

DRAFT EVALUATION REPORT
Luis Norori Antique Restoration Inc.
Application #15852 - Plant #18295 (Site #B8295)
80 Elmira Street, San Francisco, CA 94124

I. BACKGROUND

Luis Norori Antique Restoration (LNAR) refinishes and restores antique wood furniture. They are moving from their old site (Plant #15073) on 2250 Palou Avenue to a new building. After original paint is removed with a stripper, lacquer thinner or acetone, the furniture is repainted. The amount of solvent needed to prepare the furniture for refinishing depends on the type of original finish. The previous facility was permitted in 2003 under Application #6685. They are applying for Authority to Construct/Permit to Operate for the following:

S-1 Wood Painting Operation
Spray Booth, F-108, antique furniture, HVLP

II. EMISSION CALCULATIONS

Per Permit Handbook Chapter 5.1, coatings and solvents are assumed to be 100% volatile and emitted to the atmosphere.

Sample Calculation

Precursor organic compound (POC) content = 5.67 pounds/gallon

Non-precursor organic compound content = 38% as acetone at 6.6 lb/gal

Allowed annual usage = 700 gallons

$$\left(\frac{700 \text{ gallons}}{\text{year}}\right) * \left(\frac{5.67 \text{ pounds}}{\text{gallon}}\right) * \left(\frac{\text{week}}{5 \text{ day}}\right) * \left(\frac{\text{year}}{52 \text{ week}}\right) = \frac{15.3 \text{ pounds of POC}}{\text{day}} = \frac{2.0 \text{ tons of POC}}{\text{year}}$$

$$\left(\frac{700 \text{ gallons}}{\text{year}}\right) * 0.38 * \left(\frac{6.6 \text{ pounds}}{\text{gallon}}\right) * \left(\frac{\text{week}}{5 \text{ day}}\right) * \left(\frac{\text{year}}{52 \text{ week}}\right) = \frac{6.7 \text{ pounds of POC}}{\text{day}} = \frac{0.9 \text{ tons of NPOC}}{\text{year}}$$

See attached spreadsheet for all calculations.

III. PLANT CUMULATIVE INCREASE (since 4/5/91)

Previous Emissions:	None
Net POC Increase:	4.4 tons/year
Net NPOC Increase:	2.1 tons/year

IV. TOXIC SCREENING ANALYSIS

Initially, LNAR proposed to use a stripper called "Green's Liquid, Paint and Varnish Remover", which would create emissions of methylene chloride exceeding the chronic trigger level in Table 2-5-1 of Regulation 2, Rule 5. After a toxic risk screen, the use of this stripper would have been limited to 10 gallons per year. LNAR decided to switch to an alternative stripper called "Ready Strip Plus", which does not contain any chemicals in Table 2-5-1. All other potential toxic air contaminant emissions are at least 25% of their respective trigger level.

V. BEST AVAILABLE CONTROL TECHNOLOGY

In accordance with Regulation 2-2-301, because the organic emissions may exceed 10 pounds per highest day, a Best Available Control Technology (BACT) review is required. Using EPA's Con-Co\$t spreadsheet for thermal oxidizers and the cost index, the control equipment would cost approximately \$95,540. 4.0 tons of precursor organic compound (POC) emissions per year would need to be controlled, which equates to about \$24,000 per ton of POC reduced. 1.9 tons of non-precursor organic compound (NPOC) emissions per year would need to be controlled, which equates to over \$50,000 per ton of NPOC reduced. This is greater than the BACT cost-effectiveness level of \$13,750 per ton. Hence, BACT1 is not cost-effective. The owner/operator is expected to use solvent evaporative loss minimization practices. As a result, the applicant meets BACT2.

VI. OFFSETS

Offsets are not required since the facility's POC emissions are less than 10 tons per year.

VII. STATEMENT OF COMPLIANCE

The owner/operator uses a high-volume low-pressure (HVLP) spray gun to comply with Section 8-32-301. When the owner/operator performs refinishing, replacement of custom furniture, then the owner/operator is exempt from Sections 8-32-302, 303, 304, 305 and 501 (Exemption 8-32-113). The owner/operator is expected to comply with requirements for solvent evaporative loss minimization (Section 320), records (Section 502), and Permit Condition #23528 (outlined in Section VIII).

The engineering review is consistent with similar projects. Standard permit conditions were applied and standard emission factors were used in accordance with Permit Handbook Chapter 5.1. This project is considered to be ministerial and therefore is not subject to CEQA review.

This project is within 1,000 feet from the nearest public school and emits toxic emissions above the chronic trigger level for methylene chloride. Public notification is required pursuant to Regulation 2-1-412. Thurgood Marshall is within 1,000 feet and possibly Willie L. Brown Jr. College Preparatory Academy. Comments and responses are attached (To Be Determined).

PSD, NSPS, and NESHAPS are not triggered.

VIII. CONDITIONS

In addition to regulatory requirements of Regulation 8, Rule 32 (Wood Products Coatings), the owner/operator shall comply with the following Permit Conditions for Source 1, Wood Coating Operation.

1. Unless Part 3 of this condition is met, the owner/operator shall not exceed the following net limits, in any consecutive 12-month period:

Coatings	700 gallons
Acetone	300 gallons
Precursor Organic Compound (POC) solvent (e.g. stripper, lacquer thinner)	700 gallons

[Basis: Cumulative increase, toxic risk screen]
2. To demonstrate compliance with Part 1 above, the owner/operator shall maintain records in accordance with Regulation 8, Rule 32, Section 502 and total monthly records every rolling 12-month period. [Basis: Recordkeeping]
3. This condition is effective only if the owner/operator uses coatings other than those specified in Part 1. The owner/operator shall comply with the following:
 - a. Total precursor organic emissions shall not exceed 8,900 pounds in any consecutive 12-month period;
 - b. Total non-precursor organic emissions (e.g. acetone) shall not exceed 4,200 pounds in any consecutive 12-month period;
 - c. Toxic air contaminant emissions shall not be in excess of their respective trigger levels in Table 2-5-1 of Regulation 2, Rule 5; and
 - d. In addition to recordkeeping requirements in Regulation 8, Rule 32, Section 502, the owner/operator shall calculate VOC emissions monthly and total the emissions on a rolling 12-month basis. [Basis: Cumulative increase, toxic risk screen]
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IX. RECOMMENDATION

I recommend that an Authority to Construct be waived and a Permit to Operate be issued to Luis Norori Antique Restoration, Inc. for the following:

**S-1 Wood Painting Operation
Spray Booth, F-108, antique furniture, HVLP
Permit Condition #23528**

Fred Tanaka
Senior Air Quality Engineer
Engineering Division

Date: 8/21/07