San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAY 2 3 2019

Mac McCullough
Pacific Southwest Container
4530 Leckron Road
Modesto, CA 95357

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: N-8044
Project Number: N-1183571

Dear Mr. McCullough:

Enclosed for your review and comment is the District's analysis of Pacific Southwest Container's application for an Authority to Construct for relocating three flexographic printing presses from Pacific Southwest Container's facility (Facility ID: N-3606), located at 4530 Leckron Road, Modesto to Pacific Southwest Container's facility (Facility ID: N-8044), at 671 Mariposa Road, Modesto.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice and 45-day EPA notice comment periods, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Jag Kahlon of Permit Services at (209) 557-6452.

Sincerely,

Arnaud Marjollet
Director of Permit Services

AM:JK

Enclosures

cc: Brian Clerico, CARB (w/ enclosure) via email
cc: Gerardo C. Rios, EPA (w/ enclosure) via email

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
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

www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Relocation of Three Flexographic Printing Presses

Facility Name:	Pacific Southwest Container	Date:	April 22, 2019
Mailing Address:	4530 Leckron Road Modesto, CA 95357	Engineer:	Jag Kahlon
		Lead Engineer:	James Harader
Contact Person:	Mac McCullough		
Telephone:	(209) 557-5270		
Fax:	(209) 522-2913		
E-Mail:	macm@teampsc.com		
Application #(s):	N-8044-9-0, '-10-0 and '-11-0		
Project #:	N-1183571		
Deemed Complete:	February 19, 2019		

I. Proposal

Pacific Southwest Container (referred herein after "PSC") is requesting Authority to Construct (ATC) permits to relocate three flexographic printing presses from PSC's facility (Facility ID: N-3606), located at, 4530 Leckron Road, Modesto to another PSC's facility (Facility ID: N-8044), located at 671 Mariposa Road, Modesto. The draft ATC permits are included in **Appendix A**.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions 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 4653	Adhesives and Sealants (9/16/10)
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

The proposed equipment will be located at 671 Mariposa Road in Modesto, California. The equipment will not be located within 1,000 feet of the outer boundary of any 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

The proposed flexographic printing units consists of printers, folder, gluer, and die-cutter system. Flat corrugated sheets are fed into the machines. Rubber belts convey the sheets to the print units. Ink is pumped to the anilox roll and transferred to the printing plate from where the image is transferred onto the corrugated sheets. Non-skid coatings may be applied on top of the printed image. The printed and coated sheets are then conveyed to the die cutting section where the sheets are cut. Cut sheets are then conveyed to a gluer where a thin strip of adhesive is applied and the sheet is folded into a flat box and strapped.

V. Equipment Listing

N-8044-9-0: GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 4-COLOR BOBST/MARTIN MODEL MIDLINE 924 (A-0498-200) NON-HEATSET FLEXOGRAPHIC PRINTER WITH FOLDER, GLUER, AND ROTARY DIE-CUTTER (S-924)

N-8044-10-0: GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 5-COLOR MARTIN MODEL 1628 FLEXOGRAPHIC PRINTER WITH FOLDER, GLUER, AND ROTARY DIE-CUTTER

N-8044-11-0: GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 1-COLOR BOBST MARTIN MODEL 1628 FFG FLEXOGRAPHIC PRINTER (S/N 6506) WITH A PRINTER WITH FOLDER, GLUER, AND ROTARY DIE-CUTTER

VI. Emission Control Technology Evaluation

The proposed printer/coater and gluer units are sources of VOC emissions. To minimize VOC emissions, PSC is proposing to use low VOC containing inks and coatings and zero VOC glue. No add-on control equipment is proposed for the equipment; therefore, no further discussion is necessary.

Particulate matter (PM) will be emitted due to die-cutting, slotting, and scoring operations. The corrugated paper sheet trimmings will be pneumatically conveyed to a central location where they are baled and then shipped to a recycler. The trimmings conveying system is exempt from District permit requirements.

VII. General Calculations

A. Assumptions

- Assumptions will be stated as they are made during the evaluation.

B. Emission Factors

Please refer to worksheet in **Appendix B** of this document.

The ATC will include mass emission rates along with VOC content (lb/gal, less water and exempt compounds) in graphic arts materials as required by Best Available Control Technology (BACT) under Rule 2201, and other applicable local, State and Federal rules.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since the proposed units are new units to facility N-8044, PE1 is equal to zero for all pollutants.

2. Post Project Potential to Emit (PE2)

Per worksheet in **Appendix B** of this document,

N-8044-9-0 (formerly N-3606-35):
PE2 = 1.46 lb-VOC/hr, 32.0 lb-VOC/day and 7,976 lb-VOC/yr

N-8044-10-0 (formerly N-3606-15):
PE2 = 0.89 lb-VOC/hr, 19.5 lb-VOC/day and 4,874 lb-VOC/yr

N-8044-11-0 (formerly N-3606-14):
PE2 = 0.46 lb-VOC/hr, 10.2 lb-VOC/day and 2,544 lb-VOC/yr

The applicant has proposed to limit the combined total VOC emissions from units N-8044-9, '-10 and '-11 to 13,012 pounds per year.

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

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

The potential emissions for each permit unit are taken from the application review under project N-1183218.

SSPE1 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
N-8044-1-0	0	0	0	0	0
N-8044-2-0	148	0	8	95	8
N-8044-3-0	0	0	0	0	5,817
N-8044-4-0	860	744	783	9,659	1,436
N-8044-5-0	0	0	0	0	8,076
N-8044-6-0	0	0	37	0	0
N-8044-7-0	0	0	0	0	2,750
N-8044-8-0	0	0	0	0	4,900
SSPE1	**1,008**	**744**	**828**	**9,754**	**22,987**

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
N-8044-1-0	0	0	0	0	0
N-8044-2-0	148	0	8	95	8
N-8044-3-0	0	0	0	0	5,817
N-8044-4-0	860	744	783	9,659	1,436
N-8044-5-0	0	0	0	0	8,076
N-8044-6-0	0	0	37	0	0
N-8044-7-0	0	0	0	0	2,750
N-8044-8-0	0	0	0	0	4,900
N-8044-9-0, 10-0 and '-11-0 (total)	**0**	**0**	**0**	**0**	**13,012**
SSPE2	**1,008**	**744**	**828**	**9,754**	**35,999**

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source

- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO_X	SO_X	PM_{10}	*$PM_{2.5}$	CO	VOC
SSPE1	1,008	744	828	828	9,754	22,987
SSPE2	1,008	744	828	828	9,754	35,999
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	Yes

*$PM_{2.5}$ is assumed to be equal to PM_{10}

This facility is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO_2	VOC	SO_2	CO	PM	PM_{10}
Estimated Facility PE before Project Increase	0.5	11.5	0.4	4.9	0.4	0.4
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	No	No	No	No	No

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 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 District Rule 2201.

N-8044-9-0, '-10-0 and '-11-0:
Since these units are new emissions units at facility N-8044, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Per section VII.C.5 of this document, this facility is a Major Source for VOC emissions. This project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	**Project PE2 (lb/year)**	**Threshold (lb/year)**	**SB 288 Major Modification Calculation Required?**
VOC	13,012	50,000	No

Since the SB 288 Major Modification Threshold is not surpassed, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Per section VII.C.5 of this document, this facility is a Major Source for VOC emissions. Thus, this project may trigger Federal Major Modification.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

PE2 (total) = 13,012 lb-VOC/yr

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification. Federal Offset quantities are calculated below:

Federal Offset Quantities:

The Federal offset quantity is only calculated only for the pollutants for which the project is a Federal Major Modification. The Federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the potential to emit after the modification (PE2) minus the actual emissions (AE) during the baseline period for each emission unit multiplied by the applicable federal offset ratio. There are no special calculations performed for units covered by an SLC.

VOC **Federal Offset Ratio** **1.5**

Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
N-8044-9-0, '-10-0 and '-11-0 (total)	0	13,012	13,012
		Net Emission Change (lb/year):	13,012
		Federal Offset Quantity: (NEC * 1.5)	19,518

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are addressed in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM_{10}

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO_2	VOC	SO_2	CO	PM	PM_{10}
Total PE from New and Modified Units	0.0	6.5	0.0	0.0	0.0	0.0
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. 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 F**.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

Pursuant to District Rule 2201, Section 4.1, BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

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 Adjusted Increase in Permitted Emissions (AIPE) exceeding two pounds per day, and/or

d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.
*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

N-8044-9-0, '-10-0 and '-11-0:
Per section VII.C.2 above, for each unit, PE2 is greater than 2 lb/day for VOC emissions. Thus, BACT is triggered for VOC emissions for each unit.

b. Relocation of emissions units – PE > 2 lb/day

None of the emission units are being relocated from one stationary source to another; therefore, BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

None of the emission units are being modified under this project; therefore, BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.8 above, this project does constitute a Federal Major Modification. Thus, BACT is triggered for VOC emissions.

2. BACT Guideline

BACT guidelines 4.7.4 for "Flexographic Printing – Corrugated Boxes, High End Graphics", and 4.7.15 for "Flexographic Printing – Corrugated Boxes, Low-End Graphics" will be used to address the BACT requirements for VOC emissions (See **Appendix C**).

Per applicant, PSC is job shop facility that accommodate wide range of customers. They can print high-end graphics, as well as, low end-graphics to meet their customer's need. Therefore, both of these BACT guidelines are used to address BACT for VOC emissions.

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall 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 D**), BACT has been satisfied with the following:

VOC: For High-end graphics: Use of inks with VOC content not exceeding 0.88 lb/gal (less water & exempt compounds) for high-end graphics and use of inks with a VOC content not exceeding 2.5 lb/gal (less water & exempt compounds) for

metallic inks; and use of coating with VOC content not exceeding 2.5 lb/gal (less water & exempt compounds)

For Low-end graphics: Use of inks with a VOC content not exceeding 0.3 lb/gal (less water & exempt compounds); and use of coating with VOC content not exceeding 2.5 lb/gal (less water & exempt compounds)

B. Offsets

1. Offset Applicability

Pursuant to District Rule 2201, Section 4.5, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	1,008	744	828	9,754	35,999
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for VOC and the SSPE2 is greater than the offset thresholds. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 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 = HAE

The proposed project will not result in increase in cargo carrier emissions. Therefore,

Offsets Required (lb/year) = $(\Sigma[PE2 - BE]) \times DOR$

PE2 (total) = 13,012 lb/year
BE = 0 lb/year
DOR = 1.5 per section 4.8.1 of Rule 2201

Offsets Required (lb/year) = ([13,012 – 0]) x 1.5
= 19,518 lb-VOC/year

Since the proposed operation is an year-around operation, the quarterly offset amount would be 4,879.5 pounds (19,518 ÷ 4).

The applicant has proposed to use ERC certificate S-5056-1 to offset the increases in VOC emissions associated with this project. The available credits in these certificate are as follows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #S-5056-1	4,880	4,880	4,880	4,879

As seen above, the facility has sufficient credits to fully offset the quarterly PM_{10} emissions increases associated with this project.

Proposed Rule 2201 (offset) Conditions:

- Prior to operating equipment under Authority to Construct permits N-8044-9-0, N-8044-10-0 and N-8044-11-0, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 4,880 lb, 2nd quarter – 4,880 lb, 3rd quarter – 4,879 lb, and fourth quarter – 4,879 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number S-5056-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

3. ERC Withdrawal Calculations

The applicant must identify the ERC Certificate(s) to be used to offset the increase of VOC emissions for the project. As indicated in previous section, the applicant is proposing to use ERC certificate #S-5056-1 to mitigate the increases of VOC emissions associated with this project. See **Appendix I** for detailed ERC Withdrawal Calculations.

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed,
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in Sections VII.C.8, this project is a Federal Major Modification. Therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements.

As seen in Section VII.C.2 above, none of the emissions units in this project has daily emissions greater than 100 lb/day for any pollutant, therefore, public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

Pursuant to District Rule 2201, Section 4.5.3, offset requirements shall be triggered on a pollutant-by-pollutant basis, unless exempted pursuant to Section 4.6, offsets shall be required if the post-project Stationary Source Potential to Emit (SSPE2) equals or exceeds specific threshold levels.

