DRAFT
ENGINEERING EVALUATION
L-3 Communications SSG- Tinsley, Plant: 7234
4040 Lakeside Drive, Richmond CA 94511
Application: 21897

Background

Tinsley Laboratories specializes in the design, fabrication and testing of optical subsystems for space and tactical defense applications. The Richmond, CA facility is applying for an Authority to Construct/Permit to Operate for the following new source:

Equipment to be permitted:
S32– Solvent Cleaning Station, Microvoid 4F-55

This facility proposes a net usage of up to 50 gallons per year of Isopropyl Alcohol (IPA) at this cleaning station, which will be used to clean small optics, hardware, and assembly components.

Emissions Calculations

IPA has a density of 6.55 lb/gal, and is 100% POC. The daily and annual emissions calculations are shown below. The daily emissions are based on an operation schedule of 1 day per week and 52 weeks per year.

Annual Emissions:

50 gal/yr x 6.55 lb/gal = 327.5 lb/yr POC = 0.164 ton/yr POC

Daily Maximum Emissions:

327.5 lb/yr POC ÷ 52 days/yr = 6.298 lb/day POC

IPA is a toxic air contaminant. Because IPA is 100% POC, annual and daily emissions of IPA are equal to the POC emissions shown above.

BACT Review and Determination

In accordance with Regulation 2, Rule 2, Section 301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of POC, NPOC, NOx, CO, SO_2 or PM_{10}.

Based on the emission calculations above, BACT is not required for POC.

Plant Cumulative Increase and Offsets

The cumulative increase is shown below. Pursuant to Regulation 2-2-302, offsets are required for any increase in emissions at a facility that emits over 10 tons per year of POC. This facility does not emit over 10 tons per year of POC, so offsets are not required.

Plant Cumulative Emissions (ton/yr)						
Pollutant	NOx	NPOC	POC	CO	SO_2	PM_{10}
Previous Emissions	0	0.656	8.611	0	0	0
S32	0	0	0.164	0	0	0
Cumulative Total	0	0.656	8.775	0	0	0

Statement of Compliance

Toxics NSR/TBACT

IPA is listed as a toxic air contaminant in Regulation 2, Rule 5. The IPA emissions (shown above) do not exceed the TAC trigger levels in Regulation 2-5 of 270,000 lb/yr and 7.1 lb/hr IPA and therefore an HRSA is not required.

District Rules

S32 is subject to Regulation 8-16, Solvent Cleaning Operations. Because S32 has an evaporative area of less than 144 square inches (at 140 square inches), it qualifies for the limited exemption in Regulation 8-16-115, which exempts such sources from the regulation except for 8-16-303.1, 303.3.1, and 303.3.2. S32 is expected to comply with the general cold cleaner operating requirements in Regulation 8-16-303.1. S32 will comply with Regulation 8-16-303.3.1 by having a container for the solvent and the articles being cleaned. S32 will comply with Regulation 8-16-303.3.2 by having a cover which reduces solvent evaporation when not processing work in the solvent cleaner. No solvent spray is used. The facility will comply with the recordkeeping provisions in Regulation 8-16-501.

Federal Rules

PSD, NSPS, and NESHAPS are not triggered for this source.

CEQA

This application is considered to be ministerial under the District's Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 4.

Public Notices

This facility is located 1000 feet of the nearest school and therefore is subject to public school notification pursuant to Regulation 2-1-412, Public Notice, Schools. The notice was distributed on (DATE). It expired on (DATE). The notices were sent to:

- Parents and guardians of students at A Better Chance School, La Petite Academy, and Making Waves Academy
- All residential and business neighbors located within 1,000 feet of the solvent cleaning station

Recommendation

Issue an Authority to Construct to L-3 Communications SSG- Tinsley, for:

S32– Solvent Cleaning Station, Microvoid 4F-55

Permit Conditions

Conditions for S32

1. The owner/operator shall ensure that the net solvent usage at S32, Solvent Cleaning Station does not exceed 50 gallons of Isopropyl Alcohol totaled over any consecutive twelve month period. (Basis: Cumulative Increase)

2. The owner/operator may use materials at S32 other than those specified in Part 1, provided that the owner/operator can demonstrate that all of the following requirements are satisfied:

a. Total precursor organic compound (POC) emissions from S32 do not exceed 328 pounds in any consecutive 12-month period.
b. There are no non-precursor organic compound (NPOC) emissions from S32 in any consecutive 12-month period.
c. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5.
(Basis: Cumulative Increase; BAAQMD Regulation 2-1-412; Toxics)

3. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
a. Quantities of each type of solvent used at this source on a monthly basis.
b. If a material other than those specified in Part 1 is used, POC/NPOC, toxic component contents, and class (if applicable) of each material used; and mass emission calculations to demonstrate compliance with Part 2, on a monthly basis;
c. Monthly usage and/or emission calculations shall be totaled for each consecutive twelve-month period.
All records shall be retained on-site for two years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations.
(Basis: Cumulative Increase; Toxics)

4. The owner/operator shall ensure that S32 complies with the requirements of BAAQMD Regulations 8-16-303.1, 303.3.1, and 303.3.2. (Basis: Regulation 8-16-115)

By:_____
Jimmy Cheng
Air Quality Engineer I
Date: 6/7/10