	667451	Additive, Activator Imron	12.00	qt	8.01	#/gl	24.03	lbs	Other.VOC											67.8%	16.29	100%	16.29	0.01
10	120	677732	Arctic White Gel Coat					483,374.00	lbs	Styrene	100-42-5	x	x								28.5%	137,848.60	48%	66,167.33	33.08
10	120	677732	Arctic White Gel Coat					483,374.00	lbs	Methyl Methacrylate	80-62-6	x	x								4.0%	19,334.96	48%	9,280.78	4.64
10	120	680751	Bilge Grey Gel Coat					55,290.00	lbs	Styrene	100-42-5	x	x								30.0%	16,587.00	16.5%	2,736.86	1.37
10	60	699553	Gel Patch, Slow Patchaid					168.00	lbs	Styrene	100-42-5	x	x								48.0%	80.64	100%	80.64	0.04
10	60	699553	Gel Patch, Slow Patchaid					168.00	lbs	Methyl Methacrylate	80-62-6	x	x								-47.9%	80.47	100%	80.47	0.04
195	35	715581	Cpd Polishing Lackryl 5 gal	101.00	pl (5 gl)	11.68	#/gl	5,898.40	lbs	Other.VOC											2.4%	141.56	100%	141.56	0.07
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Propane	74-98-6	x		x							14.0%	5.25	100%	5.25	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Butane	106-97-8	x		x							6.0%	2.25	100%	2.25	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Toluene	108-88-3	x		x							10.0%	3.75	100%	3.75	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Xylene	1330-20-7	x		x							3.0%	1.13	100%	1.13	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Acetone	67-64-1				x						27.0%	10.13	100%	10.13	0.01
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Other.VOC											15.9%	5.96	100%	5.96	0.00
10	120	721126	Gelcoat, Zephyr Armorcote					18,773.00	lbs	Styrene	100-42-5	x	x								33.7%	6,320.87	48%	3,034.02	1.52
10	120	721126	Gelcoat, Zephyr Armorcote					18,773.00	lbs	Methyl Methacrylate	80-62-6	x	x								9.4%	1,768.42	48%	848.84	0.42
10	120	721548	Airless Tooling Gel Coat					1,296.00	lbs	Styrene	100-42-5	x	x								42.7%	553.52	54%	298.90	0.15
10	120	721548	Airless Tooling Gel Coat					1,296.00	lbs	Methyl Methacrylate	80-62-6	x	x								5.0%	64.80	54%	34.99	0.02
10	110	723080	Hvy Wt Bonding Putty					74,204.00	lbs	Styrene	100-42-5	x	x								15.0%	11,130.60	11.0%	1,224.37	0.61

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	V	H	R	A	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
												O	A	F	C					
25	160	761346	Poly vinyl Alcohol	74.00	gal	7.63	#/gl	564.62	lbs	Other.VOC		x				44.2%	249.56	100%	249.56	0.12
10	110	761643	Hvy Wt Bond Putty Low					90,540.00	lbs	Styrene	100-42-5	x	x			15.0%	13,581.00	11.0%	1,493.91	0.75
15	120	789719	Thinner, Dykem Blue	191.00	gal	6.88	#/gl	1,314.08	lbs	Other.VOC		x				97.0%	1,274.66	100%	1,274.66	0.64
15	120	789719	Thinner, Dykem Blue	191.00	gal	6.88	#/gl	1,314.08	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			3.0%	39.42	100%	39.42	0.02
25	100	790477	Isopropyl Acetate					24,480.00	lbs	Other.VOC		x				100.0%	24,480.00	100%	24,480.00	12.24
195	65	810820	Lubricant, Protecto-Flex	1,282.00	ea	15	oz	1,201.88	lbs	Other.VOC		x				50.0%	600.94	100%	600.94	0.30
25	110	813220	Sealant, Silicone Lt Gray Starbrite R	5.00	(10.3 fl o	8.68	#/gl	3.49	lbs	Other.VOC		x				5.0%	0.17	100%	0.17	0.00
15	20	825745	Paint, Acrylic Black Fast Drying	144.00	gal	8.345	#/gl	1,201.68	lbs	Other.VOC		x				6.1%	73.30	100%	73.30	0.04
10	120	830893	Gelcoat, Teal Essence					624.00	lbs	Styrene	100-42-5	x	x			31.7%	197.56	48%	94.83	0.05
10	120	830893	Gelcoat, Teal Essence					624.00	lbs	Methyl Methacrylate	80-62-6	x	x			8.9%	55.72	48%	26.75	0.01
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Dipropylene Glycol Methyl Ether	34590-94-8	x	x			7.5%	237.60	100%	237.60	0.12
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Dipropylene Glycol Monobutyl Ether	29911-28-2	x	x			3.0%	95.04	100%	95.04	0.05
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Other.VOC		x				78.2%	2,477.38	100%	2,477.38	1.24
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Acetone	67-64-1				x	27.5%	1.83	100%	1.83	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Other.VOC		x				7.5%	0.50	100%	0.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Propylene Glycol Monomethyl Ether Acetate	108-65-6	x	x			7.5%	0.50	100%	0.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Toluene	108-88-3	x	x			22.5%	1.50	100%	1.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Xylene	1330-20-7	x	x			17.5%	1.17	100%	1.17	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Other.VOC		x				17.5%	1.17	100%	1.17	0.00
10	30	863142	Adhesive, Glue Instabond	527.00	ea	1.75	oz	57.64	lbs	Other.VOC		x				86.0%	49.57	100%	49.57	0.02
10	30	863159	Adhesive, Primer 48	335.00	ea	1	oz	20.94	lbs	Other.VOC		x				99.8%	20.90	100%	20.90	0.01
10	30	863159	Adhesive, Primer 48	335.00	ea	1	oz	20.94	lbs	Hydroquinone	123-31-6	x	x			0.1%	0.02	100%	0.02	0.00
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716.00	gal	19.9	#/gl	14,248.40	lbs	Ethylene Glycol	107-21-1	x	x			2.9%	406.08	100%	406.08	0.20
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716.00	gal	19.9	#/gl	14,248.40	lbs	2-Butoxyethanol	111-76-2	x	x			2.9%	406.08	100%	406.08	0.20
15	70	868885	Paint, Primer Sandless	238.00	gal	7.8	#/gl	1,856.40	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			50.0%	928.20	100%	928.20	0.46
15	70	868893	Paint, Primer Sandless	238.00	gal	7.8	#/gl	1,856.40	lbs	Other.VOC		x				30.0%	556.92	100%	556.92	0.28
15	120	868901	Thinner, Btm Paint Brushing Dewaxer	64.00	gal	7.1	#/gl	454.40	lbs	Other.VOC		x				100.0%	454.40	100%	454.40	0.23
10	120	893420	Gelcoat, Black Backcoat					1,380.00	lbs	Styrene	100-42-5	x	x			32.0%	441.60	48%	211.97	0.11
10	120	894782	Gelcoat, Sandstone					1,920.00	lbs	Styrene	100-42-5	x	x			24.0%	460.80	48%	221.18	0.11
10	120	894782	Gelcoat, Sandstone					1,920.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	76.80	48%	36.86	0.02
10	120	894790	Gelcoat, Bone Backcoat					2,580.00	lbs	Styrene	100-42-5	x	x			32.0%	825.60	48%	396.29	0.20
10	110	896886	Gunk, Hvy Wt Bonding Putty Lg					56,654.00	lbs	Styrene	100-42-5	x	x			12.0%	6,798.48	11.0%	747.83	0.37
175	15	900381	Cleaner, Dishsoap	8.00	gal	8.6	#/gl	68.80	lbs	Other.VOC		x				1.4%	0.96	100%	0.96	0.00
25	110	911859	Sealant, Silicone Clear (Corian)	170.00	ea	1.5	oz	15.94	lbs	Other.VOC		x				5.0%	0.80	100%	0.80	0.00
25	110	918706	Sealant, Joint Compound Bone/Bisq	302.00	ea	1.5	oz	28.31	lbs	Other.VOC		x				40.0%	11.33	100%	11.33	0.01
15	80	945980	Primer, Beataseal #43518	55.00	30 cc btl	6.9	#/gl	3.01	lbs	Toluene	108-88-3	x	x			52.5%	1.58	100%	1.58	0.00
15	80	945980	Primer, Beataseal #43518	55.00	30 cc btl	6.9	#/gl	3.01	lbs	Methyl Alcohol	67-56-1	x	x			47.5%	1.43	100%	1.43	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Toluene	108-88-3	x	x			10.0%	0.55	100%	0.55	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Methyl Ethyl Ketone	78-93-3	x	x			40.0%	2.18	100%	2.18	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Other.VOC		x				8.7%	0.47	100%	0.47	0.00
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	Methyl Ethyl Ketone	78-93-3	x	x			45.0%	2.58	100%	2.58	0.00
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	Acetone	67-64-1				x	15.0%	0.86	100%	0.86	0.00

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
15	80	946004	Primer, Beatseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	MDI	101-68-8	x	x		3.9%	0.22	na	negl	0.00
10	30	946012	Adhesive, Beatseal #58702	223.00	10.5 fl oz	9.93	#/gl	181.65	lbs	Toluene	108-88-3	x	x		5.0%	9.08	100%	9.08	0.00
10	30	946012	Adhesive, Beatseal #58702	223.00	10.5 fl oz	9.93	#/gl	181.65	lbs	MDI	101-68-8	x	x		1.0%	1.82	na	negl	0.00
10	120	946327	Gelcoat, Black					648.00	lbs	Styrene	100-42-5	x	x		37.7%	244.42	51%	124.65	0.06
10	120	946327	Gelcoat, Black					648.00	lbs	Methyl Methacrylate	80-62-6	x	x		3.0%	19.44	51%	9.91	0.00
15	60	983130	Paint, Latex Cream Touch-Up Btl w/	36.00	ea	0.6	oz	1.35	lbs	Xylene	1330-20-7	x	x		30.0%	0.41	100%	0.41	0.00
15	60	983130	Paint, Latex Cream Touch-Up Btl w/	36.00	ea	0.6	oz	1.35	lbs	Other.VOC		x			27.6%	0.37	100%	0.37	0.00
10	120	987792	Gelcoat, Aurora (Granicoat)					15,780.00	lbs	Styrene	100-42-5	x	x		24.0%	3,787.20	48%	1,817.86	0.91
10	120	987792	Gelcoat, Aurora (Granicoat)					15,780.00	lbs	Methyl Methacrylate	80-62-6	x	x		4.0%	631.20	48%	302.98	0.15
10	120	992677	Gelcoat, Burnt Amber (Granicoat)					900.00	lbs	Styrene	100-42-5	x	x		24.0%	216.00	48%	103.68	0.05
10	120	992677	Gelcoat, Burnt Amber (Granicoat)					900.00	lbs	Methyl Methacrylate	80-62-6	x	x		4.0%	36.00	48%	17.28	0.01
10	120	992685	Gelcoat, Oceanic (Granicoat)					300.00	lbs	Styrene	100-42-5	x	x		24.0%	72.00	48%	34.56	0.02
10	120	992685	Gelcoat, Oceanic (Granicoat)					300.00	lbs	Methyl Methacrylate	80-62-6	x	x		4.0%	12.00	48%	5.76	0.00
10	120	1003250	Gelcoat, Tan Backcoat					300.00	lbs	Styrene	100-42-5	x	x		32.0%	96.00	48%	46.08	0.02
175	15	1004217	Cleaner, PVC Klean-N-Prime	26.00	ea	0.88	oz	1.43	lbs	Acetone	67-64-1			x	77.5%	1.11	100%	1.11	0.00
175	15	1004217	Cleaner, PVC Klean-N-Prime	26.00	ea	0.88	oz	1.43	lbs	Isobutane	75-28-5	x	x		22.5%	0.32	100%	0.32	0.00
25	110	1019231	Sealant, Pipe (PST)	26.00	ea (10 ml)	9.18	#/gl	0.63	lbs	Other.VOC		x			13.3%	0.08	100%	0.08	0.00
25	110	1081694	Sealant, Silicone Cream Starbrite RT	133.00	(10.3 fl o	8.68	#/gl	92.90	lbs	Other VOC		x			5.0%	4.64	100%	4.64	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Ethylbenzene	100-41-4	x	x		4.0%	1.24	100%	1.24	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Xylene	1330-20-7	x	x		21.0%	6.49	100%	6.49	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Other.VOC		x			27.2%	8.42	100%	8.42	0.00
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs	Acetone	67-64-1			x	32.0%	9.89	100%	9.89	0.00
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs	Toluene	108-88-3	x	x		3.0%	0.81	100%	0.81	0.00
25	110	1096072	Sealant, Silicone Zephyr RTV	484.00	(10.3 fl o	8.68	#/gl	338.06	lbs	Other.VOC		x			77.9%	21.06	100%	21.06	0.01
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Methyl Isobutyl Ketone	108-10-1	x	x		1.00%	58.60	100%	58.60	0.03
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Methyl Alcohol	67-56-1	x	x		16.04%	939.92	100%	939.92	0.47
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Other.VOC		x			82.96%	4,861.32	100%	4,861.32	2.43
195	35	1105485	Wax, Gruber Care X-Wax Soft	26.00	bx (2.5 gal	7.93	#/gl	515.45	lbs	Other.VOC		x			15.0%	77.32	100%	77.32	0.04
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Toluene	108-88-3	x	x		4.0%	48.54	100%	48.54	0.02
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Methyl Ethyl Ketone	78-93-3	x	x		10.0%	121.34	100%	121.34	0.06
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Methyl Isobutyl Ketone	108-10-1	x	x		10.0%	121.34	100%	121.34	0.06
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Acetone	67-64-1			x	24.0%	291.23	100%	291.23	0.15
25	100	1151588	Safety Clean Solvent	330.00	gal	6.65	#/gl	2,194.50	lbs	Other.VOC		x			22.0%	266.96	100%	266.96	0.13
10	30	1209303	Adhesive, Spray Whisper	714.00	gal	9.89	#/gl	7,061.46	lbs	Other.VOC		x			100.0%	2,194.50	100%	2,194.50	1.10
10	190	1226638	Resin, Hydropell A-35					23,220.00	lbs	Styrene	100-42-5	x	x		70.0%	4,943.02	100%	4,943.02	2.47
10	110	1235316	Gunk, Lt Wt Bonding Putty LV					51,840.00	lbs	Styrene	100-42-6	x	x		35.0%	8,127.00	16%	1,300.32	0.65
10	110	1235324	Gunk, Lt Wt Bonding Putty LG					48,000.00	lbs	Styrene	100-42-7	x	x		16.0%	8,294.40	11.0%	912.38	0.46
			<b>TOTAL</b>																
			<b>Subtotals</b>															496,505.74	248.25
			Total VOC Compounds (VOC)																
			Total Hazardous Air Pollutants (HAPs)															483,412.76	241.71
			Total Acetone															295,635.54	147.82
			Total Regulated and Toxic Substances (RFS)															13,092.98	6.55
																		5,877.57	2.94