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	1,008	1,008	20,000 lb/year	No
SO_X	744	744	54,750 lb/year	No
PM_{10}	828	828	29,200 lb/year	No
CO	9,754	9,754	200,000 lb/year	No
VOC	22,987	35,999	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes. Note that VOC emissions were already above the offset threshold level.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	**SSPE2 (lb/year)**	**SSPE1 (lb/year)**	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
NO_x	1,008	1,008	0	20,000 lb/year	No
SO_x	744	744	0	20,000 lb/year	No
PM_{10}	828	828	02	20,000 lb/year	No
CO	9,754	9,754	0	20,000 lb/year	No
VOC	35,999	22,987	13,012	20,000 lb/year	No

As demonstrated above, the SSIPE for each pollutant is less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

Since this facility does not have a Title V operating permit, this change is not a Title V significant Modification, and therefore public noticing is not required.

2. Public Notice Action

As discussed above, the proposed project is a Federal Major Modification. Consequently, public noticing is required for this project. Public notice documents will be submitted to the California Air Resources Board (CARB), US EPA, and a public notice will be published

in a local newspaper of general circulation prior to the issuance of the ATC permits under this project.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

N-8044-9-0:

- VOC emissions from this permit unit shall not exceed any of the following limits: 32.0 lb/day and 7,976 lb/year (12-month rolling total). [District Rule 2201]

- The combined total VOC emissions from permits units N-8044-9, N-8044-10 and N-8044-11 shall not exceed 13,012 lb/year (12-month rolling total). [District Rule 2201]

N-8044-10-0:

- VOC emissions from this permit unit shall not exceed any of the following limits: 19.5 lb/day and 4,874 lb/year (12-month rolling total). [District Rule 2201]

- The combined total VOC emissions from permits units N-8044-9, N-8044-10 and N-8044-11 shall not exceed 13,012 lb/year (12-month rolling total). [District Rule 2201]

N-8044-11-0:

- VOC emissions from this permit unit shall not exceed any of the following limits: 10.2 lb/day and 2,544 lb/year (12-month rolling total). [District Rule 2201]

- The combined total VOC emissions from permits units N-8044-9, N-8044-10 and N-8044-11 shall not exceed 13,012 lb/year (12-month rolling total). [District Rule 2201]

The following requirements BACT will also be included in permits N-8044-9-0, '-10-0 and '-11-0:

- VOC content of the materials shall not exceed the following: (a) For Low-End Graphics printing, use inks with a VOC content of less than or equal to 0.3 lb/gal (less water and exempt compounds); (b). For High-End Graphics printing, use inks with a VOC content of less than or equal to 0.88 lb/gal (less water and exempt compounds); (c) For High-End Graphics printing with metallic inks, use inks with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (d) For coatings, use coatings with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (e) Use of adhesive with no VOC content; and (f) Use of fountain solutions (if applicable) with up to 8.0% VOC by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2201, 4607 and 4653]

- High-End Graphics print jobs are print jobs that require any of the following: a glossy finish, multiple colors, highly refined graphic image, or very high letter-quality printing. [District Rule 2201]

- Low-End Graphics print jobs are print jobs that are not High-End Graphic print jobs as defined in this permit. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

The potential emissions are determined using material VOC content in the proposed inks and coatings and their maximum usage rates. This calculation methodology assume all VOC in the proposed inks and coatings will release into the atmosphere. Therefore, source testing is not required.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed in the permit:

- Permittee shall maintain records of the daily VOC emissions from this permit unit. Daily VOC emissions may be calculated from the monthly materials (inks, coatings, solvents, fountain solutions, wash primers, adhesives, etc.) usage records and the number of days per calendar month this unit was operated. [District Rule 2201]

- On a monthly basis, the permittee shall calculate and record the monthly VOC emissions in pounds from this permit unit. [District Rule 2201]

- On a monthly basis, the permittee shall calculate and record the annual VOC emissions in pounds from this permit by summing the VOC emissions from the previous 12 months. [District Rule 2201]

- On a monthly basis, the permittee shall calculate and record the total annual VOC emissions in pounds from permits N-8044-9, N-8044-10 and N-8044-11 by summing the VOC emissions from the previous 12 months. [District Rule 2201]

- All records shall be maintained for a period of at least five years and shall be made available to the District, ARB and EPA upon request.[District Rules 2201 and 4607]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

Section 4.14 of District Rule 2201 requires that an AAQA be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. No AAQA standards are established for VOC emissions. Therefore, AAQA is not required for this project.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Federal 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. As discussed in Section VIII above, this project does constitute a Federal Major Modification, therefore this requirement is applicable. PSC's compliance certification is included in **Appendix H**.

H. Alternate Siting Analysis

The current project occurs at an existing facility, which has all necessary equipment such as a boiler, corrugator, starch silo, etc. to make corrugated boards. The proposed printing presses will be used to print and coat these corrugated boards. Since all operations from the raw material to finished product will be available at the existing site, it is expected that the existing site will result in the least possible impact on the environment from this 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 impact on the environment.

Compliance is expected with this rule.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9 above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

As discussed above, this facility is a major source. Pursuant to Rule 2520 and as required by permit condition, the facility will have up to 12 months from the date of ATC issuance to either submit a Title V Application or comply with District Rule 2530 *Federally Enforceable Potential to Emit.*

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart QQ – Standards of Performance for the Graphic Arts Industry: Publication Rotogravure printing
This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

Pursuant to §60.430(c), this subpart applies to each rotogravure printing press that commences construction, modification, or reconstruction after October 28, 1980.

The proposed units are flexographic printing presses, not a rotogravure presses; and therefore, this subpart does not apply and no further discussion is required.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

40 CFR Part 63, Subpart KK – National Emission Standards for the Printing and Publishing Industry
This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63.

Pursuant to §63.820(a)(1), this subpart applies to each new and existing facility that is a "major source" of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, at which publication rotogravure, product and packing rotogravure, or wide-web flexographic printing presses are operated.

40 CFR 63.2 defines "major source" as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

Per worksheet in **Appendix G**, HAP Emission Summary, this facility is not a "major source" of HAP emissions. Therefore, the proposed unit is not subject to the requirements of this subpart.

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). Therefore, the following condition will be included in the permit:

- 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]

Compliance is expected with this rule.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. The following condition will be included in the permit:

- 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* 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.

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Appendix E**), the total facility prioritization score including this project was less than or equal to one. Therefore, no further analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Compliance is expected with this rule.

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

The purpose of this rule is to limit VOC emissions from graphic arts printing operations, digital printing operations, and paper, film, foil or fabric costing operations. The rule also specifies the administrative requirements for recording and measuring the emissions, and a compliance schedule.

Section 5.1, requires that an operator of any graphic arts printing operations shall not use graphic arts materials in excess of the VOC content limits, as applied in Table 1 and Table 2 of this section.

Table 1. VOC Content Limits for Inks, Coating, & Adhesives	
Material	Grams of VOC per liter (lb/gal), less water & less exempt compounds
Flexographic Inks	225 (1.88)
Coatings	300 (2.5)
Adhesives	150 (1.25)

Table 2. VOC Content Limits for Fountain Solution	
Material	Percent VOC by volume
All Other Presses	8.0

Section 5.2, required that an operator of flexographic printing operation shall not use a specialty ink in excess of the VOC content limit in Table 3, and shall not use more than 2 gallons of specialty inks in a calendar day and 120 gallons or specialty inks in a calendar year.

Table 3. VOC Content Limits for Flexographic Specialty Inks	
Material	Grams of VOC per liter (lb/gal), less water & less exempt compounds
Metallic Inks	460 (3.8)
Mate Finish Ink	535 (4.5)
Metallic Ink and Matte Finish Ink on Flexible Packing Printing	383 (3.2)

Per SDSs, VOC contents in the proposed inks and coatings range ranges of 0.18 lb/gal to 0.34 lb/gal. No fountain solution are proposed for the proposed operation.

Per technical data sheet, VOC content of the proposed adhesive, Aquence CG 9060 GUV, VOC content is 0%.

As discussed above, the proposed inks, coatings, and adhesive are compliant materials. The following condition(s) will be included in the permits:

- VOC content of the materials shall not exceed the following: (a) For Low-End Graphics printing, use inks with a VOC content of less than or equal to 0.3 lb/gal (less water and exempt compounds); (b). For High-End Graphics printing, use inks with a VOC content of less than or equal to 0.88 lb/gal (less water and exempt compounds); (c) For High-End Graphics printing with metallic inks, use inks with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (d) For coatings, use coatings with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (e) Use of adhesive with no VOC content; and (f) Use of fountain solutions (if applicable) with up to 8.0% VOC by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2201, 4607 and 4653]

Section 5.7 states no operator shall apply coatings unless coatings are applied with equipment operated according to manufacturer's specifications, and only by the use of one of the following types of coating application equipment:

- Flow coater
- Roll coater
- Dip coater
- Foam coater
- Die coater
- Hand application methods, or
- High-Volume, low-pressure (HVLP) spray for air dried coatings
- Other coating application methods which are demonstrated to the APCO to be capable of achieving at least 65% transfer efficiency

The coatings will be applied by roll coating technique. The following condition(s) will be included in the permits:

- Only flow coater, roll coater, dip coater, foam coater, die coater, hand application methods shall be used to apply coatings. HVLP spray equipment may be used for air dried coatings only. Application equipment shall be operated in accordance with the manufacturer's specifications. [District Rule 4607]

Section 5.8, requires that an operator shall not use organic solvents for cleaning operations that exceed the VOC content limits specified in Table 7 of this Section.

Table 7. VOC Content Limits for Solvent Cleaning

Type of Solvent Cleaning Operation	VOC content, less water & exempts compounds (lb/gal)
Surface Preparation for coating, ink, or adhesive application	0.21
Cleaning of coating or adhesive application equipment	0.21
Cleaning of ink application equipment	0.83
– Flexographic printing	0.21
– Specialty Flexographic Printing	0.83

The applicant is not proposing to use any surface preparation and equipment cleaning solvent. The following condition(s) will be included in the permits:

- Permittee shall utilize organic solvents for cleaning operations that complied with the VOC content limit specified in Table 7 of District Rule 4607. [District Rule 4607]

- For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, cleaning activities shall be by one of the following methods: wipe cleaning; application of solvent using nonpropellant-induced, hand-held spray bottles; non-atomized solvent flow method, or solvent flushing method. [District Rule 4607]

- For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, solvent shall not be atomized into the open air unless it is vented to a VOC control device. This provision shall not apply to operations where roller or blanket wash is applied automatically and the cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with nonpropellant-induced, hand-held spray bottles. [District Rule 4607]

- For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, the permittee shall not use VOC-containing material to clean spray equipment used for the application of coatings, adhesives, or ink, unless an enclosed system or equipment that is proven to be equally effective at controlling emissions is used for cleaning. If an enclosed system is used, it must totally enclose component part(s) being cleaned during washing, rinsing, draining procedures and it must be used according to manufacturer's recommendations and must be closed when not in use. [District Rule 4607]

Section 5.9 requires that an operator shall store or dispose of fresh or spent solvents, waste solvent cleaning materials, coatings, adhesives, catalysts, and ink in closed, non-absorbent and non-leaking containers. The container shall remain closed at all times except when depositing or removing the contents of the containers or when the container is empty. The following condition(s) will be included in the permits:

- Permittee shall store and dispose of fresh or spent solvents and waste solvent cleaning materials such as cloth, paper, etc. in closed, non-absorbent and non-leaking containers. The containers shall remain closed at all times except when depositing or removing material or when it is empty. [District Rule 4607]

Section 5.10 requires that an operator shall properly use and properly operates all graphic arts printing technologies as directed and/or specified by the manufacturer of the printer or graphic arts materials. The following condition(s) will be included in the permits:

- All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. The permittee shall properly use and properly operate all graphic arts printing technologies as directed and/or specified by the manufacturer of the printer or graphic arts material. [District Rules 2201 and 4607]

Section 6.1 requires the operator subject to the requirement of this rule to keep all applicable records on-site for a minimum of five years, and make records available to the APCO, ARB, and EPA upon request.

