



NOV 22 2011

Richard Sanchez
Label Technology Inc
2050 Wardrobe Ave
Merced, CA 95340

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1111861

Dear Mr. Sanchez:

Enclosed for your review and comment is the District's analysis of Label Technology Inc's application for an Authority to Construct for the installation of a flexographic printing plate manufacturing operation, at 2050 Wardrobe Ave in Merced, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. James Harader of Permit Services at (209) 557-6445.

Sincerely,



David Warner
Director of Permit Services

DW:JH/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-871B
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



NOV 22 2011

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1111861

Dear Mr. Tollstrup:

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NOV 22 2011

Gerardo C. Rios (AIR 3)
Chief, Permits Office
Air Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1111861

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Label Technology Inc's application for an Authority to Construct for the installation of a flexographic printing plate manufacturing operation, at 2050 Wardrobe Ave in Merced, CA.

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Merced Sun-Star
Merced Sun-Star

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Label Technology Inc for the installation of a flexographic printing plate manufacturing operation, at 2050 Wardrobe Ave in Merced, CA.

The analysis of the regulatory basis for this proposed action, Project #N-1111861, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, .**

San Joaquin Valley Air Pollution Control District Authority to Construct Application Review

Installation of New Flexographic Printing Plate Manufacturing Operation

Facility Name: Label Technology Inc. Date: November 14, 2011
Mailing Address: 2050 Wardrobe Ave Engineer: James Harader
Merced, CA 95340 Lead Engineer: Nick Peirce
Contact Person: Richard Sanchez
Telephone: (209) 384-1000
Application #: N-3852-19-0
Project #: N-1111861
Complete: August 24, 2011

I. Proposal

Label Technology Inc. has submitted an Authority to Construct application for the installation of a new flexographic printing plate manufacturing operation that will include an exposure unit, a washer unit, and an electric drying oven. Label Technology Inc. is not requesting any changes to the existing facility-wide limit of 49,999 lb-VOC/year.

Label Technology Inc. has submitted an application for a TV permit; however, that project has been deemed incomplete and a TV permit has yet to be issued for this facility.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4607 Graphic Arts and Paper, Film, Foil and Fabric Coatings (12/18/08)
Rule 4661 Organic Solvents (9/20/07)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387:
CEQA Guidelines

III. Project Location

This equipment will be located at 2050 Wardrobe Ave in Merced, CA. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Label Technologies is a graphic arts operation. The proposed operation will manufacture flexographic plates that will be used by the currently permitted flexographic printing operations. Flexographic plates are manufactured by from raw sheet of Cyrel 0.067 mil photo polymeric printing plate material. The plate material is UV photosensitive and when exposed to ultraviolet light through a high contrast negative, the ultraviolet light cross links the plate polymers and creates a hardened image on the raw sheet. The unexposed portion of the negative is then washed off using a solvent, dried using an electric dryer, and post-exposed (cured). The end result is a flexographic plate with the desired image. This operation will only emit VOCs.

The typical operating schedule for this equipment is 8 hours/day, 365 days/year.

V. Equipment Listing

N-3852-19-0: FLEXOGRAPHIC PRINTING PLATE MANUFACTURING OPERATION CONSISTING OF A NYOFLEX COMBI FIII EXPOSURE UNIT, A NYOFLEX FLOWLINE FIII WASHER UNIT, AND AN ELECTRIC DRYING OVEN

VI. Emission Control Technology Evaluation

This operation only results in the emission of VOCs. Emissions are controlled by using solvents with a VOC content of 7.3 lb/gal or less and by practicing evaporation minimization methods, which include keeping all solvent-laden cloths/papers, not in active use, in closed containers.

VII. General Calculations

A. Assumptions

1. Only VOCs will be emitted by the flexographic printing plate manufacturing operation.
2. 100% of the VOCs contained in the AV Solve II solvent will be emitted to the atmosphere.
3. The maximum throughput for the plate manufacturing operation is 120 square feet/day (10 sheets x 12 ft²/sheet). (Per applicant)
4. The applicant is not proposing to modify the existing facility-wide VOC emission limit of 49,999 lb-VOC/year.

B. Emission Factors

The manufacturer supplied the following emission factor for the plate manufacturing equipment.

$$\begin{aligned}EF_{VOC} &= 110 \text{ grams/m}^2 \text{ of sheets processed} \\EF_{VOC} &= 110 \text{ grams/m}^2 \times \text{m}^2/10.76 \text{ ft}^2 \times \text{lb}/453.6 \text{ g} \\EF_{VOC} &= 0.023 \text{ lb-VOC/ft}^2 \text{ of sheets processed}\end{aligned}$$

C. Calculations

1. Pre-Project Emissions (PE1)

Since this is a newly permitted operation, PE1 = 0.