(COCOA)  
3840 1 SW  
SCALE 1:24 000

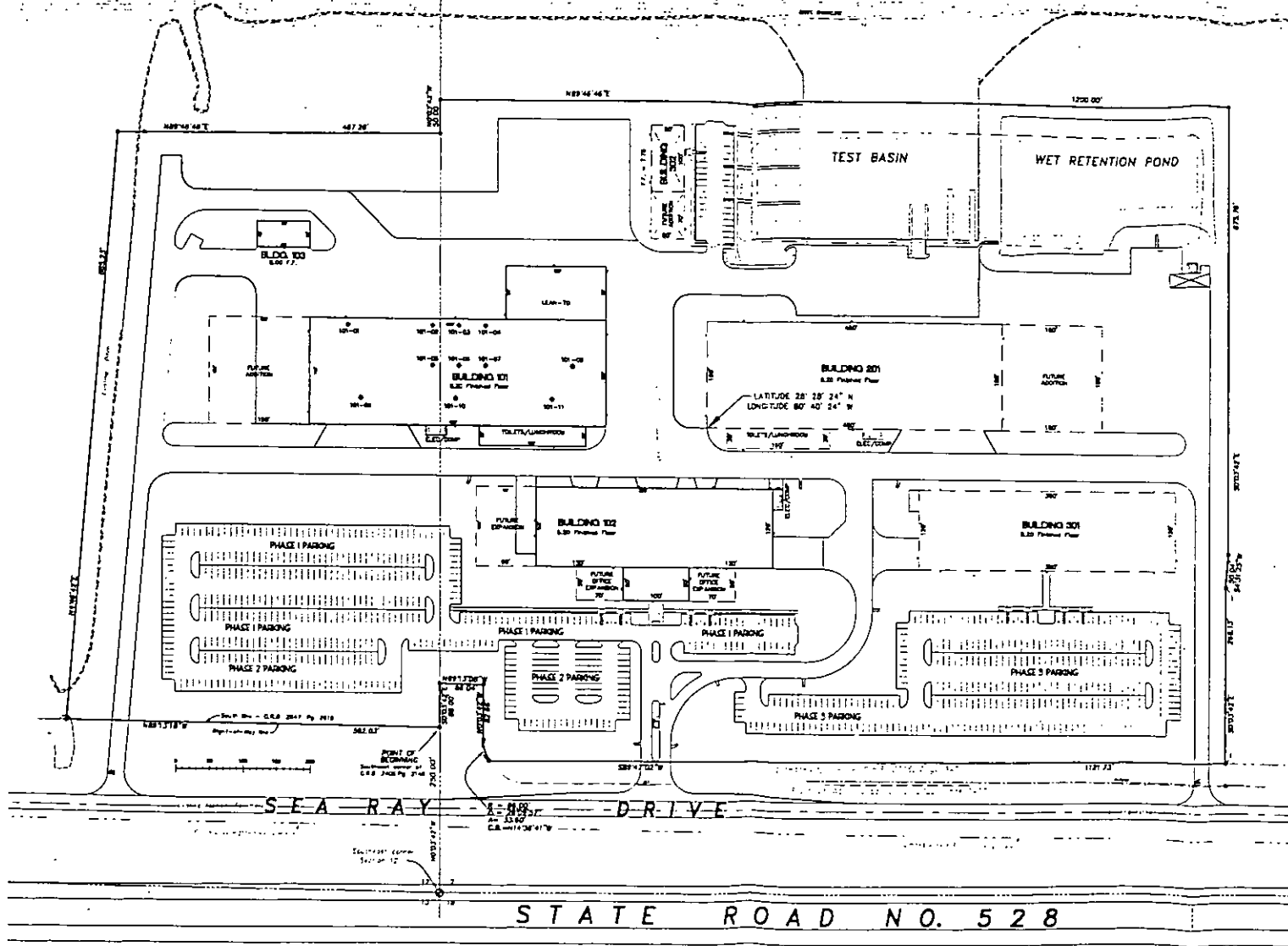


CONTOUR INTERVAL 5 FEET  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929  
 DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER  
 NO APPRECIABLE PERIODIC TIDES IN THIS AREA

**Exhibit A**

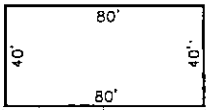
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
 FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092  
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

CANAVERAL PORT AUTHORITY "BARGE CANAL"



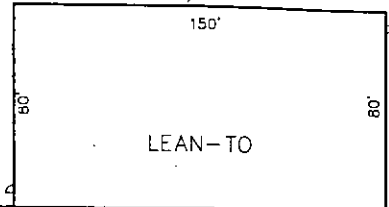
SEA RAY BOATS, INC.  
LAMINATION BUILDING  
FOR  
CAPE CANAVERAL PLANT  
S12, T24, R36E & S7, T24, R37E  
MERRITT ISLAND, FLORIDA

Exhibit B

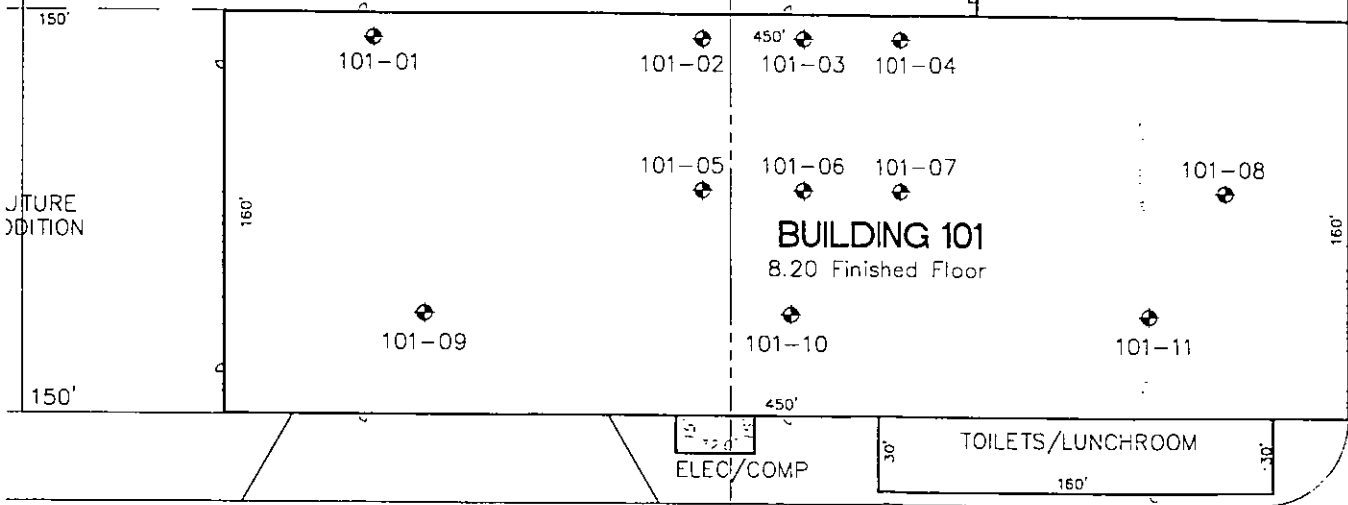


**BLDG. 103**  
8.00 F.F.

ADJUTURE  
ADDITION



LEAN-TO



**BUILDING 101**  
8.20 Finished Floor

ELEC/COMP

TOILETS/LUNCHROOM

150'

160'

101-01

101-02

450'

101-03

101-04

101-05

101-06

101-07

101-08

101-09

101-10

101-11

450'

15'

72.9'

14.2'

30'

160'

30'

120'

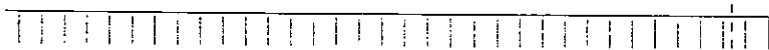
FUTURE  
EXPANSION

90'

120'

**BUILDING 102**  
8.20 Finished Floor

360'



TH  
30'

SEA RA  
LAMINA'

CAPE CA  
S12, T24, R2  
MERRITT I

*By Robert C.*

Exhibit C

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	V	H	R	A	% Chem	Chemical (lbs)	Emis Fctr	Emissions #Yr	Emissions Tons/Yr	Sorted by Chemical (lb)
15	10	102491	Additive, Retardant Butyl Cellulose	20 40	gc!	7.48	#/gl	152 59	lbs	2-Butoxyethanol	111-76-2	x	x			100 0%	152.59	100%	152 59	0 08	
175	15	191742	Cleaner, Glass	125 00	btl	20	oz	156 25	lbs	2-Butoxyethanol	111-76-2	x	x			5 7%	8 95	100%	8 95	0 00	
175	15	440727	Cleaner, All Purpose	36 00	can	19	oz	42 75	lbs	2-Butoxyethanol	111-76-2	x	x			6 0%	2 57	100%	2 57	0 00	
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716 00	gal	19.9	#/gl	14,248.40	lbs	2-Butoxyethanol	111-76-2	x	x			2 9%	406 08	100%	406 08	0 20	570 19
10	30	191510	3M Fast Foam Adhesive	11,908 00	ea	17.25	oz	12,838 31	lbs	Acetone	67-64-1				x	14 5%	1,861 56	100%	1,861.56	0 93	
10	30	191585	Adhesive, Threadlocker Primer Only	2 00	can	6	oz	0 75	lbs	Acetone	67-64-1				x	70 00%	0 53	100%	0 53	0 00	
15	50	191858	Fast Dry Lacquer	240 00	can	12	oz	180 00	lbs	Acetone	67-64-1				x	49 0%	88 20	100%	88.20	0 04	
15	80	191866	Paint, Spray Black Hi-Temp	8 00	can	12	oz	6 00	lbs	Acetone	67-64-1				x	45 0%	2 70	100%	2 70	0 00	
15	80	191882	Paint, Spray Red	49 00	can	12	oz	36 75	lbs	Acetone	67-64-1				x	36 0%	13 23	100%	13 23	0 01	
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120 00	ea	13	oz	16,347.50	lbs	Acetone	67-64-1				x	17 3%	2,833 02	100%	2,833 02	1 42	
195	60	277681	Seam Fill Antique White	130 00	ea	1	oz	8 13	lbs	Acetone	67-64-1				x	13 7%	1 11	100%	1 11	0 00	
10	30	321190	Lokweld Contact Adh	3,894 00	gal	6 86	#/gl	26,712 84	lbs	Acetone	67-64-1				x	26 5%	7,078 90	100%	7,078 90	3 54	
10	120	437145	Webbing Solution	128 00	gal	7	#/gl	896 00	lbs	Acetone	67-64-1				x	85 0%	761 60	100%	761 60	0 38	
15	120	440230	T-70 Lacquer Thinner	406 00	gal	6 72	#/gl	2,741 76	lbs	Acetone	67-64-1				x	5 0%	137 09	100%	137 09	0 07	
15	80	716936	Paint, Spray White High Glass "Hard	40 00	can	15	oz	37 50	lbs	Acetone	67-64-1				x	27 0%	10 13	100%	10 13	0 01	
15	120	848242	Thinner, Lacquer PPG-DLT/16	1 00	gal	6 67	#/gl	6 67	lbs	Acetone	67-64-1				x	27 5%	1 83	100%	1 83	0 00	
15	80	946004	Primer, Beataseal #43532	85 00	30 cc btl	8 5	#/gl	5 73	lbs	Acetone	67-64-1				x	15 0%	0 86	100%	0 86	0 00	
175	15	1004217	Cleaner, PVC Klean-N-Prime	26 00	ea	0 88	oz	1 43	lbs	Acetone	67-64-1				x	77 5%	1 11	100%	1 11	0 00	
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43 00	ea	11.5	oz	30 91	lbs	Acetone	67-64-1				x	32 0%	9 89	100%	9 89	0 00	
10	35	1129691	Coating, Strippable Wht	158 00	gal	7 68	#/gl	1,213 44	lbs	Acetone	67-64-1				x	24 0%	291 23	100%	291.23	0 15	13,092 98
15	80	181255	Paint, Spray Pt (Black)	3,692 00	can	11	oz	2,538 25	lbs	Butane	106-97-8	x	x			11 7%	295 96	100%	295 96	0 15	
15	80	191882	Paint, Spray Red	49 00	can	12	oz	36 75	lbs	Butane	106-97-8	x	x			8 0%	2 94	100%	2 94	0 00	
15	80	191932	Paint, Spray Pt (White)	184 00	can	11	oz	126 50	lbs	Butane	106-97-8	x	x			11 7%	14 75	100%	14 75	0 01	
15	80	716936	Paint, Spray White High Glass "Hard	40 00	can	15	oz	37 50	lbs	Butane	106-97-8	x	x			6 0%	2 25	100%	2 25	0 00	315 90
10	140	308205	Clear Mekp9H					14,622 00	lbs	Dimethyl Phthalate	131-11-3	x	x			43 0%	6,373 46	na	neg	0 00	
10	140	308213	Red Mekp9-H					39,302 00	lbs	Dimethyl Phthalate	131-11-3	x	x			50 0%	19,651 00	na	neg	0 00	0 00
175	15	662437	Cleaner, Super Blue Resin	2,112 00	gal	8 8	#/gl	18,585 60	lbs	Dipropylene glycol methyl ether	34950-94-8	x	x			7 0%	1,300 99	100%	1,300 99	0 65	
25	100	662445	Solvent, Super Flush S-280	6,006 00	gal	8 88	#/gl	53,333 28	lbs	Dipropylene Glycol Methyl Ether	34590-94-8	x	x			9 0%	4,800 00	100%	4,800 00	2 40	
25	100	846824	Thermaclean, Wipe-Brite					3,168 00	lbs	Dipropylene Glycol Methyl Ether	34590-94-8	x	x			7 5%	237 60	100%	237 60	0 12	6,338 59
25	100	846824	Thermaclean, Wipe-Brite					3,168 00	lbs	Dipropylene Glycol Monobutyl Ether	29911-28-2	x	x			3 0%	95 04	100%	95 04	0 05	95 04
25	110	257907	Sealant, Urethane White Sikaflex	362 00	ea	10.5	oz	237 56	lbs	Ethyl Benzene	100-41-4	x	x			4 5%	10 69	100%	10 69	0 01	
195	35	353482	Compound, Polishing Finesse II II	293 00	qt	8.345	#/gl	611 27	lbs	Ethylbenzene	100-41-4	x	x			0 1%	0 61	100%	0 61	0 00	
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43 00	ea	11.5	oz	30 91	lbs	Ethylbenzene	100-41-4	x	x			4 0%	1 24	100%	1 24	0 00	12 54
15	60	101485	Paint, Latex Black (Delta Labs)	1,246 00	gal	10 1	#/gl	12,584 60	lbs	Ethylene Glycol	107-21-1	x	x			2 9%	364 95	100%	364 95	0 18	
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716 00	gal	19.9	#/gl	14,248 40	lbs	Ethylene Glycol	107 21-1	x	x			2 9%	406 08	100%	406 08	0 20	771 03
195	35	179341	Compound Sealer Glaze	11 00	gal	8.75	#/gl	48 13	lbs	Formaldehyde	50-00-0	x	x			0 5%	0 24	100%	0 24	0 00	0 24
10	190	101410	Polygard 33-441					2,438 00	lbs	Hexachloroethane	67-72-1	x	x			4 1%	100 69	18%	18 12	0 01	18 12
15	70	101923	Paint, Plasti-Dip (Red)	1 00	gal	6 91	#/gl	6 91	lbs	Hexane	110-54-3	x	x			18 0%	1 24	100%	1 24	0 00	
10	30	166488	Contact Disc Cement	148 00	ea	5	oz	46 25	lbs	Hexane	110-54-3	x	x			37 5%	17 34	100%	17 34	0 01	
195	65	191734	Silicone Spray Lubricant	2,668 00	can	24	oz	4,002 00	lbs	Hexane	110-54-3	x	x			15 0%	600 30	100%	600 30	0 30	
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120 00	ea	13	oz	16,347 50	lbs	Hexane	110-54-3	x	x			34 6%	5,656 24	100%	5,656 24	2 83	
10	30	321190	Lokweld Contact Adh	3,894 00	gal	6 86	#/gl	26,712 84	lbs	Hexane	110-54-3	x	x			19 2%	5,128 87	100%	5,128 87	2 56	11,403 99
10	30	863159	Adhesive, Primer 48	335 00	ea	1	oz	20 94	lbs	Hydroquinone	123-31-6	x	x			0 1%	0 02	100%	0 02	0 00	0 02
15	80	181255	Paint, Spray Pt (Black)	3,692 00	can	11	oz	2,538 25	lbs	Isobutane	75-28-5	x	x			11 7%	295 96	100%	295 96	0 15	
10	30	191585	Adhesive, Threadlocker Primer Only	2 00	can	6	oz	0 75	lbs	Isobutane	75-28-5	x	x			22 50%	0 17	100%	0 17	0 00	