Section 6.1.1 requires an operator to maintain a current file documenting coatings, inks, adhesives, fountain solutions, wash primers, and solvents in use and in storage. The file shall include a safety data sheet (SDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, specific mixing instructions, and density.

Section 6.1.2 specifies recordkeeping requirements for facility utilize only compliant materials. Sections 6.1.2.1, 6.1.2.2, and 6.1.2.3 requires the monthly records of the following: 1) the type and amount of all inks, 2) the type and amount of each coating, adhesive, wash primer, and solvent (including cleaning solvent) used; and 3) the type, amount, and percent VOC by volume of fountain solution used.

Section 6.1.4 specifies recordkeeping requirements for the flexographic specialty inks. If flexographic specialty inks are used pursuant to Section 5.2, the permittee shall record, on a daily basis, the type and amount of each specialty ink used.

The following condition(s) will be included in the permits:

- Permittee shall maintain a current file of coatings, inks, adhesives, fountain solutions, wash primers, and solvents in use and in storage. The file shall include safety data sheet (SDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, density, and composite vapor pressure. [District Rule 4607]

- Monthly records shall be maintained and contain the following information: (a) The name, type, quantity and VOC content (in lb/gal, less water and exempt compounds) of all inks, fountain solutions, wash primers, coatings, adhesives, solvents, and cleaning materials used or stored at the facility; (b) The combined total amount of VOC's emitted from the use of all VOC containing material (in pounds); (c) The dates of operation of this permit unit. A daily record of the type and amount of flexographic specialty inks used shall be maintained. [District Rules 2201 and 4607]

- All records shall be maintained for a period of at least five years and shall be made available to the District, ARB and EPA upon request. [District Rules 2201 and 4607]

Compliance is expected with this rule.

Rule 4653 Adhesives and Sealants

The purpose of this rule is to reduce emission of volatile organic compounds (VOCs) from the application of adhesive products, sealant products, and associated solvent cleaning operations.

Section 4.1.2 states the use of adhesive products or sealant products containing less than 20 grams VOC per liter is exempt from the requirements of this rule.

Section 4.1.8 states adhesive products which are subject to the VOC limit requirements of Rule 4607 (Graphic Arts), are exempt from the requirements of this rule.

The applicant has proposed to use only one adhesive, Aquence CG 9060 GUV, which contains zero VOC, for the gluer in the graphic art printing operation. Therefore, the proposed gluing operation is exempt from the requirements of this rule and no further discussion will be required. The following condition will be included in the permits:

- VOC content of the materials shall not exceed the following: (a) For Low-End Graphics printing, use inks with a VOC content of less than or equal to 0.3 lb/gal (less water and exempt compounds); (b). For High-End Graphics printing, use inks with a VOC content of less than or equal to 0.88 lb/gal (less water and exempt compounds); (c) For High-End Graphics printing with metallic inks, use inks with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (d) For coatings, use coatings with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (e) Use of adhesive with no VOC content; and (f) Use of fountain solutions (if applicable) with up to 8.0% VOC by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2201, 4607 and 4653]

Compliance is expected with this rule.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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 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.

The District's engineering evaluation (this document) demonstrates that the project would 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 proposed project involves moving three printing presses already permitted by the District from an existing building to another existing building in Modesto for Pacific Southwest Container's in Stanislaus County. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project will occur at an existing facility and the project involves negligible or no expansion of the existing use. Furthermore, the District determined that the project will not have a significant effect on the environment. The District finds that the project is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline §15301 (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)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's

potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC N-8044-9-0, '-10-0 and '-11-0 subject to the permit conditions on the attached draft ATC in **Appendix A**.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
N-8044-9-0	3020-01 G	942.4 hp, electric motors	$936
N-8044-10-0	3020-01 D	100 hp, electric motors	$362
N-8044-11-0	3020-10 D	100 hp, electric motors	$362

Appendixes

A: Draft ATC Permits
B: Potential to Emit Calculations
C: BACT Guidelines
D: BACT Analysis
E: HRA Summary
F: Quarterly Net Emissions Change
G: HAP Emission Calculations
H: Compliance Certification
I: ERC Withdrawal Calculations

Appendix A
Draft ATC Permits

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-8044-9-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: PACIFIC SOUTHWEST CONTAINER, LLC
MAILING ADDRESS: 4530 LECKRON RD
MODESTO, CA 95357

LOCATION: 671 MARIPOSA ROAD
MODESTO, CA

EQUIPMENT DESCRIPTION:
GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 4-COLOR BOBST/MARTIN MODEL MIDLINE 924 (A-0498-200) NON-HEATSET FLEXOGRAPHIC PRINTER WITH FOLDER, GLUER, AND ROTARY DIE-CUTTER (S-924)

CONDITIONS

1. Authority to Construct permits N-8044-9-0, N-8044-10-0 and N-8044-11-0 shall be implemented concurrently. [District Rule 2201]
2. Prior to operating equipment under Authority to Construct permits N-8044-9-0, N-8044-10-0 and N-8044-11-0, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 4,880 lb, 2nd quarter - 4,880 lb, 3rd quarter - 4,879 lb, and fourth quarter - 4,879 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]
3. ERC Certificate Number S-5056-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct [District Rule 2201]
4. Permittee shall submit an application to comply with District Rule 2520 - Federal Mandated Operating Permits within twelve months of commencing operation of this permit unit, or comply with District Rule 2530 - Federally Enforceable Potential to Emit. [District Rule 2520]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. {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]

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.

Samir Sheikh, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-8044-9-0 Apr 22 2019 8:53AM -- KAHLONJ Joint Inspection NOT Required

7. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. The permittee shall properly use and properly operate all graphic arts printing technologies as directed and/or specified by the manufacturer of the printer or graphic arts material. [District Rules 2201 and 4607]
8. VOC emissions from this permit unit shall not exceed any of the following limits: 32.0 lb/day and 7,976 lb/year (12-month rolling total). [District Rule 2201]
9. The combined total VOC emissions from permits units N-8044-9, N-8044-10 and N-8044-11 shall not exceed 13,012 lb/year (12-month rolling total). [District Rule 2201]
10. VOC content of the materials shall not exceed the following: (a) For Low-End Graphics printing, use inks with a VOC content of less than or equal to 0.3 lb/gal (less water and exempt compounds); (b). For High-End Graphics printing, use inks with a VOC content of less than or equal to 0.88 lb/gal (less water and exempt compounds); (c) For High-End Graphics printing with metallic inks, use inks with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (d) For coatings, use coatings with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (e) Use of adhesive with no VOC content; and (f) Use of fountain solutions (if applicable) with up to 8.0% VOC by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2201, 4607 and 4653]
11. High-End Graphics print jobs are print jobs that require any of the following: a glossy finish, multiple colors, highly refined graphic image, or very high letter-quality printing. [District Rule 2201]
12. Low-End Graphics print jobs are print jobs that are not High-End Graphic print jobs as defined in this permit. [District Rule 2201]
13. Only flow coater, roll coater, dip coater, foam coater, die coater, hand application methods shall be used to apply coatings. HVLP spray equipment may be used for air dried coatings only. Application equipment shall be operated in accordance with the manufacturer's specifications. [District Rule 4607]
14. Permittee shall utilize organic solvents for cleaning operations that complied with the VOC content limit specified in Table 7 of District Rule 4607. [District Rule 4607]
15. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, cleaning activities shall be by one of the following methods: wipe cleaning; application of solvent using nonpropellant-induced, hand-held spray bottles; non-atomized solvent flow method, or solvent flushing method. [District Rule 4607]
16. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, solvent shall not be atomized into the open air unless it is vented to a VOC control device. This provision shall not apply to operations where roller or blanket wash is applied automatically and the cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with nonpropellant-induced, hand-held spray bottles. [District Rule 4607]
17. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, the permittee shall not use VOC-containing material to clean spray equipment used for the application of coatings, adhesives, or ink, unless an enclosed system or equipment that is proven to be equally effective at controlling emissions is used for cleaning. If an enclosed system is used, it must totally enclose component part(s) being cleaned during washing, rinsing, draining procedures and it must be used according to manufacturer's recommendations and must be closed when not in use. [District Rule 4607]
18. Permittee shall store or dispose of fresh or spent solvents, waste solvent cleaning materials, coatings, adhesives, catalysts, thinners, and inks in closed, non-absorbent, non-leaking containers. The containers shall remain closed at all times except when depositing or removing the contents of the containers or when the container is empty. [District Rule 4607]
19. Permittee shall maintain a current file of coatings, inks, adhesives, fountain solutions, wash primers, and solvents in use and in storage. The file shall include safety data sheet (SDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, density, and composite vapor pressure. [District Rule 4607]

CONDITIONS CONTINUE ON NEXT PAGE

20. Monthly records shall be maintained and contain the following information: (a) The name, type, quantity and VOC content (in lb/gal, less water and exempt compounds) of all inks, fountain solutions, wash primers, coatings, adhesives, solvents, and cleaning materials used or stored at the facility; (b) The combined total amount of VOC's emitted from the use of all VOC containing material (in pounds); (c) The dates of operation of this permit unit. A daily record of the type and amount of flexographic specialty inks used shall be maintained. [District Rules 2201 and 4607]
21. Permittee shall maintain records of the daily VOC emissions from this permit unit. Daily VOC emissions may be calculated from the monthly materials (inks, coatings, solvents, fountain solutions, wash primers, adhesives, etc.) usage records and the number of days per calendar month this unit was operated. [District Rule 2201]
22. On a monthly basis, the permittee shall calculate and record the monthly VOC emissions in pounds from this permit unit. [District Rule 2201]
23. On a monthly basis, the permittee shall calculate and record the annual VOC emissions in pounds from this permit by summing the VOC emissions from the previous 12 months. [District Rule 2201]
24. On a monthly basis, the permittee shall calculate and record the total annual VOC emissions in pounds from permits N-8044-9, N-8044-10 and N-8044-11 by summing the VOC emissions from the previous 12 months. [District Rule 2201]
25. All records shall be maintained for a period of at least five years and shall be made available to the District, ARB and EPA upon request. [District Rules 2201 and 4607]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-8044-10-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: PACIFIC SOUTHWEST CONTAINER, LLC
MAILING ADDRESS: 4530 LECKRON RD
MODESTO, CA 95357

LOCATION: 671 MARIPOSA ROAD
MODESTO, CA

EQUIPMENT DESCRIPTION:
GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 5-COLOR MARTIN MODEL 1628 FLEXOGRAPHIC PRINTER WITH FOLDER, GLUER, AND ROTARY DIE-CUTTER

CONDITIONS

1. Authority to Construct permits N-8044-9-0, N-8044-10-0 and N-8044-11-0 shall be implemented concurrently. [District Rule 2201]
2. Prior to operating equipment under Authority to Construct permits N-8044-9-0, N-8044-10-0 and N-8044-11-0, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 4,880 lb, 2nd quarter - 4,880 lb, 3rd quarter - 4,879 lb, and fourth quarter - 4,879 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]
3. ERC Certificate Number S-5056-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct [District Rule 2201]
4. Permittee shall submit an application to comply with District Rule 2520 - Federal Mandated Operating Permits within twelve months of commencing operation of this permit unit, or comply with District Rule 2530 - Federally Enforceable Potential to Emit. [District Rule 2520]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. {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]

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.