2. Post Project PE (PE2)

The following equation will be used to determine the estimated emissions from this operation:

$$\begin{aligned}PE2 \text{ VOC} &= \text{Throughput (ft}^2 \text{ sheets/day)} \times EF \text{ VOC (lb/ft}^2\text{)} \\PE2 \text{ VOC} &= 120 \text{ ft}^2 \text{ sheets/day} \times 0.023 \text{ lb-VOC/ft}^2 \text{ sheets} \\PE2 &= 2.8 \text{ lb-VOC/day}\end{aligned}$$

Annual emissions will be based on the daily emission rate and 365 day/year of operation.

$$\begin{aligned}PE2 &= 2.8 \text{ lb-VOC/day} \times 365 \text{ days/year} \\PE2 &= 1,022 \text{ lb-VOC/year}\end{aligned}$$

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. Since this project only involves units that emit VOC's, only the SSPE for VOC emissions will be presented.

Stationary Source Pre-Project Potential to Emit (SSPE1)	
Permit Number	VOC (lb/year)
N-3852-1-4	49,999 (Facility-wide limit)
N-3852-2-4	
N-3852-9-2	
N-3852-13-1	
N-3852-14-1	
N-3852-15-0	
N-3852-16-1	
N-3852-17-0	
N-3852-18-0	
SSPE1	49,999

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Stationary Source Post-Project Potential to Emit (SSPE2)	
Permit Number	VOC (lb/year)
N-3852-1-4	49,999 (Facility-wide limit)
N-3852-2-4	
N-3852-9-2	
N-3852-13-1	
N-3852-14-1	
N-3852-15-0	
N-3852-16-1	
N-3852-17-0	
N-3852-18-0	
ATC N-3852-19-0	
SSPE2	49,999

5. Major Source Determination

Pursuant to District Rule 2201, a Major Source is a stationary source with post project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status, the SSPE2 does not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Major Source Determination					
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Major Source Threshold (lb/yr)	Existing Major Source?	Becoming a Major Source?
VOC	49,999	49,999	20,000	Yes	No

6. Baseline Emissions (BE)

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22

The applicant is proposing to add this unit under the existing facility-wide VOC limit. For units permitted under a Specific Limiting Condition (SLC), the quantity of offsets required is based on the post-project SLC limit and the baseline emissions for the units covered by the SLC (BE_{SLC}). Therefore, BE_{SLC} must be determined for this project.

Pursuant to District Rule 2201, Section 3.7.1.2, for a Major Source, the baseline emissions for a given pollutant is equal to the sum of the pre-project potential to emit for any highly utilized emission unit. For units under an SLC, the baseline emissions (BE_{SLC}) may be set equal to $PE1_{SLC}$ if all the units combined under the SLC have an average combined actual emissions, during the two consecutive years immediately prior to the filing of an application, equal to or greater than 80% of the pre-project SLC. Pursuant to the analysis presented in Appendix II, the units under the SLC are highly utilized. Therefore,

$$BE_{SLC} = PE1_{SLC}$$

7. SB288 Modification

The SB288 Modification Trigger thresholds for each pollutant are taken from District Rule 2201 and shown in the table below.

SB288 Modification Thresholds	
Pollutant	Threshold (Pounds Per Year)
VOC	50,000

Since the total emissions from the facility will continue to be limited to 49,999 lb-VOC/year, it is not possible for a project at this facility to exceed the SB288 Modification threshold. Therefore, this project will not trigger an SB288 modification.

8. Federal Major Modification

The units in this project will emit VOC's and the facility is a major source for VOC emissions. Therefore, this proposal could potentially trigger a Federal Major Modification for VOC emissions. The Federal Major Modification threshold for VOC emissions is 0 lb/year.

The Net Emissions Increase (NEI) for a Federal Major Modification may be calculated as follows for new units:

$$NEI = PE2 - 0$$

PE2 for the new unit is 1,022 lb-VOC/year; therefore, the net emission increase will be greater than zero and this project triggers a Federal Major Modification.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix V.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

- a) Any new emissions unit with a potential to emit exceeding two pounds per day,
- b) The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d) Any new or modified emissions unit, in a stationary source project, which results in a Major Modification.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

The daily emissions from the printing plant manufacturing equipment is compared to the BACT trigger threshold in the below table. Only VOC's are emitted by the proposed equipment.

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
VOC	2.8	> 2.0	n/a	Yes

As shown above, BACT for VOC emissions is triggered.

2. BACT Guideline

Printing plate manufacturing operations are addressed by BACT Guideline 4.7.10, "Printing Plate Manufacturing" (Q4 2011). For a copy of this guideline, please refer to Appendix III of this evaluation.

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis must be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Appendix III), BACT has been satisfied with the following:

VOC: Use of processor solvents with a VOC content, less water and exempt compounds, of 7.3 lb/gal, or lower, and practicing evaporation minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers

The following conditions will be included on the Authority to Construct:

- *The VOC content of the processor solvent shall not exceed 7.3 pounds per gallon, less water and exempt compounds. [District Rule 2201]*
- *All solvents, not in active use, shall be stored in closed containers. Solvent laden cloth or paper shall be stored and disposed in closed non-absorbent containers. [District Rules 2201 and 4661]*

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements are triggered on a pollutant-by-pollutant basis. Unless exempted pursuant to Section 4.6, offset requirements are triggered if the post-project potential to emit (SSPE2) equals or exceeds the offset threshold levels listed in the following table.