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	V	H	R	A	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr	Sorted by Chemical (lb)
												O	A	F	C						
												C	P	S	e						
175	15	191742	Cleaner, Glass Spartan	125 00	btl	20	oz	156 25	lbs	Isobutane	75-28-5	x	x			5 7%	8 95	100%	8 95	0 00	
15	80	191932	Paint, Spray Pt (White)	184 00	can	11	oz	126 50	lbs	Isobutane	75-28-5	x	x			11 7%	14 75	100%	14 75	0 01	
175	15	1004217	Cleaner, PVC Klean-N-Prime	26 00	ea	0 88	oz	1 43	lbs	Isobutane	75-28-5	x	x			22 5%	0 32	100%	0 32	0 00	320 15
10	30	191585	Adhesive, Threadlocker Primer Only	2 00	can	6	oz	0 75	lbs	Isopropyl Alcohol	67-63-0	x				10 00%	0 08	100%	0 08	0 00	0 08
15	80	946004	Primer, Beataseal #43532	85 00	30 cc btl	8 5	#/gl	5 73	lbs	MDI	101-68-8	x	x			3 9%	0 22	na	negl	0 00	
10	30	946012	Adhesive, Beataseal #58702	223 00	10 5 fl oz	9 93	#/gl	181 65	lbs	MDI	101-68-8	x	x			1 0%	1 82	na	negl	0 00	0 00
15	100	102525	Sanding Sealer	161 00	gal	7 1	#/gl	1,143 10	lbs	Methyl Alcohol	67-56-1	x	x			3 9%	44 01	100%	44 01	0 02	
10	30	191569	Adhesive, Threadlocker	89 00	ea	1 69	oz	9 40	lbs	Methyl Alcohol	67-56-1	x	x			2 0%	0 19	100%	0 19	0 00	
15	50	191858	Fast Dry Lacquer	240 00	can	12	oz	180 00	lbs	Methyl Alcohol	67-56-1	x	x			1 0%	1 80	100%	1 80	0 00	
25	30	194415	Denatured Alcohol	685 00	gal	6 7	#/gl	4,589 50	lbs	Methyl Alcohol	67-56-1	x	x			50 0%	2294 75	100%	2,294 75	1 15	
10	30	321190	Lokweld Contact Adh	3,894 00	gal	6 86	#/gl	26,712 84	lbs	Methyl Alcohol	67-56-1	x	x			2 5%	667 82	100%	667 82	0 33	
15	80	945980	Primer, Beataseal #43518	55 00	30 cc btl	6 9	#/gl	3 01	lbs	Methyl Alcohol	67-56-1	x	x			47 5%	1 43	100%	1 43	0 00	
25	30	1104843	Alcohol, Denatured	872 00	gal	6 72	#/gl	5,859 84	lbs	Methyl Alcohol	67-56-1	x	x			16 04%	939 92	100%	939 92	0 47	3,949 92
15	70	101923	Paint, Plasti-Dip (Red)	1 00	gal	6 91	#/gl	6 91	lbs	Methyl Ethyl Ketone	78-93-3	x	x			8 0%	0 55	100%	0 55	0 00	
15	50	102475	Moist Resist Lacquer	18 00	gal	7 4	#/gl	133 20	lbs	Methyl Ethyl Ketone	78-93-3	x	x			3 0%	4 00	100%	4 00	0 00	
15	100	102525	Sanding Sealer	161 00	gal	7 1	#/gl	1,143 10	lbs	Methyl Ethyl Ketone	78-93-3	x	x			15 0%	171 47	100%	171 47	0 09	
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74 00	gal	7 31	#/gl	540 94	lbs	Methyl Ethyl Ketone	78-93-3	x	x			4 0%	21 64	100%	21 64	0 01	
10	30	191718	Adhesive, Pvc Cement	203 00	qt	7 99	#/gl	405 49	lbs	Methyl Ethyl Ketone	78-93-3	x	x			15 0%	60 82	40%	24 33	0 01	
15	50	191858	Fast Dry Lacquer	240 00	can	12	oz	180 00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			1 0%	1 80	100%	1 80	0 00	
15	80	191866	Paint, Spray Black Hi-Temp	8 00	can	12	oz	6 00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			11 0%	0 66	100%	0 66	0 00	
195	60	277681	Seam Fill Antique White	130 00	ea	1	oz	8 13	lbs	Methyl Ethyl Ketone	78-93-3	x	x			9 1%	0 74	100%	0 74	0 00	
10	140	308205	Clear Mekp-9H					14,822 00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			2 0%	296 44	48%	142 29	0 07	
15	120	440230	T-70 Lacquer Thinner	408 00	gal	6 72	#/gl	2,741 76	lbs	Methyl Ethyl Ketone	78-93-3	x	x			10 0%	274 18	100%	274 18	0 14	
15	80	945988	Primer, Beataseal #43520	84 00	30 cc btl	8 2	#/gl	5 46	lbs	Methyl Ethyl Ketone	78-93-3	x	x			40 0%	2 18	100%	2 18	0 00	
15	80	946004	Primer, Beataseal #43532	85 00	30 cc btl	8 5	#/gl	5 73	lbs	Methyl Ethyl Ketone	78-93-3	x	x			45 0%	2 58	100%	2 58	0 00	
10	35	1129691	Coating, Strippable Wht	158 00	gal	7 68	#/gl	1,213 44	lbs	Methyl Ethyl Ketone	78-93-3	x	x			10 0%	121 34	100%	121 34	0 06	767 75
15	120	440230	T-70 Lacquer Thinner	408 00	gal	6 72	#/gl	2,741 76	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			25 0%	685 44	100%	685 44	0 34	
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12 00	gal	7 5	#/gl	90 00	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			13 0%	11 70	100%	11 70	0 01	
15	120	789719	Thinner, Dykem Blue	191 00	gal	6 88	#/gl	1,314 08	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			3 0%	39 42	100%	39 42	0 02	
15	70	868885	Paint, Primer Sandless	238 00	gal	7 8	#/gl	1,856 40	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			50 0%	928 20	100%	928 20	0 46	
25	30	1104843	Alcohol, Denatured	872 00	gal	6 72	#/gl	5,859 84	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			1 00%	58 60	100%	58 60	0 03	
10	35	1129691	Coating, Strippable Wht	158 00	gal	7 68	#/gl	1,213 44	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			10 0%	121 34	100%	121 34	0 06	1,844 70
10	120	100073	Orange Tooling					54 00	lbs	Methyl Methacrylate	80-62-6	x	x			5 0%	2 70	54%	1 46	0 00	
10	120	101139	Gelcoat, Black					60 00	lbs	Methyl Methacrylate	80-62-6	x	x			4 6%	2 78	48%	1 33	0 00	
10	120	101436	Black Tooling					162 00	lbs	Methyl Methacrylate	80-62-6	x	x			4 4%	7 12	54%	3 84	0 00	
10	120	556944	Antique White Gel					37,055 00	lbs	Methyl Methacrylate	80-62-6	x	x			3 0%	1,111 65	48%	533 59	0 27	
10	120	677732	Arctic White Gel Coat					483,374 00	lbs	Methyl Methacrylate	80-62-6	x	x			4 0%	19,334 96	48%	9,280 78	4 64	
10	60	699553	Gel Patch, Slow Patchaid					168 00	lbs	Methyl Methacrylate	80-62-6	x	x			47 9%	80 47	100%	80 47	0 04	
10	120	721126	Gelcoat, Zephyr Armorcote					18,773 00	lbs	Methyl Methacrylate	80-62-6	x	x			9 4%	1,768 42	48%	848 84	0 42	
10	120	721548	Airless Tooling Gel Coat					1,296 00	lbs	Methyl Methacrylate	80-62-6	x	x			5 0%	64 80	54%	34 99	0 02	
10	120	830893	Gelcoat, Teal Essence					624 00	lbs	Methyl Methacrylate	80-62-6	x	x			8 9%	55 72	48%	26 75	0 01	
10	120	894782	Gelcoat, Sandstone					1,920 00	lbs	Methyl Methacrylate	80-62-6	x	x			4 0%	76 80	48%	36 86	0 02	
10	120	946327	Gelcoat, Black					648 00	lbs	Methyl Methacrylate	80-62-6	x	x			3 0%	19 44	51%	9 91	0 00	
10	120	987792	Gelcoat, Aurora (Graniccoat)					15,780 00	lbs	Methyl Methacrylate	80-62-6	x	x			4 0%	631 20	48%	302 98	0 15	
10	120	992677	Gelcoat, Burnt Amber (Graniccoat)					900 00	lbs	Methyl Methacrylate	80-62-6	x	x			4 0%	36 00	48%	17 28	0 01	
10	120	992685	Gelcoat, Oceanic (Graniccoat)					300 00	lbs	Methyl Methacrylate	80-62-6	x	x			4 0%	12 00	48%	5 76	0 00	11,184 85
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18 00	gal	12 9	#/gl	232 20	lbs	Methylene Chloride	75-09-2	x				10 7%	24 78	100%	24 78	0 01	24 78
15	120	868901	Thinner, Btm Paint Brushing Dewaxer	64 00	gal	7 1	#/gl	454 40	lbs	Other VOC		x				100 0%	454 40	100%	454 40	0 23	



CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emiss Fctr	Emissions #/Yr	Emissions Tons/Yr	Sorted by Chemical (lb)
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Other.VOC		x				33.0%	2.28	100%	2.28	0.00	
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Other.VOC		x				65.5%	87.25	100%	87.25	0.04	
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Other.VOC		x				42.7%	488.10	100%	488.10	0.24	
25	120	102665	Silicon, Lubricant (Wd-40)	5.00	gal	6.68	#/gl	33.40	lbs	Other.VOC		x				71.0%	23.71	100%	23.71	0.01	
25	110	156984	Sealant, Silicone	7,897.00	ea	10.3	oz	5,083.69	lbs	Other.VOC		x				3.7%	188.10	100%	188.10	0.09	
25	110	156992	Sealant, Silicone	238.00	ea	10.3	oz	153.21	lbs	Other.VOC		x				3.7%	5.67	100%	5.67	0.00	
25	110	157008	Sealant, Silicone	15,437.00	ea	10.3	oz	9,937.57	lbs	Other.VOC		x				3.7%	367.69	100%	367.69	0.18	
195	35	164939	Compound, Edge Wax Fin-Kare	13.00	ea (gal)	6.65	#/gl	86.45	lbs	Other.VOC		x				44.7%	38.64	100%	38.64	0.02	
10	30	166488	Contact Disc Cement	148.00	ea	5	oz	46.25	lbs	Other.VOC		x				27.5%	12.72	100%	12.72	0.01	
195	35	179341	Compound Sealer Glaze	11.00	gal	8.75	#/gl	48.13	lbs	Other.VOC		x				33.0%	15.88	100%	15.88	0.01	
195	35	179358	Compound, Mold Release TR Hi-Temp	310.00	can	14	oz	271.25	lbs	Other.VOC		x				70.0%	189.88	100%	189.88	0.09	
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Other.VOC		x				8.1%	206.61	100%	206.61	0.10	
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs	Other.VOC		x				69.0%	373.25	100%	373.25	0.19	
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Other.VOC		x				39.3%	5,045.46	100%	5,045.46	2.52	
10	30	191569	Adhesive, Threadlocker	89.00	ea	1.69	oz	9.40	lbs	Other.VOC		x				11.3%	1.06	100%	1.06	0.00	
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Other.VOC		x				2.96%	0.02	100%	0.02	0.00	
10	30	191718	Adhesive, Pvc Cement	203.00	qt	7.99	#/gl	405.49	lbs	Other.VOC		x				66.5%	269.65	40%	107.86	0.05	
195	65	191734	Silicone Spray Lubricant	2,668.00	can	24	oz	4,002.00	lbs	Other.VOC		x				80.0%	3,201.60	100%	3,201.60	1.60	
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Other.VOC		x				17.0%	30.60	100%	30.60	0.02	
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Other.VOC		x				31.0%	1.86	100%	1.86	0.00	
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Other.VOC		x				1.0%	0.37	100%	0.37	0.00	
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs	Other.VOC		x				50.8%	391.00	100%	391.00	0.20	
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Other.VOC		x				8.1%	10.30	100%	10.30	0.01	
195	35	192864	Super Polyglaze	66.00	cn (2 qt)	7.92	#/gl	340.56	lbs	Other.VOC		x				65.0%	221.36	100%	221.36	0.11	
195	35	192872	Imperial Hand Glaze	16.00	cn (qt)	7.92	#/gl	31.68	lbs	Other.VOC		x				14.3%	4.53	100%	4.53	0.00	
175	15	192898	Bilge Cleaner	2.00	ea	16	oz	2.00	lbs	Other.VOC		x				1.0%	0.02	100%	0.02	0.00	
175	15	192922	Cleaner, Vinyl Formula Lr	5.00	can	14	oz	4.38	lbs	Other.VOC		x				95.0%	4.16	100%	4.16	0.00	
195	35	194274	Cpd Polishing Lackryl	72.00	gal	11.68	#/gl	840.96	lbs	Other.VOC		x				2.4%	20.18	100%	20.18	0.01	
195	35	194282	Compound, Polishing Dixtler	20.00	gal	10.81	#/gl	216.20	lbs	Other.VOC		x				33.3%	72.06	100%	72.06	0.04	
25	30	194308	Dykem Co	11.00	gal	7.18	#/gl	78.98	lbs	Other.VOC		x				89.4%	70.61	100%	70.61	0.04	
25	110	194415	Denatured Alcohol	685.00	gal	6.7	#/gl	4,589.50	lbs	Other.VOC		x				47.5%	2,180.01	100%	2,180.01	1.09	
25	110	209106	Sealant, Silicone	43.00	ea	3	8.72	8.79	lbs	Other.VOC		x				5.2%	0.46	100%	0.46	0.00	
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Other.VOC		x				15.2%	2,478.28	100%	2,478.28	1.24	
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs	Other.VOC		x				80.0%	1,213.60	100%	1,213.60	0.61	
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Other.VOC		x				32.5%	4.55	100%	4.55	0.00	
25	110	257600	Sealant, Pipe (PVC) w/Teflon	10.00	ea (50 ml)	9.51	#/gl	0.25	lbs	Other.VOC		x				8.6%	0.02	100%	0.02	0.00	
25	30	270009	Chemical, Mineral Spirits	161.00	gal	6.43	#/gl	1,035.23	lbs	Other.VOC		x				100.0%	1,035.23	100%	1,035.23	0.52	
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Other.VOC		x				63.5%	5.16	100%	5.16	0.00	
25	110	277731	Sealant, Silicone White	92.00	ea	8	oz	46.00	lbs	Other.VOC		x				4.0%	1.84	100%	1.84	0.00	
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Other.VOC		x				19.2%	5,128.87	100%	5,128.87	2.56	
25	110	352443	Sealant, Silicone	1,093.00	ea	3	8.7	222.87	lbs	Other.VOC		x				5.2%	11.59	100%	11.59	0.01	
195	35	353482	Compound, Polishing Finesse It II	295.00	qt	8.345	#/gl	611.27	lbs	Other.VOC		x				22.8%	139.37	100%	139.37	0.07	
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Other.VOC		x				25.0%	685.44	100%	685.44	0.34	
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs	Other.VOC		x				20.0%	441.04	100%	441.04	0.22	
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs	Other.VOC		x				17.0%	5.54	100%	5.54	0.00	
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12.00	gal	7.5	#/gl	90.00	lbs	Other.VOC		x				69.0%	62.10	100%	62.10	0.03	
15	30	612077	Epoxy Btm Coat w/Hardener 2001	18.00	gal	7.3	#/gl	131.40	lbs	Other.VOC		x				48.3%	63.52	100%	63.52	0.03	
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/10	19.00	gal	8.1	#/gl	153.90	lbs	Other.VOC		x				35.5%	54.63	100%	54.63	0.03	

