



**DEC 18 2015**

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # N-3606  
Project # N-1152765**

Dear Mr. McCullough:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is to increase daily and annual VOC emission limits for the printing press under permit N-3606-32, and keep the facility-wide VOC emission limit unchanged.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Nick Peirce, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjollet  
Director of Permit Services

Enclosures

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

**Seyed Sadredin**

Executive Director/Air Pollution Control Officer

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# San Joaquin Valley Air Pollution Control District Authority to Construct

## ***Modification of Offset Lithographic Printing Operation***

Facility Name: Pacific Southwest Container                      Revised Date: December 15, 2015  
Mailing Address: 4530 Leckron Road                                  Engineer: Wai-Man So  
                                 Modesto, CA 95353    Lead Engineer: Nick Peirce  
Contact Person: Mac McCullough (Sr. VP Quality & Environmental Management)  
Telephone: (209) 557 – 5270    E-mail: [macm@teampsc.com](mailto:macm@teampsc.com)  
Fax: (209) 522 – 2913  
Application #(s): N-3606-32-1  
Project #: N-1152765  
Deemed Complete: August 14, 2015

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### **I. PROPOSAL**

Pacific Southwest Container (hereinafter PSC) is requesting an Authority to Construct (ATC) for the modification of the existing graphic arts printing operation under permit unit N-3060-32 to increase the daily and annual VOC emissions limits from 30.2 lb-VOC/day and 7,174 lb-VOV/year to 150 lb-VOC/day and 19,500 lb-VOC/year, respectively, and also keep the facility-wide SLC of 73,403 pounds of VOC per year unchanged.

PSC possesses a Title V permit. The proposed project is a Signification Modification to the Title V permit, as this project is a Federal Major Modification under District Rule 2201. The applicant has requested to issue the ATC with a Certificate of Conformity (COC), which is EPA's 45-day review of the project prior to the issuance of the final ATC. This project will be published in the local newspaper, Modesto Bee, for public review and comment. The public comment period will last 30-days from the date of publication. Both COC and public notice will run concurrently.

### **II. APPLICABLE RULES**

District Rule 2201 New and Modified Stationary Source Review Rule (04/21/11)  
District Rule 2410 Prevention of Significant Deterioration (effective 11/26/12)  
District Rule 2520 Federally Mandated Operating Permits (06/21/01)  
District Rule 4001 New Source Performance Standards (04/14/99)  
District Rule 4002 National Emission Standards for Hazardous Air Pollutants (05/20/04)  
District Rule 4101 Visible Emissions (02/17/05)  
District Rule 4102 Nuisance (12/17/92)  
District Rule 4607 Graphic Arts and Paper, Film, Foil and Fabric Coatings (12/18/08)  
District Rule 4663 Organic Solvent Cleaning, Storage, and Disposal (09/20/07)  
CH&SC 41700 Health Risk Assessment  
CH&SC 42301.6 School Notice  
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)

California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

### III. PROJECT LOCATION

This facility is located at 4530 Leckron Road, Modesto in California. The facility is not 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

Except to increase the daily and annual VOC emissions limits, no change to the operating process is proposed. See detail process description in engineering evaluation under project N-1141679.

### V. EQUIPMENT LISTING

No change to any equipment is proposed; and therefore, post-project equipment description is same as the pre-project equipment description.

#### *Pre-Project Equipment Description & Post-Project Equipment Description*

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A HEIDELBERG MODEL XL162-6+LX2 OFFSET LITHOGRAPHIC PRINTING PRESS WITH AN ELECTRICAL HEATER.

### VI. EMISSION CONTROL TECHNOLOGY EVALUATION

No change to the control equipment is proposed under this project. Therefore, no further discussion is required.

### VII. GENERAL CALCULATIONS

#### A. Assumptions

- Assumption will be stated as each is made.

#### B. Emission Factors

##### **Pre-Project Emission Factors (EF1) & Post-Project Emission Factors (EF2)**

The VOC emissions from this operation will be determined based on the VOC content of the materials and their respective usages; and therefore, a separate emission factor will not be listed on the permit.

#### C. Potential to Emit (PE) Calculations

##### 1. Daily and Annual PE

**Pre-Project Potential to Emit (PE1)**

The daily and annual VOC emission limits are taken from the current permit and summarized in the following table:

Pollutant	Daily PE1 (lb/day)	Annual PE1 (lb/year)
VOC	30.2	7,174

**Post-Project Potential to Emit (PE2)**

The applicant proposed to increase the daily and annual VOC emissions to 150 lb-VOC/day and 19,500 lb-VOC/year, respectively. The post-project potential to emit is summarized in the following table:

Pollutant	Daily PE2 (lb/day)	Annual PE2 (lb/year)
VOC	150	19,500

In addition, the facility currently has a SLC of 73,403 lb-VOC/year for the entire facility, and the applicant is not proposing any changes to this limit.

**2. Quarterly Net Emissions Change**

The Quarterly Net Emissions Changes (QNEC) is calculated for each pollutant, for each unit, as the difference between the quarterly PE2 and the quarterly baseline emissions (BE). The annual emissions are evenly distributed throughout each quarter using the following equation:

$$QNEC \text{ (lb/quarter)} = [\text{Annual PE2} - \text{Annual PE1}] \text{ (lb/year)} / 4 \text{ (quarter/year)}$$

No changes to the SLC of VOC for the entire facility are proposed. Therefore, QNEC is equal to zero for each quarter for this permit unit.

**3. Adjusted increase in Permitted Emissions (AIPE)**

AIPE is used to determine if Best Available Control Technology (BACT) is required for emission units that are being modified. AIPE shall be calculated utilize equations listed in this Rule Section 4.3 and 4.4 as follows:

$$AIPE = PE2 - HAPE$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, pounds per day

PE2 = the emissions units post project Potential to Emit, pounds per day

HAPE = the emissions unit's Historically Adjusted Potential to Emit, pounds per day

$$HAPE = PE1 \times (EF2/EF1)$$

Where,

PE1 = the emissions unit's Potential to Emit prior to modification or relocation

EF2 = the emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1.  
EF1 = the emissions unit's permitted emission factor for the pollutant before the modification or relocation.

Then,  $AIPE = PE2 - [PE1 \times (EF2/EF1)]$

Permit Unit	Daily PE2 (lb/day)	Daily PE1 (lb/day)	EF2 <sup>1</sup> (lb-VOC/gal)	EF1 <sup>1</sup> (lb-VOC/gal)	AIPE (lb/day)
N-3606-32-1	150	30.2	2.5	2.5	119.8

#### D. Facility Emissions

##### 1. 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. SSPE1 values are taken from engineering evaluation under project N-1142841.