Offsets Applicability			
Pollutant	SSPE2 (lb/yr)	Offset Threshold Levels (lb/yr)	Offsets Triggered?
VOC	49,999	20,000	Yes

2. Quantity of Offsets Required

As shown in the previous table, offsets are triggered for VOC emissions. For units operating under an SLC, the quantity of offsets required is calculated using the following equation:

VOC Offsets Required = $(PE_{2\text{SLC}} - BE_{\text{SLC}} + ICCE) \times \text{DOR}$, where

PE2 = SLC for Post Project Potential to Emit

BE = Annual Baseline Emissions

ICCE = Increase in Cargo Carrier Emissions (zero for this unit)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

As stated earlier in this evaluation, BE_{SLC} is equal to $PE_{1\text{SLC}}$ since the units under the SLC are highly utilized. Thus, the equation can be reduced to:

VOC Offsets Required = $\sum(PE_{2\text{SLC}} - PE_{1\text{SLC}}) \times \text{DOR}$

The applicant is not requesting a change to the existing facility-wide permit limit, thus $PE_{2\text{SLC}}$ is equal to $PE_{1\text{SLC}}$ and the quantity of offsets required is zero.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, which is a new facility that is also a Major Source,
- b. Major Modifications,
- c. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- d. Any project which results in the offset thresholds being surpassed, and/or
- e. Any project with an SSIPe of greater than 20,000 lb/year for any pollutant.

a. New Major Source

As demonstrated previously in this document, this project will not cause this facility to become a new Major Source.

b. Major Modification

As demonstrated previously in this document, this project will trigger a Federal Major Modification. Therefore, a public notice is required.

c. PE > 100 lb/day

The Daily PE for each new emission unit was determined to be less than the 100 lb/day threshold.

d. Offset Threshold

The following table compares the SSPE1 and SSPE2 to the offset thresholds in order to determine if this proposal will result in emissions surpassing the offset threshold.

Offset Threshold				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Offset Threshold (lb/yr)	Public Notice Required?
VOC	49,999	49,999	20,000	No

As detailed in the preceding table, emissions from this facility are already above the offset threshold; thus, the offset threshold will not be surpassed.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$.

SSIPE Public Notice Threshold					
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)	SSIPE Threshold (lb/yr)	Public Notice Required?
VOC	49,999	49,999	0	20,000	No

As detailed in the preceding table, this project does not result in an increase in emissions that surpasses the SSIPE threshold.

2. Public Notice Action

As discussed above, public noticing is required for this project since the project triggers a Federal Major Modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and EPA, and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emissions Limits

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The following conditions will be included on the ATC permit:

- *The plate manufacturing throughput shall not exceed 120 square feet of photopolymer sheets processed in any one day. [District Rules 2201 and 4661]*
- *VOC emissions from the plate manufacturing operation shall not exceed 0.023 lb-VOC/square foot of photopolymer sheets processed. [District Rule 2201]*
- *The facility-wide VOC emissions shall be less than 50,000 pounds during any one calendar year. [District Rule 2201]*

E. Compliance Assurance

1. Source Testing

Source testing is not necessary to verify emissions from this operation.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

The following recordkeeping requirements will be included on the ATC permit:

- *Permittee shall keep a daily record of the quantity of photopolymer sheets processed, in square feet. [District Rule 2201]*
- *Permittee shall keep records of all organic solvents used in this operation. The records shall include the name of each organic solvent, the organic solvent manufacturer's name, and the VOC content, less water and exempt compounds. [District Rules 2201 and 4661]*
- *A record of the facility-wide VOC emissions, on a calendar year basis, shall be maintained. The records shall be updated at least monthly. [District Rule 2201]*
- *All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4661]*

4. Reporting

No reporting is required to ensure compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

The proposed equipment will only emit VOC's. VOC's are not analyzed as part of an AAQA review; therefore, an AAQA is not required for this project.

G. Compliance Certification

District Rule 2201 requires the owner of a new Major Source or a source undergoing a Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. Label Technology's compliance certification is attached in Appendix VI of this document.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant is proposing to install a printing plate manufacturing operation.

Since the project will provide printing plates to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater environmental impact.

Rule 2520 Federally Mandated Operating Permits

Label Technologies is a Major Source for VOC emissions. They have recently applied for a Title V permit; however, the initial TV project is currently in an incomplete status. This new permit will be incorporated into the TV permit when processing the initial TV permit application; therefore, a modification to an existing TV permit is not required. No further discussion is necessary to demonstrate District Rule 2520 compliance.

Rule 4001 New Source Performance Standards (NSPS)

There are no New Source Performance Standards that are applicable to this type of operation.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

There are no National Emission Standards for Hazardous Air Pollutants that apply to this type of operation.

Rule 4101 Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. Therefore, the following condition will be listed on the ATC:

- *{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]*

Rule 4102 Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. Therefore, the following condition will be listed on the ATC to ensure compliance:

- *{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]*

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources (dated 3/2/01) specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite. The results of the analysis are shown below. Please refer to Appendix IV for further details.