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	V	H	R	A	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr	Sorted by Chemical (lb)
												O	A	F	C						
												C	P	S	e						
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs	Other.VOC		x				8.4%	9.65	100%	9.65	0.00	
25	100	662445	Solvent, Super Flush S-280	6,006.00	gal	8.88	#/gl	53,333.28	lbs	Other.VOC		x				90.9%	48,479.95	100%	48,479.95	24.24	
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Other.VOC		x				43.5%	31.95	100%	31.95	0.02	
15	10	667451	Additive, Activator Imron	12.00	qt	8.01	#/gl	24.03	lbs	Other.VOC		x				67.8%	16.29	100%	16.29	0.01	
195	35	715581	Cpd Polishing Lackryl 5 gal	101.00	pl (5 gal)	11.68	#/gl	5,898.40	lbs	Other.VOC		x				2.4%	141.56	100%	141.56	0.07	
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Other.VOC		x				15.9%	5.96	100%	5.96	0.00	
25	160	761346	Poly vinyl Alcohol	74.00	gal	7.63	#/gl	564.62	lbs	Other.VOC		x				44.2%	249.56	100%	249.56	0.12	
15	120	789719	Thinner, Dykem Blue	191.00	gal	6.88	#/gl	1,314.08	lbs	Other.VOC		x				97.0%	1,274.66	100%	1,274.66	0.64	
25	100	790477	Isopropyl Acetate					24,480.00	lbs	Other.VOC		x				100.0%	24,480.00	100%	24,480.00	12.24	
195	65	810820	Lubricant, Protecto-Flex	1,282.00	ea	15	oz	1,201.88	lbs	Other.VOC		x				50.0%	600.94	100%	600.94	0.30	
25	110	813220	Sealant, Silicone Lt Gray Starbrte RT	5.00	o (10 3 fl o	8.68	#/gl	3.49	lbs	Other.VOC		x				5.0%	0.17	100%	0.17	0.00	
15	20	825745	Paint, Acrylic Black Fast Drying	144.00	gal	8.345	#/gl	1,201.68	lbs	Other.VOC		x				6.1%	73.30	100%	73.30	0.04	
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Other.VOC		x				78.2%	2,477.38	100%	2,477.38	1.24	
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Other.VOC		x				7.5%	0.50	100%	0.50	0.00	
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Other.VOC		x				17.5%	1.17	100%	1.17	0.00	
10	30	863142	Adhesive, Glue Instabond	527.00	ea	1.75	oz	57.64	lbs	Other.VOC		x				86.0%	49.57	100%	49.57	0.02	
10	30	863159	Adhesive, Primer 48	335.00	ea	1	oz	20.94	lbs	Other.VOC		x				99.8%	20.90	100%	20.90	0.01	
15	70	868893	Paint, Primer Sandless	236.00	gal	7.8	#/gl	1,856.40	lbs	Other.VOC		x				30.0%	556.92	100%	556.92	0.28	
175	15	900381	Cleaner, Dishsoap	8.00	gal	8.6	#/gl	68.80	lbs	Other.VOC		x				1.4%	0.96	100%	0.96	0.00	
25	110	911859	Sealant, Silicone Clear (Corian)	170.00	ea	1.5	oz	15.94	lbs	Other.VOC		x				5.0%	0.80	100%	0.80	0.00	
25	110	918706	Sealant, Joint Compound Bone/Bisqu	302.00	ea	1.5	oz	28.31	lbs	Other.VOC		x				40.0%	11.33	100%	11.33	0.01	
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Other.VOC		x				8.7%	0.47	100%	0.47	0.00	
15	60	983130	Paint, Latex Cream Touch-Up Btl w/B	36.00	ea	0.6	oz	1.35	lbs	Other.VOC		x				27.6%	0.37	100%	0.37	0.00	
25	110	1019231	Sealant, Pipe (PST)	26.00	ea (10 ml)	9.18	#/gl	0.63	lbs	Other.VOC		x				13.3%	0.08	100%	0.08	0.00	
25	110	1081694	Sealant, Silicone Cream Starbrte RT	133.00	o (10 3 fl o	8.68	#/gl	92.90	lbs	Other.VOC		x				5.0%	4.64	100%	4.64	0.00	
15	80	1064912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Other.VOC		x				27.2%	8.42	100%	8.42	0.00	
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs	Other.VOC		x				77.9%	21.06	100%	21.06	0.01	
25	110	1096072	Sealant, Silicone Zephyr RTV	484.00	o (10 3 fl o	8.68	#/gl	338.06	lbs	Other.VOC		x				5.0%	16.90	100%	16.90	0.01	
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Other.VOC		x				82.96%	4,861.32	100%	4,861.32	2.43	
195	35	1105485	Wax, Gruber Care X-Wax Soft	26.00	bx (2.5 gal)	7.93	#/gl	515.45	lbs	Other.VOC		x				15.0%	77.32	100%	77.32	0.04	
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Other.VOC		x				22.0%	266.96	100%	266.96	0.13	
25	100	1151588	Safety Clean Solvent	330.00	gal	6.65	#/gl	2,194.50	lbs	Other.VOC		x				100.0%	2,194.50	100%	2,194.50	1.10	
10	30	1209303	Adhesive, Spray Whisper	714.00	gal	9.89	#/gl	7,061.46	lbs	Other.VOC		x				70.0%	4,943.02	100%	4,943.02	2.47	116,027.08
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Pentane	109-66-0	x	x			24.2%	3,106.87	100%	3,106.87	1.55	3,106.87
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Perchloroethylene	127-18-4	x	x			22.5%	3.15	100%	3.15	0.00	3.15
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/10	19.00	gal	8.1	#/gl	153.90	lbs	Phenol	108-95-2	x	x			12.5%	19.24	100%	19.24	0.01	19.24
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Propane	74-98-6	x	x			11.7%	295.96	100%	295.96	0.15	
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Propane	74-98-6	x	x			15.0%	27.00	100%	27.00	0.01	
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Propane	74-98-6	x	x			3.0%	0.18	100%	0.18	0.00	
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Propane	74-98-6	x	x			16.0%	5.88	100%	5.88	0.00	
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Propane	74-98-6	x	x			11.7%	14.75	100%	14.75	0.01	
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Propane	74-98-6	x	x			15.2%	2,478.28	100%	2,478.28	1.24	
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs	Propane	74-98-6	x	x			20.0%	303.40	100%	303.40	0.15	
175	15	440727	Cleaner, All Purpose	36.00	can	19	oz	42.75	lbs	Propane	74-98-6	x	x			5.0%	2.14	100%	2.14	0.00	
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Propane	74-98-6	x	x			14.0%	5.25	100%	5.25	0.00	3,132.84
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Propylene Glycol Methyl Ether Acetate	108-65-6	x	x			12.5%	4.59	100%	4.59	0.00	

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	Ac	% Chem	Chemical (lbs)	Emis Fctr	Emissions #Yr	Emissions Tons/Yr	Sorted by Chemical (lb)
15	80	945996	Primer, Beataseal #43520	64.00	30 c- btl	8.2	#/gl	5.46	lbs	Toluene	108-88-3	x	x		10.0%	0.55	100%	0.55	0.00	
10	30	946012	Adhesive, Beatseal #58702	223.00	10.5 fl oz	9.93	#/gl	181.65	lbs	Toluene	108-88-3	x	x		5.0%	9.08	100%	9.08	0.00	
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs	Toluene	108-88-3	x	x		3.0%	0.81	100%	0.81	0.00	
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Toluene	108-88-3	x	x		4.0%	48.54	100%	48.54	0.02	5,349.49
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Trichloroethylene	79-01-6	x	x		42.5%	5.95	100%	5.95	0.00	5.95
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Xylene	1330-20-7	x	x		4.0%	5.33	100%	5.33	0.00	
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Xylene	1330-20-7	x	x		3.9%	44.01	100%	44.01	0.02	
15	80	181255	Paint, Spray Pt (Black)	4,430.00	can	11	oz	3,045.63	lbs	Xylene	1330-20-7	x	x		12.5%	380.70	100%	380.70	0.19	
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs	Xylene	1330-20-7	x	x		3.0%	16.23	100%	16.23	0.01	
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Xylene	1330-20-7	x	x		1.0%	1.80	100%	1.80	0.00	
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Xylene	1330-20-7	x	x		12.0%	4.41	100%	4.41	0.00	
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs	Xylene	1330-20-7	x	x		1.0%	7.70	100%	7.70	0.00	
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Xylene	1330-20-7	x	x		12.5%	15.81	100%	15.81	0.01	
25	110	257907	Sealant, Urethane White Sikaflex	362.00	ea	10.5	oz	237.56	lbs	Xylene	1330-20-7	x	x		4.5%	10.69	100%	10.69	0.01	
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Xylene	1330-20-7	x	x		13.7%	1.11	100%	1.11	0.00	
10	140	308213	Red Mekp9-H					39,302.00	lbs	Xylene	1330-20-7	x	x		17.5%	6,877.85	100%	6,877.85	3.44	
195	35	353482	Compound, Polishing Finesse II	293.00	qt	8.345	#/gl	611.27	lbs	Xylene	1330-20-7	x	x		0.1%	0.61	100%	0.61	0.00	
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs	Xylene	1330-20-7	x	x		5.0%	110.26	100%	110.26	0.06	
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs	Xylene	1330-20-7	x	x		5.0%	1.63	100%	1.63	0.00	
15	120	592899	Bottom Paint Thinner	48.00	gal	7.3	#/gl	350.40	lbs	Xylene	1330-20-7	x	x		100.0%	350.40	100%	350.40	0.18	
15	30	612077	Epoxy Btm Coat w/Hardener 2001	18.00	gal	7.3	#/gl	131.40	lbs	Xylene	1330-20-7	x	x		38.0%	49.93	100%	49.93	0.02	
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18.00	gal	12.9	#/gl	232.20	lbs	Xylene	1330-20-7	x	x		7.7%	17.81	100%	17.81	0.01	
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs	Xylene	1330-20-7	x	x		1.6%	1.84	100%	1.84	0.00	
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Xylene	3330-20-7	x	x		1.4%	1.03	100%	1.03	0.00	
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Xylene	1330-20-7	x	x		3.0%	1.13	100%	1.13	0.00	
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Xylene	1330-20-7	x	x		17.5%	1.17	100%	1.17	0.00	
15	60	983130	Paint, Latex Cream Touch-Up Btl w/B	36.00	ea	0.6	oz	1.35	lbs	Xylene	1330-20-7	x	x		30.0%	0.41	100%	0.41	0.00	
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Xylene	1330-20-7	x	x		21.0%	6.49	100%	6.49	0.00	7,908.34
			<b>TOTAL</b>																	
			<b>Subtotals</b>															496,505.74	248.25	496,505.74
			Total VOC Compounds (VOC)																	
			Total Hazardous Air Pollutants (HAPs)																483,412.76	241.71
			Total Acetone																360,509.84	180.25
			Total Regulated and Toxic Substances (RFS)																13,092.98	6.55
																			6,875.76	3.44

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	ACE	% Chem	Chemical (lbs)	Emis Fctr	Emissions #Yr	Emissions Tons/Yr	Sorted by Chemical (lb)
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Propylene Glycol Monomethyl Ether	108-65-6	x	x			7.2%	5.29	100%	5.29	0.00	
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Propylene Glycol Monomethyl Ether Acetate	108-65-6	x	x			7.5%	0.50	100%	0.50	0.00	10.38
10	120	100073	Orange Tooling					54.00	lbs	Styrene	100-42-5	x	x			40.8%	22.01	54%	11.89	0.01	
10	120	101139	Gelcoat, Black					60.00	lbs	Styrene	100-42-5	x	x			33.4%	20.01	48%	9.60	0.00	
10	120	101154	Bilge Grey Gc					184,765.00	lbs	Styrene	100-42-5	x	x			34.4%	63,562.86	16.5%	10,487.87	5.24	
10	190	101410	Polygard 33-441					2,438.00	lbs	Styrene	100-42-5	x	x			37.2%	906.69	18%	163.20	0.08	
10	120	101436	Black Tooling					162.00	lbs	Styrene	100-42-5	x	x			42.5%	68.79	54%	37.15	0.02	
10	110	102574	Flexbond Putty	984.00	gal	9.17	#/gl	9,023.28	lbs	Styrene	100-42-5	x	x			34.5%	3,113.03	11.0%	342.43	0.17	
10	120	556944	Antique White Gel					37,055.00	lbs	Styrene	100-42-5	x	x			35.0%	12,969.25	48%	6,225.24	3.11	
10	110	581975	Polyester Putty	1,602.00	gal	13.27	#/gl	21,258.54	lbs	Styrene	100-42-5	x	x			15.0%	3,188.78	11.0%	350.77	0.18	
10	190	619981	Alpha Altek 80602F					3,552,635.00	lbs	Styrene	100-42-5	x	x			35.0%	1,243,422.25	16%	198,947.56	99.47	
10	190	666057	Hydropell A35					210,060.00	lbs	Styrene	100-42-5	x	x			35.0%	73,521.00	16%	11,763.36	5.88	
10	120	677732	Arctic White Gel Coat					483,374.00	lbs	Styrene	100-42-5	x	x			28.5%	137,848.60	48%	66,167.33	33.08	
10	120	680751	Bilge Grey Gel Coat					55,290.00	lbs	Styrene	100-42-5	x	x			30.0%	16,587.00	16.5%	2,736.86	1.37	
10	60	699553	Gel Patch, Slow Patchaid					168.00	lbs	Styrene	100-42-5	x	x			48.0%	80.64	100%	80.64	0.04	
10	120	721126	Gelcoat, Zephyr Armorcote					18,773.00	lbs	Styrene	100-42-5	x	x			33.7%	6,320.87	48%	3,034.02	1.52	
10	120	721548	Airless Tooling Gel Coat					1,296.00	lbs	Styrene	100-42-5	x	x			42.7%	553.52	54%	298.90	0.15	
10	110	723080	Hvy Wt Bonding Putty					74,204.00	lbs	Styrene	100-42-5	x	x			15.0%	11,130.60	11.0%	1,224.37	0.61	
10	110	761643	Hvy Wt Bond Putty Low					90,540.00	lbs	Styrene	100-42-5	x	x			15.0%	13,581.00	11.0%	1,493.91	0.75	
10	120	830893	Gelcoat, Teal Essence					624.00	lbs	Styrene	100-42-5	x	x			31.7%	197.56	48%	94.83	0.05	
10	120	893420	Gelcoat, Black Backcoat					1,380.00	lbs	Styrene	100-42-5	x	x			32.0%	441.60	48%	211.97	0.11	
10	120	894782	Gelcoat, Sandstone					1,920.00	lbs	Styrene	100-42-5	x	x			24.0%	460.80	48%	221.18	0.11	
10	120	894790	Gelcoat, Bone Backcoat					2,580.00	lbs	Styrene	100-42-5	x	x			32.0%	825.60	48%	396.29	0.20	
10	110	896886	Gunk, Hvy Wt Bonding Putty Lg					56,654.00	lbs	Styrene	100-42-5	x	x			12.0%	6,798.48	11.0%	747.83	0.37	
10	120	946327	Gelcoat, Black					648.00	lbs	Styrene	100-42-5	x	x			37.7%	244.42	51%	124.65	0.06	
10	120	987792	Gelcoat, Aurora (Graniccoat)					15,780.00	lbs	Styrene	100-42-5	x	x			24.0%	3,787.20	48%	1,817.86	0.91	
10	120	992677	Gelcoat, Burnt Amber (Graniccoat)					900.00	lbs	Styrene	100-42-5	x	x			24.0%	216.00	48%	103.68	0.05	
10	120	992685	Gelcoat, Oceanic (Graniccoat)					300.00	lbs	Styrene	100-42-5	x	x			24.0%	72.00	48%	34.56	0.02	
10	120	1003250	Gelcoat, Tan Backcoat					300.00	lbs	Styrene	100-42-5	x	x			32.0%	96.00	48%	46.08	0.02	
10	190	1226538	Resin, Hydropell A-35					23,220.00	lbs	Styrene	100-42-5	x	x			35.0%	8,127.00	16%	1,300.32	0.65	
10	110	1235316	Gunk, Lt Wt Bonding Putty LV					51,840.00	lbs	Styrene	100-42-6	x	x			16.0%	8,294.40	11.0%	912.38	0.46	
10	110	1235324	Gunk, Lt Wt Bonding Putty LG					48,000.00	lbs	Styrene	100-42-7	x	x			16.0%	7,680.00	11.0%	844.80	0.42	310,231.53
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Toluene	108-88-3	x	x			15.0%	1.04	100%	1.04	0.00	
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Toluene	108-88-3	x	x			3.0%	4.00	100%	4.00	0.00	
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Toluene	108-88-3	x	x			15.0%	171.47	100%	171.47	0.09	
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Toluene	108-88-3	x	x			25.0%	634.56	100%	634.56	0.32	
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Toluene	108-88-3	x	x			3.0%	5.40	100%	5.40	0.00	
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Toluene	108-88-3	x	x			10.0%	0.60	100%	0.60	0.00	
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Toluene	108-88-3	x	x			25.0%	31.63	100%	31.63	0.02	
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Toluene	108-88-3	x	x			13.0%	3,472.67	100%	3,472.67	1.74	
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Toluene	108-88-3	x	x			35.0%	959.62	100%	959.62	0.48	
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Toluene	108-88-3	x	x			3.7%	2.72	100%	2.72	0.00	
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Toluene	108-88-3	x	x			10.0%	3.75	100%	3.75	0.00	
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Toluene	108-88-3	x	x			22.5%	1.50	100%	1.50	0.00	
15	80	945980	Primer, Beataseal #43518	55.00	30 cc btl	6.9	#/gl	3.01	lbs	Toluene	108-88-3	x	x			52.5%	1.58	100%	1.58	0.00	

