

## ENGINEERING EVALUATION

**Kin's Cabinets, Plant: 19666**

**Application: 20604**

### **BACKGROUND**

Kin's Cabinets moved from their prior location in Pacifica, California (P# 13298) to their new location in Belmont, California. As a result, they have submitted an application for an Authority to Construct and/or Permit to Operate the following:

S-1 Spray Booth, Airless Spray Guns

for the coating of wood furniture. They have indicated that there is no material change between the two locations. Hence, the Material Safety Data Sheets contained in Application # 3236 were used in this evaluation.

### **EMISSIONS CALCULATION**

Assuming 100% evaporation of the solvents in the coating, the following emissions are estimated, using the same permit condition limits that the facility had in their prior location:

**Table 1**

Product	Annual Usage (gal/yr)	POC Content (lb/gal)	POC Emissions
			lbs/yr
Coating	450	2.1	945
Solvent	150	6.6	990
<b>TOTAL</b>			<b>1,935</b>

Cumulative Increase

$$\text{POC} = 1,935/2000 = 0.97 \text{ TPY}$$

$$\text{NPOC} = 0.97 \text{ TPY}$$

To allow for operating flexibility, an equal amount of NPOC emissions from the usage of acetone containing materials is assumed.

Daily Worst Case

$$\text{POC} = \text{NPOC} = 1,935/250 = 8 \text{ lbs/day} < 10 \text{ lbs/day (BACT NOT Triggered)}$$

### **TOXIC RISK SCREEN ANALYSIS**

The coatings and solvents may contain butyl cellosolve, methyl ethyl ketone, and xylene. Because the estimated emissions of toxics are not estimated to exceed any risk screening trigger level, a Toxic Risk Screening Analysis is not required.

### **BACT**

Because the daily emissions from S-1 are not estimated to exceed 10 pounds per day, a Best Available Control Technology review is not triggered.

**OFFSETS**

Because the estimated emissions from this new facility are not estimated to exceed 10 tons per year, offsets are not required.

**STATEMENT OF COMPLIANCE**

The coating operations at Kin's Cabinets are subject to the requirements of Regulation 8, Rule 32, "Wood Products Coating", including the VOC limits in Section 8-32-304 "Custom and Contract Furniture Limits", the solvent evaporative loss minimization requirements in Section 8-32-320 and the recordkeeping requirements of Section 8-32-501. Kin's Cabinets is subject to the recordkeeping subsections 8-32-501.2, 501.4, 502.2, and 503, because they do not qualify for the low VOC facilities exemption of Regulation 8-32-120.

VOC content of the coatings are below the VOC content limits prescribed in Section 8-32-304. Compliance with the solvent evaporative loss minimization requirements will be established through inspection. Recordkeeping requirements are incorporated into the proposed permit conditions.

This application is considered to be ministerial and requires the application of standard permit conditions in accordance with Permit Handbook Chapter 5.3.

Kin's Cabinets is located within 1,000 feet of Nesbit Elementary School and Central Elementary School. Therefore, the increase in POC emissions associated with permitting the coating operations is subject to the public notification requirements contained in Regulation 2-1-412.

PSD, NSPS and NESHAPS are not triggered.

**PERMIT CONDITIONS**

I recommend the following permit conditions for Kin's Cabinet's:

1. Unless Part 4 is met, the owner/operator shall not exceed 450 gallons combined net usage of all coatings (e.g. top coat, sanding sealer, stains, fillers, and adhesive), in any consecutive 12-month period. The owner/operator shall not exceed 150 gallons net usage of solvent in any consecutive 12-month period.  
[Basis: Cumulative increase]
2. To demonstrate compliance with Part 1 above, the owner/operator shall separately total usage of coatings and solvents on a monthly basis. Monthly records shall be totaled every rolling 12-month period. Records shall be kept at least two years from the date of creation and be made available to the District upon request.  
[Basis: Recordkeeping]
3. The owner/operator shall not use materials that cause toxic air contaminant emissions to be in

excess of their respective trigger levels in Table 2-5-1 of Regulation 2, Rule 5. [Basis: Toxic risk screen]

4. This Part is effective only if the owner/operator chooses the following alternate compliance method instead of the limits specified in Part 1.
  - a. The owner/operator shall not cause emissions of precursor organic compounds to exceed 1,935 pounds in any consecutive 12-month period;
  - b. The owner/operator shall not cause emissions of non-precursor organic compounds to exceed 1,935 pounds in any consecutive 12-month period; and
  - c. To demonstrate compliance, the owner/operator shall calculate VOC emissions monthly and total the emissions on a rolling 12-month basis.

[Basis: Cumulative increase, Recordkeeping]

### **RECOMMENDATIONS**

I recommend that the Authority to Construct be waived and a Permit to Operate be issued for the following:

S-1 Spray Booth, Airless Spray Guns

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M.K. Carol Lee, Senior Air Quality Engineer

6/22/09  
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Date