Permit Number	Pollutants (lb/yr)					
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC	
N-3606-3-7	0	0	0	0	73,403	
N-3606-4-6	0	0	183	0		
N-3606-11-9	0	0	0	0		
N-3606-13-7	0	0	0	0		
N-3606-14-7	0	0	0	0		
N-3606-15-7	0	0	0	0		
N-3606-16-7	0	0	0	0		
N-3606-19-5	0	0	0	0		
N-3606-21-5	0	0	0	0		
N-3606-23-6	0	0	0	0		
N-3606-24-5	0	0	0	0		
N-3606-25-3	0	0	0	0		
N-3606-26-6	0	0	0	0		
N-3606-27-4	0	0	0	0		
N-3606-29-1	0	0	0	0		
N-3606-30-1	1,430	509	1,358	6,612		
N-3606-31-2	0	0	0	0		
N-3606-32-0	0	0	0	0		
ERC	0	0	0	0		0
SSPE1	1,430	509	1,541	6,612		73,403

<sup>1</sup> Per current permit N-3606-32-0 and District Rule 4607, the highest VOC content of the inks used shall not exceed 2.5 lb-VOC/gal. In addition, the applicant is not proposing any change to the inks used, so EF2 is equal to EF1.

## 2. 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.

Permit Number	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
N-3606-3-7	0	0	0	0	73,403
N-3606-4-6	0	0	183	0	
N-3606-11-9	0	0	0	0	
N-3606-13-7	0	0	0	0	
N-3606-14-7	0	0	0	0	
N-3606-15-7	0	0	0	0	
N-3606-16-7	0	0	0	0	
N-3606-19-5	0	0	0	0	
N-3606-21-5	0	0	0	0	
N-3606-23-6	0	0	0	0	
N-3606-24-5	0	0	0	0	
N-3606-25-3	0	0	0	0	
N-3606-26-6	0	0	0	0	
N-3606-27-4	0	0	0	0	
N-3606-29-1	0	0	0	0	
N-3606-30-1	1,430	509	1,358	6,612	
N-3606-31-2	0	0	0	0	
<b>ATC N-3606-32-1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
ERC	0	0	0	0	
SSPE2	1,430	509	1,541	6,612	73,403

## 3. Stationary Source Increase in Permitted Emissions (SSIPE)

SSIPE calculations are used to determine if the project triggers public notice pursuant to District Rule 2201. If SSIPE results greater than 20,000 lb/yr for any one pollutant then project requires public notification. At this time, it is District Practice to define the SSIPE as the difference of SSPE2 to SSPE1, and calculated by the following equation:

$$\text{SSIPE (lb/yr)} = \text{SSPE2 (lb/yr)} - \text{SSPE1 (lb/yr)}$$

SSIPE	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
SSPE2	1,430	509	1,541	6,612	73,403
SSPE1	1,430	509	1,541	6,612	73,403
SSIPE	0	0	0	0	0

As shown above, SSIPE is equal to zero for each pollutant.

#### 4. 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 this facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

There are no ERCs listed for this facility.

Rule 2201 Major Source Determination (lb/year)						
	NO <sub>x</sub>	SO <sub>x</sub>	PM10	PM2.5	CO	VOC
SSPE1	1,430	509	1,541	1,541	6,612	73,403
SSPE2	1,430	509	1,541	1,541	6,612	73,403
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source	No	No	No	No	No	Yes

Note: PM2.5 assumed to be equal to PM10

As seen above, 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 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)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase	0.7	36.7	0.3	3.3	0.8	0.8
PSD Major Source Thresholds	250	250	250	250	250	250
Existing PSD Major Source ? (Y/N)	N	N	N	N	N	N

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

#### 5. 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

The following table shows the applicable BACT guideline number, the Achieved-in-Practice BACT requirement and whether or not the unit is a Clean Emission Unit (Achieved-in-Practice BACT was met).

Permit	Description	BACT Guideline	Achieved-in-Practice BACT Requirement	Permit Limit	Clean Emission Unit
N-3306-3-7 N-3306-11-9 N-3306-19-5 N-3306-21-5 N-3306-25-3 N-3306-27-4 N-3306-31-2	Corrugated Box/Board Manufacturing	4.9.12	Adhesive with 0.44 lb VOC/gal or less	VOC = 0.021 lb/gal VOC = 0.021 lb/gal VOC = 0.021 lb/gal VOC = 0.021 lb/gal VOC = 0.021 lb/gal VOC = 0.021 lb/gal VOC = 0.015 lb/gal	Yes Yes Yes Yes Yes Yes Yes
N-3306-4-6	Corrugated Board Manufacturing	4.9.12	Adhesive with 0.44 lb VOC/gal or less	VOC = 0.021 lb/gal	Yes
	And Corrugated Board Laminating	4.11.3	Adhesive with 0.021 lb VOC/gal or less	VOC = 0.021 lb/gal	
N-3306-13-7 N-3306-14-7 N-3306-15-7	Flexographic Printer (low-end graphics)	4.7.15	Ink with 0.3 lb VOC/gal or less	VOC = 0.3 lb/gal	Yes Yes Yes
	And Gluer	4.9.12	Adhesive with 0.44 lb VOC/gal or less	VOC = 0.021 lb/gal	
N-3306-16-7 N-3306-23-6 N-3306-26-6 N-3306-32-0	Offset lithographic printing operations	4.7.2	Inks: <5% by wt. or 30% by weight for high end graphics  Fountain Solution: <5% by vol. for coldest offset lithographic and sheet-fed lithographic greater than 11 x 17 inches Or 8% by volume for high end graphics	Inks with < 5% VOC by wt.  Fountain solutions with < 5% VOC by vol. for high-end graphics and < 5% by vol. for non-high-end graphics	Yes Yes Yes Yes



Permit	Description	BACT Guideline	Achieved-in-Practice BACT Requirement	Permit Limit	Clean Emission Unit
N-3306-24-5	Offset lithographic printing operation	4.7.2	Inks: <5% by wt. or 30% by weight for high end graphics  Fountain Solution: <5% by vol. for coldest offset lithographic and sheet-fed lithographic greater than 11 x 17 inches Or 8% by volume for high end graphics	Inks with < 5% VOC by wt.  < 6% by volume for high-end graphics and <5% by volume for non-high-end graphics	Yes
N-3306-29-1	N/A. This unit does not emit VOC.				
N-3306-30-1	Boiler	--	Use of natural gas with LPG or propane as back fuel	Requires the use of natural gas	Yes

**6. 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."

As shown in Section VII.D.4 of this document, this facility is an existing Major Source for VOC emissions. Therefore, the project's PE2 is compared to the SB 288 Major Modification Thresholds in order to determine if the SB 288 Major Modification calculation is required.