Samir Sheikh, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services
N-8044-10-0 Apr 22 2019 8:54AM -- KAHLONJ Joint Inspection NOT Required

7. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. The permittee shall properly use and properly operate all graphic arts printing technologies as directed and/or specified by the manufacturer of the printer or graphic arts material. [District Rules 2201 and 4607]
8. VOC emissions from this permit unit shall not exceed any of the following limits: 19.5 lb/day and 4,874 lb/year (12-month rolling total). [District Rule 2201]
9. The combined total VOC emissions from permits units N-8044-9, N-8044-10 and N-8044-11 shall not exceed 13,012 lb/year (12-month rolling total). [District Rule 2201]
10. VOC content of the materials shall not exceed the following: (a) For Low-End Graphics printing, use inks with a VOC content of less than or equal to 0.3 lb/gal (less water and exempt compounds); (b). For High-End Graphics printing, use inks with a VOC content of less than or equal to 0.88 lb/gal (less water and exempt compounds); (c) For High-End Graphics printing with metallic inks, use inks with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (d) For coatings, use coatings with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (e) Use of adhesive with no VOC content; and (f) Use of fountain solutions (if applicable) with up to 8.0% VOC by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2201, 4607 and 4653]
11. High-End Graphics print jobs are print jobs that require any of the following: a glossy finish, multiple colors, highly refined graphic image, or very high letter-quality printing. [District Rule 2201]
12. Low-End Graphics print jobs are print jobs that are not High-End Graphic print jobs as defined in this permit. [District Rule 2201]
13. Only flow coater, roll coater, dip coater, foam coater, die coater, hand application methods shall be used to apply coatings. HVLP spray equipment may be used for air dried coatings only. Application equipment shall be operated in accordance with the manufacturer's specifications. [District Rule 4607]
14. Permittee shall utilize organic solvents for cleaning operations that complied with the VOC content limit specified in Table 7 of District Rule 4607. [District Rule 4607]
15. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, cleaning activities shall be by one of the following methods: wipe cleaning; application of solvent using nonpropellant-induced, hand-held spray bottles; non-atomized solvent flow method, or solvent flushing method. [District Rule 4607]
16. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, solvent shall not be atomized into the open air unless it is vented to a VOC control device. This provision shall not apply to operations where roller or blanket wash is applied automatically and the cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with nonpropellant-induced, hand-held spray bottles. [District Rule 4607]
17. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, the permittee shall not use VOC-containing material to clean spray equipment used for the application of coatings, adhesives, or ink, unless an enclosed system or equipment that is proven to be equally effective at controlling emissions is used for cleaning. If an enclosed system is used, it must totally enclose component part(s) being cleaned during washing, rinsing, draining procedures and it must be used according to manufacturer's recommendations and must be closed when not in use. [District Rule 4607]
18. Permittee shall store or dispose of fresh or spent solvents, waste solvent cleaning materials, coatings, adhesives, catalysts, thinners, and inks in closed, non-absorbent, non-leaking containers. The containers shall remain closed at all times except when depositing or removing the contents of the containers or when the container is empty. [District Rule 4607]
19. Permittee shall maintain a current file of coatings, inks, adhesives, fountain solutions, wash primers, and solvents in use and in storage. The file shall include safety data sheet (SDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instructions, density, and composite vapor pressure. [District Rule 4607]

CONDITIONS CONTINUE ON NEXT PAGE

20. Monthly records shall be maintained and contain the following information: (a) The name, type, quantity and VOC content (in lb/gal, less water and exempt compounds) of all inks, fountain solutions, wash primers, coatings, adhesives, solvents, and cleaning materials used or stored at the facility; (b) The combined total amount of VOC's emitted from the use of all VOC containing material (in pounds); (c) The dates of operation of this permit unit. A daily record of the type and amount of flexographic specialty inks used shall be maintained. [District Rules 2201 and 4607]
21. Permittee shall maintain records of the daily VOC emissions from this permit unit. Daily VOC emissions may be calculated from the monthly materials (inks, coatings, solvents, fountain solutions, wash primers, adhesives, etc.) usage records and the number of days per calendar month this unit was operated. [District Rule 2201]
22. On a monthly basis, the permittee shall calculate and record the monthly VOC emissions in pounds from this permit unit. [District Rule 2201]
23. On a monthly basis, the permittee shall calculate and record the annual VOC emissions in pounds from this permit by summing the VOC emissions from the previous 12 months. [District Rule 2201]
24. On a monthly basis, the permittee shall calculate and record the total annual VOC emissions in pounds from permits N-8044-9, N-8044-10 and N-8044-11 by summing the VOC emissions from the previous 12 months. [District Rule 2201]
25. All records shall be maintained for a period of at least five years and shall be made available to the District, ARB and EPA upon request. [District Rules 2201 and 4607]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-8044-11-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: PACIFIC SOUTHWEST CONTAINER, LLC
MAILING ADDRESS: 4530 LECKRON RD
MODESTO, CA 95357

LOCATION: 671 MARIPOSA ROAD
MODESTO, CA

EQUIPMENT DESCRIPTION:
GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 1-COLOR BOBST MARTIN MODEL 1628 FFG FLEXOGRAPHIC PRINTER (S/N 6506) WITH A PRINTER WITH FOLDER, GLUER, AND ROTARY DIE-CUTTER

CONDITIONS

1. Authority to Construct permits N-8044-9-0, N-8044-10-0 and N-8044-11-0 shall be implemented concurrently. [District Rule 2201]
2. Prior to operating equipment under Authority to Construct permits N-8044-9-0, N-8044-10-0 and N-8044-11-0, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 4,880 lb, 2nd quarter - 4,880 lb, 3rd quarter - 4,879 lb, and fourth quarter - 4,879 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]
3. ERC Certificate Number S-5056-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct [District Rule 2201]
4. Permittee shall submit an application to comply with District Rule 2520 - Federal Mandated Operating Permits within twelve months of commencing operation of this permit unit, or comply with District Rule 2530 - Federally Enforceable Potential to Emit. [District Rule 2520]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. {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]

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.

Samir Sheikh, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services
N-8044-11-0 Apr 22 2019 8:54AM – KAHLONJ Joint Inspection NOT Required

7. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. The permittee shall properly use and properly operate all graphic arts printing technologies as directed and/or specified by the manufacturer of the printer or graphic arts material. [District Rules 2201 and 4607]
8. VOC emissions from this permit unit shall not exceed any of the following limits: 10.2 lb/day and 2,544 lb/year (12-month rolling total). [District Rule 2201]
9. The combined total VOC emissions from permits units N-8044-9, N-8044-10 and N-8044-11 shall not exceed 13,012 lb/year (12-month rolling total). [District Rule 2201]
10. VOC content of the materials shall not exceed the following: (a) For Low-End Graphics printing, use inks with a VOC content of less than or equal to 0.3 lb/gal (less water and exempt compounds); (b). For High-End Graphics printing, use inks with a VOC content of less than or equal to 0.88 lb/gal (less water and exempt compounds); (c) For High-End Graphics printing with metallic inks, use inks with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (d) For coatings, use coatings with a VOC content of less than or equal to 2.5 lb/gal (less water and exempt compounds); (e) Use of adhesive with no VOC content; and (f) Use of fountain solutions (if applicable) with up to 8.0% VOC by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2201, 4607 and 4653]
11. High-End Graphics print jobs are print jobs that require any of the following: a glossy finish, multiple colors, highly refined graphic image, or very high letter-quality printing. [District Rule 2201]
12. Low-End Graphics print jobs are print jobs that are not High-End Graphic print jobs as defined in this permit. [District Rule 2201]
13. Only flow coater, roll coater, dip coater, foam coater, die coater, hand application methods shall be used to apply coatings. HVLP spray equipment may be used for air dried coatings only. Application equipment shall be operated in accordance with the manufacturer's specifications. [District Rule 4607]
14. Permittee shall utilize organic solvents for cleaning operations that complied with the VOC content limit specified in Table 7 of District Rule 4607. [District Rule 4607]
15. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, cleaning activities shall be by one of the following methods: wipe cleaning; application of solvent using nonpropellant-induced, hand-held spray bottles; non-atomized solvent flow method, or solvent flushing method. [District Rule 4607]
16. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, solvent shall not be atomized into the open air unless it is vented to a VOC control device. This provision shall not apply to operations where roller or blanket wash is applied automatically and the cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with nonpropellant-induced, hand-held spray bottles. [District Rule 4607]
17. For a permittee using any solvent containing more than 25 g/L of VOC for organic solvent cleaning, the permittee shall not use VOC-containing material to clean spray equipment used for the application of coatings, adhesives, or ink, unless an enclosed system or equipment that is proven to be equally effective at controlling emissions is used for cleaning. If an enclosed system is used, it must totally enclose component part(s) being cleaned during washing, rinsing, draining procedures and it must be used according to manufacturer's recommendations and must be closed when not in use. [District Rule 4607]
18. Permittee shall store or dispose of fresh or spent solvents, waste solvent cleaning materials, coatings, adhesives, catalysts, thinners, and inks in closed, non-absorbent, non-leaking containers. The containers shall remain closed at all times except when depositing or removing the contents of the containers or when the container is empty. [District Rule 4607]
19. Permittee shall maintain a current file of coatings, inks, adhesives, fountain solutions, wash primers, and solvents in use and in storage. The file shall include safety data sheet (SDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instructions, density, and composite vapor pressure. [District Rule 4607]

CONDITIONS CONTINUE ON NEXT PAGE

20. Monthly records shall be maintained and contain the following information: (a) The name, type, quantity and VOC content (in lb/gal, less water and exempt compounds) of all inks, fountain solutions, wash primers, coatings, adhesives, solvents, and cleaning materials used or stored at the facility; (b) The combined total amount of VOC's emitted from the use of all VOC containing material (in pounds); (c) The dates of operation of this permit unit. A daily record of the type and amount of flexographic specialty inks used shall be maintained. [District Rules 2201 and 4607]
21. Permittee shall maintain records of the daily VOC emissions from this permit unit. Daily VOC emissions may be calculated from the monthly materials (inks, coatings, solvents, fountain solutions, wash primers, adhesives, etc.) usage records and the number of days per calendar month this unit was operated. [District Rule 2201]
22. On a monthly basis, the permittee shall calculate and record the monthly VOC emissions in pounds from this permit unit. [District Rule 2201]
23. On a monthly basis, the permittee shall calculate and record the annual VOC emissions in pounds from this permit by summing the VOC emissions from the previous 12 months. [District Rule 2201]
24. On a monthly basis, the permittee shall calculate and record the total annual VOC emissions in pounds from permits N-8044-9, N-8044-10 and N-8044-11 by summing the VOC emissions from the previous 12 months. [District Rule 2201]
25. All records shall be maintained for a period of at least five years and shall be made available to the District, ARB and EPA upon request. [District Rules 2201 and 4607]

Appendix B
Potential to Emit Calculations

Potential to Emit
N-8044-9-0_Bobst4Color

Coating	[1]Coating VOC lb/gal	[1]VOC % by wt. lb-VOC/lb-product	[1]Ammonium hydroxide Content % by wt.	[1]Density lb/gal	[2]Material VOC lb-VOC/gal	[6]Max Use rate gal/day	[3]Max Use rate gal/yr	[4]VOC			[5]NH_3		
								PE lb/hr	PE lb/day	PE lb/yr	PE lb/hr	PE lb/day	PE lb/yr
Tristar Display Dense Black 1016229	0.18	0.86	2.747	8.99	0.077	101	25,249	0.355	7.8	1,944	0.55	12.1	3,030
PSC F50536 GCMI 39 KRAFT Blue 1390440	0.2	0.91	0	9.0906	0.083	101	25,249	0.382	8.4	2,096	0	0	0
PSC F40994 GCMI 75 Red 1485674	0.16	0.74	2	9.174	0.068	101	25,249	0.314	6.9	1,717	0.409	9	2,252
INXSPERSE 23 GREEN 7 1011639	0	0	0	10.2582	0	101	25,249	0	0	0	0	0	0
PSC NpH NON SKID OVERPRINT COATING-NW2 1565849	0.34	1.5	0	8.8404	0.133	44.9	11,222	0.273	6	1,493	0	0	0
Tristar Extender Varnish 1398204	0.15	0.86	0	8.34	0.072	40.3	10,080	0.132	2.9	726	0	0	0
Aquence CG 9060 GUV Adhesive 2280062	0	0	0	9.5076	0	25	6,239	0	0	0	0	0	0
							Total:	**1.456**	**32**	**7,976**	**0.959**	**21.1**	**5,282**

Notes:

1 - Information taken from safety data sheets

2 - Material VOC = VOC % by wt. x Density (lb/gal)/100

3 - Max usage proposed by the applicant

4 - PE (lb/hr) = PE (lb/day) ÷ 22 (hr/day) of operation;
PE (lb/day, lb/yr) = Material VOC (lb-VOC/gal) x Max Use rate (gal/day, gal/yr)

5 - PE (lb/hr) = PE (lb/day) ÷ 22 (hr/day) of operation;
PE (lb/day, lb/yr) = Max Use rate (gal-ink/day, gal-ink/yr) x Ammonium hydroxide content (lb-NH_4OH/100 lb-ink) x Density (lb-ink/gal-ink) x 17.03 (lb-NH_3/mol of NH_3) x 1 (mol of NH_3/mol NH_4OH) x (mol of NH_4OH/35.04 lb-NH_4OH)

6 - Max usage rate (gal/yr) ÷ 250 (days/yr) of operation

Potential to Emit
N-8044-10-0_Bobst5Color

Coating	[1]Coating VOC lb/gal	[1]VOC % by wt. lb-VOC/lb-product	[1]Ammonium hydroxide Content % by wt.	[1]Density lb/gal	[2]Material VOC lb-VOC/gal	[6]Max Use rate gal/day	[3]Max Use rate gal/yr	[4]VOC			[5]NH_3		
								PE lb/hr	PE lb/day	PE lb/yr	PE lb/hr	PE lb/day	PE lb/yr
Tristar Display Dense Black 1016229	0.18	0.86	2.747	8.99	0.077	61.7	15,429	0.218	4.8	1,188	0.336	7.4	1,852
PSC F50536 GCMI 39 KRAFT Blue 1390440	0.2	0.91	0	9.0906	0.083	61.7	15,429	0.232	5.1	1,281	0	0	0
PSC F40994 GCMI 75 Red 1485674	0.16	0.74	2	9.174	0.068	61.7	15,429	0.191	4.2	1,049	0.25	5.5	1,376
INXSPERSE 23 GREEN 7 1011639	0	0	0	10.2582	0	61.7	15,429	0	0	0	0	0	0
PSC NpH NON SKID OVERPRINT COATING-NW2 1565849	0.34	1.5	0	8.8404	0.133	27.4	6,858	0.164	3.6	912	0	0	0
Tristar Extender Varnish 1398204	0.15	0.86	0	8.34	0.072	24.6	6,160	0.082	1.8	444	0	0	0
Aquence CG 9060 GUV Adhesive 2280062	0	0	0	9.5076	0	15.3	3,813	0	0	0	0	0	0
							Total:	**0.887**	**19.5**	**4,874**	**0.586**	**12.9**	**3,228**

Notes:

1 - Information taken from safety data sheets

2 - Material VOC = VOC % by wt. x Density (lb/gal)/100

3 - Max usage proposed by the applicant

4 - PE (lb/hr) = PE (lb/day) ÷ 22 (hr/day) of operation;
PE (lb/day, lb/yr) = Material VOC (lb-VOC/gal) x Max Use rate (gal/day, gal/yr)

5 - PE (lb/hr) = PE (lb/day) ÷ 22 (hr/day) of operation;
PE (lb/day, lb/yr) = Max Use rate (gal-ink/day, gal-ink/yr) x Ammonium hydroxide content (lb-NH_4OH/100 lb-ink) x Density (lb-ink/gal-ink) x 17.03 (lb-NH_3/mol of NH_3) x 1 (mol of NH_3/mol NH_4OH) x (mol of NH_4OH/35.04 lb-NH_4OH)

6 - Max usage rate (gal/yr) ÷ 250 (days/yr) of operation

Potential to Emit
N-8044-11-0_Bobst1Color

Coating	[1]Coating VOC lb/gal	[1]VOC % by wt. lb-VOC/lb-product	[1]Ammonium hydroxide Content % by wt.	[1]Density lb/gal	[2]Material VOC lb-VOC/gal	[6]Max Use rate gal/day	[3]Max Use rate gal/yr	[4]VOC			[5]NH_3		
								PE lb/hr	PE lb/day	PE lb/yr	PE lb/hr	PE lb/day	PE lb/yr
Tristar Display Dense Black 1016229	0.18	0.86	2.747	8.99	0.077	61.7	15,429	0.218	4.8	1,188	0.336	7.4	1,852
PSC NpH NON SKID OVERPRINT COATING-NW2 1565849	0.34	1.5	0	8.8404	0.133	27.4	6,858	0.164	3.6	912	0	0	0
Tristar Extender Varnish 1398204	0.15	0.86	0	8.34	0.072	24.6	6,160	0.082	1.8	444	0	0	0
							Total:	**0.464**	**10.2**	**2,544**	**0.336**	**7.4**	**1,852**

Notes:

1 - Information taken from safety data sheets

2 - Material VOC = VOC % by wt. x Density (lb/gal)/100

3 - Max usage proposed by the applicant

4 - PE (lb/hr) = PE (lb/day) ÷ 22 (hr/day) of operation;
PE (lb/day, lb/yr) = Material VOC (lb-VOC/gal) x Max Use rate (gal/day, gal/yr)

5 - PE (lb/hr) = PE (lb/day) ÷ 22 (hr/day) of operation;
PE (lb/day, lb/yr) = Max Use rate (gal-ink/day, gal-ink/yr) x Ammonium hydroxide content (lb-NH_4OH/100 lb-ink) x Density (lb-ink/gal-ink) x 17.03 (lb-NH_3/mol of NH_3) x 1 (mol of NH_3/mol NH_4OH) x (mol of NH_4OH/35.04 lb-NH_4OH)

6 - Max usage rate (gal/yr) ÷ 250 (days/yr) of operation

Appendix C
BACT Guidelines

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.4*

Last Update: 09/22/2006

Flexographic Printing - Corrugated Boxes, High End Graphics

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of inks with a VOC content not exceeding 1.1 lb/gal (less water & exempt compounds) for high-end graphics and use of inks with a VOC content not exceeding 2.5 lb/gal (less water & exempt compounds) for metallic inks	1) capture of VOCs and thermal or catalytic oxidation. 2) capture of VOCs and carbon absorption 3) capture of VOCs and regenerative thermal oxidizer 4) use of inks with VOC content not exceeding 0.88 lb/gal (less water and exempt compounds) for high-end graphics printing	

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**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.15*

Last Update: 09/22/2006

Flexographic Printing - Corrugated Boxes, Low-end Graphics

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	use of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal and evaporative minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers.	1) capture of VOCs and thermal or catalytic oxidation 2) capture of VOCs and carbon absorption 3) capture of VOCs and regenerative thermal oxidizer	

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**

Appendix D
BACT Analysis

Top-Down BACT Analysis for VOC emissions

N-8044-9-0:

High-end Graphics:

The following VOC emission control technologies are listed in BACT guideline 4.7.4, flexographic printing corrugated boxes with **high-end graphics**:

Step 1 - Identify all control technologies

Achieved in Practice or contained in the SIP:

- Use of inks with VOC content not exceeding 1.1 lb/gal (less water and exempt compounds) for high-end graphics and use of inks with VOC content not exceeding 2.5 lb/gal (less water and exempt compounds) for metallic inks

Technologically Feasible:

- VOC capture and thermal/catalytic incineration
- VOC capture and carbon absorption
- VOC capture and regenerative thermal oxidizer
- Use of inks with VOC content not exceeding 0.88 lb/gal (less water and exempt compounds) for high-end graphics printing

Alternate Basic Equipment:

None of any alternate basic equipment is identified in this option.

Step 2 - Eliminate technologically infeasible options

There is no technologically infeasible option.

Step 3 - Rank remaining options by control effectiveness

1. VOC capture and incineration (98% overall capture and control)
2. VOC capture and regenerative thermal oxidizer (98% overall capture and control)
3. VOC capture and carbon absorption (95% overall capture and control)
4. Use of inks with VOC content not exceeding 0.88 lb/gal (less water and exempt compounds) for high-end graphics printing

Step 4 - Cost Effectiveness Analysis

A cost-effective analysis will now be performed for each control technology, since none of the control technologies has been eliminated.

Uncontrolled VOC emission from the operation:

The uncontrolled VOC emissions from the proposed operation is 7,976 lb-VOC per year (equivalent to about 4 ton-VOC per year).

For the 1st & 2nd most effective control option, with VOC capture and incineration (98% overall capture & control)

Equipment Cost

The entire flexographic printer & gluer unit must be enclosed to capture 100% of the VOC emissions, and a permanent total enclosure (PTE) would be required to be built around the unit to ensure 100% capture. Per applicant, the size of the PTE would be at least 200 feet (L) x 40 feet (W) x 15 feet (H), equivalent to 120,000 cubic feet. The cost of the PTE would be $528,000[1].

Per EPA's Office of Air Quality Planning and Standards (OAQPS) document EPA/452/B-02-001, Section 2, Chapter 3, page 12, to ensure worker comfort and provide healthful working conditions, the recommended amount of ventilation in terms of room air changes per hour (RACs/hr) for a PTE is at least 10 to 15 RACs/hr, and therefore; 10 RACs/hr will be used to determine the minimum exhaust airflow rate for the PTE.

The minimum exhaust airflow rate of the PTE would be 20,000 cfm[2]. The cost of the RTO is estimated to be $456,325[3]. This price does not include sales tax, freight expenses, operational and maintenance costs, site preparation, etc. Please note that the capital cost of a catalytic incinerator is expected to be greater, due to the added cost of the catalyst material.

The direct and indirect costs, shown in the following table, are taken from EPA's Office of Air Quality Planning and Standards (OAQPS) document EPA/452/B-02-001, Section 3.2, Chapter 2, page 42; OAQPS numbers are based on 2000 dollar value. These number are not adjusted for inflation over the past 16-year period. The numbers are presumed be reasonably conservative for the cost-effectiveness analysis.

Cost Item	Cost, $
Direct Costs	
Purchased equipment costs	
RTO, A	456,325
Sales tax, Modesto, 7.875%A	35,936
Freight, 0.05A	22,816
Purchased equipment cost, B	$515,077
Direct installation costs	
Foundations & supports, 0.08B	41,206
Handling & erection, 0.14B	72,111
Electrical, 0.04B	20,603
Piping, 0.02B	10,302
Insulation for duct work, 0.01B	5,151
Painting, 0.01B	5,151
Direct installation costs	$154,523

[1] Dellabarca Design & Build Inc on February 28, 2013 under project N-1130130 supplied cost of $61/ft² for constructing PTE. Using inflation calculator (https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=61&year1=2013&year2=2018[2]), the cost to construct same PTE in December 2018 would be $66/ft². Thus, the total cost of PTE would be $528,000 [(200 ft x 40 ft x $66/ft²)]

[2] The minimum exhaust airflow rate for the PTE is 20,000 cfm (10 RACs/hr x 120,000 ft³ ÷ 60 min/h) Therefore, RTO is presumed to be designed to handle at least 20,000 cfm

[3] In 2011, Rick Cooley of Oxidation Technology provided a cost quote for RTOs at various flow rates. Based on this information, the cost of an RTO handling 20,000 cfm is $400,000 (2011 dollar). Using inflation calculator (https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=61&year1=2013&year2=2018[2]), the cost of an RTO in December 2018 dollars is estimated to be $456,325 Note that this cost does not include any taxes, freight or installation expenses

Site preparation (PTE Const)	528,000
Total Direct	$1,197,600
Indirect Costs (installation)	
Engineering, 0.1B	51,508
Construction & field expenses, 0.05B	25,754
Contractor fees, 0.1B	51,508
Start-up, 0.02B	10,302
[4]Performance test, 0.01B	--
Contingencies, 0.03B	15,452
Total Indirect Costs	$154,523
Total Capital Investment (TCI)	$1,352,123

The total capital investment is annualized over 10 years assuming 10% interest. The following formula is used to determine the annualized cost:

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

Amortization Factor = $\left[\frac{0.1(1.1)^{10}}{(1.1)^{10}-1}\right]$ = 0.163 per District policy, amortizing over 10 years at 10%

Therefore,
Annualized Capital Investment = $1,352,123 x 0.163 = **$220,396/year**

Fuel Cost
Fuel Cost = {[Q x Cp_{Air} x ΔT x (1-HR) x O] – (VOC x HC)} x (Natural gas cost)

Where,
Q: Airflow rate 20,000 CFM
Cp_{Air}: Specific heat of air (0.0194 Btu/scf-°F)
ΔT: Change in temperature required 1,342°F (1500°F - 158°F)
HR: Heat recovery (0.95)
O: Operational time, 525,600 min/yr (60 min/hr x 8,760 hr/yr)
VOC: Total amount of VOC 7,976 lb/yr
HC: Heat content of the VOCs in the contaminated air stream. The heat content of MEK, which is 13,729 Btu/lb, will be assumed.