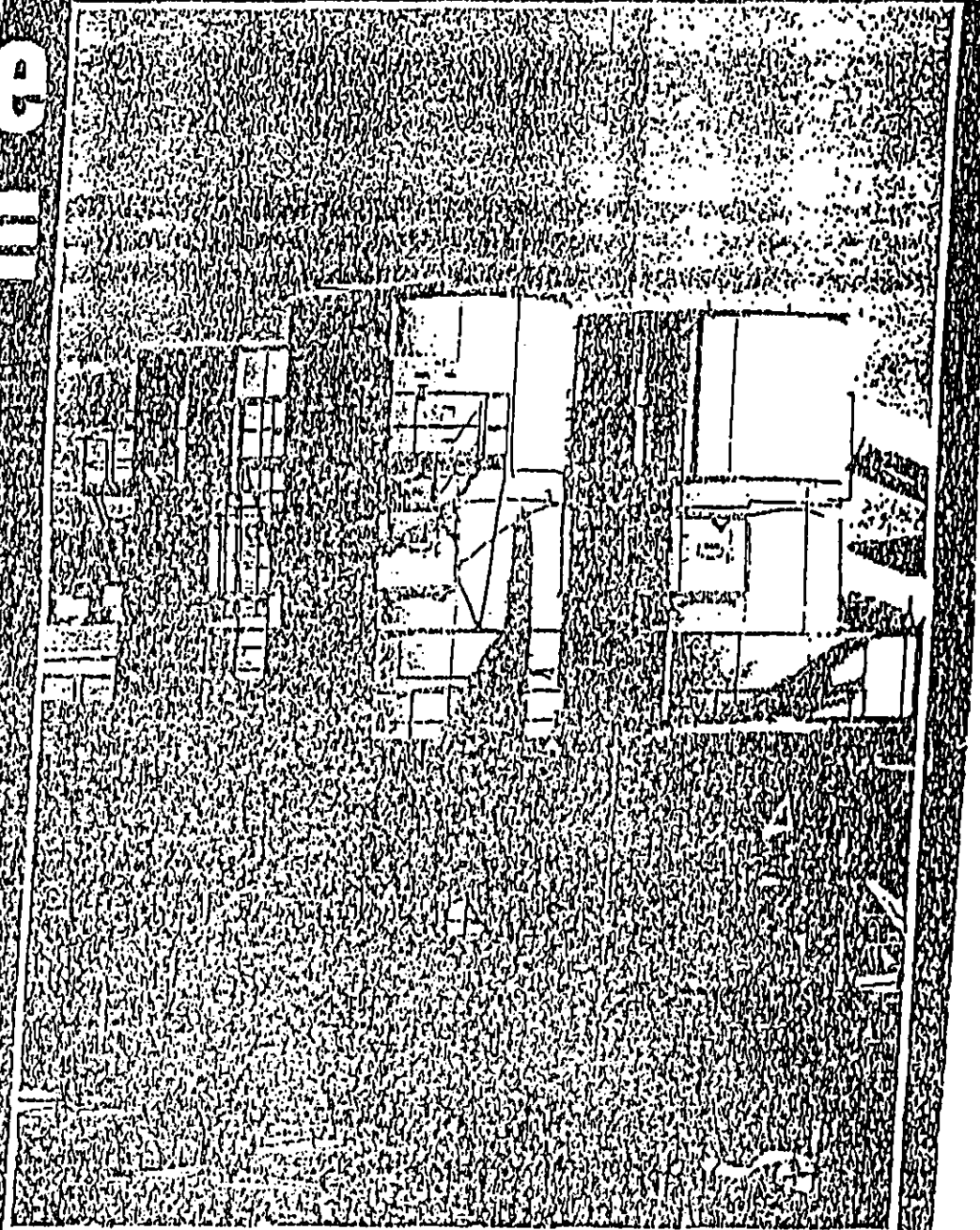
**Emission Stack Geometry and Flow Characteristics - Sea Ray Boats, Inc. - Cape Canaveral Plant**

Stack Number	Stack (UTM Coords.) Easting (meters)	Stack (UTM Coords.) Northing (meters)	Discharge Type Code	Stack Height <sup>1</sup> (ft)	Stack Exit Diameter (ft)	Gas Flow Rate, ACFM <sup>2</sup>	Velocity <sup>3</sup> (fps)	Gas Exit Temperature <sup>4</sup> (°F)	Water Vapor Content <sup>5</sup> (%)
101-01	1122.8848	1752.7061	V	55.0	3.5	20,000	8.67	Ambient, 68	Ambient
101-02	1135.0768	1752.7061	V	55.0	3.5	40,000	17.33	Ambient, 68	Ambient
101-03	1147.2688	1752.7061	V	55.0	3.5	40,000	17.33	Ambient, 68	Ambient
101-04	1122.8848	1734.4181	V	55.0	3.5	40,000	17.33	Ambient, 68	Ambient
101-05	1135.0768	1734.4181	V	55.0	3.5	40,000	17.33	Ambient, 68	Ambient
101-06	1147.2688	1734.4181	V	55.0	3.5	40,000	17.33	Ambient, 68	Ambient
101-07	1083.2608	1752.7061	V	55.0	3.5	40,000	17.33	Ambient, 68	Ambient
101-08	1186.8928	1734.4181	V	55.0	3.5	30,000	13.00	Ambient, 68	Ambient
101-09	1089.3568	1719.3823	V	55.0	3.5	15,000	6.50	Ambient, 68	Ambient
101-10	1133.5528	1719.3823	V	55.0	3.5	15,000	6.50	Ambient, 68	Ambient
101-11	1177.7488	1719.3823	V	55.0	3.5	15,000	6.50	Ambient, 68	Ambient

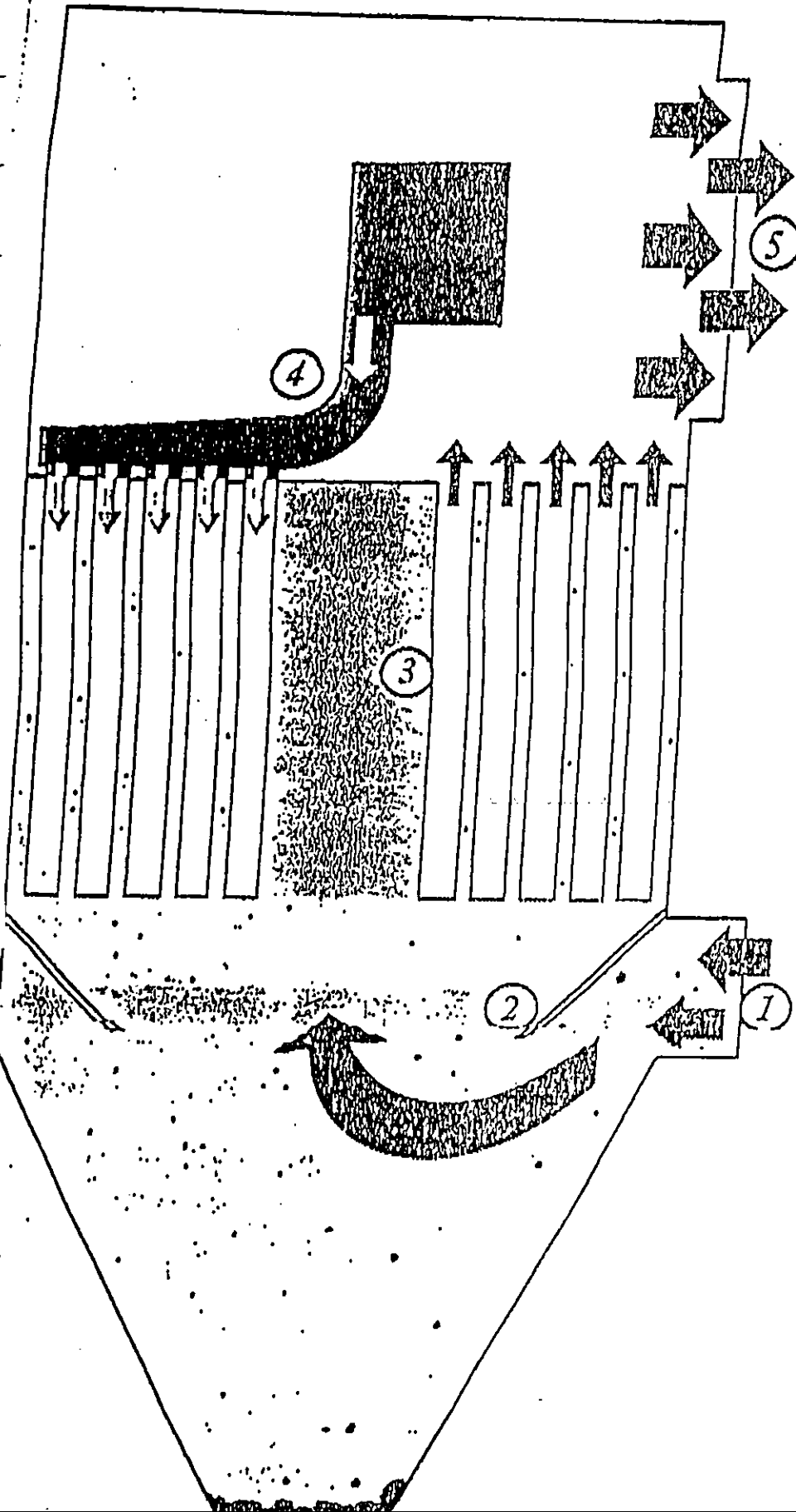
**\*Notes**

1. Stack height was determined from a ground elevation of 0 ft
2. Gas Flow Rate, ACFM  
The flow rates were determined from manufacturers information.
3. The velocity was calculated from the flow rate
- 4, 5. Since the fans will be exhausting air from buildings, Ambient temperatures and water contents would be present

# The Pneumafil Reverse Air Filter



# How the filter works



1. Contaminated air enters the Reverse Air Filter through a tangential air inlet. Its large size minimizes entrance pressure loss and reduces power requirements.

2. The combination of the tangential inlet and deep particle deflector results in the cyclonic downward deflection of larger particles to the hopper. This allows heavier loadings, less abrasion to the filter bags, higher collection efficiencies and less energy to remove the remaining particles from the air stream.

3. The filter bags remove dust particles from the air stream. Clean air passes upward through the filter bags and into the walk-in clean air plenum.

4. The reverse-air cleaning fan returns part of the clean air in the walk-in plenum to the rotating air manifold. As the manifold rotates once every minute, air is directed down into the hopper and then clean air. Dislodged dust is collected in the conical hopper. Reverse air cleaning of the filter bags maintains constant porosity and low pressure drop across the filter, resulting in an extremely high dust collection efficiency.

5. The clean, dust free air is exhausted through the large air outlet to be either vented to the atmosphere or recycled to the plant. Because of the short contact time required for the air to pass through the Reverse Air Filter, no additional energy is required to either heat or cool the air stream.

# The Pneumafil Reverse Air Filter

*How it compares . . .*

*. . . in energy savings*

A true evaluation of a dust control system should consider energy consumption as it applies to the complete filter system — and not merely to any one component. This is why all Pneumafil dust filters are designed to function as an integral part of the total system in combination with its other exceptional capabilities for reducing overall operating costs.

For example, our reverse air filters are cleaned by either an economical 7½, 10, or 15 hp motor and costs very little to operate. But more important, each bag is cleaned once every 60 seconds by utilizing the efficient reversed flow of "processed" air. This complete and systematic cleaning dramatically reduces the pressure drop across the media as well as the load demands on the complete fan system. The result is energy savings! Conversely, a system that employs a random air pump cleaning sequence may only require the same amount of horsepower in driving the air pump — however, this type of system *does not* clean the bags every 60 seconds. The air discharge is regulated by whenever and wherever the pressure build up activates the air jets. Because of this random firing, some bags could remain uncleaned indefinitely. This means higher pressure drops across the media, increased demands on the total fan system and ultimately higher energy costs.

Our low tangential air entry utilizes less overall energy than filters with a high air inlet. The low tangential entry allows heavy dust particles to "drop out" into the filter hopper. This initial sorting out of larger dust particles results in greater energy savings and less wear and tear on filter bags. Each contributing to lower operating costs.

Additional energy savings are obtained by recycling plant air previously heated or cooled. With the short contact time of air passing through the filter, the cleaned air is not affected by outside temperatures — and no additional energy is expended to heat or cool make-up air.

*. . . with filter  
maintenance*

All bag inspection and removal operations were designed to simplify maintenance procedures and keep maintenance costs down.

With a Pneumafil dust filter, bag inspection can be accomplished without entering the walk-in, clean air plenum viewing port and lighted plenum allows the operator to visually inspect the bag cleaning system from outside filter.

Our walk-in plenum permits top bag removal from clean air side. This operation simply requires extra two screws before removing and inserting a new bag. Five clips on the bag cage eliminates misplacing or dropping into the hopper section.

Pneumafil bags are designed and constructed to deliver maximum efficiency and a consistent high level of performance. Bags are made of 16 oz. polyester felt with a special nylon scrim reinforcement and a 2" canvas wear strip at the bottom to protect against abrasion. All bags can be washed or dry cleaned.

