PERMIT TO OPERATE EVALUATION
SPRAY BOOTHS & FILTER BANKS

Applicant's Name AMERICAN DOCK BOX

Company I.D. 152948

Mailing Address 19940 HANSEN AVE., NUEVO, CA 92567

Equipment Address 19940 HANSEN AVE., NUEVO, CA 92567

Equipment Description

Application No. 492862 (New Construction)

FILTER BANK NO. 4, SPRAYLINE MANUFACTURING CO., 12’ – 4” W. X 7’ – 2” D. X 4’ – 3” H., WITH TWENTY-EIGHT 20” X 20” EXHAUST FILTERS AND ONE 2.5 H.P. EXHAUST FAN.

Application No. 492864 (New Construction)

FILTER BANK NO. 5, SPRAYLINE MANUFACTURING CO., 10’ – 4” W. X 5’ – 4” D. X 7’ – 0” H., WITH TWENTY-FOUR 20” X 20” EXHAUST FILTERS AND ONE 3.5 H.P. EXHAUST FAN.

Application No. 492865 (New Construction)

SPRAY BOOTH NO. 1, FLOOR TYPE, SPRAYLINE MANUFACTURING CO., 14' - 6" W. X 26 - 1" D. X 9' - 3" H. WITH TWENTY-TWO 20" X 20" EXHAUST FILTERS AND ONE 3.5 H. P. EXHAUST FAN.

Application No. 492867 (New Construction)

FILTER BANK NO. 6, SPRAYLINE MANUFACTURING CO., 6’ – 8” W. X 10’ – 0” D. X 5’ – 4” H., WITH TWENTY-FOUR 20” X 20” EXHAUST FILTERS AND ONE 2.0 H.P. EXHAUST FAN.

Application No. 492868 (New Construction)

SPRAY BOOTH NO. 2, FLOOR TYPE, SPRAYLINE MANUFACTURING CO., 14' - 6" W. X 26 - 1" D. X 9' - 3" H. WITH TWENTY-TWO 20" X 20" EXHAUST FILTERS AND ONE 3.5 H. P. EXHAUST FAN.

Application No. 493125

TITLE V REVISION - Minor

HISTORY

American Dock Box submitted the above permit applications with the District for permits to operate two new spray booths and three new filter banks. The company manufactures fiberglass storage boxes for use at marinas and already has active permits from the District to operate a spray booth and a filter bank.

The company originally indicated that they have modified the permitted (F93300) spray booth by dividing it into two identical spray booths. However, the dimensions of the two spray booths applied for did not match with the old permitted spray booth. Hence the two spray booths will be considered as new construction under this project, replacing the old spray booth. The permit for the old spray booth will be inactivated and removed from the facility permit.

The applicant requested a 30 lb/day combined VOC emission cap for all the above equipment. This provides compliance with the current BACT requirements for the cross draft spray booths and does not require a Rule 212 public notice. American Dock Box has a facility VOC emission cap of 80 lbs/day. The applicant has not requested any VOC emission increase to the facility cap under this project. Rules 1162 and 1171 apply to this facility and the above described equipment.

The district database shows one notice to comply issued to this facility to maintain filters on the spray booth. One complaint is also on the file against this facility in the last two years for operating polyester resin operation without AQMD permits. One notice of violation was issued in the last two years for not submitting their Title V annual compliance certification on time. In follow-up inspections, the facility was operating in compliance.

This facility is not located within 1000 feet from any school and there will not be any emission increases exceeding Rule 212 thresholds from this project, hence, these applications will not require any public notification.

American Dock Box is a Title V facility. A Title V permit was issued on 10/23/2007 for change of operator (C/O) from Innovation Fiberglass Products, ID # 102216. The initial Title V permit for Innovation Fiberlass was issued on 8/15/05. . The proposed permit revision is considered as a "minor permit revision" to the C/O Title V permit, as described in the Regulation XXX evaluation. This is the first revision of the C/O Title V permit.

PROCESS DESCRIPTION

As discussed above this company manufactures fiberglass boxes. The materials used to manufacture these boxes are polyester resin and gelcoat. The spray guns used are flow coater type (non-atomized) for resin and gelcoat application. The monomer (styrene) content of the resin is 34.6 %. The monomer (styrene) content of the gelcoat is 25 %. Acetone is used for the clean-up of the application equipment.

OPERATING HOURS

Average: 16 hr/day, 7 day/week, 52 weeks/year
Maximum: 24 hr/day, 7 day/week, 522weeks/year

EMISSION CALCULATIONS

Emissions from Polyester Resin in Spray Booths & Filter Banks

All the above equipment will continue to operate under the facility VOC cap of 80 lbs/day. This equipment will have a 30 lbs/day VOC group emission cap. The applicant will use the appropriate UEF factor to calculate VOC emissions from the spray booths and the filter banks based on the amount of virgin resin applied in the equipment.

VOC emissions:

Max. = 30 lb-VOC/day (1.25 lb/hr)
Avg. = 16 lb-VOC/day (1 lb/hr)

The company will have to use following UEFs for resin with 34.6% styrene and gelcoat with 25% styrene.

Resin = 75.8 lbs/ton resin (mechanical non-atomized, interpolated between 34% styrene (74 lb/ton) and 35% styrene (77 lb/ton)
Gelcoat = [(0.445 X 25%)] X 2000 = 222.5 lbs/ton gelcoat

PM/PM10 emissions:

Particulate emissions are expected from the spraying operation.

Assume 50% solids, 65% transfer efficiency, 90% filter efficiency, and PM10 = 50% PM.

Worst case PM/PM10

30 lbs/day VOC ÷ 75.8 lbs/2000 lb resin = 792 lbs/day resin usage.