Categories	Printing Plate Manufacturing (unit 19-0)	Project Totals	Facility Totals
Prioritization Score	0.00*	0.00*	0.00
Acute Hazard Index	N/A	N/A	0.64
Chronic Hazard Index	N/A	N/A	0.69
Maximum Individual Cancer Risk (10 ⁻⁶)	N/A	N/A	0.00
T-BACT Required?	No		
Special Permit Conditions?	No		

* A prioritization was not performed after determining that no Hazardous Air Pollutants (HAPs) are associated with this project. No further analysis was required.

Rule 4607 Graphic Arts and Paper, Film, Foil, and Fabric Coatings

This rule is applicable to any graphic arts printing operation, to digital printing operations, and to any paper, film, foil, or fabric coating operation and to the organic solvent cleaning materials and processes associated with such operations. The applicant is not proposing to install a printing or coating operation; rather, they are proposing to install a printing plate manufacturing operation. Therefore, the proposed unit is not subject to the requirements of District Rule 4607 and no further analysis is necessary.

Rule 4661 Organic Solvents

This rule is applicable to any source operation that uses organic solvents unless the source operation is exempted under Section 4.0. This operation utilizes organic solvents for the manufacturing of flexographic printing plates and is subject to the requirements of this rule.

Per Section 5.8, on and after March 21, 2008, from all VOC-containing materials, equipment, and processes subject to this rule, an operation shall not emit to the atmosphere VOCs in excess of 833 pounds VOC per calendar month per facility. The flexographic printing plate manufacturing operation under this project is the only source operation at the facility which is subject to this rule. The maximum daily VOC emission rate from this operation is limited by a DEL to not exceed 2.8 pounds in any one day and the resulting maximum monthly emissions will be 86.8 pounds per calendar month⁽¹⁾. Therefore, compliance with the requirements of Section 5.8 is expected.

Section 5.10 of this rule requires an operator to comply with the requirements of Rule 4663 (Organic Solvent Cleaning Storage and Disposal) when performing organic solvent cleaning, storage and disposal of organic solvents and waste solvent materials, coatings, adhesives, catalysts, and thinners. The application is proposing to comply with the applicable solvent cleaning requirements of Section 5.1 and 5.2.3 of Rule 4663. In addition, the applicant is proposing to comply with the solvent storage and disposal requirements of Section 5.4 of Rule 4663. Therefore, compliance with the requirements of Section 5.10 is expected.

Section 6.1 of this rule specifies the records that must be kept to document compliance with the provisions of the rule. Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule. Therefore, compliance with District Rule 4661 requirements is expected with the issuance of the ATC permit.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a k-12 school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

¹ Maximum monthly emissions is based on the following calculation: 2.8 lb-VOC/day x 31 days/month = 86.8 lb-VOC/month.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

This project will not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Issue Authority to Construct N-3852-19-0 subject to the permit conditions on the attached draft Authority to Construct in Appendix I.

X. Billing Information

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
N-3852-19-0	3020-01-B	29.4 Electric HP	\$117.00

Appendixes

- I. Draft Authority to Construct Permit
- II. Highly Utilized Determination
- III. BACT Guideline 4.7.10 and Top-Down BACT Analysis
- IV. Risk Management Review
- V. Quarterly Net Emission Change
- VI. Compliance Certification Statement

Appendix I
Draft Authority to Construct Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-3852-19-0

LEGAL OWNER OR OPERATOR: LABEL TECHNOLOGY, INC.
MAILING ADDRESS: 2050 WARDROBE AVE
MERCED, CA 95340

LOCATION: 2050 WARDROBE AVE
MERCED, CA 95340

EQUIPMENT DESCRIPTION:

FLEXOGRAPHIC PRINTING PLATE MANUFACTURING OPERATION CONSISTING OF A NYOFLEX COMBI FIII EXPOSURE UNIT, A NYOFLEX FLOWLINE FIII WASHER UNIT, AND AN ELECTRIC DRYING OVEN

CONDITIONS

1. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. The VOC content of the processor solvent shall not exceed 7.3 pounds per gallon, less water and exempt compounds. [District Rule 2201]
4. The plate manufacturing throughput shall not exceed 120 square feet of photopolymer sheets processed in any one day. [District Rules 2201 and 4661]
5. VOC emissions from the plate manufacturing operation shall not exceed 0.023 lb-VOC/square foot of photopolymer sheets processed. [District Rule 2201]
6. The facility-wide VOC emissions shall be less than 50,000 pounds during any one calendar year. [District Rule 2201]
7. All solvents, not in active use, shall be stored in closed containers. Solvent laden cloth or paper shall be stored and disposed in closed non-absorbent containers. [District Rules 2201 and 4661]
8. Permittee shall keep a daily record of the quantity of photopolymer sheets processed, in square feet. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-3852-19-0 Nov 14 2011 2:46PM -- HARADERJ - Joint Inspection NOT Required

9. Permittee shall keep records of all organic solvents used in this operation. The records shall include the name of each organic solvent, the organic solvent manufacturer's name, and the VOC content, less water and exempt compounds. [District Rules 2201 and 4661]
10. A record of the facility-wide VOC emissions, on a calendar year basis, shall be maintained. The records shall be updated at least monthly. [District Rule 2201]
11. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4661]

DRAFT

Appendix II

Highly Utilized Determination

Highly Utilized Determination

The following calculations will determine whether the emission units under the facility wide Specific Limiting Condition (SLC) for VOC emissions are Highly-Utilized Emissions Units. According to District Rule 2201, Section 3.7.1.2., units under an SLC are Highly-Utilized Emissions Units if all emission units under the SLC have an average combined annual Actual Emissions (AE) during the two consecutive years immediately prior to filing of an application for an Authority to Construct (ATC) that is equal to or greater than 80% of the pre-project SLC limit. The AE are emissions having actually occurred and are calculated from actual ink, coating, solvent, and adhesive usage records utilizing established emission factors (EF).