*. . . in special features*

#### Tube Sheet

Our filter tube sheet is sectionalized, bolted in place — in case of damage can be easily removed through plenum door. Filters that employ welded-in tube sheets require a major dismantling operation. Cutting and welding are required to remove damaged plates, in addition to replacing the entire mechanical section. This can result in considerable downtime and expense.

Wear against the tube sheet is virtually non-existent. The cleaning arm is equipped with a nylon base to eliminate friction of metal to metal contact. A flexible connection permits the arm to ride over obstructions on the tube sheet.

The Pneumafil reverse air bag cleaning operation is accomplished by effectively using a simple reverse flow fan. There are no valves, dampers or compressors to maintain. And with the absence of compressed air, there is less risk of explosion because no additional oxygen is being introduced.

#### Hopper Design

Our hopper design eliminates the need for any additional and expensive auger discharge. Any bridging of collected dust is prevented by the use of a conical hopper with a 6:1 slope. Each hopper is equipped with a large, bolted access door and flanged outlets.



## ... in general construction and painting

The filter is constructed of hot rolled, pickled and oiled mild steel. Our unique standing seam design provides considerable reinforcement and rigidity to the overall structural integrity, making the filter ideally suited for any environment. All filters are constructed to withstand  $\pm 20$  in. water gauge.

Each filter is equipped with relief panels in accordance with NFPA standards. The doors are secured with safety chains of uneven lengths to reduce the possibility of the door becoming a projectile. Another example of how Pneumafil pays attention to details.

Every unit is epoxy primed (2.0-2.5 mils) inside and outside and finished outside with polyester epoxy paint (2.0-3.5 mils). Pneumafil offers many standard colors to choose from. Special colors are available to meet customer specifications. Unlike units that have only a single coat of paint, Pneumafil's painting method means additional savings in maintenance costs over the life of the filter. Our paint surface preparation meets the SSPC-SP6 standard and passed a 500 hour salt spray test.

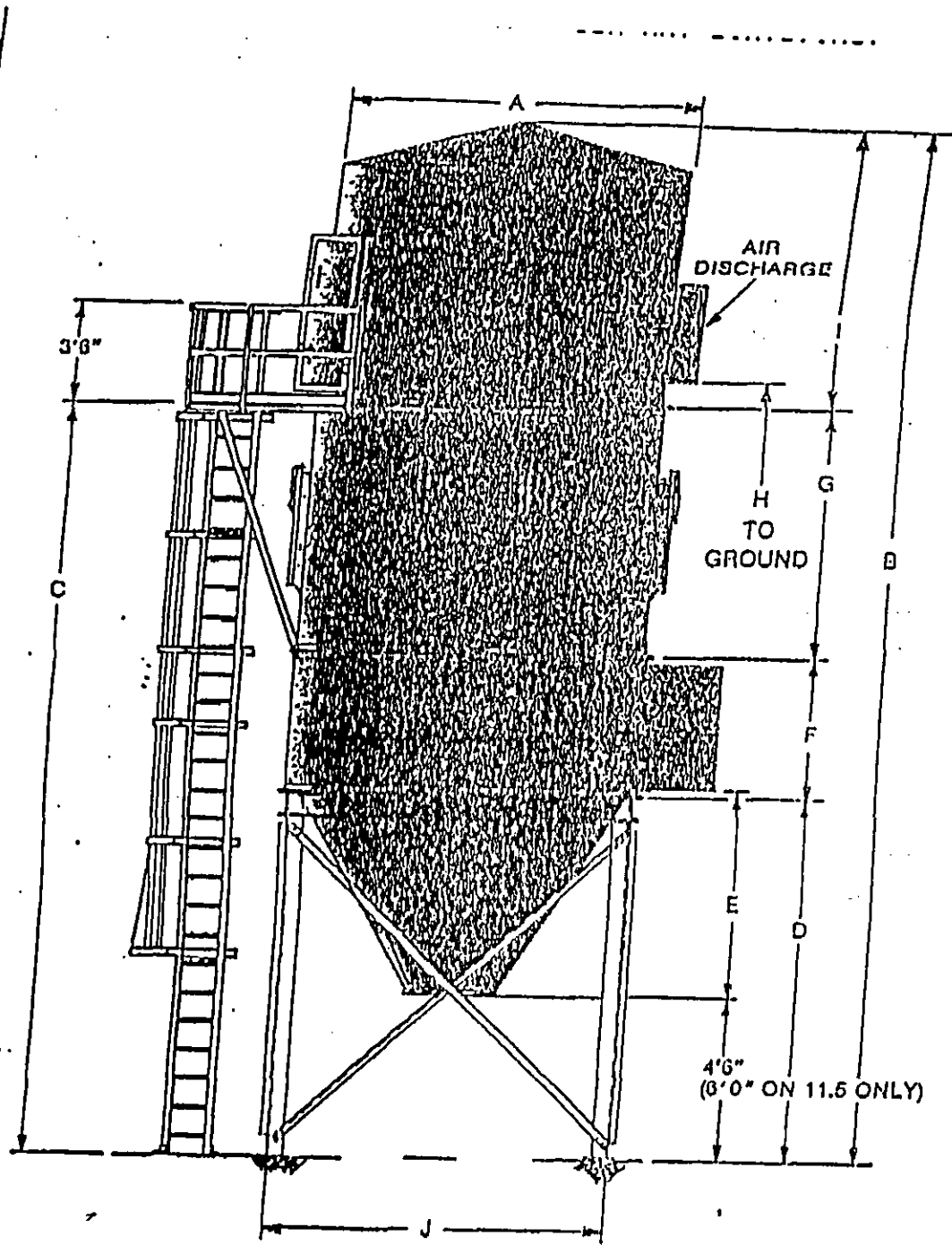
## ... with options

1. Support structure
2. Three types of maintenance platforms with OSHA approved access ladder
3. Customer color preference
4. Non-sparking air entry wear plates
5. 70° hopper
6. Sprinkler heads
7. Explosion proof motor for Class II-G and F applications
8. Additional bracing for higher pressures
9. Factory insulation
  0. High level and high temperature sensors
  1. Rotary air locks
  2. Modified to customer specifications
  3. Special media available

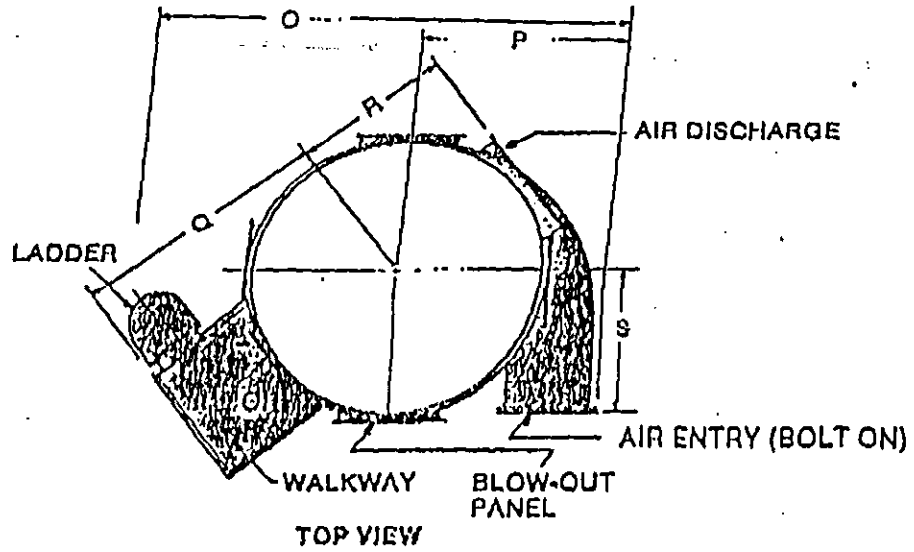
# Specification

## Notes

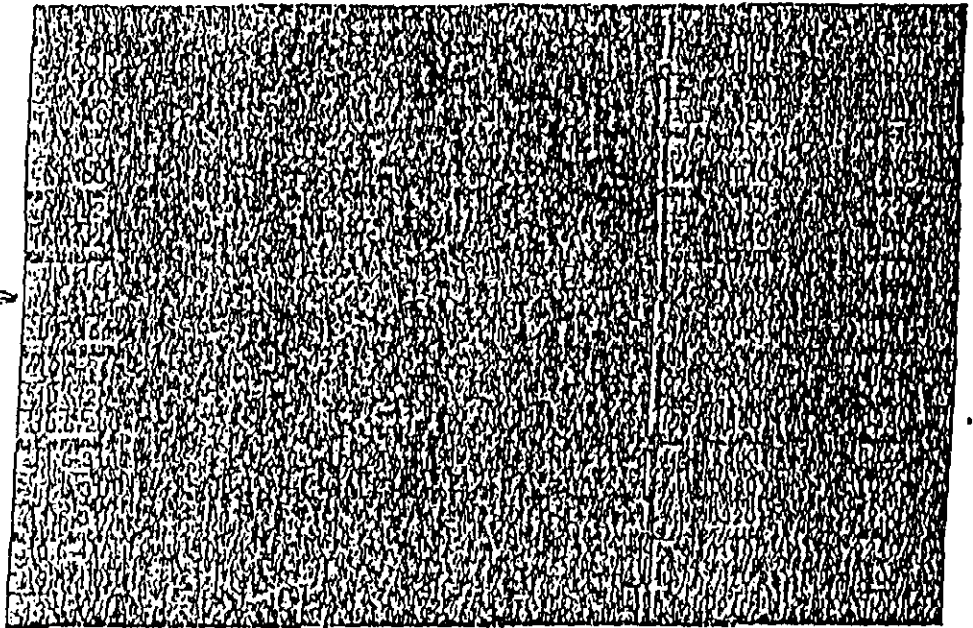
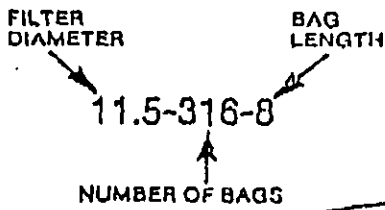
1. Standard height from hopper to grade is 4'6". Optional heights are available upon request. Dimensions B, C, D and H change accordingly.
2. Entry section may be rotated 360° except where it would interfere with ladder.
3. Discharge section and ladder may be rotated together 360° in approximately 6° increments except where they would interfere with the entry elbow.
4. Counterclockwise shown, clockwise opposite.
5. Structural supports are designed for 25 P.S.I. when loading and 50 P.C.F. dust loading unless otherwise specified.
6. Filters are available as bin vents.
7. All units have a 360° mounting ring.
8. 4.5' and 5.5' units are not walk-in filters.



MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	V	U	T
4.6-40-0	35'0"	20'0"	16'0"	15'0"	22'11"	20'2"	17'11"	17'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
4.6-40-10	41'4"	22'8"	18'0"	17'0"	22'11"	20'2"	17'11"	17'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
5.5-00-0	47'0"	24'0"	19'0"	18'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
5.5-00-10	53'0"	26'0"	21'0"	19'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
6.6-02-0	59'0"	28'0"	22'0"	20'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
6.6-02-10	65'0"	30'0"	24'0"	21'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
8.8-160-8	71'0"	31'0"	25'0"	21'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
8.8-160-10	77'0"	33'0"	27'0"	23'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
8.8-150-12	83'0"	35'0"	29'0"	25'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
10.8-280-0	89'0"	37'0"	30'0"	26'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
10.8-260-10	95'0"	39'0"	32'0"	28'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
10.8-260-12	101'0"	41'0"	34'0"	30'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
11.8-310-8	107'0"	43'0"	36'0"	32'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
11.8-310-10	113'0"	45'0"	38'0"	34'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
11.8-310-12	119'0"	47'0"	40'0"	36'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"
13.6-440-8	125'0"	49'0"	42'0"	38'0"	23'4"	21'0"	18'0"	18'0"	4'2"	4'4"	1'0"	4'2"	4'4"	1'0"	4'2"	4'4"



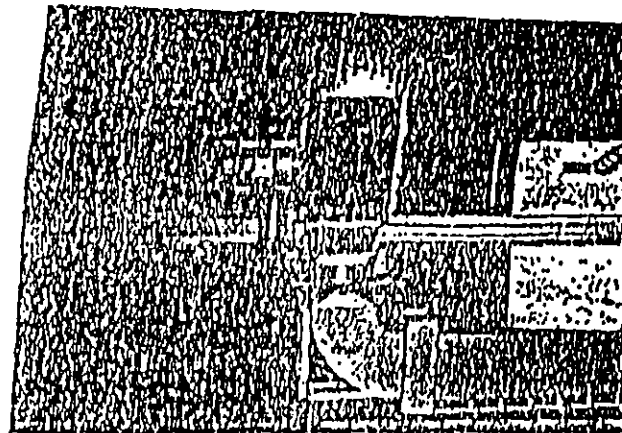
Filter Nomenclature



Note:  
Initial specifications can call for less than the maximum number of bags; however, filter dimensions remain unchanged. Additional bags may be added as filtering demands increase.

Filter Diameter	Bag Length	Number of Bags	Filter Unit	Complete Structure
11.5	316	8	2042	6837
11.5	316	16	3120	4220
11.5	316	24	6050	7604
11.5	316	32	8730	8730
11.5	316	40	6050	7804
11.5	316	48	8730	8730
11.5	316	56	7002	10217
11.5	316	64	9100	11760
11.5	316	72	10300	13283
11.5	316	80	11260	15150
11.5	316	88	13100	17686
11.5	316	96	14026	19005
11.5	316	104	12621	16421
11.5	316	112	14300	18084
11.5	316	120	10277	12947
11.5	316	128	10011	10080
11.5	316	136	10300	20700

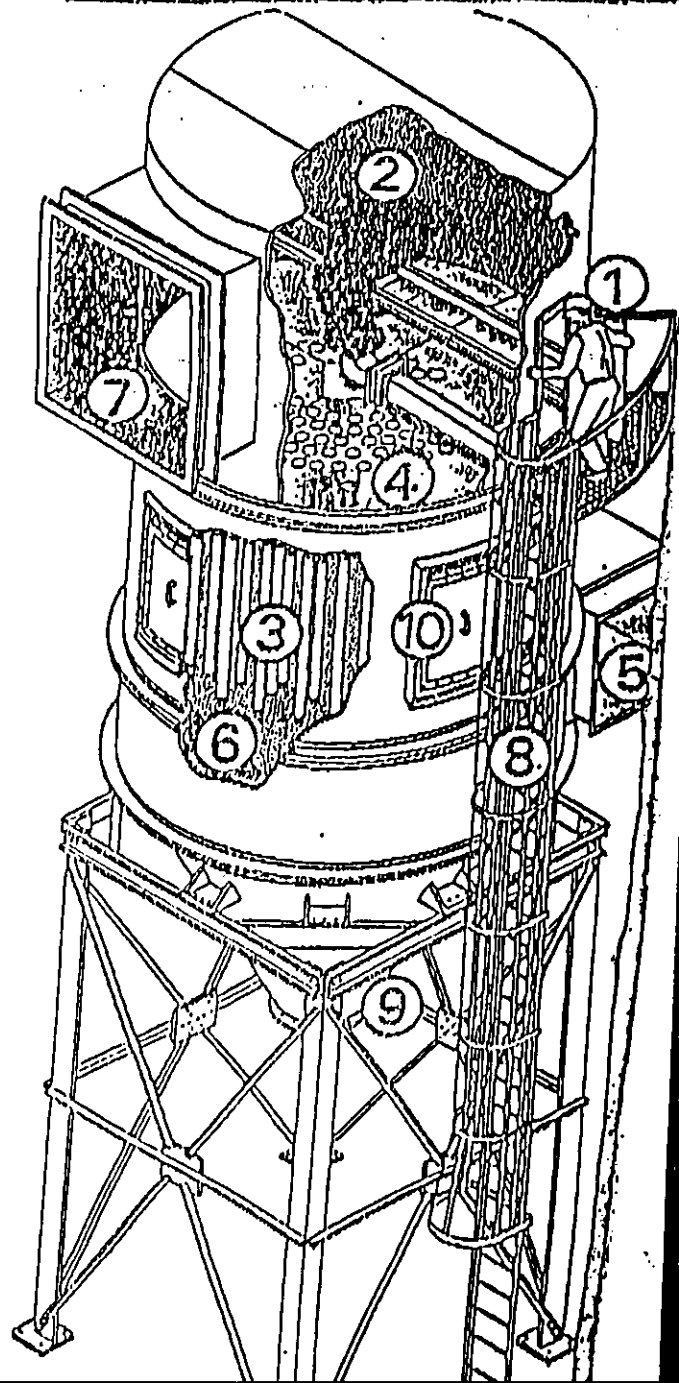
# Pneumafil's unique construction features