Max. PM (R_1) = (792 lb/day resin)(50% lb solids/lb resin)(1-0.65) = 139 lb-PM/day
Max. PM (R_2) = 139 (1-0.90) = 13.9 lb-PM/day

Avg. PM (R_1) = 69.5 lb-PM/day
Avg. PM (R_2) = 6.95 lb-PM/day

Max. PM10 @ 24 hrs/day = R1 = 139 X 0.5 = 69.5 lbs/day = 2.89 lbs/hr
=R2 = 69.5 (1-0.9) =6.95 lbs/day = 0.29 lbs/hr

Avg. PM10 @ 16 hrs/day = R1 = 69.5 X 0.5 = 34.8 lbs/day = 2.17 lbs/hr
=R2 = 34.8 (1-0.9) =3.48 lbs/day = 0.22 lbs/hr

RULES/REGULATION EVALUATION

¤ ***RULE 212, PUBLIC NOTIFICATION***

v***SECTION 212(c)(1):***
This section requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school. This equipment is not located within 1,000 feet from the outer boundary of a school. Therefore, public notice will not be required by this section.

v ***SECTION 212(c)(2):***
This section requires a public notice for all new or modified facilities which have on-site emission increases exceeding any of the daily maximums as specified in subdivision (g). There are no emission increases from this facility as a result of this project since the facility cap will remain the same. Therefore, these applications will not be subject to this section.

v ***SECTION 212(c)(3):***

Please, see Rule 1401 evaluation section. Public notice is not required by this section. There is no toxic emission increase from the use of polyester resin and materials used in this equipment since the facility VOC cap will remain the same.

v

SECTION 212(g):

This section requires a public notice for all new or modified sources which undergo construction or modifications resulting in an emissions increase exceeding any of the daily maximum specified in the table below. As shown in the following table, the emission increases from this project are below the daily maximum limits specified by Rule 212(g). Therefore, public notice will not be required by this section.

LB/DAY	CO	NOX	PM_{10}	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	0	0	7	30	0	0

¤

RULES 401 & 402, VISIBLE EMISSIONS & NUISANCE

AQMD database has no records of any visible emissions or nuisance violations against this company in the last two years.

¤ ***RULE 1162, POLYESTER RESIN OPERATIONS***

(c)(2) MATERIAL REQUIREMENTS

The following material information submitted by the applicant shows compliance with the rule requirements.

Resin Material	Rule Limit (Monomer Content)	Monomer Content As Received	Compliance
Laminating Resin	35%	34.6%	Yes
Gelcoat	37%	25%	Yes

¤ ***RULE 1162, POLYESTER RESIN OPERATIONS***

(c)(1) APPLICATION TECHNIQUE

In the spray booths and the filter banks, non-atomized spray guns are used.

¤ ***RULE 1171, SOLVENT CLEANING OPERATIONS***

The applicant uses acetone (exempt solvent) for the equipment clean-up operations, which will comply with these requirements.

REGULATION XIII

¤ ***RULE 1303(a), BEST AVAILABLE CONTROL TECHNOLOGY (BACT)***

(a) VOC EMISSIONS

Since the VOC emissions from this equipment will not exceed 30 lbs/day, the installation and operation of add-on control equipment is not achieved in practice for this category of source (spray booths). Also, VOC content of the coatings complies with the rule requirements, which is considered compliance with the BACT requirements at this level of emissions.

(b) PM10 EMISSIONS

The use of 2" thick filters satisfies BACT requirement for PM emissions.

⊙ ***RULE 1303(b)(1), MODELING***

No detailed modeling analysis required for VOC. PM10 emissions of 0.29 lbs/hr are less than the allowable emissions on Rule 1303 Table A-1 of 0.41 lbs/hr. Therefore modeling is not required.

⊙ ***RULE 1303 (b)(2), EMISSION OFFSETS***

The applicant has not requested any facility-wide emission increases from this project and will continue to operate under the existing facility VOC emission cap of 80 lbs/day. The PM emissions associated with the VOC cap will also be the same so there will be no increase in PM emissions from the facility as a result of this project. Hence, emission offsets are not required for this equipment.

¤ ***RULE 1401, NEW SOURCE REVIEW OF CARCINOGENIC AIR CONTAMINANTS***

All the VOC emissions are styrene emissions. Maximum annual styrene emissions @ 1.25 lbs/hr are 10,800 lbs. There are no other toxic emissions from this equipment. The styrene emissions are below the screening emission levels of 10.5 lbs/hr and 29,800 lbs/yr. Therefore screening risk assessment is not required. This equipment is expected to comply with the rule requirements.

REGULATION XXX

This facility is not in the RECLAIM program. The proposed project is considered as a "minor permit revision" to the Title V permit for this facility.

Rule 3000(b)(12)(vi) defines a "minor permit revision" as any Title V permit revision that does not result in an increase in emissions of a pollutant subject to Regulation XIII – New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP).

The proposed project is not expected to result in an increase in emissions of a pollutant subject to Regulation XIII – New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP), and therefore is considered as a "minor permit revision" pursuant to Rule 3000(b)(12)(A)(vi).

This proposed project is the 1st permit revision since the Title V permit for change of operator was issued to this facility on October 23, 2007. The following table summarizes the permit revisions since the initial Title V permit:

Revision	HAP	VOC	NOx	PM_{10}	SOx	CO
Change of operator from Innovation Fiberglass ID 102216 to American Dock Box, Issued on 10-23-07.	0	0	0	0	0	0
1st Permit Revision since the C/O. Permit to Operate new spray booths and filter banks(A/N 492862/4/5/7/8) and remove spray booth P/O F93300.	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0
Maximum Daily	30	30	40	30	60	220

CONCLUSIONS/RECOMMENDATIONS

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "minor permit revision", it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V permit will be issued to this facility.