Natural gas cost: $7.00/MMBtu (average) for both Nov 2017 and Nov 2018 (except Aug 2018, data not available for the month) per U.S. Energy Information Administration[(5)].

Fuel Cost = **$95,021/year**

[4] A performance test price is not included because it would have been required even if a company voluntarily proposes to install an RTO.
[5] https://www.eia.gov/dnav/ng/hist/n3035ca3m.htm

Electricity Cost:

$$\text{Power}_{fan} = \frac{(1.17\times10^{-4}) \times Q \times \Delta P}{\in}$$

Where,

ΔP: Pressure drop across system = 4 in. H_2O
$\in$: Efficiency for fan and motor = 0.6
Q: Exhaust flow rate = 20,000 cfm

Power_{fan} = 15.6 kW

MID's electric rate schedule GS-3 (General Service industrial) for off-peak are \$0.0526/kwH[6]. Thus,

Electric cost = (\$0.0526/kwH)(15.6 kW)(24 hr/day)(365 days/yr)
= **\$7,188/year**

Total Cost = \$220,396/yr + \$95,021/yr + \$7,188/yr
= \$322,605/yr

For VOC capture and incineration with overall VOC control efficiency 98%, the amount of VOC emissions controlled is calculated as follow:

Controlled VOC emissions = 7,976 lb-VOC/year x 1 tons-VOC/2,000 lb-VOC x 0.98
= 3.908 ton-VOC/year

Cost of VOC reduction is calculated as follow:
Cost of VOC reduction = \$322,605/year ÷ 4 ton-VOC/year
= \$82,550/ton-VOC

Since the calculated cost of VOC reduction exceeds the VOC cost effective threshold of \$17,500/ton, use of RTO is not cost effective. Please also note that the equipment cost of a regular thermal oxidizer is comparable to that of the RTO. However, the RTO fuel cost are found to be 45% less with an assumed heat recovery rate of 95% as opposed to the 70% heat recovery of a thermal oxidizer. Therefore, cost analysis for RTO is considered representative of thermal oxidizer technology.

For the 3rd effective control option, with VOC capture and carbon adsorption (95% overall capture & control)
The carbon bed replacement cost normally exceeds the cost effectiveness threshold by itself, so the capital cost is not being included in this analysis.

Annual Operating Costs:
Assuming the carbon would be able to capture 20% of its weight in VOC, the annual carbon requirement would be 39,880 pounds (7,976/0.2).

[6] https://www.mid.org/tariffs/rates/GS-3_INDUSTRIAL.pdf

According to phone conversation between the process engineer and Nicole Passarella of Calgon on Nov 8, 2016, under project N-1162967, the cost is $2.03/lb-carbon. Therefore, the cost of carbon for this project is calculated to:

The cost of carbon = 39,880 lb-carbon/year x $2.03/lb-carbon = **$80,956/year**

For carbon adsorption system with overall VOC control efficiency 95%, the amount of VOC emissions controlled is calculated as follows:

Controlled VOC emissions = 7,976 lb-VOC/yr x 1 tons-VOC/2,000 lb-VOC x 0.95
= 3.8 ton-VOC/yr

Cost of VOC reduction = $80,956/year ÷ 3.8 ton-VOC/year
= $21,304/ton-VOC

As demonstrated above, the cost of disposing or replacing the carbon for the carbon adsorption system alone exceeds the VOC cost effectiveness threshold of $17,500/ton. Thus, use of carbon adsorption system is not cost effective.

For the 4th effective control option, use of inks with a VOC content not exceeding 0.88 lb/gal (less water & exempt compounds) for high-end graphics printing
The applicant is proposing the use of this control option, therefore, a cost effectiveness analysis for this control option is not required.

For the 5th effective control option, use of inks with a VOC content not exceeding 1.1 lb/gal (less water & exempt compounds) for high-end graphics and use of inks with a VOC content not exceeding 2.5 lb/gal (less water & exempted compounds for metallic inks
The applicant is proposing the use of a more effective VOC control measure. Therefore, a cost effectiveness analysis for this control option is not required.

Step 5 - Select BACT

BACT requirement of VOC emissions are satisfied by utilizing inks up to 0.88 lb-VOC/gal (less water & exempt compounds). Therefore, BACT requirement is satisfied.

Low-end Graphics:

The following VOC emission control technologies are listed in BACT guideline 4.7.15, flexographic printing corrugated boxes with **low-end graphics**:

Step 1 - Identify all control technologies

Achieved in Practice or contained in the SIP:

- Use of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal and evaporative minimization methods, which include keeping all solvents and solvent-laden clothes/papers, not in active use, in closed containers.

Technologically Feasible:

- VOC capture and thermal/catalytic oxidation
- VOC capture and carbon absorption
- VOC capture and regenerative thermal oxidizer

Alternate Basic Equipment:
None of any alternate basic equipment is identified in this option.

Step 2 - Eliminate technologically infeasible options

There is no technologically infeasible option.

Step 3 - Rank remaining options by control effectiveness

1. VOC capture and incineration (98% overall capture and control)
2. VOC capture and regenerative thermal oxidizer (98% overall capture and control)
3. VOC capture and carbon absorption (95% overall capture and control)
4. Use of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal and evaporative minimization methods, which include keeping all solvents and solvent-laden clothes/papers, not in active use, in closed containers

Step 4 - Cost Effectiveness Analysis

For the first three effective control options listed above
As indicates in previous BACT analysis for flexographic printing corrugated boxes with high-end graphics, the first three technologically feasible control technologies listed above are each not cost effective; and therefore, these control technologies have been removed from consideration at this time.

For the 4th effective control option, used of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal
The applicant is proposing to use this control option; therefore, a cost effectiveness analysis for this control option is not required.

Step 5 - Select BACT

BACT requirement of VOC emissions are satisfied by utilizing inks up to 0.3 lb-VOC/gal (less water & exempt compounds). Therefore, BACT requirement is satisfied.

N-8044-10-0:

High-end Graphics:
The following VOC emission control technologies are listed in BACT guideline 4.7.4, flexographic printing corrugated boxes with **high-end graphics**:

Step 1 - Identify all control technologies

Achieved in Practice or contained in the SIP:

- Use of inks with VOC content not exceeding 1.1 lb/gal (less water and exempt compounds) for high-end graphics and use of inks with VOC content not exceeding 2.5 lb/gal (less water and exempt compounds) for metallic inks

Technologically Feasible:

- VOC capture and thermal/catalytic incineration
- VOC capture and carbon absorption
- VOC capture and regenerative thermal oxidizer
- Use of inks with VOC content not exceeding 0.88 lb/gal (less water and exempt compounds) for high-end graphics printing

Alternate Basic Equipment:
None of any alternate basic equipment is identified in this option.

Step 2 - Eliminate technologically infeasible options

There is no technologically infeasible option.

Step 3 - Rank remaining options by control effectiveness

1. VOC capture and incineration (98% overall capture and control)
2. VOC capture and regenerative thermal oxidizer (98% overall capture and control)
3. VOC capture and carbon absorption (95% overall capture and control)
4. Use of inks with VOC content not exceeding 0.88 lb/gal (less water and exempt compounds) for high-end graphics printing

Step 4 - Cost Effectiveness Analysis

A cost-effective analysis will now be performed for each control technology, since none of the control technologies has been eliminated.

For the 1st & 2nd most effective control option, with VOC capture and incineration (98% overall capture & control)

Equipment Cost
The entire flexographic printer & gluer unit must be enclosed to capture 100% of the VOC emissions, and a permanent total enclosure (PTE) would be required to be built around the unit to ensure 100% capture.

Per project N-1130130 (where N-3606-14 and '-15 were originally permitted), the size of the PTE would be at least 86 feet (L) x 35 feet (W) x 15 feet (H), equivalent to 45,150 cubic feet. The cost of the PTE would be $198,660[7].

Per EPA's Office of Air Quality Planning and Standards (OAQPS) document EPA/452/B-02-001, Section 2, Chapter 3, page 12, to ensure worker comfort and provide healthful working conditions, the recommended amount of ventilation in terms of room air changes per hour (RACs/hr) for a PTE is at least 10 to 15 RACs/hr, and therefore; 10 RACs/hr will be used to determine the minimum exhaust airflow rate for the PTE.

The minimum exhaust airflow rate of the PTE would be 7,525 cfm[8]. The cost of the RTO is estimated to be $293,831[9]. This price does not include sales tax, freight expenses, operational and maintenance costs, site preparation, etc. Please note that the capital cost of a catalytic incinerator is expected to be greater, due to the added cost of the catalyst material.

The direct and indirect costs, shown in the following table, are taken from EPA's Office of Air Quality Planning and Standards (OAQPS) document EPA/452/B-02-001, Section 3.2, Chapter 2, page 42; OAQPS numbers are based on 2000 dollar value. These number are not adjusted for inflation over the past 16-year period. The numbers are presumed be reasonably conservative for the cost-effectiveness analysis.

Cost Item	Cost, $
Direct Costs	
Purchased equipment costs	
RTO cost, A	293,831
Sales tax, Modesto, 7.875%A	23,139
Freight, 0.05A	14,692
Purchased equipment cost, B	$331,662
Direct installation costs	
Foundations & supports, 0.08B	26,533
Handling & erection, 0.14B	46,433
Electrical, 0.04B	13,266
Piping, 0.02B	6,633
Insulation for duct work, 0.01B	3,317
Painting, 0.01B	3,317
Direct installation costs	$99,499
Site preparation (PTE Const)	198,660
Total Direct	$629,820
Indirect Costs (installation)	
Engineering, 0.1B	33,166
Construction & field expenses, 0.05B	16,583

[7] Dellabarca Design & Build Inc on February 28, 2013 under project N-1130130 supplied cost of $61/ft² for constructing PTE. Using inflation calculator (https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=61&year1=2013&year2=2018), the cost to construct same PTE in December 2018 would be $66/ft². Thus, the total cost of PTE would be $198,660 ((86 ft x 35 ft x $66/ft²))

[8] The minimum exhaust airflow rate for the PTE is 7,525 cfm (10 RACs/hr x 45,150 ft³ ÷ 60 min/h). Therefore, RTO is presumed to be designed to handle at least 7,525 cfm.

[9] In 2011, Rick Cooley of Oxidation Technology provided a cost quote for RTOs at various flow rates. Based on this information, the cost of an RTO handling 7,525 cfm is $257,563 (2011 dollar). Using inflation calculator (https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=61&year1=2013&year2=2018), the cost of an RTO in December 2018 dollars is estimated to be $293,031. Note that this cost does not include any taxes, freight or installation expenses.

Contractor fees, 0.1B	33,166
Start-up, 0.02B	6,633
[10]Performance test, 0.01B	--
Contingencies, 0.03B	9,950
Total Indirect Costs	$99,499
Total Capital Investment (TCI)	$729,319

The total capital investment is annualized over 10 years assuming 10% interest. The following formula is used to determine the annualized cost:

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

Amortization Factor = $\left[\frac{0.1(1.1)^{10}}{(1.1)^{10}-1}\right]$ = 0.163 per District policy, amortizing over 10 years at 10%

Therefore,
Annualized Capital Investment = $729,319 x 0.163 = **$118,879/year**

Fuel Cost
Fuel Cost = {[Q x Cp_{Air} x ΔT x (1-HR) x O] – (VOC x HC)} x (Natural gas cost)

Where,
Q: Airflow rate 7,525 CFM
Cp_{Air}: Specific heat of air (0.0194 Btu/scf-°F)
ΔT: Change in temperature required 1,342°F (1500°F - 158°F)
HR: Heat recovery (0.95)
O: Operational time, 525,600 min/yr (60 min/hr x 8,760 hr/yr)
VOC: Total amount of VOC 4,874 lb/yr
HC: Heat content of the VOCs in the contaminated air stream. The heat content of MEK, which is 13,729 Btu/lb, will be assumed.