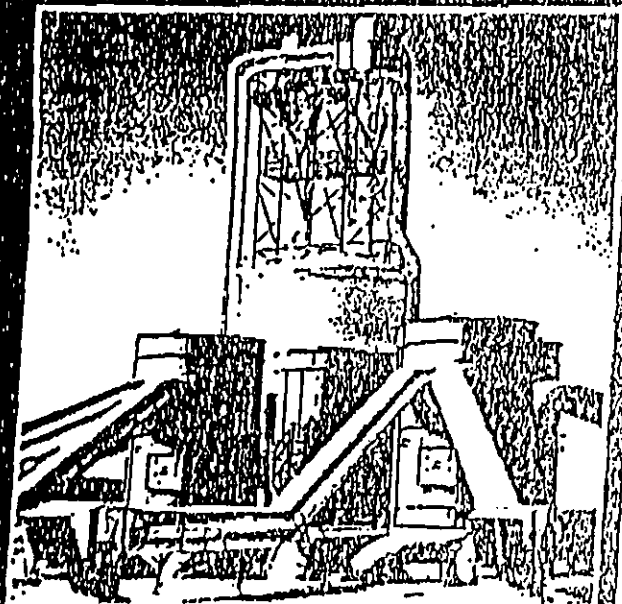
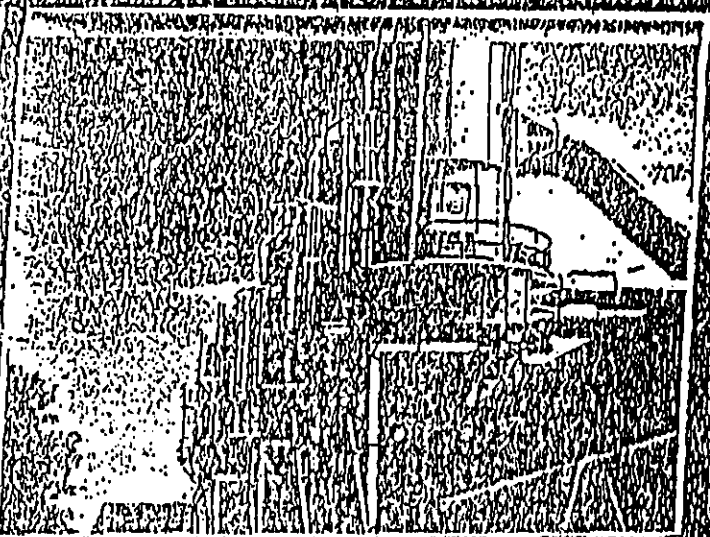
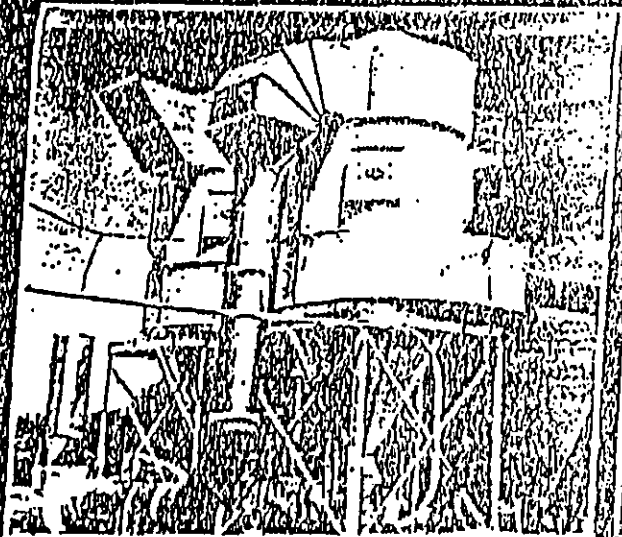


There are distinctive design features about a Pneumafil Reverse Air Filter that sets it apart from other filters. These features translate to direct benefits making a strong case for selecting Pneumafil.

Pneumafil is dedicated to manufacturing a superior product for their customers by using the very best materials, exercising the highest standards in workmanship and employing the latest in applied technology. This dedication is reflected in our attention to details, simplicity of construction and economical cost of operation.

1. Walk-in clean air compartment for inspection maintenance and filter bag changing.
2. Reverse air bag cleaning mechanism with rotating air manifold arm; simple design for trouble-free operation.
3. Fabric filter bags — 16 oz. polyester felt, nylon scrim reinforcement with 2" canvas wear strips on bottom for long life and abrasion resistance.
4. Bolt-in sectional tube sheet for easy replacement.
5. Large, low tangential air inlet for lower pressure drop and cyclonic cleaning action.
6. Built-in particle deflector for abrasion protection of filter bags; thus longer bag life and lower maintenance.
7. Large clean air outlet for lower pressure drop resulting in energy savings.
8. Support steel, ladder and access platform conforms to all applicable building codes.
9. 60° conical hopper for dust collection.
10. Relief panels for safety.
11. Hot rolled, pickled and oiled mild steel with a unique surface preparation for superior corrosive resistant finish, insuring longer filter life and substantial maintenance savings. (Meets SSPC-SP6 standard)
12. Epoxy primed interior and exterior (2.0-2.5 mils), polyester epoxy painted exterior (2.0-3.5 mils). Total paint finish of 4.0-5.5 mils passed 500 hour salt spray test.
13. Components factory assembled and tested.
14. All filters meet EPA and OSHA regulations.
15. Filters constructed to withstand  $\pm 20^{\circ}$  W.G.
16. Standing seams for increased strength.





AMAX Coal Co.

General Mills

Archer Daniels Midland

Georgia Pacific

Broyhill Industries

International Paper

Burlington Furniture

Kingsford Charcoal

Carolina Power & Light

Northern States Power

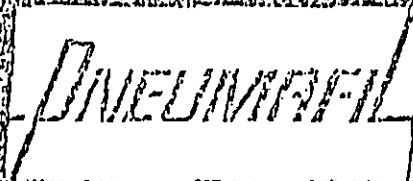
Cargill

Pillsbury Company

Continental Grain

St. Regis Paper

General Electric



DUELLMANN CORPORATION  
10000 DUELLMANN DRIVE  
DALLAS, TEXAS 75243  
(214) 343-1000

**IMPROVED  
SAFETY**

**PLANT  
EFFICIENCY**

**AUTOMATIC  
MONITORING  
CONTROL**

# JBI SAFE AIR MODULE

**TO CONTROL DUST AND IN-PLANT  
AIR POLLUTANTS**

**MEETS O.S.H.A.  
STANDARDS**



**DESIGNED TO REMOVE FINE  
HAZARDOUS FOREIGN  
MATERIAL FROM VARIOUS  
MANUFACTURING SOURCES**

- ▶ Wood Sanding
- ▶ Metal Grinding
- ▶ Composite Grinding

## ▶ DESIGN PERFORMANCE

The JBI Safe Air Module is designed to control in-plant air pollutants and to remove fine hazardous foreign materials from various manufacturing sources that include; wood sanding, metal grinding and composite grinding.

## ▶ IMPROVED SAFETY

The JBI Safe Air Module provides improved safety and a healthier, cleaner working environment. Meets O.S.H.A. clean air standards.

## ▶ AUTOMATIC CLEANING

A high velocity of air is automatically injected into each filter on a sequential basis to clean the filters and ensure maximum air flow and long filter life.

## ▶ AUTOMATIC MONITORING

An automatic monitoring control system is standard with each JBI system. The state-of-the-art control panel features a Photohelic™ pressure gauge that monitors pressure drop and initiates the automatic cleaning process.

## ▶ MODULAR CONSTRUCTION

Heavy duty 12 gauge steel modular construction. The JBI Safe Air Module is shipped completely assembled for easy and accurate installation. Factory painted.

## ▶ RECIRCULATES CLEAN AIR

The JBI Safe Air Module eliminates the need for expensive air make-up systems and outside ducting.

## ▶ SUPERIOR CLEANING

Engineered to provide maximum air cleaning efficiency by removing up to 99% + of air pollutants.

## ▶ HIGH EFFICIENCY FILTERS

Model JBI-4-SG and JBI-7-SG feature JBI Safe Air Cartridges recommended for non fibrous applications; sanding and grinding with a filtration efficiency up to 99% +.

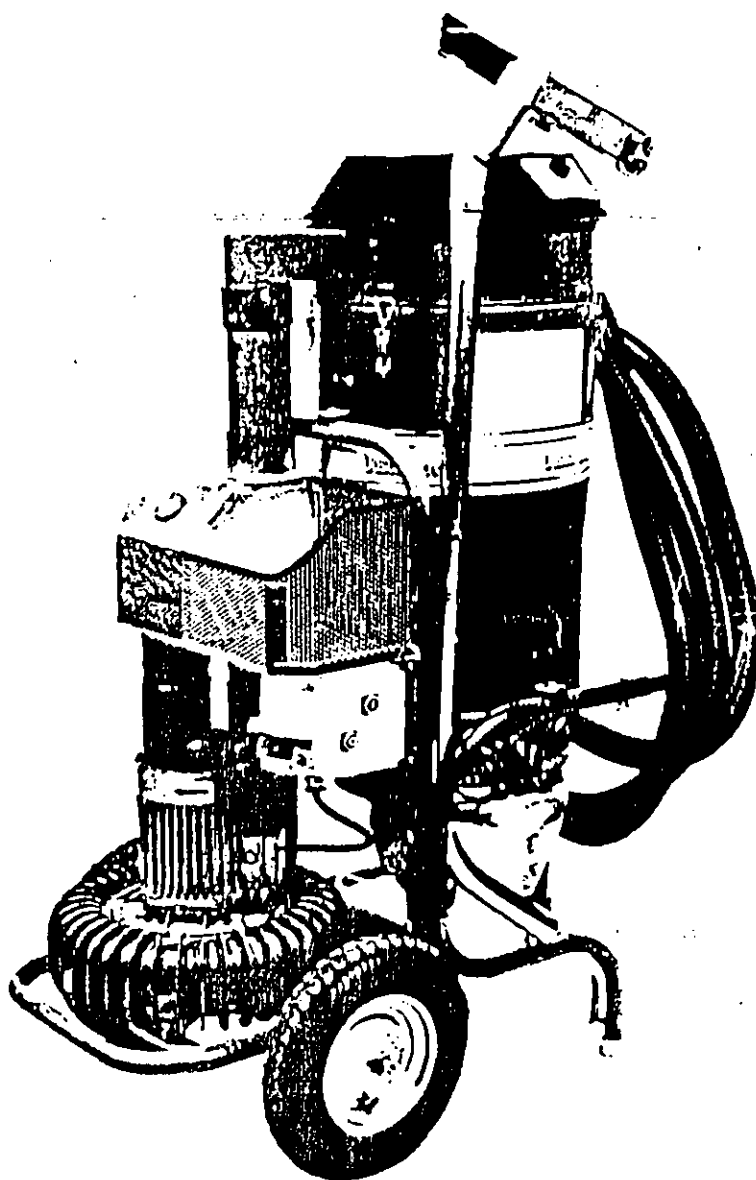
Model JBI-4-CO and JBI-7-CO feature JBI Safe Air Cartridges recommended for fibrous applications; fiberglass, laminates and other composites with a proven filtration efficiency of 99% +.

JBI SAFE AIR MODULES													
Application	Model	Filter Area (sq. ft.)	Filter Depth (in.)	Filter Area (sq. ft.)	Filter Depth (in.)	Filter Area (sq. ft.)	Filter Depth (in.)	Filter Area (sq. ft.)	Filter Depth (in.)	Filter Area (sq. ft.)	Filter Depth (in.)	Filter Area (sq. ft.)	
Non	JBI-4-SG	3	9	2034	5120	160	140	4'	8'	4'	4.8	2.5:1	1050
Fibrous	JBI-7-SG	7½	15	3390	8960	160	140	7'	8'	4'	8.4	2.6:1	1900
Fibrous	JBI-4-CO	3	9	2034	5120	160	140	4'	8'	4'	4.8	5:1	1050
	JBI-7-CO	7½	15	3390	8960	160	140	7'	8'	4'	8.4	5.4:1	1900

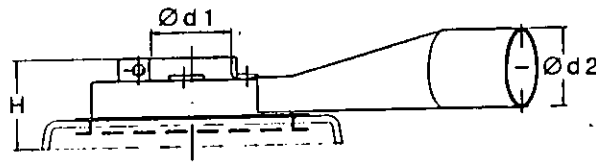
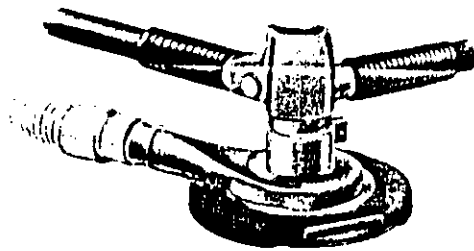
Electrical Requirements: Blower 208-230/460 V 60 HZ Three Phase, Control Power 120V 60 HZ Single Phase.  
Electric control panels are available to meet customers voltage specifications.  
All JBI Safe Air Modules are shipped complete and fully assembled with fan, motor, cartridges and control panel.

# Dustcontrol

## DC 5500 5 kW (5,5kW, 7,5kW)



**INSTRUKTION  
USER INSTRUCTION  
BETRIEBSANLEITUNG**



## Sanding disc

### SUCTION CASING 1", 1,5", 2", 3"

Manufacturer	Model	Part no	d <sub>1</sub>	d <sub>2</sub>
Dotco	10-12 KL	6260	26	25
DYNABRADE	50088	6738	34	32
DYNABRADE	50235	6739	35	32

### SUCTION CASING 4" F

Atlas Copco	G 2408	6224	-	32
BOSCH	GWS 9-125 C	6298	43	32
CP	CP-9110	6809	-	32
Desoutter	F 740-P	6243	41	32
DYNABRADE	50324	6740	46	32
HITACHI	PDP-100 C	6435	40	32
INGERSOLL-RAND	TA120	6810	-	32
INGERSOLL-RAND	TXA 135	6814	-	32
Krupp	R 3201-1263	6467	50	32
MaKita	9503 BH	6720	40	32
Metabo	EWE 9125-S	6467	50	32

### SUCTION CASING 4,5" F

ARO	8447-B5	6285	-	32
Atlas Copco	G 2408-115	6225	-	32
Black & Decker	DN 10/SAG 500/SAG 550/SAG 850	6274	54,5	32
Black & Decker	2750	6790	38	32
Bosch	GWS 7-115	6800	-	32
CP	UT 8871	6511	52	32
Fein	Msf 642	6502	36	32
Fein	Msf 842	6503	36	32
Flex	L 1109	6342	46	32
Hitachi	G 13SB	6440	50	32
Makita	9005 BS	6719	40	32
Makita	GA 5000	6411	40	32
Perles	HSW 109-S	6557	40	32
STID	ET-2	6366	52,5	32
Suhner	LWD 8	6465	41,5	32
Suhner	UWB 102	6465	41,5	32
Suhner	LWC 13	6465	41,5	32
Suhner	LWD 13	6465	41,5	32
Suhner	WIG 7	6465	41,5	32







## 32 Accessories

## Chapter 4

Part no	Construction	Material	Area m <sup>2</sup>	Degree of separat. %	Max. Temp °C
4422	Pleated around support cylinder	Cellulose Glass fibre	2.5	99.97 (DOP)	80
4667	Pleated in box	Glass fibre	15.9	99.97 (DOP)	120
4669	Carpet	Polyester	0.3	86 (DIN 24185)	100
4885	Pleated	Gore-Tex	0.65	99.84 (DIN)	70
4889	Pleated	Polyester	1.4	99.89 (DIN)	130

## Filter

Dustcontrol uses pleated filters in the filter units. A pleated filter has a very large filter area relative to its physical size and the filter units can therefore be more compact.