As shown in Section VII.C.1 of this document, the PE2 for this project itself is equal to 19,500 pounds of VOC per year.

SB 288 Major Modification Thresholds (Existing Major Source)			
Pollutant	Project's PE (lb/year)	Thresholds (lb/year)	SB 288 Major Modification Calculation Required?
VOC	19,500	50,000	No

As indicate above, the SB 288 Major Modification Threshold for VOC is not surpassed with this project, this project does not constitute an SB 288 Major Modification and further analysis is required.

## 7. 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.

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.

For existing emissions units, the increase in emissions is calculated as follows.

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

Where: PAE = Projected Actual Emissions, and  
BAE = Baseline Actual Emissions  
UBC = Unused baseline capacity

The equipment associated with this project emits only VOC and a detailed PAE are not provided, assuming the worst-case operating scenario, the PAE is equal to the PE2 for the modified unit.

Pursuant to 40 CFR, Part 51, Subpart I, Review of New Sources and Modifications, §51.165 (a)(1)(xxxv)(C) states for a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and therefore, for all other purposes, shall equal to the unit's potential to emit.

40 CFR, Part 51, Subpart I, §51.165 (a)(1)(vii)(A) defines new emissions unit is any emissions unit which is (or will be) newly constructed and which has existed for less than 2 years from the date such emissions unit first operated.

This permit unit, N-3606-32 was first implemented on April 13, 2015, and per information provided by the applicant, the facility started operating this equipment in July 2015, which is considered a new emissions unit, so the BAE is equal to the pre-project potential to emit of 7,174 pounds of VOC per year. There is no unused baseline capacity for this permit unit. Therefore,

$$\begin{aligned} \text{Emission Increase} &= \text{PAE} - \text{BAE} - \text{UBC} = \text{PE2} - \text{PE1} \\ &= [19,500 - 7,174] \text{ (lb-VOC/year)} \\ &= 12,326 \text{ lb-VOC/year} \end{aligned}$$

As calculated above, the emission increase from this project is equal to 12,326 pounds VOC per year, and is compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emissions Increases			
Pollutant	Total Emissions Increase (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NOx	0	0	No
VOC	12,326	0	Yes
PM10	0	30,000	No
PM2.5	0	20,000	No
SOx	0	80,000	No

Since there is an increase of VOC emissions, this project constitutes a Federal Major Modification and no further analysis is required.

#### 8. 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 are: (See 52.21 (b) (23) definition of significant).

As determined in Section VII.D.4 of this document, this facility is not an existing PSD Major Source. Therefore, the project potential to emit from the new and modified units is compared to the PSD major source thresholds to determine if the project is subject to the requirements of Rule 2410.

The equipment associated with this project emits only VOC, and as shown in Section VII.C.1 of this document, the potential emission from the modified unit is calculated to 19,500 lb-VOC/year (equivalent to 9.75 ton-VOC/year).

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). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Total PE from the modified unit	0	9.75	0	0	0	0
PSD Major Source Thresholds	250	250	250	250	250	250
New PSD Major Source ? (Y/N)	N	N	N	N	N	N

As shown in the table above, the project potential to emit for the project, by itself, does not exceed any PSD Major Source thresholds. Therefore Rule 2410 is not applicable and no further discussion is required.

## VIII.COMPLIANCE

### District Rule 2201 New and Modified Stationary Source Review Rule

#### 1. Best Available Control Technology (BACT)

##### A. BACT Applicability

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

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

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

As discussed in Section I of this document, the facility is proposing to modify the existing graphic arts printing operation. Additionally, as determined in Section VII.D.7 of this document, this project constitutes a Federal Major Modification. Therefore, BACT is triggered and required for the modified unit.

##### B. BACT Guideline

BACT Guideline 4.7.2, which appears in Appendix III of this document, covers offset lithographic printing with non-heat set press.

##### C. Top Down BACT Analysis

Per District Policy APR 1305, Section IX, "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 for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

The "Top-Down BACT Analysis" for VOC emissions is performed in Appendix III of this document. According to this analysis, BACT is satisfied with:

VOC: Using materials with the following VOC contents:

- Inks: less than 5% VOC by weight (less water and exempt compounds) or less than 30% VOC by weight (less water and exempt compounds) for high end graphics

- Fountain Solutions: less than 5% by volume for coldest web offset lithographic, less than 5% by volume for sheet-fed offset lithographic with maximum sheet size greater than 11 x 17 inches, and less than 8% by volume for high end graphics

The proposed operation meets the above requirements. Therefore, BACT is satisfied for VOC emissions.

## 2. Offsets

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to 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 <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
SSPE2	1,430	509	1,541	6,612	73,403
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offset Triggered?	No	No	No	No	Yes

As discussed in Section VII.D.4 of this document, 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) =  $(\Sigma[PE2 - BE] + ICCE) \times DOR$ , 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

There are no increases in Cargo Carrier emissions as a result of this project, and the proposed modified emission unit is located in the same stationary source, which result DOR = 1.0. Then,

$$\text{Emission offset} = \Sigma (\text{PE2} - \text{BE}) \times 1.0 + 0 = \Sigma (\text{PE2} - \text{BE})$$

Pursuant to District Policy APR 1420, *NSR Calculations for Units with Specific Limiting Conditions (3/12/07)*, the quantity of ERCs for a project will be determined by comparing the post project PE, which is the SLC, to the pre project BE, the existing SLC.

Additionally, the policy states that if the SLC is for a pollutant exceeding the Major Source threshold and any single unit under the SLC is not a Highly-Utilized, Fully-Offset, or Clean Emissions Units, then the sum of the actual emissions from all units in SLC will be used to determine the pre project BE.

As shown in Section VII.D.5 of this document, all permit units at this facility meet the District's determination of achieved-in-practice BACT (and are thus Clean Emission Units). Therefore the pre project BE emissions are equal to the pre project PE emissions ( $\text{BE}_{\text{SLC}} = \text{PE1}_{\text{SLC}}$ ).

Based on the information above, the emissions increase to be offset for this project should be calculated as follows:

$$\text{Emissions Increase (lb/year)} = \text{PE2}_{\text{SLC}} - \text{BE}_{\text{SLC}}$$

Where:

$\text{PE2}_{\text{SLC}}$  = Post project SLC selected by the facility. In this project,  $\text{PE2}_{\text{SLC}} = \text{PE1}_{\text{SLC}}$ .