Natural gas cost: $7.00/MMBtu (average) for both Nov 2017 and Nov 2018 (except Aug 2018, data not available for the month) per U.S. Energy Information Administration[11].

Fuel Cost = **$35,572/year**

Electricity Cost:

$$\text{Power}_{fan} = \frac{(1.17\times10^{-4}) \times Q \times \Delta P}{\in}$$

Where,
ΔP: Pressure drop across system = 4 in. H_2O
∈: Efficiency for fan and motor = 0.6
Q: Exhaust flow rate = 7,525 cfm

[10] A performance test price is not included because it would have been required even if a company voluntarily proposes to install an RTO.
[11] https://www.eia.gov/dnav/ng/hist/n3035ca3m.htm

Power $_{fan}$ = 6 kW

MID's electric rate schedule GS-3 (General Service industrial) for off-peak are $0.0526/kwH[12]. Thus,

Electric cost = ($0.0526/kwH)(6 kW)(24 hr/day)(365 days/yr)
= **$2,765/year**

Total Cost = $118,879/yr + $35,572/yr + $2,765/yr
= $157,216/yr

For VOC capture and incineration with overall VOC control efficiency 98%, the amount of VOC emissions controlled is calculated as follows:

Controlled VOC emissions = 4,874 lb-VOC/year x 1 tons-VOC/2,000 lb-VOC x 0.98
= 2.4 ton-VOC/year

Cost of VOC reduction = $157,216/year ÷ 2.4 ton-VOC/year
= $65,507/ton-VOC

Since the calculated cost of VOC reduction exceeds the VOC cost effective threshold of $17,500/ton, use of RTO is not cost effective. Please also note that the equipment cost of a regular thermal oxidizer is comparable to that of the RTO. However, the RTO fuel cost are found to be 45% less with an assumed heat recovery rate of 95% as opposed to the 70% heat recovery of a thermal oxidizer. Therefore, cost analysis for RTO is considered representative of thermal oxidizer technology.

For the 3rd effective control option, with VOC capture and carbon adsorption (95% overall capture & control)
The carbon bed replacement cost normally exceeds the cost effectiveness threshold by itself, so the capital cost is not being included in this analysis.

Annual Operating Costs:
Assuming the carbon would be able to capture 20% of its weight in VOC, the annual carbon requirement would be 24,370 pounds (4,874/0.2).

According to phone conversation between the process engineer and Nicole Passarella of Calgon on Nov 8, 2016, under project N-1162967, the cost is $2.03/lb-carbon. Therefore, the cost of carbon for this project is calculated to:

The cost of carbon = 24,370 lb-carbon/year x $2.03/lb-carbon = **$49,471/year**

For carbon adsorption system with overall VOC control efficiency 95%, the amount of VOC emissions controlled is calculated as follow:

[12] https://www.mid.org/tariffs/rates/GS-3_INDUSTRIAL.pdf

Controlled VOC emissions = 4,874 lb-VOC/yr x 1 tons-VOC/2,000 lb-VOC x 0.95
= 2.32 ton-VOC/yr

Cost of VOC reduction = $49,471/year ÷ 2.32 ton-VOC/year
= $21,324/ton-VOC

As demonstrated above, the cost of disposing or replacing the carbon for the carbon adsorption system alone exceeds the VOC cost effectiveness threshold of $17,500/ton. Thus, use of carbon adsorption system is not cost effective.

For the 4th effective control option, use of inks with a VOC content not exceeding 0.88 lb/gal (less water & exempt compounds) for high-end graphics printing
The applicant is proposing the use of this control option, therefore, a cost effectiveness analysis for this control option is not required.

For the 5th effective control option, use of inks with a VOC content not exceeding 1.1 lb/gal (less water & exempt compounds) for high-end graphics and use of inks with a VOC content not exceeding 2.5 lb/gal (less water & exempted compounds for metallic inks
The applicant is proposing the use of a more effective VOC control measure. Therefore, a cost effectiveness analysis for this control option is not required.

Step 5 - Select BACT

BACT requirement of VOC emissions are satisfied by utilizing inks up to 0.88 lb-VOC/gal (less water & exempt compounds). Therefore, BACT requirement is satisfied.

Low-end graphics:
The following VOC emission control technologies are listed in BACT guideline 4.7.15, flexographic printing corrugated boxes with **low-end graphics**:

Step 1 - Identify all control technologies

Achieved in Practice or contained in the SIP:

- Use of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal and evaporative minimization methods, which include keeping all solvents and solvent-laden clothes/papers, not in active use, in closed containers.

Technologically Feasible:

- VOC capture and thermal/catalytic oxidation
- VOC capture and carbon absorption
- VOC capture and regenerative thermal oxidizer

Alternate Basic Equipment:
None of any alternate basic equipment is identified in this option.

Step 2 - Eliminate technologically infeasible options

There is no technologically infeasible option.

Step 3 - Rank remaining options by control effectiveness

1. VOC capture and incineration (98% overall capture and control)
2. VOC capture and regenerative thermal oxidizer (98% overall capture and control)
3. VOC capture and carbon absorption (95% overall capture and control)
4. Use of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal and evaporative minimization methods, which include keeping all solvents and solvent-laden clothes/papers, not in active use, in closed containers

Step 4 - Cost Effectiveness Analysis

For the first three effective control options listed above
As indicates in previous BACT analysis for flexographic printing corrugated boxes with high-end graphics, the first three technologically feasible control technologies listed above are each not cost effective; and therefore, these control technologies have been removed from consideration at this time.

For the 4th effective control option, used of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal
The applicant is proposing to use this control option; therefore, a cost effectiveness analysis for this control option is not required.

Step 5 - Select BACT

BACT requirement of VOC emissions are satisfied by utilizing inks/coatings up to 0.3 lb-VOC/gal (less water & exempt compounds). Therefore, BACT requirement is satisfied.

N-8044-11-0:

High-end Graphics:
The following VOC emission control technologies are listed in BACT guideline 4.7.4, flexographic printing corrugated boxes with **high-end graphics**:

Step 1 - Identify all control technologies

Achieved in Practice or contained in the SIP:

- Use of inks with VOC content not exceeding 1.1 lb/gal (less water and exempt compounds) for high-end graphics and use of inks with VOC content not exceeding 2.5 lb/gal (less water and exempt compounds) for metallic inks

Technologically Feasible:

- VOC capture and thermal/catalytic incineration
- VOC capture and carbon absorption
- VOC capture and regenerative thermal oxidizer
- Use of inks with VOC content not exceeding 0.88 lb/gal (less water and exempt compounds) for high-end graphics printing

Alternate Basic Equipment:
None of any alternate basic equipment is identified in this option.

Step 2 - Eliminate technologically infeasible options

There is no technologically infeasible option.

Step 3 - Rank remaining options by control effectiveness

5. VOC capture and incineration (98% overall capture and control)
6. VOC capture and regenerative thermal oxidizer (98% overall capture and control)
7. VOC capture and carbon absorption (95% overall capture and control)
8. Use of inks with VOC content not exceeding 0.88 lb/gal (less water and exempt compounds) for high-end graphics printing

Step 4 - Cost Effectiveness Analysis

A cost-effective analysis will now be performed for each control technology, since none of the control technologies has been eliminated.

For the 1st & 2nd most effective control option, with VOC capture and incineration (98% overall capture & control)

Equipment Cost
The entire flexographic printer & gluer unit must be enclosed to capture 100% of the VOC emissions, and a permanent total enclosure (PTE) would be required to be built around the unit to ensure 100% capture.

Per project N-1130130 (where N-3606-14 and '-15 were originally permitted), the size of the PTE would be at least 86 feet (L) x 35 feet (W) x 15 feet (H), equivalent to 45,150 cubic feet. The cost of the PTE would be $198,660[13].

Per EPA's Office of Air Quality Planning and Standards (OAQPS) document EPA/452/B-02-001, Section 2, Chapter 3, page 12, to ensure worker comfort and provide healthful working conditions, the recommended amount of ventilation in terms of room air changes per hour (RACs/hr) for a PTE is at least 10 to 15 RACs/hr, and therefore; 10 RACs/hr will be used to determine the minimum exhaust airflow rate for the PTE.

The minimum exhaust airflow rate of the PTE would be 7,525 cfm[14]. The cost of the RTO is estimated to be $293,831[15]. This price does not include sales tax, freight expenses, operational and maintenance costs, site preparation, etc. Please note that the capital cost of a catalytic incinerator is expected to be greater, due to the added cost of the catalyst material.

The direct and indirect costs, shown in the following table, are taken from EPA's Office of Air Quality Planning and Standards (OAQPS) document EPA/452/B-02-001, Section 3.2, Chapter 2, page 42; OAQPS numbers are based on 2000 dollar value. These number are not adjusted for inflation over the past 16-year period. The numbers are presumed be reasonably conservative for the cost-effectiveness analysis.

Cost Item	Cost, $
Direct Costs	
Purchased equipment costs	
RTO cost, A	293,831
Sales tax, Modesto, 7.875%A	23,139
Freight, 0.05A	14,692
Purchased equipment cost, B	$331,662
Direct installation costs	
Foundations & supports, 0.08B	26,533
Handling & erection, 0.14B	46,433
Electrical, 0.04B	13,266
Piping, 0.02B	6,633
Insulation for duct work, 0.01B	3,317
Painting, 0.01B	3,317
Direct installation costs	$99,499
Site preparation (PTE Const)	198,660
Total Direct	$629,820
Indirect Costs (installation)	
Engineering, 0.1B	33,166
Construction & field expenses, 0.05B	16,583

[13] Dellabarca Design & Build Inc on February 28, 2013 under project N-1130130 supplied cost of $61/ft² for constructing PTE. Using inflation calculator (https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=61&year1=201302&year2=201812), the cost to construct same PTE in December 2018 would be $66/ft². Thus, the total cost of PTE would be $198,660 [(86 ft x 35 ft x $66/ft²)]

[14] The minimum exhaust airflow rate for the PTE is 7,525 cfm (10 RACs/hr x 45,150 ft³ ÷ 60 min/h). Therefore, RTO is presumed to be designed to handle at least 7,525 cfm.

[15] In 2011, Rick Cooley of Oxidation Technology provided a cost quote for RTOs at various flow rates. Based on this information, the cost of an RTO handling 7,525 cfm is $257,563 (2011 dollar). Using inflation calculator (https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=257563&year1=201301&year2=201812), the cost of an RTO in December 2018 dollars is estimated to be $293,831. Note that this cost does not include any taxes, freight or installation expenses.

Contractor fees, 0.1B	33,166
Start-up, 0.02B	6,633
[16]Performance test, 0.01B	--
Contingencies, 0.03B	9,950
Total Indirect Costs	$99,499
Total Capital Investment (TCI)	$729,319

The total capital investment is annualized over 10 years assuming 10% interest. The following formula is used to determine the annualized cost:

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

Amortization Factor = $\left[\frac{0.1(1.1)^{10}}{(1.1)^{10}-1}\right]$ = 0.163 per District policy, amortizing over 10 years at 10%

Therefore,
Annualized Capital Investment = $729,319 x 0.163 = **$118,879/year**

Fuel Cost
Fuel Cost = {[Q x Cp_{Air} x ΔT x (1-HR) x O] – (VOC x HC)} x (Natural gas cost)

Where,
Q: Airflow rate 7,525 CFM
Cp_{Air}: Specific heat of air (0.0194 Btu/scf-°F)
ΔT: Change in temperature required 1,342°F (1500°F - 158°F)
HR: Heat recovery (0.95)
O: Operational time, 525,600 min/yr (60 min/hr x 8,760 hr/yr)
VOC: Total amount of VOC 2544 lb/yr
HC: Heat content of the VOCs in the contaminated air stream. The heat content of MEK, which is 13,729 Btu/lb, will be assumed.