### Filter testing

To determine filter efficiencies several different standards are used: DIN 24184, DIN 53887 and ZH 1/487 nr 2. The tests have been performed or commissioned by the German certification organization BIA. For HEPA filters, the standard ZH 1/487 nr 2 is used with DOP. Testing has also been performed using other standards such as ASHRAE and British Standard 3928. The use of different standards can also be specified by the customer.

**DIN 24184.** European standard, is suitable for dusts usually found in industry. This method is used also for radioactive and infectious dusts. The test aerosol is composed mostly of silica dust having a particle size ranging from 1-3 µm.

**DOP,** used for the testing of Micro/HEPA filters and other filters with particularly high filtration efficiencies. The aerosol DOP that is used has a relatively uniform particle size of 0.3 µm. This particle size is the most difficult to filtrate. A filter with efficiency 99,97% or better can be certified an Absolute or HEPA filter.

**ASHRAE 57-68** is the best suited for filters with moderate filtration efficiencies and is too coarse for the measurement of filtration efficiency for harmful dusts. Ratings for these types of filters usually are expressed in relation to the particle size, efficiency and degree of retention.

**BS 3928,** British Standard, is for use in testing micro/HEPA filters. Measurements are comparable with the DOP method but the particulate used for the test has a median size of 0,45 µm.

### HEPA FILTER TESTING

Dustcontrol HEPA filters have been tested according to three standards:

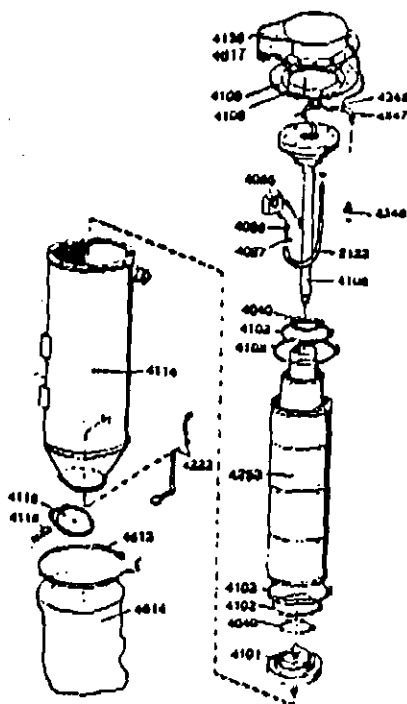
1. According to the DOP method (American and Swedish standard) Filter collection efficiency was 99,985% and is denoted as 99,97%.
2. Testing with a sodium chloride aerosol (BS 4400). The filter collection efficiency was 99,9963 - 99,9974% and is denoted as HEPA minimum efficiency 99,99%.
3. According to ZH 1/487 nr 2, the BIA requirement for the testing of filters to be used in machines and equipment to filter hazardous dusts (effected 06/90). The maximum permitted penetration is 0,05% and is equivalent to class K1 and K2.

**RESERVDLAR/SPARE PARTS/ERSATZTEILE**

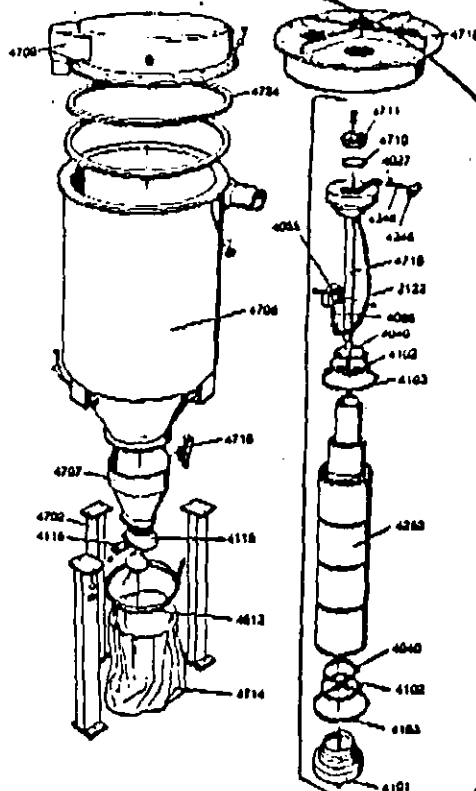
**Dustcontrol**

**1.23**

**DC 6000**



**DC 17000**



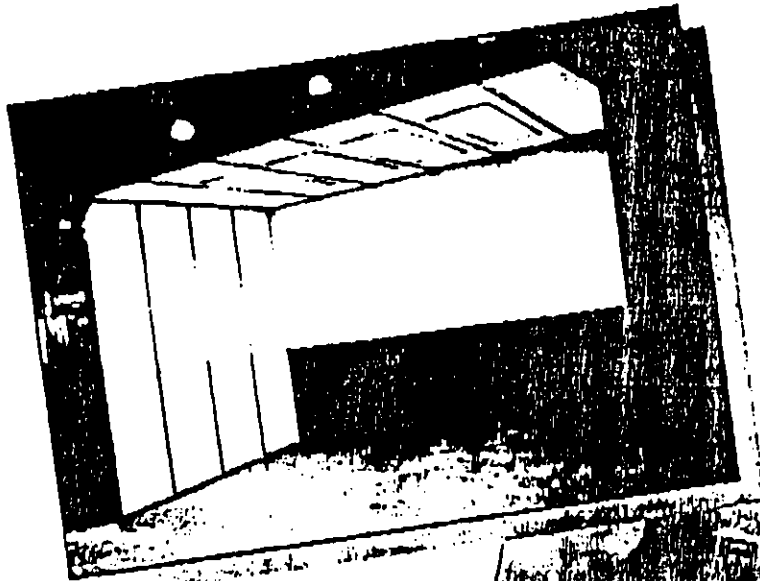
Art.nr	Benämning
2122	Tryckluftslang 3/8"
4027	Slangklämma
4040	Slangklämma 160
4055	Kulvibratör
4086	Slangnippel R 1/4"
4101	Filterhållare
4102	Slangklämma 240
4103	Slangklämma 320
4106	Insatsdel
4108	Gummimembran
4109	Fläns
4114	Cyklon
4116	Gummiklaff
4118	Platta
4136	Lock 5,5 kW, 7,5 kW
4253	Filter, sats
4346	T-rör R 3/8"
4347	Böj 3/8"
4348	Slangnippel R 3/8"
4613	Spännband
4614	Plastsäck (50 st)
4617	Lock 9,2 KWS
4702	Ben (3)
4707	Kona
4708	Cyklon
4709	Lock
4710	Gummipackning
4711	Spännödel
4714	Plastsäck
4715	Spännlås
4716	Cyklonplatta
4719	Insatsdel
4724	Packning till lock

Part No.	Description
2122	Compressed air hose 3/8"
4027	Hose clamp
4040	Hose clamp 160
4055	Ball vibrator
4088	Hose nipple R 1/4"
4101	Filter holder
4102	Hose clamp 240
4103	Hose clamp 320
4106	Filter insert
4108	Rubber diaphragm
4109	Flange
4114	Cyclone
4115	Rubber flap
4116	Plate
4136	Cover 5.5 kW, 7.5 kW
4253	Filter, set
4346	T-pipe R 3/8"
4347	Bend 3/8"
4348	Hose nipple R 3/8"
4613	Strap
4614	Plastic bag (50 pcs)
4617	Cover 9.2 KWS
4702	Legs (3)
4707	Cone
4708	Cyclone
4709	Cover
4710	Rubber gasket
4711	Tightener
4714	Plastic bag
4715	Fastener
4716	Cyclone plate
4719	Filter insert
4724	Gasket for cover

Art. Nr.	Benennung
2122	Druckluftschlauch 3/8"
4027	Schlauchklemme
4040	Schlauchklemme 160
4055	Vibrator
4086	Schlauchnippel R 1/4"
4101	Filterhalterung
4102	Schlauchklemme 240
4103	Schlauchklemme 320
4106	Filtereinsatz
4108	Gummimembran
4109	Flansch
4114	Zyklon
4115	Gummiklappe
4116	Platte
4136	Deckel 5,5 kW, 7,5 kW
4253	Filter, Satz
4346	T-Rohr R 3/8"
4347	Bogen 3/8"
4348	Schlauchnippel R 3/8"
4613	Spannband
4614	Plasticsack (50 Stk.)
4617	Deckel 9,2 KWS
4702	Bein (3)
4707	Konus
4708	Zyklon
4709	Deckel
4710	Gummildichtung
4711	Spannteil
4714	Plasticsack
4715	Spannschloss
4716	Platte für Zyklon
4719	Einsatzteil
4724	Dichtung für Deckel

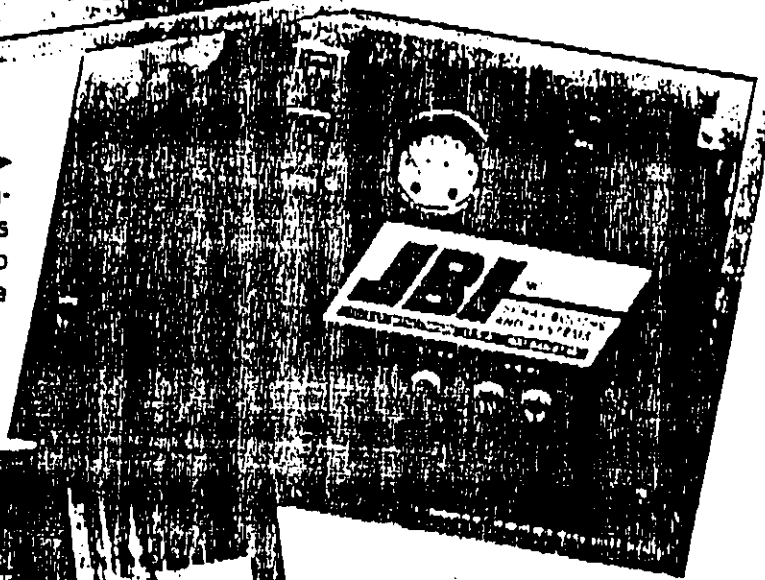
# JBI SAFE AIR SYSTEMS

A DUST COLLECTION AND CLEAN AIR  
RECIRCULATING SYSTEM



◀ JBI Safe Air Systems improve safety and provide a cleaner, healthier working environment.

▶ A solid state control panel, standard with all JBI systems, features a Photohelic™ pressure gauge to monitor pressure drop and initiate the cleaning process.



▶ JBI Safe Air Modules feature vertical baffles to eliminate blow back. Two large capacity drawers for dust collection and easy access.



Quality Performance  
by *Design*

**JBI INCORPORATED**

P.O. BOX 38 • 801 NORWAY ROAD • OSSEO, WI 54758  
715-597-3168 • TOLL FREE 1-800-848-8738 • FAX 715-597-2193

# JBI CARTRIDGE FILTERS

JBI high efficiency cartridge filters are available for two alternative applications.

The JBI non-fibrous filter model MPF 122-030 is recommended for non-fibrous applications: Sanding and grinding. These filters feature a pleat design that holds the pleats open and even for improved long term air performance and service life. The JBI non-fibrous filter has a 99.8% filtration efficiency for .5 micron particles. The filter area per cartridge is 226 sq. ft.

The JBI fibrous filter model MPF 122-045 is recommended for fibrous applications: Fiberglass, laminates and other composites. These filters have wide pleat spacing and the absence of an outer liner to permit a thorough pulse cleaning. The JBI fibrous filter has a 99.7% filtration efficiency for .5 micron particles. The filter area per cartridge is 110 sq. ft.

JBI cartridge filters are supported by expanded metal retainers constructed of 1/8" galvanized wire. The 98% open configuration promotes cleaning during the pulse cycle. All components are made with G60 galvanized corrosion resistant material.

JBI SAFE AIR REPLACEMENT CARTRIDGE FILTERS									
Application	Model	DIMENSIONS			Filtration Efficiency	Filter Area per Cartridge	Permability	Dry Mullen Blast	Shipping Weight
		OD	Height	ID					
Non Fibrous	MPF 122-030	12 1/2"	26"	8 1/2"	99.8% to .5 Micron	226 sq.ft.	25 CPM/sq.ft. @ 1/2" W.C.	40 PSIG	18 lb.
Fibrous	MPF 122-045	12 1/2"	26"	8 1/2"	99.7% to .5 Micron	110 sq.ft.	18 CPM/sq.ft. @ 1/2" W.C.	40 PSIG	14 lb.



**TDC  
Filter  
Manufacturing, Inc.**

Revised 9/90

FILTER CARTRIDGE SPECIFICATIONS  
PART NUMBER 10000008

<u>DIMENSIONS</u>	26" HGT x 12 3/4" OD x 8 3/8" ID
<u>END CAPS</u>	22 Ga. Galvanized Carbon Steel - Top End Open Bottom End Closed With 1/2" Diameter Hole
<u>TOP GASKET</u>	11" OD x 10 1/4" ID x 1/2" Thick Neoprene
<u>CRANK ARM GASKET</u>	1 1/4" OD x 7/16" ID x 1/8" Thick Neoprene
<u>OUTER RETAINER</u> <u>INNER CORE</u>	22 ga. Galvanized Expanded Metal - 72% Open Area
<u>FILTER AREA</u>	226 Sq. Ft.
<u>PLEAT</u> <u>CONFIGURATION</u>	PLEATKEEPER design plus adhesive spiral holds media securely maximizing air volume capacity.
<u>MATERIAL</u> <u>DESCRIPTION</u>	A gradient density media for use in dust collection applications requiring high efficiency and excellent cake release.
	PERMEABILITY: 26 CFM/Sq.Ft. @ 1/2" W.C. Pressure Drop. Max.
	DRY MULLEN BURST: 40 PSIG
<u>WEIGHT</u>	18 LB.
<u>TEMPERATURE</u> <u>LIMIT</u>	150°F



**TDC PERFORMANCE SPECIFICATION**

**TDC PART NUMBER 10000008** *YD*

**ASHRAE 52-76**

TEST FLOW RATE	450 CFM
INITIAL RESISTANCE	.58" WG
INITIAL ATMOSPHERIC DUST SPOT EFFICIENCY	96.2%
AVERAGE ATMOSPHERIC DUST SPOT EFFICIENCY	95%
AVERAGE AC FINE DUST WEIGHT ARRESTANCE	100%

**PARTICLE EFFICIENCY BY WEIGHT  
TEST DUST - AC FINE**

<u>PARTICLE SIZE</u>	<u>EFFICIENCY</u>
0.5	99.4%
1.0	99.6%
2.0	99.7%
5.0	100%
10.0	100%