For this project the two consecutive years immediately prior to the filing of the application for an ATC permit is from April 1, 2009 to March 31, 2011 and will be referenced as the baseline period for this project. The quarterly baseline period VOC emissions from each permit unit under the facility-wide SLC of 49,999 lb-VOC/year were provided by the applicant and are listed in the tables below.

Annual Actual Emissions from Permit N-3852-1-4:

VOC Emissions from the Rotopress Model #2002 8-Color Flexographic Printing Press					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	1,527	1,958	1,616	---
2010	1,138	845	1,081	1,348	---
2011	2,035	---	---	---	---
Average	1,587	1,186	1,520	1,482	5,775

Annual Actual Emissions from Permit N-3852-2-4:

VOC Emissions from the Rotopress Model #4002 4-Color Flexographic Printing Press					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	763	979	1,212	---
2010	853	634	811	1,011	---
2011	1,527	---	---	---	---
Average	1,190	699	895	1,112	3,896

Annual Actual Emissions from Permit N-3852-5-4:

VOC Emissions from the Allied Gear Flexomaster #3C-108 3-Color Flexographic Printing Press					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	382	489	0	---
2010	0	0	0	0	---
2011	0	---	---	---	---
Average	0	191	245	0	436

Annual Actual Emissions from Permit N-3852-9-2:

VOC Emissions from the Rotopress 8-Color Flexographic Printing Press					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	1,527	1,958	1,616	---
2010	1,138	845	1,081	1,348	---
2011	2,035	---	---	---	---
Average	1,587	1,186	1,520	1,482	5,775

Annual Actual Emissions from Permit N-3852-13-1:

VOC Emissions from the Mark Andy Model #4150 9-Color Flexographic Printing Press					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	1,718	2,078	1,818	---
2010	1,280	951	1,216	1,516	---
2011	2,118	---	---	---	---
Average	1,699	1,335	1,647	1,667	6,348

Annual Actual Emissions from Permit N-3852-14-1:

VOC Emissions from the Rotopress Model #3516 9-Color Flexographic Printing Press					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	1,240	1,280	1,260	---
2010	1,161	951	1,148	1,211	---
2011	1,260	---	---	---	---
Average	1,211	1,096	1,214	1,236	4,757

Annual Actual Emissions from Permit N-3852-15-0:

VOC Emissions from the PCMC "Evolution" 9-Color Flexographic Printing Press & Die-Cutter					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	1,706	1,728	1,674	---
2010	1,280	951	1,216	1,460	---
2011	1,701	---	---	---	---
Average	1,491	1,329	1,472	1,567	5,859

Annual Actual Emissions from Permit N-3852-16-1:

VOC Emissions from the Mark Andy Model #LP3430-17 10-Color Flexographic Printing Press & Die-Cutter					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	1,674	1,728	1,422	---
2010	1,422	1,056	1,351	1,559	---
2011	1,701	---	---	---	---
Average	1,562	1,365	1,540	1,491	5,958

Annual Actual Emissions from Permit N-3852-18-0:

VOC Emissions from the Mark Andy Model XP5000-20 10-Color Flexographic Label & Tag Printing Press and Die-Cutting press with 10-7.5 kW dryers					
Year	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)	Total Annual (lb/yr)
2009	---	1,908	2,211	2,020	---
2010	1,422	1,056	1,351	1,685	---
2011	2,260	---	---	---	---
Average	1,841	1,482	1,781	1,853	6,957

AE_{SLC} Calculations:

The AE_{SLC} for VOC emissions will be based on the sum of the VOC emissions from the tables shown above. Therefore:

$$\begin{aligned}
 \Sigma AE_{SLC/VOC} &= 5,775 \text{ lb-VOC/yr} + 3,896 \text{ lb-VOC/yr} + 436 \text{ lb-VOC/yr} + 5,775 \text{ lb-VOC/yr} \\
 &\quad + 6,348 \text{ lb-VOC/yr} + 4,757 \text{ lb-VOC/yr} + 5,859 \text{ lb-VOC/yr} \\
 &\quad + 5,958 \text{ lb-VOC/yr} + 6,957 \text{ lb-VOC/yr} \\
 &= \mathbf{45,761 \text{ lb-VOC/yr}}
 \end{aligned}$$

Determination of Highly-Utilized Emission Units for VOC Emissions:

The average combined Annual Actual Emissions is equal to the above calculated $\Sigma AE_{SLC/VOC}$. Therefore:

Pollutant	Average Combined Annual Actual Emissions (lb/yr)	Pre-Project Annual SLC Limit (lb/yr)
VOC	45,761	49,999

$$\begin{aligned}
 80\% \text{ of the Pre-Project Annual SLC Limit for VOC Emissions} &= 0.8 \times 49,999 \text{ lb/yr} \\
 &= 39,999 \text{ lb/yr}
 \end{aligned}$$

The average combined annual actual VOC emission rate is 45,761 lb/yr, which is greater than 80% of the pre-project annual SLC of 49,999 lb/yr. Therefore, all emission units under the facility wide SLC are Highly-Utilized Emission Units for VOC (Ref. District Rule 2201, Sections 3.7.1.2 & 3.21).