Natural gas cost: $7.00/MMBtu (average) for both Nov 2017 and Nov 2018 (except Aug 2018, data not available for the month) per U.S. Energy Information Administration[17].

Fuel Cost = **$35,795/year**

Electricity Cost:

$$\text{Power}_{fan} = \frac{(1.17\times10^{-4}) \times Q \times \Delta P}{\epsilon}$$

Where,
ΔP: Pressure drop across system = 4 in. H_2O
ϵ: Efficiency for fan and motor = 0.6
Q: Exhaust flow rate = 7,525 cfm

[16] A performance test price is not included because it would have been required even if a company voluntarily proposes to install an RTO.
[17] https://www.eia.gov/dnav/ng/hist/n3035ca3m.htm

Power $_{fan}$ = 6 kW

MID's electric rate schedule GS-3 (General Service industrial) for off-peak are $0.0526/kwH[18]. Thus,

Electric cost = ($0.0526/kwH)(6 kW)(24 hr/day)(365 days/yr)
= **$2,765/year**

Total Cost = $118,879/yr + $35,795/yr + $2,765/yr
= $157,439/yr

For VOC capture and incineration with overall VOC control efficiency 98%, the amount of VOC emissions controlled is calculated as follows:

Controlled VOC emissions = 2,544 lb-VOC/year x 1 tons-VOC/2,000 lb-VOC x 0.98
= 1.25 ton-VOC/year

Cost of VOC reduction = $157,439/year ÷ 1.25 ton-VOC/year
= $125,951/ton-VOC

Since the calculated cost of VOC reduction exceeds the VOC cost effective threshold of $17,500/ton, use of RTO is not cost effective. Please also note that the equipment cost of a regular thermal oxidizer is comparable to that of the RTO. However, the RTO fuel cost are found to be 45% less with an assumed heat recovery rate of 95% as opposed to the 70% heat recovery of a thermal oxidizer. Therefore, cost analysis for RTO is considered representative of thermal oxidizer technology.

For the 3rd effective control option, with VOC capture and carbon adsorption (95% overall capture & control)
The carbon bed replacement cost normally exceeds the cost effectiveness threshold by itself, so the capital cost is not being included in this analysis.

Annual Operating Costs:
Assuming the carbon would be able to capture 20% of its weight in VOC, the annual carbon requirement would be 12,720 pounds (2,544/0.2).

According to phone conversation between the process engineer and Nicole Passarella of Calgon on Nov 8, 2016, under project N-1162967, the cost is $2.03/lb-carbon. Therefore, the cost of carbon for this project is calculated to:

The cost of carbon = 12,720 lb-carbon/year x $2.03/lb-carbon = **$25,822/year**

For carbon adsorption system with overall VOC control efficiency 95%, the amount of VOC emissions controlled is calculated as follow:

[18] https://www.mid.org/tariffs/rates/GS-3_INDUSTRIAL.pdf

Controlled VOC emissions = 2,544 lb-VOC/yr x 1 tons-VOC/2,000 lb-VOC x 0.95
= 1.21 ton-VOC/yr

Cost of VOC reduction = $25,822/year ÷ 1.21 ton-VOC/year
= $21,341/ton-VOC

As demonstrated above, the cost of disposing or replacing the carbon for the carbon adsorption system alone exceeds the VOC cost effectiveness threshold of $17,500/ton. Thus, use of carbon adsorption system is not cost effective.

For the 4th effective control option, use of inks with a VOC content not exceeding 0.88 lb/gal (less water & exempt compounds) for high-end graphics printing
The applicant is proposing the use of this control option, therefore, a cost effectiveness analysis for this control option is not required.

For the 5th effective control option, use of inks with a VOC content not exceeding 1.1 lb/gal (less water & exempt compounds) for high-end graphics and use of inks with a VOC content not exceeding 2.5 lb/gal (less water & exempted compounds for metallic inks
The applicant is proposing the use of a more effective VOC control measure. Therefore, a cost effectiveness analysis for this control option is not required.

Step 5 - Select BACT

BACT requirement of VOC emissions are satisfied by utilizing inks up to 0.88 lb-VOC/gal (less water & exempt compounds). Therefore, BACT requirement is satisfied.

Low-end graphics:
The following VOC emission control technologies are listed in BACT guideline 4.7.15, flexographic printing corrugated boxes with **low-end graphics**:

Step 1 - Identify all control technologies

Achieved in Practice or contained in the SIP:

- Use of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal and evaporative minimization methods, which include keeping all solvents and solvent-laden clothes/papers, not in active use, in closed containers.

Technologically Feasible:

- VOC capture and thermal/catalytic oxidation
- VOC capture and carbon absorption
- VOC capture and regenerative thermal oxidizer

Alternate Basic Equipment:
None of any alternate basic equipment is identified in this option.

Step 2 - Eliminate technologically infeasible options

There is no technologically infeasible option.

Step 3 - Rank remaining options by control effectiveness

1. VOC capture and incineration (98% overall capture and control)
2. VOC capture and regenerative thermal oxidizer (98% overall capture and control)
3. VOC capture and carbon absorption (95% overall capture and control)
4. Use of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal and evaporative minimization methods, which include keeping all solvents and solvent-laden clothes/papers, not in active use, in closed containers

Step 4 - Cost Effectiveness Analysis

For the first three effective control options listed above
As indicates in previous BACT analysis for flexographic printing corrugated boxes with high-end graphics, the first three technologically feasible control technologies listed above are each not cost effective; and therefore, these control technologies have been removed from consideration at this time.

For the 4th effective control option, used of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal
The applicant is proposing to use this control option; therefore, a cost effectiveness analysis for this control option is not required.

Step 5 - Select BACT

BACT requirement of VOC emissions are satisfied by utilizing inks/coatings up to 0.3 lb-VOC/gal (less water & exempt compounds). Therefore, BACT requirement is satisfied.

Appendix E
HRA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Jag Kahlon – Permit Services
From:	Kyle Melching – Technical Services
Date:	February 27, 2019
Facility Name:	Pacific Southwest Container
Location:	671 Mariposa Rd., Modesto
Application #(s):	N-8044-9-0, 10-0, and 11-0
Project #:	N-1183571

A. RMR SUMMARY

RMR Summary			
Categories	**Graphics Arts Printing (Unit 9-0 thru 11-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	**N/A***	N/A*	<1
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	**No**		
Special Permit Conditions?	**No**		

*A prioritization was not performed after determining no Toxic Air Contaminants (TACs) are associated with this project. No further analysis was required.

I. Project Description

Technical Services received a request on February 22, 2019, to perform a Risk Management Review for the relocation of three flexographic printing press operations currently under permit N-3606-14, -15, and -35.

II. Analysis

Technical Services reviewed the submitted SDS sheets for toxic air contaminants (TACs) with risk factors. After reviewing the SDS sheet, it was determined that there are TACs resulting from the project; however, none with risk factors present. Therefore, no further analysis or prioritization was required 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.

IV. Attachments

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer
C. Facility Summary

Appendix F
Quarterly Net Emissions Change

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 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$PE2_{quarterly} = PE2_{annual} \div 4$ quarters/year
$PE1_{quarterly} = PE1_{annual} \div 4$ quarters/year

However, the applicant has proposed to establish a combined total VOC emission limit of 13,012 lb-VOC/yr for permit units N-8044-9, '-10 and '-11. Thus, QNEC emissions will be counted under permit N-8044-9-0. QNEC for the other two permits will be set equal to zero.

Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	0	0	0
CO	0	0	0
VOC	3,253	0	3,253

Appendix G
HAP Emission Calculations

Summary of HAP Emissions
(N-8044)

Pollutant	N-8044-2-0	N-8044-3-0	N-8044-4-0	N-8044-5-0	N-8044-8-0	N-8044-9-0, '-10 and '-11-0	Total (lb/yr)	HAP	HAP (lb/yr)
Benzene	0.3	–	1.5	–	–	–	1.8	Y	1.80
Formaldehyde	2.7	–	3.2	–	–	–	5.9	Y	5.90
PAHs	0.1	–	0	–	–	–	0.1	Y	0.10
Naphthalene	0	–	0.1	–	–	–	0.1	Y	0.10
Acetaldehyde	1.2	–	0.8	–	–	–	2.0	Y	2.00
Acrolein	0.1	–	0.7	–	–	–	0.8	Y	0.80
1,3-Butadiene	0.3	–	–	–	–	–	0.3	Y	0.30
Chlorobenzene	0	–	–	–	–	–	0.0	Y	0.00
Propylene	0.7	–	138.4	–	–	–	139.1	Y	139.10
Hexane	0	–	1.2	–	–	–	1.2	Y	1.20
Toluene	0	–	6.9	–	–	–	6.9	Y	6.90
Xylene	0.1	–	5.1	–	–	–	5.2	Y	5.20
Ethyl Benzene	0	–	1.8	–	–	–	1.8	Y	1.80
Hydrogen Chloride	0.1	–	–	–	–	–	0.1	Y	0.10
Arsenic	0	–	–	–	–	–	0.0	Y	0.00
Cadmium	0	–	–	–	–	–	0.0	Y	0.00
Total Chromium	0	–	–	–	–	–	0.0	Y	0.00
Hexavalent Chromium	0	–	–	–	–	–	0.0	Y	0.00
Copper	0	–	–	–	–	–	0.0	Y	0.00
Lead	0	–	–	–	–	–	0.0	Y	0.00
Manganses	0	–	–	–	–	–	0.0	Y	0.00
Mercury	0	–	–	–	–	–	0.0	Y	0.00
Nickel	0	–	–	–	–	–	0.0	Y	0.00
Selenium	0	–	–	–	–	–	0.0	Y	0.00
Zinc	0	–	–	–	–	–	0.0	Y	0.00
Ammonia	–	3960	–	4400	4400	–	8360.0	N	0.00
Dipropylene glycol monomethyl ether	–	7.6	–	–	1400	–	7.6	Y	7.60
								Total:	173

Appendix H
Compliance Certification

March 18, 2019

Mr. Nick Peirce
San Joaquin Valley Air Pollution Control District
4800 Enterprise Way
Modesto CA 95356-8718

Subject: Compliance Statement for Pacific Southwest Container, LLC.

Dear Mr. Peirce:

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications, Pacific Southwest Container, LLC. is pleased to provide this compliance statement regarding its proposed paper converting project N-1183571

All major stationary sources in California owned or operated by [facility name], or by any entity controlling, controlled by, or under common control with, Pacific Southwest Container, LLC. , and which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards. These sources include one or more of the following facilities:

Facility #1: Pacific Southwest Container, LLC.
4530 Leckron Road
Modesto, CA 95357

Facility #2: Pacific Southwest Container, LLC.
671 Mariposa Road
Modesto, CA 95354

Based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Please contact me if you have any questions regarding this certification.

Sincerely,

Mac McCullough - Senior VP Quality & Environmental Mgmt.
Pacific Southwest Container, LLC.

Appendix I
ERC Withdrawal Calculations

ERC Withdrawal Calculations

The proposed project triggered Federal Major Modification. Therefore, pursuant to section 4.8.1 of Rule 2201, distance offset ratio (DOR) of 1.5 will be used.

Parameters	Q1	Q2	Q3	Q4
Offset amount	3,253	3,253	3,253	3,253
Offset amount x 1.5 (DOR)	4,879.5	4,879.5	4,879.5	4,879.5
ERC S-5056-1	4,880	4,880	4,880	4,879
Readjustment of credits in ERC S-5040-1 per section 4.13.8 of Rule 2201*	4,880	4,880	4,879	4,879
Remaining amount in S-5056-1**	0	0	1	0

*Per section 4.13.8 of Rule 2201, Actual Emission Reductions for NOx and VOC that occurred from April through November may be used to offset increases in NOx and VOC during any period of the year.