$\text{BE}_{\text{SLC}} = 73,403 \text{ lb-VOC/yr}$

Therefore,

$$\begin{aligned} \text{Emissions Increase (lb/year)} &= \text{PE2}_{\text{SLC}} - \text{BE}_{\text{SLC}} \\ &= 73,403 \text{ lb-VOC/yr} - 73,403 \text{ lb-VOC/yr} \\ &= 0 \text{ lb-VOC/yr} \end{aligned}$$

As indicated above, offsets are not required for this project.

### 3. Public Notification

District Rule 2201 requires a public notification for the affected pollutants from the following types of projects:

#### a. New Major Source, Federal Major Modification, and SB 288 Major Modification

As demonstrated in Section VII.D.7, this project constitutes Federal Major Modification. Therefore, public noticing for Federal Major Modification purpose is required.

**b. Any new emission unit with PE > 100 lb/day for any one pollutant**

There is no new emissions unit associated with this project. Therefore, public noticing for this purpose is not required.

**c. Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis**

The proposed project does not result in SSPE from below offset threshold level to above offset threshold level for any one pollutant. Therefore, public noticing for this purpose is not required.

**d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant**

The proposed project does not result in SSIPE exceeding 20,000 lb/year for any one pollutant. Therefore, public noticing for this purpose is not required.

**e. Title V Significant Permit Modification**

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

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

**4. 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. Therefore, the following conditions will be listed on each permit:

- *VOC emissions from this unit shall not exceed 150.0 pounds in any one day. [District Rule 2201]*
- *VOC emissions from this unit shall not exceed 19,500 pounds on a rolling 12-month basis. [District Rule 2201]*
- *The facility-wide VOC emissions shall not exceed 73,403 pounds on a rolling 12-month basis. [District Rule 2201]*

- *The VOC content of the fountain solutions used shall not exceed 5.0% by volume. [District Rules 2201 and 4607]*
- *The VOC content of inks used for non-high-end graphics shall not exceed 2.5 lb/gal or 5% by weight, whichever is less. The VOC content of inks used for high-end graphics shall not exceed 2.5 lb/gal or 30% by weight, whichever is less. [District Rules 2201 and 4607]*

## **5. Compliance Assurance**

### **a. Source Testing**

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

### **b. Monitoring**

No monitoring is required to demonstrate compliance with Rule 2201.

### **c. Recordkeeping**

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. The permittee is required to keep the daily and cumulative annual VOC emissions due to the ink usages. In addition, as required by District Rule 4607, *Graphic Arts*, this printing press is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4607, will be discussed in Section VIII, *District Rule 4607*, of this document.

### **d. Reporting**

No reporting is required to ensure compliance with Rule 2201.

## **6. Ambient Air Quality Analysis**

Per Section 4.14 of Rule 2201, ambient air quality analysis (AAQA) shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse the violation of an Ambient Air Quality Standard (AAQS).

This project involves only VOCs for which AAQS does not exist; therefore, AAQA is not performed for this project.

## **7. Compliance Certification**

Rule 2201 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 VII.D.7 of this document, this project constitutes a Federal Major Modification. Therefore, compliance certification is required, and a copy of compliance certification from the facility is included in Appendix IV of this document.

### **8. Alternative Siting Analysis**

The current project occurs at an existing facility. The applicant proposes to increase only the VOC emissions limits for one of the printing presses in the facility.

Since the current project involves only increase the VOC emissions limits for one of the printing presses and no change to any other facets of the operation, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures and facilities on a much greater scale, and would therefore result in a much greater impact.

Compliance with the requirements of this Rule is expected.

### **District Rule 2410 Prevention of Significant Deterioration**

The provisions of this rule shall apply to any source and the owner or operator of any source subject to any requirements under Title 40 Code of Federal Regulations (40 CFR) Part 52.21 as incorporated into this rule.

As demonstrated in Section VII.D.8 of this document, the proposed project is not subject to the requirements of Rule 2410; therefore no further discussion is required.

### **District Rule 2520 Federally Mandated Operating Permits**

PSC is a Major Source for VOC emissions, and is operating under Title V permit. Therefore, this facility is subjected to the requirements of this rule.

As discussed in Section VII.D.7 of this document, the proposed project triggers Federal Major Modification and therefore, is a Significant Modification to their Title V operating permit. The applicant has applied for a Certificated of Conformity (COC). Therefore, the following conditions will be listed on each permit:

- *{1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule]*
- *{1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]*

In accordance with Rule 2520, the application meets the procedural requirements of Section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permit (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix IV of this document)

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change. PSC is expected to notify the District by filing an administrative amendment application upon implementing the ATC.

Therefore, compliance with the requirements of this Rule is expected.

**District Rule 4001 *New Source Performance Standards – 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 modified unit, the offset lithographic printing press, is not a rotogravure press; and therefore, this subpart does not apply and no further discussion is required.

**District Rule 4002 *National Emission Standards for Hazardous Air Pollutants – 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.

The proposed modified unit, the offset lithographic printing press, is not a publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing press; and therefore, this subpart does not apply and no further discussion is required.

**District Rule 4101 *Visible Emissions***

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity. To ensure

continuous compliance with the requirement of this Rule, the following condition will be listed on the permit:

- {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]

#### District Rule 4102 Nuisance

Section 4.0 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. To ensure compliance with the requirement of this Rule, the following condition will be listed on the permit:

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

#### California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources 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 one. According to the Technical Services Memo for this project (**Appendix V**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project. Per the health risk assessment results, the cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
N-3606-32-1	N/A <sup>2</sup>	No

#### District 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.

Except to increase the daily and annual VOC emission limits for one of the cold set lithographic printing presses, the applicant is not proposing any changes to the inks,

<sup>2</sup> Per Technical Services Memo, the maximum individual cancer risk was not calculated since there are no risk factors associated with any of the Hazardous Air Pollutants (HAPs) in this analysis.

coatings, solvents, and fountain solutions used, application methods, as well as operating procedures and work practices. Therefore, continuous compliance with the requirements of this rule is expected, and the following conditions will be listed on the permit to ensure continuous compliance.