Appendix III

BACT Guideline 4.7.10 and Top-Down BACT Analysis

[Per » B A C T » Bact Guideline.asp?category_Level1=4&category_Level2=7&category_Level3=10&last Update=6 » 21 :](#)

[Back](#)

**Best Available Control Technology (BACT) Guideline 4.7.10
Last Update: 6/21/2000**

Printing Plate Manufacturing

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of processor solvents with a VOC content, less water and exempt compounds, of 7.3 lb/gal, or lower, and Practicing evaporation minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers.	1. VOC Capture and thermal oxidation. 2. VOC Capture and catalytic oxidation. 3. VOC Capture and carbon adsorption	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source. For background information, see Permit Specific BACT Determinations on [Details Page](#).

Top Down BACT Analysis for ATC Permit N-3852-19-0

Top Down BACT Analysis for VOC Emissions:

Step 1 - Identify All Possible VOC Control Technologies

According to District BACT Guideline 4.7.10 (Printing Plate Manufacturing), the following are possible controls for VOC emissions:

Achieved-in-Practice:

- Use of processor solvents with a VOC content (less water and exempt compounds) of 7.3 lb/gal, or lower, and practicing evaporation minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers.

Technologically Feasible:

- VOC capture and control with thermal/catalytic incineration (98% control efficiency and 100% capture).
- VOC capture and control with a carbon adsorption system (95% control efficiency and 100% capture).

Alternate Basic Equipment:

None identified.

Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- 1st 98% control efficiency (thermal/catalytic incineration and 100% capture). [Technologically Feasible]
- 2nd 95% control efficiency (carbon adsorption and 100% capture). [Technologically Feasible]
- 3rd Use of processor solvents with a VOC content of 7.3 lb/gal or lower (less water and exempt compounds) and practicing evaporation minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers. [Achieved-In-Practice]

Step 4 - Cost Effectiveness Analysis

Cost Effective Threshold:

The District's BACT Policy establishes annual cost thresholds for imposed control based upon the amount of pollutants abated by the controls. If the cost of control is at or below the threshold, the control is considered cost effective. If the cost exceeds the threshold, it is not cost effective and the control is not required. The District's cost effective threshold for VOC is \$17,500/ton.

Industry Standard Emissions (ISE):

Industry standard emissions are considered to be what is available to the industry as standard equipment. The industry standard VOC emissions will be assumed to be the applicants proposed annual VOC emissions limit, as this VOC emission rate was provided by the manufacturer for a unit that is utilizing standard solvents. Therefore:

$$\text{Annual ISE}_{\text{VOC}} = \text{Annual PE2} = 1,022 \text{ lb-VOC/year}$$

1st Most Effective Control Option:

98% total control efficiency using a VOC capture and control system with thermal/catalytic incineration and 100% VOC capture.

(A). Emission Reduction:

Based on the above determined industry standard emissions and assuming a VOC capture efficiency of 100% and incinerator destruction efficiency of 98%, the amount of VOC emissions reduced is calculated below.

$$\begin{aligned} \text{VOC Emission Reductions} &= \text{Annual ISE}_{\text{VOC}} \times 1 \text{ tons}/2,000 \text{ lb} \times \text{Overall Control Eff.} \\ &= 1,022 \text{ lb/year} \times 1 \text{ tons}/2,000 \text{ lb} \times 0.98 \\ &= \mathbf{0.50 \text{ tons/year}} \end{aligned}$$

(B). Design Parameters:

The total printing plate processing equipment exhaust flow rates will be used as the minimum airflow rate to determine the fuel usage cost for this control option for this project. Therefore:

$$\begin{aligned} \text{Total Airflow Rate} &= \text{Exposure Unit}_{\text{Airflow Rate}} \text{ (cfm)} + \text{Washer Unit}_{\text{Airflow Rate}} \\ &\quad + \text{Bench Oven}_{\text{Airflow Rate}} \text{ (cfm)} \\ &= 118 \text{ cfm} + 470 \text{ cfm} + 400 \text{ cfm} \\ &= 988 \text{ cfm} \end{aligned}$$

(C). Annual Natural Gas Cost:

The cost of natural gas for this operation is calculated based on an operating schedule of 8 hr/day and 2,920 hr/year (175,200 min/yr)². A heat exchanger efficiency of 50% is assumed.

$$\text{Natural Gas Usage} = \text{Flow Rate} \times \text{Cp}_{\text{Air}} \times \Delta T \times \text{HEF}$$

Where: Flow Rate = Air flow through the incinerator (988 cfm – as determined above)

Cp_{Air} = specific heat of air is 0.194 Btu/scf - °F

ΔT = increase in the temperature of the contaminated air stream required for catalytic oxidation to occur (It will be assumed that the air stream would increase in temperature from 77°F to 600°F.)

HEF = heat exchanger factor (0.5, assumed)

$$\begin{aligned} \text{Natural Gas Usage} &= 988 \text{ cfm} \times 0.194 \text{ Btu/scf} - \text{°F} \times (600 \text{ °F} - 77 \text{ °F}) \times 0.5 \\ &\quad \times 175,200 \text{ min/year} \times \text{MMBtu}/10^6 \text{ Btu} \\ &= 8,781 \text{ MMBtu/year} \end{aligned}$$

The fuel usage will be reduced by the heating value of the influent VOC stream. The heating value of the VOC's being controlled is not known, so the heating value of benzyl alcohol (14,900 Btu/lb) will be utilized in the calculation.

$$\begin{aligned} \text{Btu Content} &= \text{Uncontrolled VOC Emissions lb/year} \times \text{HV Btu/lb} \\ &= 1,022 \text{ lb-VOC/yr} \times 14,900 \text{ Btu/lb} \times \text{MMBtu}/10^6 \text{ Btu} \\ &= 15 \text{ MMBtu/yr} \end{aligned}$$

$$\begin{aligned} \text{Adjusted Natural Gas Usage} &= 8,781 \text{ MMBtu/year} - 15 \text{ MMBtu/yr} \\ &= 8,766 \text{ MMBtu/yr} \end{aligned}$$

$$\begin{aligned} \text{Natural Gas Cost} &= 8,766 \text{ MMBtu/year} \times \$6.88/\text{MMBtu}^{(3)} \\ &= \mathbf{\$60,310\text{year}} \end{aligned}$$

(D). Cost Effectiveness of a Catalytic Incinerator with 100% Capture:

$$\begin{aligned} \text{Cost Effectiveness} &= \text{Natural Gas Cost (\$/year)} \div \text{Emission Reduction (ton-VOC/year)} \\ &= \$60,310/\text{year} \div 0.5 \text{ tons-VOC/year} \\ &= \mathbf{\$120,620/\text{ton-VOC}} \end{aligned}$$

The cost to operate a catalytic incinerator with 100% capture is \$120,620/ton, which is greater than the District's VOC cost-effectiveness threshold of \$17,500/ton. Therefore, this VOC control option is **not cost effective** and is being removed from consideration for this project.

² Maximum operating schedule of 8 hrs/day and 365 days/year, which is equal to: 8 hr/day x 365 day/yr x 60 min/hr = 175,200 min/yr.

³ The natural gas price used is based on the average of the California industrial natural gas price over the previous 12 months of available data at the time the project was deemed complete (June 2010 through May 2011) as published by the U.S. Energy Information Administration in their monthly natural gas reports. See <http://tonto.eia.doe.gov/dnav/ng/hist/n3035ca3m.htm>

2nd Most Effective Control Option:

95% total control using a VOC capture and control system with carbon adsorption and 100% capture.

(A). Emission Reduction:

Based on the above determined industry standard emissions and assuming a VOC capture efficiency of 100% and carbon adsorption system control efficiency of 95%, the amount of VOC emissions reduced is calculated below.

$$\begin{aligned}\text{VOC Emission Reductions} &= \text{Annual ISE}_{\text{VOC}} \times 1 \text{ tons}/2,000 \text{ lb} \times \text{Overall Control Eff.} \\ &= 1,022 \text{ lb/year} \times 1 \text{ tons}/2,000 \text{ lb} \times 0.95 \\ &= \mathbf{0.49 \text{ tons/year}}\end{aligned}$$

(B). Annual Carbon Replacement Costs:

Carbon adsorption occurs when air containing VOCs is blown through a carbon unit and the VOCs are adsorbed onto the surface of the cracks in the activated carbon particles. Two main areas of cost are the cost of the carbon adsorption unit itself and the annual operating cost of the unit. The primary annual operating cost is the replacement of the spent activated carbon. It will be shown that the annual cost to replace the spent activated carbon alone will be adequate to cause this technology to be not cost effective per District BACT policy. This estimate does not include the capital cost of purchasing the carbon adsorption unit or any additional operational and maintenance costs.

Since carbon can adsorb 20% of its weight in VOCs, and the control efficiency of carbon adsorption is 95%, the total amount of carbon required per year can be determined as follows:

$$\begin{aligned}\text{Carbon Required} &= 1,022 \text{ lb-VOC/year} \times 0.95 \times 1 \text{ lb-Carbon}/0.2 \text{ lb-VOC} \\ &= 4,855 \text{ lb-Carbon/year}\end{aligned}$$

Per Kurt Keefer of EAS Corp. (916-967-9007, April 2011) under project N-1100320, the cost of carbon replacement for ranges from \$2.00/lb to \$10.00/lb, depending on the type and quantity of carbon purchased. For the purposes of this analysis and to be conservative, it is assumed that the price of carbon is \$2.00/lb. The annual cost of spent carbon replacement will be:

$$\begin{aligned}\text{Annual Carbon Replacement Cost} &= 4,855 \text{ lb-Carbon/year} \times \$2/\text{lb-Carbon} \\ &= \$9,710/\text{year}\end{aligned}$$

(C). Cost Effectiveness of a Carbon Adsorption System:

$$\begin{aligned}\text{Cost Effectiveness} &= \text{Annual Carbon Replacement Cost } (\$/\text{year}) \\ &\quad \div \text{Emission Reduction } (\text{ton-VOC}/\text{year}) \\ &= \$9,710/\text{year} \div 0.49 \text{ ton-VOC}/\text{year} \\ &= \mathbf{\$19,816/\text{ton-VOC}}\end{aligned}$$

The cost to operate a carbon adsorption system is \$19,816/ton, which is greater than the District's VOC cost-effectiveness threshold of \$17,500/ton. Therefore, this VOC control option is **not cost effective** and is being removed from consideration for this project.

3rd Most Effective Control Option:

Use of processor solvents with a VOC content of 7.3 lb/gal or lower (less water and exempt compounds) and practicing evaporation minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers. [Achieved-In-Practice]

The applicant is proposing this option; therefore, a cost effectiveness analysis is not required.

Step 5 - Select BACT

The most effective VOC control technology, not eliminated in steps 2 and 4 above, is the use of the above described achieved-in-practice control method. The applicant has proposed to use a processor solvent that meet the above VOC limit and will use the evaporative minimization methods as stated above. Therefore, the applicant's proposal meets the BACT requirements for VOC emissions.

Appendix IV

Risk Management Review Results

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Kai Chan – Permit Services
 From: Cheryl Lawler – Technical Services
 Date: September 19, 2011
 Facility Name: Label Technology, Inc.
 Location: 2050 Wardrobe Avenue, Merced
 Application #(s): N-3852-19-0
 Project #: N-1111861

A. RMR SUMMARY

RMR Summary			
Categories	Printing Plate Manufacturing (Unit 19-0)	Project Totals	Facility Totals
Prioritization Score	0.00*	0.00*	0.00
Acute Hazard Index	N/A	N/A	0.64
Chronic Hazard Index	N/A	N/A	0.69
Maximum Individual Cancer Risk	N/A	N/A	0.00
T-BACT Required?	No		
Special Permit Conditions?	No		

*A prioritization was not performed after determining no Hazardous Air Pollutants (HAPs) are associated with this project. No further analysis was required.

I. Project Description

Technical Services received a request on August 30, 2011, to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for a flexographic printing plate manufacturing operation consisting of a Nyloflex Combi Fill exposure unit, a Nyloflex Flowline Fill washer unit, and a Grieve Model 343 electric bench oven.

II. Analysis

For the RMR, after reviewing the information provided in the Risk Management Review request along with MSDS sheet for the proposed product, Technical Services determined that there are no HAPs associated with this project. Therefore, no further analysis or prioritization was required for this project.

For the AAQA, VOCs are the only criteria pollutant that will be emitted as a result of this project. VOCs are not analyzed as part of an AAQA review. Therefore, an AAQA was not required or performed for this project.

III. Conclusion

The proposed project will not contribute to the facility's risk. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

Appendix V

QNEC Calculations

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

$QNEC = PE2 - BE$, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
- BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, $PE2_{quarterly}$ and $BE_{quarterly}$ can be calculated as follows:

Quarterly Post Project Emissions		
Pollutant	PE2 Total (lb/yr)	Quarterly PE2 (lb/qtr)
NO _x	0	0.0
SO _x	0	0.0
PM ₁₀	0	0
CO	0	0.0
VOC	1,022	255.5

$$\begin{aligned}
 BE_{quarterly} &= BE_{annual} \div 4 \text{ quarters/year} \\
 &= 0 \text{ lb/year} \div 4 \text{ qtr/year} \\
 &= 0 \text{ lb/qtr (for all criteria pollutants)}
 \end{aligned}$$

QNEC			
Pollutant	Quarterly PE2 (lb/qtr)	Quarterly BE (lb/qtr)	QNEC (lb/qtr)
NO _x	0.0	0	0.0
SO _x	0.0	0	0.0
PM ₁₀	0	0	0
CO	0.0	0	0.0
VOC	255.5	0	255.5

Appendix VI

Compliance Certification Statement

**RECEIVED****NOV 14 2011****SJVAPCD
NORTHERN REGION**

November 11, 2011

James Harader
Senior Air Quality Engineer
San Joaquin Valley Air Pollution Control District

**Compliance Certification for Flexographic Printing Plate Manufacturing Operation
Project N-1111861**

Dear Mr. Harader

As required under District Rules 4102, 4101 & 2201,1070 and Table 6 Rule 4607. Label Technology Inc. hereby submits this letter of certification regarding statewide compliance for the all permits obtain by Label Technology Inc.

Based on all the information obtained and to the best of my knowledge and belief, the major stationary sources, as defined in this facility are in compliance, or on a schedule for compliance with all emission limitations and standards under the Clean Air Act.

For further assistance feel free to contact me,

Sincerely

A handwritten signature in black ink, appearing to read "Richard Sanchez".

Richard Sanchez
Ink Manager
Label Technology, Inc
2050 Wardrobe Ave
Merced, CA 95340
209-384-1000