- *The VOC content of inks used for non-high-end graphics shall not exceed 2.5 lb/gal or 5% by weight, whichever is less. The VOC content of inks used for high-end graphics shall not exceed 2.5 lb/gal or 30% by weight, whichever is less. [District Rules 2201 and 4607]*
- *The VOC content of the fountains solutions used shall not exceed 5.0% by volume. [District Rules 2201 and 4607]*
- *The VOC content of solvents utilized shall comply with Table 7 of 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: (1) wipe cleaning; or (2) application of solvent from hand-held spray bottles from which solvents are dispensed without a propellant-induced force; or (3) non-atomized solvent flow method in which the cleaning solvent is collected in a container or a collection system which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or (4) solvent flushing method in which the cleaning solvent is discharged into a container that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure, or by pumping. [District Rule 4607]*
- *The operator 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 Rules 4607 and 4663]*
- *Graphic arts materials shall be used in accordance with the manufacturer's instructions. [District Rule 4607]*
- *The operator shall record, on a monthly basis, the type and amount of all inks used according to one of the following methods; (1) group the quantity of all inks used and identify the maximum VOC content and use the maximum density of 1,010 g/l (8.44 lb/gal), (2) report process inks and pantone inks separately and use specific VOC content and density values for each process ink, and the highest VOC content and the maximum density of 1,010 g/l (8.44 lb/gal) for pantone inks or, (3) report process inks and pantone inks separately and use the maximum VOC content and minimum density value for both process and pantone inks, or use the density of 1,010 g/l (8.44 lb/gal) for pantone inks or, (4) itemize each ink and pantone ink and use the specific VOC content and density value for each. [District Rule 4607]*

- *The operator shall record, on a monthly basis, the type and amount of each coating, adhesive, wash primer and solvent (including cleaning solvents) used. [District Rule 4607]*
- *The operator shall record, on a monthly basis, the type, amount and percent VOC by volume of each fountain solution used. [District Rule 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, 4607 and 4663]*

Compliance with District Rule 4607 requirements is expected.

### **District Rule 4663 Organic Solvent Cleaning, Storage, and Disposal**

The purpose of this rule is to limit the emissions of volatile organic compounds (VOCs) from organic solvent cleaning and from the storage and disposal of solvents and waste solvent materials.

Except to increase the daily and annual VOC emission limits for one of the cold set lithographic printing presses, the applicant is not proposing any changes to the cleaning solvents used, the cleaning methods, the storage and disposal of solvents and waste solvent materials, as well as the work practices. Therefore, continuous compliance with the requirements of this rule is expected, and the following conditions will be listed on the permit to ensure continuous compliance.

- *The operator 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 Rules 4607 and 4663]*
- *The operator shall maintain a current list of solvents that are in use at the stationary source. The list shall include the following information: (1) the name of the solvent and its manufacturer; (2) the VOC content of each solvent expressed in grams/liter or lb/gal; (3) when the solvent is a mixture of different materials that are blended by the operator, the mix ratio of the batch shall be recorded and the VOC content of the batch shall be calculated and recorded in order to determine compliance with the specified limits of VOC content, as applied; (4) the type of cleaning activity for each solvent that is being used at the stationary source in accordance with the applicable cleaning category specified in Table 1 of this rule; (5) the daily quantity of solvents used in solvent cleaning operations. [District Rule 4663]*
- *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, 4607 and 4663]*

### **California Health & Safety Code 42301.6 (School Notice)**

As discussed in Section III of this document, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

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

**IX. RECOMMENDATION**

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct permit N-3606-32-1 subject to the permit conditions on the attached draft Authority to Construct in Appendix I.

**X. BILLING INFORMATION**

Annual Permit Fees				
Permit Number	Previous Fee Schedule	Fee Schedule	Fee Description	Annual Fee
N-3606-32-1	3020-01-D	3020-01-D (100 or Greater but less Than 200 hp)	160.9 hp	\$ 330

**APPENDICES**

- Appendix I: Draft Authority to Construct (ATC)*
- Appendix II: Existing Permit to Operate (PTO)*
- Appendix III: BACT Guideline & Top-Down BACT Analysis*
- Appendix IV: Compliance Certification*
- Appendix V: RMR Summary*

## **APPENDIX I**

Draft Authority to Construct (ATC)



San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

PERMIT NO: N-3606-32-1

LEGAL OWNER OR OPERATOR: PACIFIC SOUTHWEST CONTAINER  
MAILING ADDRESS: ATTN: SR VICE PRESIDENT OF QUALITY & ENVIRONMENTAL MNGT  
4530 LECKRON RD  
MODESTO, CA 95357

LOCATION: 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A HEIDELBERG MODEL XL162-6+LX2 OFFSET LITHOGRAPHIC PRINTING PRESS WITH AN ELECTRICAL HEATER; INCREASE DAILY AND 12-MONTH ROLLING VOC EMISSION LIMITS FOR THIS PERMIT UNIT TO 150.0 POUNDS PER DAY AND 19,500 POUNDS PER 12-MONTH ROLLING PERIOD RESPECTIVELY

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. 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] Federally Enforceable Through Title V Permit
5. The VOC emissions from this unit shall not exceed 150.0 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The VOC emissions from this unit shall not exceed 19,500 pounds on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjolle, Director of Permit Services

N-3606-32-1 Doc 8/2015 9:20AM - 60W Joint Inspection NOT Required

7. The facility-wide VOC emissions, on a rolling 12-month basis, shall not exceed 73,403 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The VOC content of the fountain solutions used shall not exceed 5.0% by volume. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
9. The VOC content of inks used for non-high-end graphics shall not exceed 2.5 lb/gal or 5% by weight, which ever is less. The VOC content of inks used for high-end graphics shall not exceed 2.5 lb/gal or 30% by weight, which ever is less. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
10. The VOC content of solvents utilized shall comply with Table 7 of 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: (1) wipe cleaning; or (2) application of solvent from hand-held spray bottles from which solvents are dispensed without a propellant-induced force; or (3) non-atomized solvent flow method in which the cleaning solvent is collected in a container or a collection system which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or (4) solvent flushing method in which the cleaning solvent is discharged into a container that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure, or by pumping. [District Rule 4607] Federally Enforceable Through Title V Permit
11. The operator 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 Rules 4607 and 4663] Federally Enforceable Through Title V Permit
12. Graphic arts materials shall be used in accordance with the manufacturer's instructions. [District Rule 4607] Federally Enforceable Through Title V Permit
13. The operator shall maintain a current list of solvents that are in use at the stationary source. The list shall include the following information: (1) the name of the solvent and its manufacturer; (2) the VOC content of each solvent expressed in grams/liter or lb/gal; (3) when the solvent is a mixture of different materials that are blended by the operator, the mix ratio of the batch shall be recorded and the VOC content of the batch shall be calculated and recorded in order to determine compliance with the specified limits of VOC content, as applied; (4) the type of cleaning activity for each solvent that is being used at the stationary source in accordance with the applicable cleaning category specified in Table 1 of this rule; (5) the daily quantity of solvents used in solvent cleaning operations. [District Rule 4663] Federally Enforceable Through Title V Permit
14. The operator shall record, on a monthly basis, the type and amount of all inks used according to one of the following methods; (1) group the quantity of all inks used and identify the maximum VOC content and use the maximum density of 1,010 g/l (8.44 lb/gal), (2) report process inks and pantone inks separately and use specific VOC content and density values for each process ink, and the highest VOC content and the maximum density of 1,010 g/l (8.44 lb/gal) for pantone inks or, (3) report process inks and pantone inks separately and use the maximum VOC content and minimum density value for both process and pantone inks, or use the density of 1,010 g/l (8.44 lb/gal) for pantone inks or, (4) itemize each ink and pantone ink and use the specific VOC content and density value for each. [District Rule 4607] Federally Enforceable Through Title V Permit
15. The operator shall record, on a monthly basis, the type and amount of each coating, adhesive, wash primer and solvent (including cleaning solvents) used. [District Rule 4607] Federally Enforceable Through Title V Permit
16. The operator shall record, on a monthly basis, the type, amount and percent VOC by volume of each fountain solution used. [District Rule 4607] Federally Enforceable Through Title V Permit
17. A record of the daily VOC emissions from this unit shall be kept. The daily VOC emissions may be calculated from the monthly material usage (inks, coatings, solvents, etc.) records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
18. A record of the VOC emissions from this unit, on a rolling 12-month basis, shall be kept. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. A record of the facility-wide VOC emissions, on a rolling 12-month basis, shall be kept. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. 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, 4607 and 4663] Federally Enforceable Through Title V Permit

**DRAFT**

## **APPENDIX II**

Existing Permit to Operate (PTO)

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-3606-32-0

EXPIRATION DATE: 04/30/2019

## EQUIPMENT DESCRIPTION:

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A HEIDELBERG MODEL XL162-6+LX2 OFFSET LITHOGRAPHIC PRINTING PRESS WITH AN ELECTRICAL HEATER.

## PERMIT UNIT REQUIREMENTS

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. 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] Federally Enforceable Through Title V Permit
3. The VOC emissions from this unit shall not exceed 30.2 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The VOC emissions from this unit shall not exceed 7,174 pounds on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The facility-wide VOC emissions, on a rolling 12-month basis, shall not exceed 73,403 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The VOC content of the fountain solutions used shall not exceed 5.0% by volume. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
7. The VOC content of inks used for non-high-end graphics shall not exceed 2.5 lb/gal or 5% by weight, which ever is less. The VOC content of inks used for high-end graphics shall not exceed 2.5 lb/gal or 30% by weight, which ever is less. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
8. The VOC content of solvents utilized shall comply with table 7 of 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: (1) wipe cleaning; or (2) application of solvent from hand-held spray bottles from which solvents are dispensed without a propellant-induced force; or (3) non-atomized solvent flow method in which the cleaning solvent is collected in a container or a collection system which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or (4) solvent flushing method in which the cleaning solvent is discharged into a container that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure, or by pumping. [District Rule 4707] Federally Enforceable Through Title V Permit
9. The operator 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 Rules 4607 and 4663] Federally Enforceable Through Title V Permit
10. Graphic arts materials shall be used in accordance with the manufacturer's instructions. [District Rule 4607] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The operator shall maintain a current list of solvents that are in use at the stationary source. The list shall include the following information: (1) the name of the solvent and its manufacturer; (2) the VOC content of each solvent expressed in grams/liter or lb/gal; (3) when the solvent is a mixture of different materials that are blended by the operator, the mix ratio of the batch shall be recorded and the VOC content of the batch shall be calculated and recorded in order to determine compliance with the specified limits of VOC content, as applied; (4) the type of cleaning activity for each solvent that is being used at the stationary source in accordance with the applicable cleaning category specified in Table 1 of this rule; (5) the daily quantity of solvents used in solvent cleaning operations. [District Rule 4663] Federally Enforceable Through Title V Permit
12. The operator shall record, on a monthly basis, the type and amount of all inks used according to one of the following methods; (1) group the quantity of all inks used and identify the maximum VOC content and use the maximum density of 1,010 g/l (8.44 lb/gal), (2) report process inks and pantone inks separately and use specific VOC content and density values for each process ink, and the highest VOC content and the maximum density of 1,010 g/l (8.44 lb/gal) for pantone inks or, (3) report process inks and pantone inks separately and use the maximum VOC content and minimum density value for both process and pantone inks, or use the density of 1,010 g/l (8.44 lb/gal) for pantone inks or, (4) itemize each ink and pantone ink and use the specific VOC content and density value for each. [District Rule 4607] Federally Enforceable Through Title V Permit
13. The operator shall record, on a monthly basis, the type and amount of each coating, adhesive, wash primer and solvent (including cleaning solvents) used. [District Rule 4607] Federally Enforceable Through Title V Permit
14. The operator shall record, on a monthly basis, the type, amount and percent VOC by volume of each fountain solution used. [District Rule 4607] Federally Enforceable Through Title V Permit
15. A record of the daily VOC emissions from this unit shall be kept. The daily VOC emissions may be calculated from the monthly material usage (inks, coatings, solvents, etc.) records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
16. A record of the VOC emissions from this unit, on a rolling 12-month basis, shall be kept. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A record of the facility-wide VOC emissions, on a rolling 12-month basis, shall be kept. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
18. 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, 4607 and 4663] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

## **APPENDIX III**

### **BACT Guideline & Top-Down BACT Analysis**

San Joaquin Valley  
Unified Air Pollution Control District

**Best Available Control Technology (BACT) Guideline 4.7.2\***

Last Update: 10/15/2010

**Offset Lithographic Printing - Non-heat Set Press**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	<p>Using materials with the following VOC contents:</p> <p>Inks: less than 5% VOC by weight (less water and exempt compounds) or less than 30% VOC by weight (less water and exempt compounds) for high end graphics</p> <p>Fountain Solutions: less than 5% by volume for coldset web offset lithographic, less than 5% by volume for sheet-fed offset lithographic with maximum sheet size greater than 11x17 inches, and less than 8% by volume for high end graphics</p>	<p>VOC capture and incineration; or</p> <p>VOC capture and carbon adsorption and using materials with the following VOC contents:</p> <p>- Inks: less than 5% VOC by weight (less water and exempt compounds) or less than 30% VOC by weight (less water and exempt compounds) for high end graphics</p> <p>- Fountain Solutions: less than 5% by volume for coldset web offset lithographics, less than 5% by volume for sheet-fed offset lithographic with maximum sheet size greater than 11x17 inches, and less than 8% by volume for high end graphics</p>	

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**



# Top-Down BACT Analysis for VOC emissions

The following VOC emission control technologies are listed in BACT guideline 4.7.2, Offset Lithographic Printing – Non-heat Set Press:

## Step 1 - Identify all control technologies

### Achieved in Practice or contained in the SIP:

- Use materials with the following VOC contents:
  - Inks: <5% VOC by weight (less water and exempt compounds) or <30% VOC by weight. (less water and exempt compounds) for high end graphics
  - Fountain Solutions: <5% VOC by volume for coldest web offset lithographic, <5% VOC by volume for sheet-fed offset lithographic with maximum sheet size greater than 11 x17 inches, and <8% VOC by volume for high end graphics

### Technologically Feasible:

- VOC capture and incineration
- VOC capture and carbon absorption

### 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 carbon absorption (95% overall capture and control)
3. Use materials with the following VOC contents:
  - Inks: <5% VOC by weight (less water and exempt compounds) or <30% VOC by weight. (less water and exempt compounds) for high end graphics
  - Fountain Solutions: <5% VOC by volume for coldest web offset lithographic, <5% VOC by volume for sheet-fed offset lithographic with maximum sheet size greater than 11 x17 inches, and <8% VOC by volume for high end graphics

## Step 4 - Cost Effectiveness Analysis

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

### Uncontrolled VOC emission from the operation:

The uncontrolled VOC emission from the proposed operation is 19,500 lb-VOC per year (equivalent to 9.75 ton-VOC per year).

For the 1<sup>st</sup> most effective control option, with VOC capture and incineration (98% overall capture & control)

#### Equipment Cost

The minimum airflow rate to the RTO would be 6,400 cfm<sup>3</sup>. The cost of the RTO is estimated to be \$276,087<sup>4</sup>. This price does not include sales tax, freight expenses, operational and maintenance costs, site preparation, etc.

The printing press must be enclosed to capture 100% of the VOC emissions. This enclosure is estimated to cost \$100,000<sup>5</sup>.

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, page 42; OAQPS numbers are based on 1999 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.

<u>Cost Item</u>	<u>Cost, \$</u>
<b>Direct Costs</b>	
Purchased equipment costs	
RTO cost, A	276,087
Sales tax, Modesto, 7.625%A	21,052
Freight, 0.05A	13,804
Purchased equipment cost, B	<u>\$310,943</u>
Direct installation costs	
Foundations & supports, 0.08B	24,875
Handling & erection, 0.14B	43,532
Electrical, 0.04B	12,438
Piping, 0.02B	6,219
Insulation for duct work, 0.01B	3,109
Painting, 0.01B	3,109
Direct installation costs	<u>\$93,282</u>
Site preparation	--
Buildings (Enclosure)	<u>100,000</u>
<b>Total Direct</b>	<u>\$504,225</u>

<sup>3</sup> The airflow rate for electric heater blower is 6,357 cfm per application under project N-1141679. Therefore, RTO is presumed to be designed to handle at least 6,400 cfm.

<sup>4</sup> 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 6,400 cfm is \$245,300 (2011 dollar). Using 3% inflation over the past four years, the cost of an RTO in 2015 dollars is estimated to be \$276,087 [ $245,300 \times (1+0.03)^4$ ]. Note that this cost does not include any taxes, freight or installation expenses.

<sup>5</sup> Enclosure cost taken from the application review under project N-1141679 for the same printing press.

**Indirect Costs (installation)**

Engineering, 0.1B	31,094
Construction & field expenses, 0.05B	15,547
Contractor fees, 0.1B	31,094
Start-up, 0.02B	6,219
<sup>6</sup> Performance test, 0.01B	—
Contingencies, 0.03B	9,328
<b>Total Indirect Costs</b>	<b>\$93,282</b>

<b>Total Capital Investment (TCI)</b>	<b>\$597,507</b>
---------------------------------------	------------------

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

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

Therefore,

$$\text{Annualized Capital Investment} = \$597,507 \times 0.163 = \mathbf{\$97,394/\text{year}}$$

Fuel Cost

$$\text{Fuel Cost} = \{[(Q \times C_{p\text{Air}} \times \Delta T \times (1-\text{HR}) \times O) - \{\text{VOC} \times \text{HC}\}]\}(\text{Natural gas cost})$$

Where,

Q: Airflow rate 6,400 CFM

$C_{p\text{Air}}$ : Specific heat of air (0.0194 Btu/scf - °F)

$\Delta T$ : 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 19,500 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: \$7.17/MMBtu (average) for both 2013 and 2014 per U.S. Energy Information Administration<sup>(7)</sup>.

$$\text{Fuel Cost} = \$29,477/\text{yr}$$

Electricity Cost:

$$\text{Power}_{\text{fan}} = \frac{1.17 \times 10^{-4} Q \Delta P}{\epsilon}$$

<sup>6</sup> A performance test price is not included because it would have been required even if a company voluntarily proposes to install an RTO.

<sup>7</sup> <http://tonto.eia.doe.gov/dnav/ng/hist/n3035ca3m.htm>

Where,

$\Delta P$ : Pressure drop across system = 4 in. H<sub>2</sub>O

$\epsilon$ : Efficiency for fan and motor = 0.6

Q: 6,400 cfm

Power<sub>fan</sub> = 5 kW

MID's electric rate schedule GS-3 (General Service industrial) for off-peak are \$0.0526/kWH<sup>8</sup>.

Thus,

Electric cost = (\$0.0526/kWH)(5 kW)(24 hr/day)(365 days/yr)  
= \$2,304/yr

#### Operation and Maintenance Costs

Operator Cost			
Operator	0.5 h/shift	\$20.00/h	\$5,550
Supervisor	15% of operator		\$833
Maintenance Cost			
Labor	0.5 h/shift	\$20.00	\$5,550
Material	100% of labor		\$5,550
Indirect Annual Cost (IC)			
Overhead	60% of Labor Cost		\$3,330
Administrative Charge	2% TCI		\$11,950
Property Taxes	1% TCI		\$5,975
Insurance	1% TCI		\$5,975
Total:			\$44,713

Total Cost = \$97,394/yr + \$29,477/yr + \$2,304/yr + \$44,713/yr  
= \$173,888/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 = 19,500 lb-VOC/year x 1 tons-VOC/2,000 lb-VOC x 0.98  
= 9.555 ton-VOC/year

Cost of VOC reduction is calculated as follow:

Cost of VOC reduction = \$173,888/year ÷ 9.555 ton-VOC/year  
= \$18,199/ton-VOC

Since the calculated cost of VOC reduction exceeds the VOC cost effective threshold of \$17,500/ton. Therefore, this control technology of utilize a RTO is deemed not cost effective and will be removed from consideration at this time. Please note that the equipment cost catalytic 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

<sup>8</sup> [http://www.mid.org/tariffs/rates/GS-3\\_INDUSTRIAL.pdf](http://www.mid.org/tariffs/rates/GS-3_INDUSTRIAL.pdf)

catalytic oxidizer. Therefore, cost analysis for RTO is considered to be representative of catalytic oxidizer technology.

For the 2<sup>nd</sup> effective control option, with VOC capture and carbon adsorption (95% overall capture & control)

#### Annual Operating Costs:

Assuming the carbon would be able to capture 20% of its weight in VOC, the annual carbon requirement would be 97,500 pounds (19,500/0.2).

Per cost estimate provided by Calgon, the cost is \$2.0/lb-carbon. Therefore, the cost of carbon is calculated to:

The cost of carbon = 97,500 lb-carbon/year x \$2.0/lb-carbon = **\$195,000/year**

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

Controlled VOC emissions = 19,500 lb-VOC/yr x 1 tons-VOC/2,000 lb-VOC x 0.95  
= 9.263 ton-VOC/yr

Cost of VOC reduction is calculated as follow:

Cost of VOC reduction = \$195,000/year ÷ 9.263 ton-VOC/year  
= \$21,051/ton-VOC

As demonstrated above, the cost of disposing or replacing the carbon for the carbon adsorption system alone would exceed the VOC cost effectiveness threshold of \$17,500/ton. Therefore, this control technology of utilize a carbon adsorption system is deemed not cost effective and will be removed from consideration at this time.

For the 3<sup>rd</sup> effective control option, Use of inks with a VOC content of <5% VOC by weight (less water and exempt compounds) or <30% VOC by weight (less water and exempt compounds) for high end graphics; and use of fountain solutions with a VOC content of <5% VOC by volume for coldest web offset lithographic, <5% VOC by volume for sheet-fed offset lithographic with maximum sheet size greater than 11 x17 inches, and <8% VOC by volume for high end graphics

The applicant is proposing the use of 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 utilize of inks with a VOC content of <5% VOC by weight (less water and exempt compounds) or <30% VOC by weight (less water and exempt compounds) for high end graphics; and use of fountain solutions with a VOC content of <5% VOC by volume for coldest web offset lithographic, <5% VOC by volume for sheet-fed offset lithographic with maximum sheet size greater than 11 x17 inches, and <8% VOC by volume for high end graphics. Therefore, BACT requirement is satisfied.

**Appendix VI**  
**Compliance Certification**

RECEIVED

AUG 11 2015

SJVAPCD  
NORTHERN REGION

August 11, 2015

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 L.L.C. is pleased to provide this compliance statement regarding its printing press project N-3606-32-0.

All major stationary sources in California owned or operated by Pacific Southwest Container L.L.C., or by any entity controlling, controlled by, or under common control with Pacific Southwest Container L.L.C., 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 L.L.C.- 4530 Leckron Road- Modesto, CA 95357

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 Vice President Quality Engineering & Environmental Mgmt.  
Pacific Southwest Container L.L.C.

**APPENDIX V**

RMR Summary



## San Joaquin Valley Air Pollution Control District Risk Management Review

To: Jag Kahlon – Permit Services  
 From: Yu Vu – Technical Services  
 Date: August 26, 2015  
 Facility Name: Pacific Southwest Container, LLC  
 Location: 4530 Leckron Road, Modesto, CA 95357  
 Application #(s): N-3606-32-1  
 Project #: N-1152765

### A. RMR SUMMARY

RMR Summary			
Categories	Lithographic Printing Press (Unit 32-1)	Project Totals	Facility Totals
Prioritization Score	0.04	>1.0	>1.0
Acute Hazard Index	0.00	0.00	0.01
Chronic Hazard Index	0.00	0.00	0.15
Maximum Individual Cancer Risk (10 <sup>-6</sup> )	N/A <sup>1</sup>	N/A <sup>1</sup>	2.48
T-BACT Required?	No		
Special Permit Conditions?	Yes		

<sup>1</sup>The Maximum Individual Cancer Risk was not calculated since there are no risk factors associated with any of the Hazardous Air Pollutants (HAPs) in this analysis.

### Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

#### Unit # 32-1

1. The VOC emissions from this unit shall not exceed 150 pounds during any one day. [District Rule 2201]
2. The VOC emissions from this unit shall not exceed 19,500 pounds on a rolling 12-month basis. [District Rule 2201]

### B. RMR REPORT

#### I. Project Description

Technical Services received a request on August 17, 2015, to perform a Risk Management Review for a proposed modification to a graphic arts printing operation. The applicant is proposing to increase the daily VOC emission limit for this unit (Unit N-3606-32) from 30.2 lbs to 150 lbs and the annual VOC limit from 7,174 lbs to 19,500 lbs. Although an ambient

air quality analysis (AAQA) is required, the only emissions from this project are VOC emissions, which currently do not have a standard with which to evaluate against. Therefore, an AAQA was not performed for this project.

## II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the total facility prioritization score was greater than one, a refined health risk assessment was required. Per the project engineer, this modification uses the same MSDSs from project N1141679. Therefore, emissions from project N1141679 were used to determine the emissions from this project (see spreadsheet in project folder). The project emissions were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2009-2013 from Modesto to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP) and the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The project was modeled using the exact same parameters found in project N1141679. As in project N1141679, the emissions from this project were evenly distributed amongst all of the volume sources. The parameters used in that project are listed below:

Analysis Parameters Unit 32-1			
VOC Emissions Increase (lb/hr)	4.99	Location Type	Urban
VOC Emissions Increase (lb/yr)	12,326	Closest Receptor (m)	~200
Source Type	Volume	Type of Receptor	Business
# of Openings	5		

Analysis Parameters Opening #1			
Length of Side (m)	6.25	Release Height (m)	2.13
Initial Lateral Dimension (m)	1.45	Initial Vertical Dimension (m)	3.4

Analysis Parameters Opening #2			
Length of Side (m)	8.06	Release Height (m)	2.13
Initial Lateral Dimension (m)	1.88	Initial Vertical Dimension (m)	3.4

Analysis Parameters Opening #3			
Length of Side (m)	9.54	Release Height (m)	2.13
Initial Lateral Dimension (m)	2.22	Initial Vertical Dimension (m)	2.22

<b>Analysis Parameters Opening #4</b>			
<b>Length of Side (m)</b>	9.14	<b>Release Height (m)</b>	2.13
<b>Initial Lateral Dimension (m)</b>	2.13	<b>Initial Vertical Dimension (m)</b>	3.4

<b>Analysis Parameters Opening #5</b>			
<b>Length of Side (m)</b>	7.47	<b>Release Height (m)</b>	2.13
<b>Initial Lateral Dimension (m)</b>	1.74	<b>Initial Vertical Dimension (m)</b>	3.4

### **III. Conclusion**

The acute and chronic indices are below 1.0 and there is no cancer risk associated with the project. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for this proposed unit.

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. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary