



JUN 03 2013

Mr. Mac McCullough  
Pacific Southwest Containers  
4530 Leckron Road  
Modesto, CA 95353

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)**  
**District Facility # N-3606**  
**Project # N-1130130**

Dear Mr. McCullough:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The facility proposes to install a starch receiving and storage operation, one 19.9 MMBtu/hr natural gas-fired boiler, and a corrugated board manufacturing operation served by a cyclone.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates 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 Authorities 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. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
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

**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

**NOTICE OF PRELIMINARY DECISION  
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND  
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY  
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Pacific Southwest Containers at 4530 Leckron Road, Modesto, California. The facility proposes to install a starch receiving and storage operation, one 19.9 MMBtu/hr natural gas-fired boiler, and a corrugated board manufacturing operation served by a cyclone.

The District's analysis of the legal and factual basis for this proposed action, project #N-1130130, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and at any District office. There are no emission increases associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact the District at (559) 230-6000. Written comments on the proposed initial permit must be submitted by July 8, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

# San Joaquin Valley Air Pollution Control District

## Authority to Construct Application Review

New Starch Receiving and Storage Operation, New 19.9 MMBtu/hr Boiler, New Corrugated Board Manufacturing Operation

Facility Name: Pacific Southwest Container

Date: May 30, 2013

Mailing Address: 4530 Leckron Road  
Modesto, CA 95353

Engineer: Stanley Tom

Lead Engineer: Joven Refuerzo

Contact Person: Mac McCullough

Telephone: (209) 526-0444

Application #s: N-3606-3-6, '4-5, '9-7, '11-8, '13-6, '14-6, '15-6, '19-4, '21-4, '23-5, '24-4, '25-2, '26-5, '27-3, '29-0, '30-0, '31-0

Project #: N-1130130

Deemed Complete: March 20, 2013

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### I. Proposal

Pacific Southwest Container prints and manufactures containers and packing materials. The facility has requested Authority to Construct (ATC) permits to install the following new equipment:

- 1) Starch receiving and storage operation (permit N-3606-29-0)
- 2) 19.9 MMBtu/hr natural gas-fired boiler (permit N-3606-30-0)
- 3) Corrugated board manufacturing operation served by a cyclone (permit N-3606-31-0)

The facility is also proposing to remove all existing annual VOC limits on permits N-3606-3, '4, '9, '11, '13, '14, '15, '19, '21, '23, '24, '25, '26, '27 and establish a facility-wide Specific Limiting Condition (SLC) limit for VOC. Individual annual VOC limits will be listed on permits N-3606-9, '11, '13, '14, '15, '16, '23, '24, '26 to enforce the assumptions performed in the BACT analysis.

Pacific Southwest Container has received their Title V Permit. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct permits. Pacific Southwest Container must apply to administratively amend their Title V permit.

### II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
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 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)

Rule 4201 Particulate Matter Concentration (12/17/92)  
Rule 4301 Fuel Burning Equipment (12/17/92)  
Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)  
Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)  
Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)  
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)  
Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (08/21/03)  
Rule 4607 Graphic Arts and Paper, Film, Foil, and Fabric Coatings (12/18/08)  
Rule 4653 Adhesives and Sealants (9/16/10)  
Rule 4801 Sulfur Compounds (12/17/92)  
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 facility is located at 4530 Leckron Road, Modesto, California. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

### **IV. Process Description**

Pacific Southwest Container manufactures corrugated cardboard and corrugated cardboard boxes. The facility first produces corrugated cardboard and then cuts the cardboard into box blanks with die-cutters and applies graphic with lithographic/flexographic printing presses.

In this project, the facility proposes to install a new starch receiving and storage operation, one 19.9 MMBtu/hr natural gas-fired boiler, and one corrugated box manufacturing operation served by a cyclone.

#### **Starch Receiving and Storage Operation (Permit N-3606-29-0)**

Starch will be received via truck and pneumatically loaded into a silo equipped with a bin vent filter.

#### **Boiler (Permit N-3606-30-0)**

The proposed boiler will be used to provide steam to the corrugator system to soften the paper for board manufacturing process.

Corrugated Board Manufacturing Operation (Permit N-3606-31-0)

The corrugator system consists of a set of in-line machines designed to adhere together multiple sheets of paper to form single or double wall corrugated cardboard. Reels of paper are fed into the corrugator, where the paper is conditioned with heat and steam, and fed between large corrugating rollers that give the paper its fluted shape. Starch is applied to the tips of the flutes on one side and the inner liner is glued to the fluting. The corrugated fluting medium with one liner attached to it is called single face web and travels along the machine toward double backer where the single face web meets the outer line and forms corrugated board. The corrugated board is then cut and stacked.

The proposed corrugator is capable of producing double wall corrugated cardboard. Double layer corrugated cardboard is made up of two corrugated layers separated by a center flat layer all between two outer flat layers.

The adhesives for the corrugator will be prepared onsite from various ingredients. A typical batch will consist of water, starch, a liquid resin, borax, and sodium hydroxide. These ingredients are loaded into a mixer in appropriate proportions along with the starch, which is mechanically conveyed from the starch silo to the mixer. Once the mixing process is complete, the adhesive will be pumped into the holding tanks, to be used in the corrugator system.

The facility may operate 24 hours per day, 365 days per year.

**V. Equipment Listing**

Pre-Project Equipment Description

Current Permit #	Pre-Project Equipment Description
N-3606-3-5	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 165/MATIC BOX MAKER
N-3606-4-4	CORRUGATED BOARD MANUFACTURING OPERATION CONSISTING OF AN ASITRADE LAMINATOR SERVED BY A RINGWOOD STARCH MIXING SYSTEM AND A PERMIT EXEMPT STEAM GENERATOR (NATURAL GAS-FIRED, 5.0 MMBTU/HR OR LESS)
N-3606-9-6	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL VARIMAT 127 (7-COLOR) SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS WITH AN INLINE COATER AND AN INFRA-RED DRYING SYSTEM
N-3606-11-7	CORRUGATED BOARD FINISHING OPERATION CONSISTING OF AN AUTOMATAN MODEL 7000 SHEETFED GLUER
N-3606-13-5	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 4-COLOR MARTIN MIDLINE MODEL 924 FLEXOGRAPHIC PRINTER (S/N 6208) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)

N-3606-14-5	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FFG FLEXOGRAPHIC PRINTER (S/N 6506) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)
N-3606-15-5	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FLEXOGRAPHIC PRINTER (S/N 6036) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)
N-3606-16-5	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 6-COLOR KBA RAPIDA MODEL 162 SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 361-264) WITH AN INLINE COATER AND UV DRYER
N-3606-19-3	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 110M II MATIC BOX MAKER (S/N 0349-063-01)
N-3606-21-3	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STAUDE WINDOW MACHINE (S/N WSI-2307)
N-3606-23-4	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL 105 (8 COLOR) SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS WITH AN INLINE COATER AND UV DRYING SYSTEM
N-3606-24-3	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA RAPIDA 6-COLOR 47"X64" FORMAT NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 363-742) WITH AN ANILOX TOWER COATER
N-3606-25-1	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE INTERNATIONAL PAPERBOX MODEL 6FX-154 20" WEB WIDTH FOLDER GLUER
N-3606-26-4	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA MODEL RAPIDA 162A 64" NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 368-24)
N-3606-27-2	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STANDARD MAX 1100 30" WEB WIDTH FOLDER GLUER

Proposed Modification

ATC Permit #	ATC Equipment Description
N-3606-3-6	MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 165/MATIC BOX MAKER: REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT

<p>N-3606-4-5</p>	<p>MODIFICATION OF CORRUGATED BOARD MANUFACTURING OPERATION CONSISTING OF AN ASITRADE LAMINATOR SERVED BY A RINGWOOD STARCH MIXING SYSTEM AND A PERMIT EXEMPT STEAM GENERATOR (NATURAL GAS-FIRED, 5.0 MMBTU/HR OR LESS): REMOVE ANNUAL VOC LIMIT AND ESTABLISH A FACILITY-WIDE VOC LIMIT</p>
<p>N-3606-9-7</p>	<p>MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL VARIMAT 127 (7-COLOR) SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 13112943 AKA P50) WITH AN INLINE COATER AND AN INFRA-RED DRYING SYSTEM: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS AND GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT</p>
<p>N-3606-11-8</p>	<p>MODIFICATION OF CORRUGATED BOARD FINISHING OPERATION CONSISTING OF AN AUTOMATAN MODEL 7000 SHEETFED GLUER: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT</p>
<p>N-3606-13-6</p>	<p>MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 4-COLOR MARTIN MIDLINE MODEL 924 FLEXOGRAPHIC PRINTER (S/N 6208) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT): REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS AND GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT</p>
<p>N-3606-14-6</p>	<p>MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FFG FLEXOGRAPHIC PRINTER (S/N 6506) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT): REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS AND GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT</p>
<p>N-3606-15-6</p>	<p>MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FLEXOGRAPHIC PRINTER (S/N 6036) AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT): REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS AND GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT</p>
<p>N-3606-16-6</p>	<p>MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 6-COLOR KBA RAPIDA MODEL 162 SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 361264 AKA UV64) WITH AN INLINE COATER AND UV DRYER: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS, AND ESTABLISH A FACILITY-WIDE VOC LIMIT</p>

N-3606-19-4	MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 110M II MATIC BOX MAKER (S/N 0349-063-01): REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT
N-3606-21-4	MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STAUDE WINDOW MACHINE (S/N WSI-2307): REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT
N-3606-23-5	MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL 105 (8 COLOR) SHEETFEED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 364565 AKA UV40) WITH AN INLINE COATER AND UV DRYING SYSTEM: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS, AND ESTABLISH A FACILITY-WIDE VOC LIMIT
N-3606-24-4	MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA RAPIDA 6-COLOR 47"X64" FORMAT NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 363742 AKA P64) WITH AN ANILOX TOWER COATER: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL LIMIT FOR PRINTING PRESS, AND ESTABLISH A FACILITY-WIDE VOC LIMIT
N-3606-25-2	MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE INTERNATIONAL PAPERBOX MODEL 6FX-154 20" WEB WIDTH FOLDER GLUER: REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT
N-3606-26-5	MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA MODEL RAPIDA 162A 64" NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 368024 AKA C64): REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS, AND ESTABLISH A FACILITY-WIDE VOC LIMIT
N-3606-27-3	MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STANDARD MAX 1100 30" WEB WIDTH FOLDER GLUER: REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT
N-3606-29-0	STARCH RECEIVING AND STORAGE OPERATION CONSISTING OF 12' DIAMETER AND 42' HIGH SILO WITH CPE FILTER BIN VENT SYSTEM
N-3606-30-0	19.9 MMBTU/HR CLEAVER-BROOKS MODEL CBEX-700-500-200ST BOILER EQUIPPED WITH A CLEAVER-BROOKS MODEL NT INTEGRAL TYPE ULTRA LOW-NOX BURNER
N-3606-31-0	CORRUGATED BOARD MANUFACTURING OPERATION WITH A FOSBER SMART 400-98' CORRUGATOR SYSTEM AND A STARCH CONVEYING AND MIXING SYSTEM

Post-Project Equipment Description

<b>Proposed Permit #</b>	<b>Post-Project Equipment Description</b>
N-3606-3-6	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 165/MATIC BOX MAKER
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N-3606-9-7	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL VARIMAT 127 (7-COLOR) SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 13112943 AKA P50) WITH AN INLINE COATER AND AN INFRA-RED DRYING SYSTEM
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N-3606-13-6	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 4-COLOR MARTIN MIDLINE MODEL 924 FLEXOGRAPHIC PRINTER (S/N 6208) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)
N-3606-14-6	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FFG FLEXOGRAPHIC PRINTER (S/N 6506) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)
N-3606-15-6	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FLEXOGRAPHIC PRINTER (S/N 6036) AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)
N-3606-16-6	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 6-COLOR KBA RAPIDA MODEL 162 SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 361264 AKA UV64) WITH AN INLINE COATER AND UV DRYER
N-3606-19-4	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 110M II MATIC BOX MAKER (S/N 0349-063-01)
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N-3606-25-2	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE INTERNATIONAL PAPERBOX MODEL 6FX-154 20" WEB WIDTH FOLDER GLUER
N-3606-26-5	GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA MODEL RAPIDA 162A 64" NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 368024 AKA C64)
N-3606-27-3	CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STANDARD MAX 1100 30" WEB WIDTH FOLDER GLUER
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N-3606-30-0	19.9 MMBTU/HR CLEAVER-BROOKS MODEL CBEX-700-500-200ST BOILER EQUIPPED WITH A CLEAVER-BROOKS MODEL NT INTEGRAL TYPE ULTRA LOW-NOX BURNER
N-3606-31-0	CORRUGATED BOARD MANUFACTURING OPERATION WITH A FOSBER SMART 400-98' CORRUGATOR SYSTEM AND A STARCH CONVEYING AND MIXING SYSTEM

## VI. Emission Control Technology Evaluation

### N-3606-29-0

The applicant has proposed the use of a bin vent filter system to reduce particulate matter emissions while receiving starch in the silo. To ensure proper operation, the visible emissions from the bin vent filter shall not equal or exceed 5% opacity.

#### Design check calculations:

##### Air Flow Calculations for the bin vent filter:

Airflow: 600 ft<sup>3</sup>/min (per Applicant)  
 Air/Cloth Ratio: Air Flow Rate ÷ Cloth Area  
 600 cfm ÷ 214 ft<sup>2</sup> = 2.8 ft/min

The pulse jet cleaning mechanism uses a high pressure jet of air to remove the dust from the bags. The dust cake is removed from the bag by a blast of compressed air injected into the top of the bag tube. The air blast causes the bag to flex or expand as the shock wave travels down the bag tube. As the bag tube flexes, the dust cake fractures and deposited particulates are discharged from the bag. Pulse jet baghouses are generally designed with air-to-cloth ratio (filtering velocity) between 5 and 15 ft/min.

The calculated air/cloth ratio is lower than the typical range. However the bin vent filter manufacturer has ensured that this bin vent filter is appropriate for their operation.

In order to ensure that this bin vent filter is operating properly at all times, the following conditions will be included on the permit:

- Each bin vent filter shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]
- Each bin vent filter cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]
- Material removed from each bin vent filter shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]
- Replacement bags numbering at least 10% of the total number of bags in the bin vent filter shall be maintained on the premises. [District Rule 2201]
- Each bin vent filter shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201]
- The differential pressure gauge reading range shall be established per manufacturer's recommendation at time of start up inspection. [District Rule 2201]

#### N-3606-30-0

Emissions are expected from the combustion of natural gas in the proposed burners. NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO, and VOC are the products of combustion emitted from the burners. This unit will be fired on PUC-regulated natural gas.

The boilers are equipped with a Low-NO<sub>x</sub> burner that reduces NO formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NO<sub>x</sub> burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO<sub>x</sub>. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

#### N-3606-31-0

The applicant has proposed the use of low VOC content starch-based adhesives to minimize VOC emissions.

## **VII. General Calculations**

### **A. Assumptions**

- The facility operates 24 hr/day, 365 days/year for worst case emissions.

N-3606-4-5

- Maximum dry starch adhesive usage = 4,158 lb/day (per current PTO)
- Maximum corrugated board process rate = 125,000 ft<sup>2</sup>/hour (per project N-960022)

N-3606-29-0

- Maximum starch receiving rate = 66 tons/day (per applicant)
- Bin vent filter PM<sub>10</sub> control efficiency = 99%
- Bin vent filter air flow rate = 600 cfm (per manufacturer)
- Density of cement = 85 lb/ft<sup>3</sup>
- Density of starch = 44 lb/ft<sup>3</sup>

N-3606-30-0

- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)
- The unit is fired on PUC-regulated natural gas

N-3606-31-0

- Maximum corrugated board production rate = 167,000 ft<sup>2</sup>/hour, 4,000,000 ft<sup>2</sup>/day, 1,040,000,000 ft<sup>2</sup>/year
- Maximum Velocity SP29-962A Performance Enhancer Resin usage = 183 gallons/day and 43900 gallons/year
- Maximum Ultraguard 29-9734 WRA Thermosetting Resin usage = 211 gallons/day and 50,634 gallons/year
- Velocity SP29-962A Performance Enhancer Resin VOC content = 0.008 lb/gal (less water and exempt compounds)
- Ultraguard 29-9734 WRA Thermosetting Resin VOC content = 0.21% by weight
- Ultraguard 29-9734 WRA Thermosetting Resin Specific gravity = 1.16

**B. Emission Factors**

N-3606-4-5

EF<sub>PM10</sub> = 0.24 lb/ton dry starch adhesive (per current PTO)

N-3606-29-0

The following is the uncontrolled PM<sub>10</sub> emission factor for pneumatic cement unloading to elevated storage silo (AP-42 Table 11.12-2 (6/06)):

EF<sub>Cement Silo</sub> = 0.46 lb-PM<sub>10</sub>/ton

As a worst case scenario, the emission factor for the starch silo loading will be taken to be the emission factor pneumatic cement unloading to elevated storage silo adjusted for density.

$$\begin{aligned} \text{Controlled EF}_{\text{Starch Silo}} &= \text{EF}_{\text{Cement Silo}} \times (\text{starch density} \div \text{cement density}) \times (1 - 0.99) \\ &= 0.46 \text{ lb-PM}_{10}/\text{ton} \times (44 \text{ lb/ft}^3 \div 85 \text{ lb/ft}^3) \times (1 - 0.99) \\ &= 0.00238 \text{ lb-PM}_{10}/\text{ton} \end{aligned}$$

Emission Unit	Emission Factor
Starch Silo	0.00238 lb-PM <sub>10</sub> /ton

N-3606-30-0

Boiler (Natural Gas Fuel)			
Pollutant	Emission Factors (EF2)		Source
	lb/MMBtu	ppmvd @ 3% O <sub>2</sub>	
NO <sub>x</sub>	0.0060	5.0	Per applicant
SO <sub>x</sub>	0.00285	-	Per applicant
PM <sub>10</sub>	0.0076	-	Per applicant
CO	0.0728	100	Per applicant
VOC	0.0055	-	Per applicant

N-3606-31-0

Corrugator

Per project N-1082244,

$$\text{EF}_{\text{VOC}} = 8 \text{ lb}/10^6 \text{ ft}^2 \text{ of product}$$

Note this emission factor may already account for VOC emissions from the adhesive. To be conservative, the adhesive VOC emissions will be assessed separately.

Adhesive

Adhesive Composition	
Constituent	Volume %
Velocity SP29-962A Performance Enhancer Resin	1.04
Ultraguard 29-9734 WRA Thermosetting Resin	1.48
Water	71.84
Starch	24
Aquence CG 905B Solids Saver	0.2
Sodium Hydroxide	1.44
Borax	

Of the constituents listed above, only the resin constituents contain VOCs.

$$\begin{aligned} \text{Velocity Resin EF}_{\text{VOC}} &= 0.008 \text{ lb/gal (less water and exempt compounds)} \\ \text{Ultraguard Resin EF}_{\text{VOC}} &= (0.21 \text{ lb}/100 \text{ lb resin}) \times 1.16 \times 8.34 \text{ lb/gal} \\ &= 0.0203 \text{ lb/gal} \end{aligned}$$

$$\text{Adhesive EF}_{\text{VOC}} = [(0.008 \text{ lb/gal})(1.04 \text{ gal}) + (0.0203 \text{ lb/gal})(1.48 \text{ gal})] \div (1.04 \text{ gal} + 1.48 \text{ gal})$$

$$= 0.015 \text{ lb/gal (less water and exempt compounds)}$$

**C. Calculations**

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

N-3606-3-6, '4-5, '9-7, '11-8, '13-6, '14-6, '15-6, '19-4, '21-4, '23-5, '24-4, '25-2, '26-5, '27-3

The potential to emit values were taken from each current PTO.

Permit Unit	Description	Daily PE1 (lb-VOC/day)	Annual PE1 (lb-VOC/year)
N-3606-3-6	Corrugated box making lines (folder/gluer)	10.0	950
N-3606-19-4		10.0	
N-3606-21-4		5.0	
N-3606-25-2		10.0	
N-3606-27-3		10.0	
N-3606-4-5	Corrugated board manufacturing	64.0 (40.0 + 24.0*)	18,578 (9,818 + 8,760*)
N-3606-11-8	Corrugated board finishing operation	30.0	53,875
N-3606-13-6	Flexographic printing presses with gluers	95.0	
N-3606-14-6		95.0	
N-3606-15-6		95.0	
N-3606-16-6		70.0	
N-3606-23-5	Lithographic printing presses	70.0	
N-3606-9-7		170.0	
N-3606-24-4		99.0	
N-3606-26-5		99.0	

\* The equipment listed on permit N-3606-4 was initially permitted in July 1996. At that time, it was not known that the paper used in the corrugating process (i.e. softening paper with steam and then feeding the paper between corrugating rollers to give the paper a fluted shape) are potential sources of VOC emissions. In July 2003, a source test was performed on a corrugator and revealed VOC emissions appears to be most influenced by the source of fiber used to make the corrugated board. The manufacturer established a VOC emission factor of 8 lb-VOC/million square foot of board produced. These emissions will be added to permit unit N-3606-4 as pre-project emissions. Per project N-960022, the process rate for the equipment listed on permit N-3606-4 is 125,000 square feet per hour.

$$\text{Daily PE1} = 125,000 \text{ ft}^2/\text{hour} \times 8 \text{ lb-VOC}/10^6 \text{ ft}^2 \times 24 \text{ hr}/\text{day} = 24.0 \text{ lb-VOC}/\text{day}$$

$$\text{Annual PE1} = 24.0 \text{ lb-VOC}/\text{day} \times 365 \text{ days} = 8,760 \text{ lb-VOC}/\text{year}$$

N-3606-4-5

Only permit N-3606-4 is expected to be a source of particulate matter emissions.

$$\begin{aligned} \text{Daily PE1} &= 4,158 \text{ lb-dry starch adhesive/day} \times 0.24 \text{ lb-PM}_{10}\text{/ton dry starch adhesive} \times \\ &\quad \text{ton/2,000 lb} \\ &= 0.5 \text{ lb-PM}_{10}\text{/day} \end{aligned}$$

$$\begin{aligned} \text{Annual PE1} &= \text{Daily PE1} \times 365 \text{ days/year} \\ &= 0.5 \text{ lb-PM}_{10}\text{/day} \times 365 \text{ days/year} \\ &= 183 \text{ lb-PM}_{10}\text{/year} \end{aligned}$$

<b>Pre-Project Potential to Emit</b>		
<b>Permit Unit</b>	<b>Daily PE1 (lb-PM<sub>10</sub>/day)</b>	<b>Annual PE1 (lb-PM<sub>10</sub>/year)</b>
N-3606-4-5	0.5	183

N-3606-29-0, '30-0, '31-0

Since these are new emission units, PE1 = 0.

**2. Post Project Potential to Emit (PE2)**

N-3606-3-6, '4-5, '9-7, '11-8, '13-6, '14-6, '15-6, '19-4, '21-4, '23-5, '24-4, '25-2, '26-5, '27-3

The facility has proposed to establish a facility-wide SLC limit for annual VOC emissions based upon the sum of the pre-project annual VOC emissions from the facility.

$$\text{Annual PE2} = (950 + 18,578 + 53,875) \text{ lb-VOC/year} = 73,403 \text{ lb-VOC/year}$$

Permit Unit	Description	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/year)
N-3606-3-6	Corrugated box making lines (folder/gluer)	10.0	30.0*
N-3606-19-4		10.0	
N-3606-21-4		5.0	
N-3606-25-2		10.0	
N-3606-27-3		10.0	
N-3606-4-5	Corrugated board manufacturing	64.0	
N-3606-11-8	Corrugated board finishing operation	30.0	
N-3606-13-6	Flexographic printing presses with gluers	95.0 (30.0*)	19,000
N-3606-14-6		95.0 (30.0*)	19,000
N-3606-15-6		95.0 (30.0*)	19,000
N-3606-16-6	Lithographic printing presses	70.0	11,500
N-3606-23-5		70.0	11,500
N-3606-9-7		170.0	11,500
N-3606-24-4		99.0	11,500
N-3606-26-5		99.0	11,500
N-3606-30-0	Boiler	2.6	959
N-3606-31-0	Corrugator	37.8	9,699
			73,403**

\* The printing operations N-3606-13-6, '14-6, and '15-6 are included in the adhesive usage combined 30 lb-VOC/day limit for permits N-3606-3-6, '19-4, '21-4, '25-2, '27-3 per the BACT analysis.

\*\* Facility-wide SLC limit

N-3606-4-5

There are no proposed changes to the PM<sub>10</sub> emissions.

Therefore, PE2 = PE1.

N-3606-29-0

The maximum daily starch receiving rate is equal to the capacity of the silo of 66 tons.

$$\begin{aligned} \text{Daily PE1} &= 66 \text{ tons-starch/day} \times 0.00238 \text{ lb-PM}_{10}/\text{ton starch} \\ &= 0.2 \text{ lb-PM}_{10}/\text{day} \end{aligned}$$

$$\begin{aligned} \text{Annual PE1} &= \text{Daily PE1} \times 365 \text{ days/year} \\ &= 0.2 \text{ lb-PM}_{10}/\text{day} \times 365 \text{ days/year} \\ &= 73 \text{ lb-PM}_{10}/\text{year} \end{aligned}$$

<b>Post-Project Potential to Emit</b>		
Permit Unit	Daily PE2 (lb-PM <sub>10</sub> /day)	Annual PE2 (lb-PM <sub>10</sub> /year)
N-3606-29-0	0.2	73

N-3606-30-0

Daily PE2 = EF2 (lb/MMBtu) x Heat Input (MMBtu/hr) x 24 hours/day

Annual PE2 = Daily PE2 x 365 days/year

Pollutant	<b>Daily PE2 (Natural Gas Fuel)</b>			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO <sub>x</sub>	0.0060	19.9	24	2.9
SO <sub>x</sub>	0.00285	19.9	24	1.4
PM <sub>10</sub>	0.0076	19.9	24	3.6
CO	0.0728	19.9	24	34.8
VOC	0.0055	19.9	24	2.6

Pollutant	<b>Annual PE2 (Natural Gas Fuel)</b>		
	Daily Emissions (lb/day)	Operating Schedule (days/year)	Annual PE2 (lb/year)
NO <sub>x</sub>	2.9	365	1,046
SO <sub>x</sub>	1.4	365	497
PM <sub>10</sub>	3.6	365	1,325
CO	34.8	365	12,691
VOC	2.6	365	959

N-3606-31-0

Corrugator

Daily PE2 = 8 lb-VOC/10<sup>6</sup> ft<sup>2</sup> x 5,000,000 ft<sup>2</sup>/day = 40.0 lb-VOC/day

Annual PE2 = 8 lb-VOC/10<sup>6</sup> ft<sup>2</sup> x 1,825,000,000 ft<sup>2</sup>/year = 14,600 lb-VOC/year

<b>Post-Project Potential to Emit (Corrugator)</b>		
Permit Unit	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/year)
N-3606-31-0	40.0	14,600

Adhesive

*Velocity SP29-962A Performance Enhancer Resin*

Daily PE2 = 183 gallons/day x 0.008 lb-VOC/gal = 1.5 lb-VOC/day  
Annual PE2 = 43,900 gallons/year x 0.008 lb-VOC/gal = 351 lb-VOC/year

*Ultraguard 29-9734 WRA Thermosetting Resin*

Daily PE2 = 211 gallons/day x 0.0203 lb-VOC/gal = 4.3 lb-VOC/day  
Annual PE2 = 50,634 gallons/year x 0.0203 lb-VOC/gal = 1,028 lb-VOC/year

<b>Post-Project Potential to Emit (Adhesive)</b>			
Permit Unit	Constituent	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/year)
N-3606-31-0	Velocity SP29-962A Performance Enhancer Resin	1.5	351
	Ultraguard 29-9734 WRA Thermosetting Resin	4.3	1,028
	<b>Total</b>	<b>5.8</b>	<b>1,379</b>

<b>Daily Post-Project Potential to Emit</b>	
Permit Unit	VOC (lb/day)
N-3606-31-0	40.0 + 5.8 = 45.8

<b>Annual Post-Project Potential to Emit</b>	
Permit Unit	VOC (lb/year)
N-3606-31-0	14,600 + 1,379 = 15,979

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

Pursuant to District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid 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 that have occurred at the source, and which have not been used on-site.

<b>SSPE1 (lb/year)</b>					
Permit Unit	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
N-3606-3-5	0	0	0	0	950
N-3606-19-3	0	0	0	0	
N-3606-21-3	0	0	0	0	
N-3606-25-1	0	0	0	0	
N-3606-27-2	0	0	0	0	
N-3606-4-4	0	0	183	0	18,578

N-3606-9-6	0	0	0	0	53,875
N-3606-11-7	0	0	0	0	
N-3606-13-5	0	0	0	0	
N-3606-14-5	0	0	0	0	
N-3606-15-5	0	0	0	0	
N-3606-16-5	0	0	0	0	
N-3606-23-4	0	0	0	0	
N-3606-24-3	0	0	0	0	
N-3606-26-4	0	0	0	0	
SSPE1	0	0	183	0	73,403

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

Pursuant to District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid 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 that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)						
Permit Unit	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC	
N-3606-3-6	0	0	0	0	73,403	
N-3606-4-5	0	0	183	0		
N-3606-9-7	0	0	0	0		
N-3606-11-8	0	0	0	0		
N-3606-13-6	0	0	0	0		
N-3606-14-6	0	0	0	0		
N-3606-15-6	0	0	0	0		
N-3606-16-6	0	0	0	0		
N-3606-19-4	0	0	0	0		
N-3606-21-4	0	0	0	0		
N-3606-23-5	0	0	0	0		
N-3606-24-4	0	0	0	0		
N-3606-25-2	0	0	0	0		
N-3606-26-5	0	0	0	0		
N-3606-27-3	0	0	0	0		
N-3606-30-0	1,046	497	1,325	12,691		
N-3606-31-0	0	0	0	0		
N-3606-29-0	0	0	73	0		0
SSPE2	1,046	497	1,581	12,691		73,403

## 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

<b>Rule 2201 Major Source Determination (lb/year)</b>					
	NO <sub>x</sub>	SO <sub>x</sub>	PM10	CO	VOC
SSPE1	0	0	183	0	73,403
SSPE2	1,046	497	1,581	12,691	73,403
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	Yes

As seen in the table above, the facility is an existing Major Source for VOC and will remain a Major Source for VOC.

### 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)(i). Therefore the following PSD Major Source thresholds are applicable.

<b>PSD Major Source Determination (tons/year)</b>							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	0	36.7	0	0	0.1	0.1	0
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	N	N	N	N	N

As shown above, the facility is not an existing major source for PSD for at least one pollutant. Therefore the facility is not an existing major source for PSD.

## 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.

BE = Pre-project Potential to Emit for:

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

Otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Rule 2201

Permits N-3606-29-0, '30-0, '31-0 are new units; therefore, BE = 0 lb/year for all pollutants.

### a. BE PM<sub>10</sub>

#### Unit Located at a Non-Major Source

As shown in Section VII.C.5 above, the facility is not a major source for PM<sub>10</sub> emissions.

Therefore BE = PE1.

### b. BE VOC

#### Clean Emissions Unit, Located at a Major Source

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

Clean Emissions Unit Determination				
Permit Unit	BACT Guideline	Achieved in Practice	Permit Limit (Actual)	Clean Emissions Unit?
N-3606-3-6	4.9.12	0.044 lb/gal	0.06 lb/gal (0.013 lb/gal)	Yes
N-3606-19-4				
N-3606-21-4				
N-3606-25-5	4.9.12	0.044 lb/gal	0.044 lb/gal	Yes
N-3606-27-3				
N-3606-4-5	4.11.3	0.021 lb/gal	0.083 lb/gal (single facer: 0.015 lb/gal; laminator: 0.01 lb/gal)	Yes

N-3606-11-8	4.9.12	0.044 lb/gal	1.25 lb/gal (0.013 lb/gal)	Yes
N-3606-13-6	4.7.15	Inks: 0.3 lb/gal Adhesive: 0.044 lb/gal	Inks: 0.3 lb/gal Adhesive 0.06 lb/gal (0.044 lb/gal)	Yes
N-3606-14-6				
N-3606-15-6				
N-3606-16-6	4.7.2	Inks: <5% by wt Fountain Solution: <5% by vol Inks high end graphics: < 30% by wt Fountain Solution high end graphics: <8% by vol	Inks: <5% by wt Fountain Solution: <6% by vol (4.77% by vol) Inks high end graphics: <30% by wt Fountain Solution high end graphics: <8% by vol	Yes
N-3606-23-5				
N-3606-9-7				
N-3606-24-4				
N-3606-26-5				

Baseline Emissions [BE] (lb/year)					
Permit Unit	NO <sub>x</sub>	SO <sub>x</sub>	PM10	CO	VOC
N-3606-3-6	0	0	0	0	950
N-3606-19-4	0	0	0	0	
N-3606-21-4	0	0	0	0	
N-3606-25-5	0	0	0	0	
N-3606-27-3	0	0	0	0	
N-3606-4-5	0	0	183	0	18,578
N-3606-11-8	0	0	0	0	53,875
N-3606-13-6	0	0	0	0	
N-3606-14-6	0	0	0	0	
N-3606-15-6	0	0	0	0	
N-3606-16-6	0	0	0	0	
N-3606-23-5	0	0	0	0	
N-3606-9-7	0	0	0	0	
N-3606-24-4	0	0	0	0	
N-3606-26-5	0	0	0	0	
N-3606-30-0	0	0	0	0	
N-3606-31-0	0	0	0	0	0

## 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."

### NO<sub>x</sub>, SO<sub>x</sub>, PM10

Since this facility is not a major source for NO<sub>x</sub>, SO<sub>x</sub>, or PM10, this project does not constitute an SB 288 Major Modification for NO<sub>x</sub>, SO<sub>x</sub>, or PM10.

VOC

Since this facility is a major source for VOC, the PE2 for the emission units within this project is compared to the SB 288 Major Modification Threshold in the following table in order to determine if the SB 288 Major Modification calculation is required.

<b>SB 288 Major Modification Threshold (Existing Major Source)</b>			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
VOC	73,403	50,000	Yes

Baseline Actual Emissions (BAE)

Per Rule 2201, the baseline period is the two consecutive years of operation immediately prior to the submission date of the Complete Application or at least two consecutive years within the five years immediately prior to the submission date of the Complete Application if determined by the APCO as more representative of normal source operation.

The 2011 data was taken the facility emission inventory submittals. The 2012 data was provided by the applicant.

<b>Baseline Actual Emissions (BAE)</b>			
Permit Unit	2011 VOC Emissions (lb/year)	2012 VOC Emissions (lb/year)	2011/2012 Average VOC Emissions (lb/year)
N-3606-3-6	43	32	38
N-3606-19-4	43	33	38
N-3606-21-4	8	6	7
N-3606-25-2	25	17	21
N-3606-27-3	3	2	3
N-3606-4-5	6,486	6,722	6,604
N-3606-11-8	64	65	65
N-3606-13-6	2,188	2,608	2,398
N-3606-14-6	2,189	2,478	2,334
N-3606-15-6	2,097	2,463	2,280
N-3606-16-6	3,466	3,276	3,371
N-3606-23-5	3,248	3,068	3,158
N-3606-9-7	2,899	906	1,903
N-3606-24-4	251	2,486	1,369
N-3606-26-5	3,425	3,241	3,333
N-3606-30-0	0	0	0
N-3606-31-0	0	0	0
<b>Total</b>	<b>26,435</b>	<b>27,403</b>	<b>26,919</b>

Net Emissions Increase

Net Emissions Increase (NEI) is calculated as follows:

$$NEI = PE2 - BAE$$

<b>SB 288 Major Modification Threshold (Existing Major Source)</b>					
Pollutant	PE2 (lb/year)	BAE (lb/year)	NEI (lb/year)	Threshold (lb/year)	SB 288 Major Modification?
PM <sub>10</sub>	73,403	26,919	46,484	50,000	No

The NEI for this project will be less than the SB 288 Major Modification thresholds for VOC. Therefore, this project does qualify for a “Less-Than-Significant Emissions Increase” exclusion and is thus determined to not be a SB 288 Major Modification for VOC.

**8. Federal Major Modification**

NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>

Since this facility is not a major source for NO<sub>x</sub>, SO<sub>x</sub>, or PM<sub>10</sub>, this project does not constitute a Federal Major Modification for NO<sub>x</sub>, SO<sub>x</sub>, or PM<sub>10</sub>.

VOC

District Rule 2201 states that Major Modifications are also Federal Major Modifications, unless they qualify for either a “Less-Than-Significant Emissions Increase” exclusion or a “Plantwide Applicability Limit” (PAL) exclusion.

A Less-Than-Significant Emissions Increase exclusion is for an emissions increase for the project, or a Net Emissions Increase for the project (as defined in 40 CFR 51.165 (a)(2)(ii)(B) through (D), and (F)), that is not significant for a given regulated NSR pollutant, and therefore is not a federal major modification for that pollutant.

- To determine the post-project projected actual emissions from existing units, the provisions of 40 CFR 51.165 (a)(1)(xxviii) shall be used.
- To determine the pre-project baseline actual emissions, the provisions of 40 CFR 51.165 (a)(1)(xxxv)(A) through (D) shall be used.
- If the project is determined not to be a federal major modification pursuant to the provisions of 40 CFR 51.165 (a)(2)(ii)(B), but there is a reasonable possibility that the project may result in a significant emissions increase, the owner or operator shall comply with all of the provisions of 40 CFR 51.165 (a)(6) and (a)(7).
- Emissions increases calculated pursuant to this section are significant if they exceed the significance thresholds specified in the table below.

<b>Significant Threshold (lb/year)</b>	
Pollutant	Threshold (lb/year)
VOC	0
NO <sub>x</sub>	0
PM <sub>10</sub>	30,000
SO <sub>x</sub>	80,000

The Net Emissions Increases (NEI) for purposes of determination of a “Less-Than-Significant Emissions Increase” exclusion will be calculated below to determine if this project qualifies for such an exclusion.

Since this project consists of both existing and new emissions units, the “hybrid test” specified in 40 CFR(a)(2)(ii)(F) is applicable and requires that the NEI determination be based on the sum of the individual NEI determinations for existing emissions units (NEI<sub>E</sub>) and new emissions units (NEI<sub>N</sub>) pursuant to 40 CFR(a)(2)(ii)(C) and (D) respectively. Therefore,

$$NEI = NEI_E + NEI_N$$

Net Emission Increase for Existing Units (NEI<sub>E</sub>)

The project’s emission increase for each pollutant is equal to the sum of the differences between the projected actual emissions or PE and the baseline actual emissions (BAE) (for existing emission units) or the sum of the potentials to emit (for new emission units).

$$NEI_E = PAE - BAE - UBC$$

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

If there is no increase in design capacity or potential to emit, the PAE is equal to the annual emission rate at which the unit is projected to emit in any one year, selected by the operator, within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to emit). If detailed PAE are not provided, the PAE is equal to the PE2 for each permit unit.

The BAE is calculated based on historical emissions and operating records for any 24 month period, selected by the operator, within the previous 10 year period (5 years for electric utility steam generating units). The BAE must be adjusted to exclude any non-compliant operation emissions and emissions that are no longer allowed due to lower applicable emission limits that were in effect when this application was deemed complete.

In calculating the emission increase (PAE – BAE) the portion of the emissions after the project that the unit could have accommodated before the project (during the same period used to determine BAE) and that are unrelated to the particular project (including emissions increases due to product demand growth) are to be excluded. In other words, the difference in emissions between what the unit could have actually accommodated

(legally and physically) before the project and the BAE are to be subtracted from any calculated increase, if the ability to utilize the previously unused capacity is not related to the current project. This quantity is termed “unused baseline capacity emissions”.

In estimating the unused baseline capacity emissions, only those emissions that could have actually been accommodated (legally and physically) by the emission unit prior to the modification can be excluded when calculating the emission increase. Any increase in capacity utilization that is a result of the proposed modification cannot be counted when determining the unused baseline capacity emissions.

The PAE will be taken to be PE2 as a worst case scenario. The operator has selected years 2011 and 2012 to be the baseline period for the Federal Major Modification calculations. The existing permits are being modified to remove the individual or combined VOC limits. This change results in an increase in potential emissions for these units. Since this project does result in an increase in design capacity or potential to emit, and it does impact the ability of the emission unit to operate at a higher utilization rate, the UBC cannot be counted.

For this project,

$$NEI_E = PAE - BAE$$

Projected Actual Emissions

As explained above, the PAE will be taken to be PE2 as a worst case scenario.

<b>Federal Major Modification Projected Actual Emissions</b>		
Permit Unit	VOC (lb/year)	
N-3606-3-6	73,403	
N-3606-4-5		
N-3606-9-7		
N-3606-11-8		
N-3606-13-6		
N-3606-14-6		
N-3606-15-6		
N-3606-16-6		
N-3606-19-4		
N-3606-21-4		
N-3606-23-5		
N-3606-24-4		
N-3606-25-2		
N-3606-26-5		
N-3606-27-3		
N-3606-30-0		
N-3606-31-0		
<b>Total</b>		<b>73,403</b>

Baseline Actual Emissions

The Federal Major Modification Baseline Actual Emissions will be calculated utilizing the operator selected baseline period of years 2011 and 2012.

The 2011 data was taken the facility emission inventory submittals. The 2012 data was provided by the applicant.

<b>Baseline Actual Emissions (BAE)</b>			
Permit Unit	2011 VOC Emissions (lb/year)	2012 VOC Emissions (lb/year)	2011/2012 Average VOC Emissions (lb/year)
N-3606-3-6	43	32	38
N-3606-19-4	43	33	38
N-3606-21-4	8	6	7
N-3606-25-2	25	17	21
N-3606-27-3	3	2	3
N-3606-4-5	6,486	6,722	6,604
N-3606-11-8	64	65	65
N-3606-13-6	2,188	2,608	2,398
N-3606-14-6	2,189	2,478	2,334
N-3606-15-6	2,097	2,463	2,280
N-3606-16-6	3,466	3,276	3,371
N-3606-23-5	3,248	3,068	3,158
N-3606-9-7	2,899	906	1,903
N-3606-24-4	251	2,486	1,369
N-3606-26-5	3,425	3,241	3,333
N-3606-30-0	0	0	0
N-3606-31-0	0	0	0
<b>Total</b>	<b>26,435</b>	<b>27,403</b>	<b>26,919</b>

<b>Federal Major Modification VOC Net Emissions Increase For Existing Units (NEI<sub>E</sub>)</b>			
Permit Unit	PAE (lb/year)	BAE (lb/year)	NEI <sub>E</sub> (lb/year)
N-3606-3-6	73,403	38	46,484
N-3606-4-5		38	
N-3606-9-7		7	
N-3606-11-8		21	
N-3606-13-6		3	
N-3606-14-6		6,604	
N-3606-15-6		65	
N-3606-16-6		2,398	
N-3606-19-4		2,334	
N-3606-21-4		2,280	
N-3606-23-5		3,371	
N-3606-24-4		3,158	
N-3606-25-2		1,903	
N-3606-26-5		1,369	

N-3606-27-3		3,333	
N-3606-30-0		0	
N-3606-31-0		0	
Total	73,403	26,919	46,484

Net Emission Increase for New Units (NEI<sub>N</sub>)

Per 40 CFR 51.165 (a)(2)(ii)(D) for new emissions units in this project,

$$NEI_N = PE2_N - BAE$$

$$BAE = 0 \text{ for the new unit therefore } NEI_N = PE2_N$$

The emission increase from the new units are already accounted for with the existing units and the facility SLC for VOC.

Net Emission Increase (NEI)

The NEI for this project is thus calculated as follows:

$$NEI = NEI_E + NEI_N$$

Federal Major Modification Threshold			
Pollutant	NEI (lb/year)	Threshold (lb/year)	SB 288 Major Modification?
VOC	46,484	0	Yes

The NEI for this project will be greater than the Federal Major Modification threshold for VOC. Therefore, this project does not qualify for a “Less-Than-Significant Emissions Increase” exclusion and is thus determined to be a Federal Major Modification for VOC.

**10. Quarterly Net Emissions Change (QNEC)**

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District’s PAS database.

$$QNEC = PE2 - PE1, \text{ where:}$$

- 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.

$$QNEC_{SLC} = PE2_{SLC} - PE1_{SLC}, \text{ where:}$$

- QNEC<sub>SLC</sub> = Quarterly Net Emissions Change for units covered by the SLC.
- PE2<sub>SLC</sub> = PE2 for all units covered by the SLC.
- PE1<sub>SLC</sub> = PE1 for all units covered by the SLC.

N-3606-3-6, '4-5, '9-7, '11-8, '13-6, '14-6, '15-6, '19-4, '21-4, '23-5, '24-4, '25-2, '26-5, '27-3

<b>Quarterly NEC [QNEC]</b>			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO <sub>x</sub>	0	0	0
SO <sub>x</sub>	0	0	0
PM <sub>10</sub>	0	0	0
CO	0	0	0
VOC	18,351	18,351	0

N-3606-4-5

<b>Quarterly NEC [QNEC]</b>			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO <sub>x</sub>	0	0	0
SO <sub>x</sub>	0	0	0
PM <sub>10</sub>	46	46	0
CO	0	0	0
VOC	See above		

N-3606-29-0

<b>Quarterly NEC [QNEC]</b>			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO <sub>x</sub>	0	0	0
SO <sub>x</sub>	0	0	0
PM <sub>10</sub>	18	0	18
CO	0	0	0
VOC	0	0	0

N-3606-30-0

<b>Quarterly NEC [QNEC]</b>			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO <sub>x</sub>	262	0	262
SO <sub>x</sub>	124	0	124
PM <sub>10</sub>	331	0	331
CO	3,173	0	3,173
VOC	0	0	0

N-3606-31-0

<b>Quarterly NEC [QNEC]</b>			
	<b>PE2 (lb/qtr)</b>	<b>PE1 (lb/qtr)</b>	<b>QNEC (lb/qtr)</b>
NO <sub>x</sub>	0	0	0
SO <sub>x</sub>	0	0	0
PM <sub>10</sub>	0	0	0
CO	0	0	0
VOC	0	0	0

**VIII. Compliance**

**Rule 2201 New and Modified Stationary Source Review Rule**

**A. Best Available Control Technology (BACT)**

**1. BACT Applicability**

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

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

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

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

As seen in Section VII.C.2 of this evaluation, the applicant is proposing one boiler (permit N-3606-30-0) with a PE greater than 2 lb/day for NO<sub>x</sub>, PM<sub>10</sub>, CO, and VOC and one corrugated board manufacturing operation with a PE greater than 2 lb/day for PM<sub>10</sub> and VOC (permit N-3606-31-0). BACT is triggered for NO<sub>x</sub>, PM<sub>10</sub>, and VOC since the PEs are greater than 2 lbs/day for the boiler and for PM<sub>10</sub> and VOC for the corrugated board manufacturing operation. However BACT is not triggered for CO for the boiler since the SSPE2 for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 above.

N-3606-29-0

Potential to Emit		
Pollutant	PE2 (lb/day)	BACT Triggered?
NO <sub>x</sub>	0.0	No
SO <sub>x</sub>	0.0	No
PM <sub>10</sub>	0.2	No
CO	0.0	No
VOC	0.0	No

N-3606-30-0

Potential to Emit		
Pollutant	PE2 (lb/day)	BACT Triggered?
NO <sub>x</sub>	2.9	Yes
SO <sub>x</sub>	1.4	No
PM <sub>10</sub>	3.6	Yes
CO	34.8	No
VOC	2.6	Yes

N-3606-31-0

Potential to Emit		
Pollutant	PE2 (lb/day)	BACT Triggered?
NO <sub>x</sub>	0.0	No
SO <sub>x</sub>	0.0	No
PM <sub>10</sub>	0.0	No
CO	0.0	No
VOC	37.8	Yes

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

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

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

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

PE2 = Post-Project Potential to Emit, (lb/day)

HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

Where,

PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)

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

$$AIPE = PE2 - (PE1 * (EF2 / EF1))$$

There are no proposed emission factor changes in this project. Therefore, EF2 / EF1 = 1.

<b>Adjusted Increase in Permitted Emissions</b>				
Permit Unit	PE2 (lb-VOC/day)	PE1 (lb-VOC/day)	AIPE (lb/day)	BACT Triggered?
N-3606-3-6	30.0	30.0	0.0	No
N-3606-4-5	64.0	64.0	0.0	No
N-3606-9-7	170.0	170.0	0.0	No
N-3606-11-8	30.0	30.0	0.0	No
N-3606-13-6	95.0	95.0	0.0	No
N-3606-14-6	95.0	95.0	0.0	No
N-3606-15-6	95.0	95.0	0.0	No
N-3606-16-6	70.0	70.0	0.0	No
N-3606-19-4	30.0	30.0	0.0	No
N-3606-21-4	30.0	30.0	0.0	No
N-3606-23-5	70.0	70.0	0.0	No
N-3606-24-4	99.0	99.0	0.0	No
N-3606-25-2	30.0	30.0	0.0	No
N-3606-26-5	99.0	99.0	0.0	No
N-3606-27-3	30.0	30.0	0.0	No

**d. SB 288/Federal Major Modification**

As discussed in Section VII.C.7 and VII.C.8 above, this project does constitute a Federal Major Modification for VOC emissions. Therefore, BACT is triggered for VOC for all emissions units in this project.

## 2. BACT Guideline

The following BACT Guidelines apply to each permit:

<b>BACT Guideline Applicability</b>		
Permit Unit	BACT Guideline	Description
N-3606-3-6	4.9.12	Corrugated Box Gluer
N-3606-19-4		
N-3606-21-4		
N-3606-25-5		
N-3606-27-3		
N-3606-11-8		
N-3606-31-0		
N-3606-4-5	4.11.3	Cardboard Box Laminator
N-3606-13-6	4.7.15	Flexographic Printing – Corrugated Boxes, Low-end Graphics
N-3606-14-6		
N-3606-15-6		
N-3606-16-6	4.7.2	Offset Lithographic Printing – Non-heat Set Press
N-3606-23-5		
N-3606-9-7		
N-3606-24-4		
N-3606-26-5		

### N-3606-30-0

The District adopted District Rule 4320 on October 16, 2008. The NO<sub>x</sub> emission limit requirements in District Rule 4320 are lower than the limits contained within BACT Guideline 1.1.2 which has since been rescinded; therefore a project specific BACT analysis will be performed to determine BACT for this project. District Rule 4320 limits natural gas boilers with heat input ratings less than 20 MMBtu/hr to 9 ppmv @ 3% O<sub>2</sub>. Since this emission limit is required by the rule, it will be considered the Achieved in Practice control technology for the BACT analysis. District Rule 4320 also contains an enhanced schedule option that allows applicants additional time to meet the requirements of the rule. The enhanced schedule NO<sub>x</sub> emission limit requirement is 6 ppmv @ 3% O<sub>2</sub>. Since this is an enhanced option in the rule, it will be considered the Technologically Feasible control technology for the BACT analysis. (See Appendix B)

## 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 B), BACT has been satisfied.

## B. Offsets

### 1. Offset Applicability

Pursuant to Rule 2201, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Determination (lb/year)					
	NO <sub>x</sub>	SO <sub>x</sub>	PM10	CO	VOC
SSPE2	1,046	497	9,901	12,691	73,403
Offset Threshold	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 SSPE2 is greater than the offset threshold for VOC; therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year 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) =  $(\sum[PE2 - BE] + ICCE) \times DOR$ , 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

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE)

There are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

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

Offset Requirement Summary (PE2 – BE)			
Permit Unit	PE2 (lb-VOC/year)	BE (lb-VOC/year)	Offsets Required (lb-VOC/year)
N-3606-3-6	73,403	950	0
N-3606-19-4			
N-3606-21-4			
N-3606-25-5		18,578	
N-3606-27-3			
N-3606-4-5		53,875	
N-3606-11-8			
N-3606-13-6			
N-3606-14-6			
N-3606-15-6			
N-3606-16-6			
N-3606-23-5			
N-3606-9-7			
N-3606-24-4			
N-3606-26-5			
N-3606-29-0			
N-3606-30-0			
N-3606-31-0			
Total		73,403	

As demonstrated in the calculation above, the amount of offsets is zero. Therefore, offsets will not be required for this project.

**C. Public Notification**

**1. Applicability**

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB288 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, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

**a. New Major Sources, Federal Major Modifications, and SB288 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 VII.C.7 and VII.C.8, this project does constitute a Federal Major Modification for VOC; therefore, public noticing for Federal Major Modification purposes is required.

**b. PE > 100 lb/day**

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which 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**

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO <sub>x</sub>	0	1,046	20,000 lb/year	No
SO <sub>x</sub>	0	497	54,750 lb/year	No
PM10	183	9,901	29,200 lb/year	No
CO	0	12,691	200,000 lb/year	No
VOC	73,403	73,403	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.

**d. SSIPE > 20,000 lb/year**

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e.  $SSIPE = SSPE2 - SSPE1$ . The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. 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 (lb/year)	Public Notice Required?
NO <sub>x</sub>	1,046	0	1,046	20,000	No
SO <sub>x</sub>	497	0	497	20,000	No
PM10	9,901	183	9,718	20,000	No
CO	12,691	0	12,691	20,000	No
VOC	73,403	73,403	0	20,000	No

## **2. Public Notice Action**

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

## **D. Daily 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.

Appropriate DEL conditions have been placed on each permit to enforce the requirement of this section.

## **E. Compliance Assurance**

### **1. Source Testing**

The VOC emitted are fugitive. Fugitive emissions are not amenable to stack source testing; therefore, no source testing is required to demonstrate compliance with the DEL for VOC. Compliance will be demonstrated by usage records and documentation of the VOC content of the inks and materials used (see Recordkeeping below).

### **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 conditions will appear on the permits in this project:

- 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]

- Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201]
- The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201]

#### **4. Reporting**

No reporting is required to demonstrate compliance with Rule 2201.

#### **F. Ambient Air Quality Analysis (AAQA)**

An AAQA shall 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. The District's Technical Services Division conducted the required analysis. Refer to Appendix F of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO<sub>x</sub>, CO, and SO<sub>x</sub>. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO<sub>x</sub>, CO, or SO<sub>x</sub>.

The proposed location is in a non-attainment area for the state's PM<sub>10</sub> as well as federal and state PM<sub>2.5</sub> thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM<sub>10</sub> and PM<sub>2.5</sub>.

#### **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 Sections VIII-Rule 2201-C.1.a and VIII-Rule 2201-C.1.b, this source is undergoing a Federal Major Modification, therefore this requirement is applicable. Included in Appendix D is the facility's compliance certification.

#### **H. Alternate Siting Analysis**

Alternative siting analysis is required for any project, which constitutes a New Major Source or a Federal Major Modification.

In addition to printing presses, the operation of a package and container printing facility requires a large number support equipment, services and structures such as raw material receiving stations, silos, die cutters, boilers, warehouses, shipping facilities, and administration buildings.

Since the current project involves 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.

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

The prevention of significant deterioration (PSD) program is a construction permitting program for new major stationary sources and major modifications to existing major stationary sources located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant.

As demonstrated above, this project is not subject to the requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

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

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a “permit amendment that does not qualify as a minor permit modification or administrative amendment.”

Section 3.20.5 states that a minor permit modification is a permit modification that does not meet the definition of modification as given in Section 111 or Section 112 of the Federal Clean Air Act. Since this project is a Title I modification (i.e. Federal Major Modification), the proposed project is considered to be a modification under the Federal Clean Air Act. As a result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

As discussed above, the facility has applied for a Certificate of Conformity (COC) (see Appendix E); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

#### **Rule 4001 New Source Performance Standards (NSPS)**

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.

N-3606-3-6, '4-5, '9-7, '11-8, '13-6, '14-6, '15-6, '19-4, '21-4, '23-5, '24-4, '25-2, '26-5, '27-3, '29-0, '31-0

There are no subparts of 40 CFR Part 60 apply to corrugated paper box manufacturing or lithographic or flexographic printing.

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#### **40 CFR Part 60 Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

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. 40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Institutional Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction). Subpart Dc has standards for SO<sub>x</sub> and PM<sub>10</sub>. The 19.9 MMBtu/hr boiler is subject to Subpart Dc requirements.

##### 60.42c – Standards for Sulfur Dioxide

Since coal is not combusted by the boiler in this project, the requirements of this section are not applicable.

##### 60.43c – Standards for Particulate Matter

The boiler is not fired on coal, combusts mixtures of coal with other fuels, combusts wood, combusts mixture of wood with other fuels, or oil; therefore it will not be subject to the requirements of this section.

##### 60.44c – Compliance and Performance Tests Methods and Procedures for Sulfur Dioxide.

Since the boiler in this project is not subject to the sulfur dioxide requirements of this subpart, no testing to show compliance is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

##### 60.45c – Compliance and Performance Test Methods and Procedures for Particulate Matter

Since the boiler in this project is not subject to the particulate matter requirements of this subpart, no testing to show compliance is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

##### 60.46c – Emission Monitoring for Sulfur Dioxide

Since the boiler in this project is not subject to the sulfur dioxide requirements of this subpart, no monitoring is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

##### 60.47c – Emission Monitoring for Particulate Matter

Since the boiler in this project is not subject to the particulate matter requirements of this subpart, no monitoring is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

### 60.48c – Reporting and Recordingkeeping Requirements

Section 60.48c (a) states that the owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by §60.7 of this part. This notification shall include:

- (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

*The design heat input capacity and type of fuel combusted at the facility will be listed on the unit's equipment description. No conditions are required to show compliance with this requirement.*

- (2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel mixture of fuels under §60.42c or §40.43c.

*This requirement is not applicable since the unit is not subject to §60.42c or §40.43c.*

- (3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

*The facility has not proposed an annual capacity factor; therefore one will not be required.*

- (4) Notification if an emerging technology will be used for controlling SO<sub>2</sub> emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator

*This requirement is not applicable since the unit will not be equipped with an emerging technology used to control SO<sub>2</sub> emissions.*

Section 60.48 c (g) states that the owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The following conditions will be added to the permit to ensure compliance with this section.

- A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rules 2201 and 40 CFR 60.48 (c)(g)]
- Permittee shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rules 2201 and 40 CFR 60.48 (c)(g)]

Section 60.48 c (i) states that all records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. District Rule 4320 requires that records be kept for five years.

**40 CFR Part 64 – Compliance Assurance Monitoring (CAM)**

Except for back-up utility units that are exempt under paragraph (b)(2), Section 64.2 states that the requirements of this subpart shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a Part 70 or 71 permit if the unit satisfies all of the following criteria:

- 1) the unit must have an emission limit for the pollutant;
- 2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, catalytic oxidizers, etc; and
- 3) the unit must have a pre-control potential to emit of greater than the major source thresholds.

<b>Pollutant</b>	<b>Major Source Threshold (lb/year)</b>
VOC	20,000
NO <sub>x</sub>	20,000
CO	200,000
PM <sub>10</sub>	140,000
SO <sub>x</sub>	140,000

The permits in this project contain emission limits for NO<sub>x</sub>, CO, VOC, PM<sub>10</sub> and SO<sub>x</sub> emissions. However, none of the equipment are equipped with any add on control devices. Therefore, the CAM requirements of 40 CFR 64 are not applicable for this project.

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

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. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to corrugated paper box manufacturing or lithographic or flexographic printing operations.<sup>1</sup>

**Rule 4101 Visible Emissions**

Per Section 5.0, 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).

The following condition will ensure compliance with this rule:

- {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]

<sup>1</sup> Subpart KK - Printing and Publishing Industry – applies to *major sources* that use the following printing methods: rotogravure, product and packaging rotogravure, or *wide-web flexographic* printing press operations. This facility does not use any of the above listed methods for printing on the boxes it manufactures. Therefore, no subpart applies.

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To ensure the proper operation of the proposed bin vent filter system, the visible emissions (VE) will be limited to less than 5% opacity. This VE limit is in accordance with the guidelines provided in District Policy SSP 1005. The following condition will be placed on the permit:

- Visible emissions from the bin vent filter serving the storage silo shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]

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

**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. Therefore, compliance with this rule is expected.

The following condition will ensure compliance with this rule:

- {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 F), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

<b>HRA Summary</b>		
<b>Unit</b>	<b>Cancer Risk</b>	<b>T-BACT Required</b>
N-3606-29-0	N/A	No
N-3606-30-0	0.000201 per million	No
N-3606-31-0	N/A	No

## Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix F of this report, the emissions increases for this project was determined to be less than significant.

### Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

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$$\frac{0.2 \text{ lb} - \text{PM}_{10}}{\text{day}} \times \frac{7,000 \text{ grain}}{\text{lb}} / \left( \frac{600 \text{ dscf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hour}} \times \frac{24 \text{ hour}}{\text{day}} \right) = 0.0016 \frac{\text{grain}}{\text{dscf}}$$

Since 0.0016 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

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F-Factor for Natural Gas:	8,578 dscf/MMBtu at 60 °F
Maximum PM <sub>10</sub> Emission Factor:	0.0076 lb-PM <sub>10</sub> /MMBtu
Percentage of PM as PM <sub>10</sub> in Exhaust:	100%
Exhaust Oxygen (O <sub>2</sub> ) Concentration:	3%

$$GL = \left( \frac{0.0076 \text{ lb} - \text{PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb} - \text{PM}} \right) / \left( \frac{8,578 \text{ ft}^3}{\text{MMBtu}} \right) = 0.0062 \text{ grains/dscf}$$

Therefore, compliance with District Rule 4201 requirements is expected. The following condition will be listed on the permits:

- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

**Rule 4202 Particulate Matter Emission Rate**

This rule limits the allowable PM emission rate based on the equipment process weight rate. Section 3.1 defines the process weight as “the total weight of all materials introduced into any specific process, which process may cause any discharge into the atmosphere.”

Per section 4.1, particulate matter (PM) emissions from any source operation shall not exceed the allowable hourly emission rate (E) as calculated using the following applicable formulas:

$$E = 3.59 P^{0.62} \text{ (when, } P = \text{ process weight rate } \leq 30 \text{ tons/hr)}$$

$$E = 17.31 P^{0.16} \text{ (when, } P = \text{ process weight rate } > 30 \text{ tons/hr)}$$

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Assume PM<sub>10</sub> is equal to PM for worst case scenario.

The post-project process weight rate of the material handling operation is 2.75 tons per hour (66 tons/day ÷ 24 hours/day).

$$\begin{aligned} \text{Rule 4202 emission limit} &= 3.59 * P^{0.62} \text{ (where } P \text{ less than or equal to } 30 \text{ tons/hr)} \\ &= 3.59 * (2.75)^{0.62} \\ &= 6.72 \text{ lb/hr} \end{aligned}$$

The operation has a maximum Post Project Potential to Emit (PE2) of 0.008 lb/hr (0.2 lb/day ÷ 24 hr/day).

Therefore, the PM emissions are within allowable limits and compliance with the rule is expected.

**Rule 4301 Fuel Burning Equipment**

This rule specifies maximum emission rates in lb/hr for SO<sub>2</sub>, NO<sub>2</sub>, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP-42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter. As shown below, each unit’s maximum hourly emission rates are below the Rule 4301 limits.

District Rule 4301 Limits			
Unit	NO <sub>2</sub>	Total PM	SO <sub>2</sub>
N-3606-30-0	0.12	0.15	0.06
<b>Rule 4301 Limit</b>	<b>140 lb/hr</b>	<b>10 lb/hr</b>	<b>200 lb/hr</b>

As shown above, compliance with this rule is expected.

#### **Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters**

This rule includes tune-up requirements for boilers. Boiler tuning is not required if monitoring the emissions with a portable analyzer. The facility has chosen to monitor emissions monthly using a portable analyzer. Therefore, compliance with this Rule is not required.

#### **Rule 4305 Boilers, Steam Generators, and Process Heaters – Phase II**

Each boiler is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*. In addition, each boiler is also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3* and District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*.

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4305.

#### **Rule 4306 Boilers, Steam Generators, and Process Heaters – Phase III**

Each boiler is subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*. In addition, each boiler is also subject to *District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*.

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306.

#### **Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr**

The boiler is subject to District Rule 4320 requirements pursuant to Section 2.0 of District Rule 4320.

#### **Section 5.2, NO<sub>x</sub> and CO Emissions Limits**

Section 5.2 requires NO<sub>x</sub> and carbon monoxide (CO) emissions shall not exceed the limits specified in the following table. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen.

The boiler is rated between 5 MMBtu/hr and 20 MMBtu/hr; thus, the applicable emission limit category is Section 5.2, Table 1, Category A, from District Rule 4320.

Rule 4320 Emissions Limits		
Category	Operated on gaseous fuel	
	NO <sub>x</sub> Limit	CO Limit
A. Units with a total rated heat input > 5.0 MMBtu/hr to ≤ 20.0 MMBtu/hr, except for Categories C through G units (Standard Schedule)	9 ppmv or 0.011 lb/MMBtu	400 ppmv

The boiler will be limited to 9 ppmvd NO<sub>x</sub> and 100 ppmvd CO, all corrected to 3% O<sub>2</sub>. Thus, compliance with the District Rule 4320 NO<sub>x</sub> and CO emission limits is expected.

### Section 5.3, Annual Fee Calculation

Annual Fees are required if an emissions unit will not be meeting the emission limits in Section 5.2 of this rule. Since the proposed boiler will each meet the emissions limits of Section 5.2, the annual fee requirements are not applicable.

### Section 5.4, Particulate Matter Control Requirements

Section 5.4.1 of this rule requires the operator to comply with one of the following requirements:

1. Fire the boiler exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;
2. Limit fuel sulfur content to no more than five grains of total sulfur per one hundred (100) standard cubic feet;
3. Install and properly operate an emission control system that reduces SO<sub>2</sub> emissions by at least 95% by weight; or limit exhaust SO<sub>2</sub> to less than or equal to 9 ppmv corrected to 3.0% O<sub>2</sub>;

The boiler is fired on PUC-regulated natural gas. The use of PUC-regulated gas meets the PM<sub>10</sub> requirements.

### Section 5.5, Low Use

Each boiler's annual heat input will exceed the 1.8 billion Btu heat input per calendar year criteria limit addressed by this section. Thus, the requirements of Section 5.5 are not applicable.

### Section 5.6, Startup and Shutdown Provisions

Section 5.6 states that on and after the full compliance deadline in Section 5.0, the applicable emission limits of Sections 5.2 Table 1 and 5.5.2 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.6.1 through 5.6.5

The applicant is proposing the use of an ultra low NO<sub>x</sub> burner to control the emissions from this boiler. The ultra low NO<sub>x</sub> burner will be utilized the entire time the boiler is operating, including at time of start-up and shutdown. The facility has not requested that any start-up or shutdown

provisions be incorporated into this permit. Therefore, the requirements of this section do not apply.

## Section 5.7, Monitoring Provisions

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 emissions limits shall either install and maintain Continuous Emission Monitoring (CEM) equipment for NO<sub>x</sub>, CO and O<sub>2</sub>, or install and maintain APCO-approved alternate monitoring.

For the boiler in this project, the facility will use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO<sub>x</sub>, CO, and O<sub>2</sub> exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the permit in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

- The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within five days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- If the NO<sub>x</sub> or CO concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than one hour of operation after detection. If the portable analyzer continues to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following one hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
- All NO<sub>x</sub>, CO, and O<sub>2</sub> emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]
- The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4305, 4306, and 4320]

Section 5.7.6 outlines requirements for monitoring SO<sub>x</sub> emissions. For units that are complying with Section 5.4.1.1 or 5.4.1.2 of this Rule, the facility must provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit to Operate. This boiler is complying using Sections 5.4.1.1 or 5.4.1.2.

This unit is fired on PUC-Regulated natural gas. Therefore, the following requirement will be listed on the permit to comply with the SO<sub>x</sub> emissions monitoring requirement:

- The permittee shall submit an analysis showing the natural gas fuel sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]

### **Section 6.1, Recordkeeping**

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate non-compliance with the applicable requirements of this rule shall constitute a violation of this rule.

The following condition will be listed on the permit to ensure compliance:

- All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

Section 6.1.2 requires that the operator of a unit subject to Section 5.5 shall record the amount of fuel use at least on a monthly basis. Since the boiler is not subject to the requirements listed in Section 5.5, Section 6.1.2 requirements are not applicable.

Section 6.1.3 requires that the operator of a unit subject to Section 5.5.1 or 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics have been performed. These boilers are not subject to Sections 5.5.1 or 6.3.1. Therefore, the requirements of this section do not apply.

Section 6.1.4 requires that the operator of a unit with startup or shutdown provisions keep records of the duration of the startup or shutdowns. The applicant has not proposed startup or shutdown provisions. Therefore, the requirements of this section do not apply.

Section 6.1.5 requires that the operator of a unit fired on liquid fuel during PUC-quality natural gas curtailment periods record the sulfur content of the fuel, amount of fuel used, and duration of the natural gas curtailment period. The boiler is not fired on liquid fuels. Therefore, the requirements of this section do not apply.

### **Section 6.2, Test Methods**

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

Pollutant	Units	Test Method Required
NO <sub>x</sub>	ppmv	EPA Method 7E or ARB Method 100
NO <sub>x</sub>	lb/MMBtu	EPA Method 19
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O <sub>2</sub>	%	EPA Method 3 or 3A, or ARB Method 100
Stack Gas Velocities	ft/min	EPA Method 2 or 19
Stack Gas Moisture Content	%	EPA Method 4

The following permit conditions will be listed on the permit to ensure compliance:

- Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
- NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
- CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
- Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]

### Section 6.3, Compliance Testing

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.2 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the source test may be deferred for up to thirty-six months. The following condition will be listed on the permit to ensure compliance:

- Source testing to measure natural gas combustion NO<sub>x</sub> and CO emissions from this unit shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 2201, 4102, 4305, 4306, and 4320]

### Section 6.4, Emission Control Plan (ECP)

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4306.

The proposed unit will be in compliance with the emissions limits listed in table 1, Section 5.1 of this rule and with periodic monitoring and source testing requirements. Therefore, this current application for the new proposed unit satisfies the requirements of the Emission Control Plan, as listed in Section 6.4 of District Rule 4320.

## **Section 7.0, Compliance Schedule**

Section 7.0 indicates that an operator with multiple units at a stationary source shall comply with this rule in accordance with the schedule specified in Table 2, Section 7.1 of District Rule 4306.

The units will be in compliance with the emissions limits listed in table 1, Section 5.1 of this rule, and periodic monitoring and source testing as required by District Rule 4320. Therefore, requirements of the compliance schedule, as listed in Section 7.1 of District Rule 4320, are satisfied.

## **Conclusion**

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule. Therefore, compliance with District Rule 4320 requirements is expected.

## **Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1**

This rule applies to boilers, steam generators, and process heaters at NO<sub>x</sub> Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4320. Therefore, compliance with this rule is expected.

## **Rule 4607 Graphic Arts**

The purpose of this rule is to limit VOC emissions from graphic arts printing operations. This rule is applicable to any graphic arts printing operation, to any paper or fabric coating operation, to the organic solvent cleaning, and to the storage and disposal of solvents and waste solvent materials associated with such operations as defined in Section 3.0 of this rule.

Rule 4607 defines graphic arts printing operations as “those operations employing gravure, flexography, letterpress, lithography, screen, or any coating or laminating process to produce published products and packages. Organic solvent cleaning operations performed in order to produce published products and packages are considered to be part of graphic arts printing operations.”

Since the units in this project employ a lithographic or flexographic method of printing, the units are subject to this rule.

## **Section 5.1 Graphic Arts Printing Operation**

Section 5.1, Table 1 has the applicable VOC content limits for graphic arts operations not subject to Section 5.2 (flexographic printing with specialty inks), 5.3 (screen printing), or 5.4 (paper and fabric coating).

<b>Table 1</b>	
<b>Material</b>	<b>Grams of VOC per liter (lb/gal), less water and exempt compounds</b>
	Effective 1/1/10
Flexographic Ink on Porous Substrates	225 (1.88)
All Other Inks	300 (2.5)
Coating	300 (2.5)
Adhesives	150 (1.25)
Web Splicing Adhesives	150 (1.25)

<b>Table 2</b>	
<b>Fountain Solution</b>	<b>Percent VOC by volume</b>
	Effective 1/1/10
Heatset Web Offset Lithographic	1.6
Coldset Web Offset Lithographic	5.0
Sheet-fed Offset Lithographic with maximum sheet size greater than 11 x 17 inches	5.0
All Other Presses	8.0

The units in this project employ a flexographic or lithographic method of printing. Therefore, the VOC content limits in Section 5.1, Table 1 are applicable.

The following permit conditions will ensure compliance with the VOC content limits of this section:

N-3606-13-6, '14-6, '15-6

- The VOC content of the materials shall not exceed the following: (a) For standard 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 1.1 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) Fountain solutions - 8.0% 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 and 4607]

N-3606-9-7, '16-6, '23-5, '24-4, '26-5

- The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 6% by volume; inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions for high end graphics - less than 8% by volume. [District Rules 2201 and 4607]

**Section 5.2 Flexographic Specialty Ink**

Section 5.2.1 states an operator using a 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 of specialty inks in a calendar year.

Section 5.2.2 states on and after January 1, 2009, facilities with the potential to emit or with actual emissions of at least 10 tons VOC in any calendar year shall not use specialty inks with VOC content greater than 300 grams VOC per liter, less water and exempt compounds, as applied.

The following permit condition will ensure compliance with the VOC content limits of this section:

N-3606-13-6, '14-6, '15-6

- The VOC content of the materials shall not exceed the following: (a) For standard 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 1.1 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) Fountain solutions - 8.0% by volume. The VOC content of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2201 and 4607]

**Section 5.3 Coldset Web Offset Lithographic Fountain Solution**

This section states on and after January 1, 2010, an operator performing coldset web offset lithographic printing shall use fountain solution with that is five percent alcohol substitute or less, by weight, and shall have no alcohol in the fountain solution.

The following permit condition will ensure compliance with this section:

N-3606-9-7, '16-6, '23-5, '24-4, '26-5

- The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain

solutions - less than 5% alcohol substitute by weight and no alcohol. [District Rules 2201 and 4607]

**Section 5.4 Screen Printing Operations**

This section applies to screen printing operations. The machines at this facility do not perform screen printing; therefore, Section 5.4 does not apply.

**Section 5.5 Paper, Film, Foil, or Fabric Coating Operation**

This section applies to paper, film, foil, or fabric coating operations. The machines at this facility do not perform paper, film, foil, or fabric coating; therefore, Section 5.5 does not apply.

**Section 5.6 Approved Emission Control System**

The printers at this facility are not equipped with an emission control system; therefore, the requirements of Section 5.6 do not apply.

**Section 5.7 Coating Application Equipment**

This section requires all coating application equipment to be operated according to the manufacturer's specifications, and only the following application methods may be used: flow coater, roll coater, dip coater, foam coater, die coater, hand application methods, or high volume low pressure (HVLV) spray for air dried coatings.

The following permit condition will ensure compliance with this section:

- Only flow coater, roll coater, dip coater, foam coater, die coater, hand application methods shall be used to apply coatings. HVLV 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 Organic Solvent Cleaning**

Section 5.8 states an owner or operator shall not use organic solvents for cleaning operations that exceed the VOC content limits specified in the Table 7. Only the categories that potentially apply to the units in this project have been included.

<b>Table 7</b>	
<b>Cleaning Solvent Use</b>	<b>VOC Content Limit grams/liter (lb/gal)</b>
A. Product Cleaning During Manufacturing Process; or Surface Preparation for Coating, Ink, or Adhesive Application	25 (0.21)
B. Repair and Maintenance Cleaning	25 (0.21)

C. Cleaning of Coating or Adhesive Application Equipment	25 (0.21)
D. Cleaning of Ink Application Equipment	
1. General	25 (0.21)
2. Flexographic Printing	25 (0.21)
3. Specialty Flexographic Printing	100 (0.83)
5. Lithographic (Offset) or Letterpress Printing	
5.1 Roller Wash – Step 1	100 (0.83)
5.2 Roller Wash – Step 2; Roller Wash – not specified; Blanket Wash, and On-Press Components	100 (0.83)
5.3 Removable Press Components	25 (0.21)

The following condition will ensure compliance with the requirements of Section 5.8, Table 7:

- No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607]

Section 5.8.2 restricts the use of solvents containing more than 25 g-VOC/l according to the provisions in Sections 5.8.3 through 5.8.5:

Section 5.8.3 requires cleaning activities that use solvents with a VOC content greater than 25 g/l (0.21 lb/gallon) be performed by one or more 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.

The following condition will ensure compliance with this section:

- 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]

Section 5.8.4 prohibits the atomization into the open air of solvents with a VOC content greater than 25 g/l (0.21 lb/gallon) used for cleaning activities unless such solvents are vented to a VOC emission control system that complies with Section 5.6. This provision shall not apply to printing operations where the roller or blanket wash is applied automatically and the cleaning of nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with spray bottles or containers described in Section 5.8.3.2.

The following permit condition will ensure compliance with this section:

- 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]

Section 5.8.5 prohibits the use of solvents with a VOC content greater than 25 g/l (0.21 lb/gallon) 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 spray guns, cups, nozzles, bowls, and other parts during washing, rinsing and draining procedures, and it must be used according to the manufacturer's recommendations and must be closed when not in use.

The following permit condition will ensure compliance with this section:

- 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 storage or disposal of fresh or spent solvents, waste solvent cleaning materials such as cloth, paper, etc., coatings, adhesives, catalysts, thinners, and ink in closed, non-absorbent and non-leaking containers. The containers must remain closed at all times except when depositing or removing the contents of the containers or when the container is empty.

The following permit condition will ensure compliance with this section:

- 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]

## **Section 6.0 Administrative Requirements**

### **Section 6.1 Recordkeeping**

Any person subject to the provisions of this rule including stationary sources exempt pursuant to Section 4.1, shall comply with the following requirements:

Section 6.1.1 requires the permittee to maintain a current file of coatings, inks, adhesives, fountain solutions, wash primers, and solvents in use and in storage. The file shall include a material data sheet or product data sheet showing the material name, manufacturer's name, VOC content as applied, specific mixing instruction, density, and if required, composite vapor pressure.

The following permit condition will ensure compliance with this section:

- 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607]

Section 6.1.2 states that if the facility only uses materials that are compliant with the VOC content limits from Sections 5.1, 5.2, 5.3, 5.4, or 5.5, then (section 6.1.2.1) the facility shall record, on a monthly basis, the type and amount of all inks used according to one of the following methods:

- 6.1.2.1.1 Group the quantity of all inks used and identify the maximum VOC content and use the minimum density of 1010 gm/liter (8.44 lb/gal); or
- 6.1.2.1.2 Report process inks and pantone inks separately and use specific VOC content and density value for each process ink, and the highest VOC content and the minimum density of 1010 gm/liter (8.44 lb/gal) for pantone inks; or
- 6.1.2.1.3 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 1010 gm/liter (8.44 lb/gal) for pantone inks; or
- 6.1.2.1.4 Itemize each ink and pantone ink and use the specific VOC content and density value for each.

In addition, Sections 6.1.2.2 and 6.1.2.3 requires the facility to record, on a monthly basis, the type and amount of each coating, adhesive, fountain solution, wash primer, and solvent used.

The following permit condition will ensure compliance with this section:

- 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. [District Rules 2201 and 4607]

Section 6.1.4 applies to the use of 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 permit condition will ensure compliance with this section:

- 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]

Section 6.1.5 applies to graphic arts operations served by a VOC control device. None of the printers in this project are equipped with a VOC control device; therefore, this section is not applicable.

Section 6.1 requires the facility to keep records for five years. The following condition will appear on the permits to ensure compliance with this requirement:

- All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4607]

Section 6.2, Compliance Statement Requirement, applies to the manufacturers of graphic arts materials. This facility is not a manufacturer of graphic arts materials; therefore, this section does not apply.

Section 6.3 Determination of VOC Emissions from Inks Used in a Lithographic Printing Operation.

This section states for the purposes of determining compliance with emissions limits, and determining eligibility for exemption under Section 4.1 of this rule, the amount of VOC emitted from heatset and non-heatset inks used shall be discounted by the following substrate retention factors: 20 percent for heatset inks and 95 percent for non-heatset inks. These substrate retention factors shall not be used when determining compliance of inks with applicable VOC content limits specified in this rule, and heatset and non-heatset lithographic inks shall meet the VOC content limits specified in Section 5.1, Table 1.

The following permit condition will ensure compliance with this section:

- Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District Rules 2201 and 4607]

Section 6.4 lists the approved test methods. No testing is required; therefore, none of the test methods will be listed on the permits.

Therefore, continued compliance with the requirements of this rule is expected.

#### **Rule 4653 Adhesives and Sealants**

This rule applies to any person who supplies, sells, offers for sale, or applies any adhesive product within the District.

Per Section 4.1.2, units that apply adhesives with VOC contents of less than 20 grams per liter are exempt from this rule.

Per Section 4.1.8, adhesive products which are subject to the VOC limit requirements of Rule 4605 (Aerospace Assembly and Component Coating Operations), Rule 4607 (Graphic Arts), and Rule 4681 (Rubber Tire Manufacturing) are exempt from this rule.

The facility uses either adhesives with VOC contents of less than 20 grams per liter or adhesive products which are subject to the VOC limit requirements of Rule 4607.

Therefore, the equipment in this project is exempt from the requirements of this rule.

#### **Rule 4801 Sulfur Compounds**

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO<sub>2</sub>, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With:

N = moles SO<sub>2</sub>

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

R (Universal Gas Constant) =  $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$

### Natural Gas Combustion

EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to

$$\text{Corrected } F - \text{ factor} = \left( \frac{8,710 \text{ dscf}}{\text{MMBtu}} \right) \times \left( \frac{60^\circ F + 459.6}{68^\circ F + 459.6} \right) = 8,578 \frac{\text{dscf}}{\text{MMBtu}} \text{ at } 60^\circ F$$

$$\frac{0.00285 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1.97 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 1.97 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

### **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)**

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

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- 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.

Project specific impacts on global climate change were evaluated consistent with the adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District’s engineering evaluation (this document – Appendix G and H) demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit. 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. Pending a successful NSR Public Noticing period, issue ATC permits N-3606-3-6, '4-5, '9-7, '11-8, '13-6, '14-6, '15-6, '19-4, '21-4, '23-5, '24-4, '25-2, '26-5, '27-3, '29-0, '30-0, '31-0 subject to the permit conditions on the attached draft ATC permits in Appendix I.

**X. Billing Information**

<b>Annual Permit Fees</b>			
<b>Permit Unit</b>	<b>Fee Schedule</b>	<b>Fee Description</b>	<b>Annual Fee</b>
N-3606-3-6	3020-01-B	30 hp	\$117
N-3606-4-5	3020-01-E	265 hp	\$412
N-3606-9-7	3020-01-D	162 hp	\$314
N-3606-11-8	3020-01-B	30 hp	\$117
N-3606-13-6	3020-01-C	75 hp	\$197
N-3606-14-6	3020-01-D	100 hp	\$314
N-3606-15-6	3020-01-D	100 hp	\$314
N-3606-16-6	3020-01-D	100 hp	\$314
N-3606-19-4	3020-01-B	30 hp	\$117
N-3606-21-4	3020-01-A	15 hp	\$87
N-3606-23-5	3020-01-D	110 hp	\$314
N-3606-24-4	3020-01-D	147 hp	\$314
N-3606-25-2	3020-01-A	7.5 hp	\$87
N-3606-26-5	3020-01-D	148 hp	\$314
N-3606-27-3	3020-01-A	20 hp	\$87
N-3606-29-0	3020-05-C	35,530 Gallons	\$135
N-3606-30-0	3020-02-H	19.9 MMBtu/hr	\$1,030
N-3606-31-0	3020-01-F	481	\$607

**Appendices**

- A: Current Permits to Operate
- B: BACT Guidelines and Top Down BACT Analysis
- C: New BACT Determination - Corrugator
- D: Compliance Certification
- E: Certificate of Conformity
- F: Health Risk Assessment Analysis and Ambient Air Quality Analysis
- G: Greenhouse Gas Calculations
- H: Best Performance Standard
- I: Draft ATCs

# **Appendix A**

## **Current Permits to Operate**

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-3-5

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 165/MATIC BOX MAKER

## PERMIT UNIT REQUIREMENTS

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1. 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. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The VOC content of the adhesives used shall not exceed 0.06 lb/gal (less water and exempt compounds). [District NSR Rule] Federally Enforceable Through Title V Permit
3. VOC emissions from this unit shall not exceed 10.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The combined VOC emissions from the box making lines shall not exceed 30.0 pounds during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The combined VOC emissions from the box making lines shall not exceed 950 pounds during any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
6. A record of the cumulative combined annual VOC emissions, in pounds, from the box making lines shall be kept. The record be updated at least monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District NSR Rule] Federally Enforceable Through Title V Permit
8. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District NSR Rule] Federally Enforceable Through Title V Permit
9. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District NSR Rule] Federally Enforceable Through Title V Permit
10. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-4-4

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

CORRUGATED BOARD MANUFACTURING OPERATION CONSISTING OF AN ASITRADE LAMINATOR SERVED BY A RINGWOOD STARCH MIXING SYSTEM AND A PERMIT EXEMPT STEAM GENERATOR (NATURAL GAS-FIRED, 5.0 MMBTU/HR OR LESS)

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
3. 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, 5.8.3] Federally Enforceable Through Title V Permit
4. 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, 5.8.4] Federally Enforceable Through Title V Permit
5. 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, 5.8.5] Federally Enforceable Through Title V Permit
6. 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, 5.9] Federally Enforceable Through Title V Permit
7. The PM10 emissions shall not exceed 0.24 pounds per ton of dry starch adhesive mixed. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The maximum amount of dry starch adhesive used in the mixer shall not exceed 4,158 pounds during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The VOC content of the adhesives used shall not exceed 0.083 lb/gal (less water and exempt compounds). [District NSR Rule and District Rule 4607, 5.1] 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.

10. VOC emissions shall not exceed 40.0 lb/day and 9,818 lb/year. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Permittee shall maintain a current file of coatings, inks, adhesives, fountain solutions, wash primers, and solvents in use and in storage. For each material, the file shall include a material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instructions, and density. [District Rule 4607, 6.1.1] Federally Enforceable Through Title V Permit
12. 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 NSR Rule and District Rule 4607, 6.1.2 & 6.1.4] Federally Enforceable Through Title V Permit
13. Average daily VOC emissions shall be calculated from monthly records of adhesives, primers, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
14. The permittee shall maintain daily records of the quantity, in pounds, of dry starch used for this operation. [District NSR Rule] Federally Enforceable Through Title V Permit
15. The permittee shall maintain a record of the cumulative annual VOC emissions from this permit. The cumulative total VOC emissions shall be updated monthly. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
16. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-9-6

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL VARIMAT 127 (7-COLOR) SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS WITH AN INLINE COATER AND AN INFRA-RED DRYING SYSTEM

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. Only flow coater, roll coater, dip coater, foam coater, die coater, and 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, 5.7] Federally Enforceable Through Title V Permit
3. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
4. 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, 5.8.3] Federally Enforceable Through Title V Permit
5. 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, 5.8.4] Federally Enforceable Through Title V Permit
6. 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, 5.8.5] Federally Enforceable Through Title V Permit
7. 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, 5.9] 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.

8. The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); adhesives - 1.25 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 6% by volume; inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions for high end graphics - less than 8% by volume. [District NSR Rule and District Rule 4607, 5.1] Federally Enforceable Through Title V Permit
9. VOC emissions shall not exceed 170.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District NSR Rule and District Rule 4607, 6.3] Federally Enforceable Through Title V Permit
11. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
13. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607, 6.1.1] Federally Enforceable Through Title V Permit
14. 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. [District NSR Rule and District Rule 4607, 6.1.2] Federally Enforceable Through Title V Permit
15. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
17. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-11-7

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

CORRUGATED BOARD FINISHING OPERATION CONSISTING OF AN AUTOMATAN MODEL 7000 SHEETFED GLUER

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
3. 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, 5.8.3] Federally Enforceable Through Title V Permit
4. 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, 5.8.4] Federally Enforceable Through Title V Permit
5. 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, 5.8.5] Federally Enforceable Through Title V Permit
6. 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, 5.9] Federally Enforceable Through Title V Permit
7. The VOC content of the standard adhesives shall not exceed 1.25 lb/gal (less water and exempt compounds) and the VOC content of the web splicing adhesives shall not exceed 1.25 lb/gal (less water and exempt compounds). [District Rule 4607, 5.1] Federally Enforceable Through Title V Permit
8. VOC emissions shall not exceed 30.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District NSR Rule] 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.

10. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
11. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607, 6.1.1] Federally Enforceable Through Title V Permit
12. 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 NSR Rule and District Rule 4607, 6.1.2 & 6.1.4] Federally Enforceable Through Title V Permit
13. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
14. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1.6] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-13-5

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 4-COLOR MARTIN MIDLINE MODEL 924 FLEXOGRAPHIC PRINTER (S/N 6208) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
3. 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, 5.8.3] Federally Enforceable Through Title V Permit
4. 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, 5.8.4] Federally Enforceable Through Title V Permit
5. 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, 5.8.5] Federally Enforceable Through Title V Permit
6. 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, 5.9] Federally Enforceable Through Title V Permit
7. The VOC content of the materials shall not exceed the following: (a) For standard 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 1.1 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 box gluing use adhesives with a VOC content of less than or equal to 0.06 lb/gal (less water and exempt compounds) (e) Fountain solutions - 8.0% by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District NSR Rule and District Rule 4607, 5.1 & 5.2] 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.

8. VOC emissions shall not exceed 95.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
11. 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 material safety data sheet (MSDS) 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, 6.1.1] Federally Enforceable Through Title V Permit
12. 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 NSR Rule and District Rule 4607, 6.1.2 & 6.1.4] Federally Enforceable Through Title V Permit
13. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
14. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-14-5

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FFG FLEXOGRAPHIC PRINTER (S/N 6506) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
3. 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, 5.8.3] Federally Enforceable Through Title V Permit
4. 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, 5.8.4] Federally Enforceable Through Title V Permit
5. 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, 5.8.5] Federally Enforceable Through Title V Permit
6. 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, 5.9] Federally Enforceable Through Title V Permit
7. The VOC content of the materials shall not exceed the following: (a) For standard 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 1.1 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 box gluing use adhesives with a VOC content of less than or equal to 0.06 lb/gal (less water and exempt compounds) (e) Fountain solutions - 8.0% by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District NSR Rule and District Rule 4607, 5.1 & 5.2] 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.

8. VOC emissions shall not exceed 95.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
11. 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 material safety data sheet (MSDS) 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, 6.1.1] Federally Enforceable Through Title V Permit
12. 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 NSR Rule and District Rule 4607, 6.1.2 & 6.1.4] Federally Enforceable Through Title V Permit
13. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
14. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-15-5

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FLEXOGRAPHIC PRINTER (S/N 6036) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT)

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
3. 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, 5.8.3] Federally Enforceable Through Title V Permit
4. 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, 5.8.4] Federally Enforceable Through Title V Permit
5. 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, 5.8.5] Federally Enforceable Through Title V Permit
6. 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, 5.9] Federally Enforceable Through Title V Permit
7. The VOC content of the materials shall not exceed the following: (a) For standard 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 1.1 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 box gluing use adhesives with a VOC content of less than or equal to 0.06 lb/gal (less water and exempt compounds) (e) Fountain solutions - 8.0% by volume. The use of specialty inks shall not exceed 2 gallons in a calendar day and 120 gallons in a calendar year. [District NSR Rule and District Rule 4607, 5.1 & 5.2] Federally Enforceable Through Title V Permit
8. VOC emissions shall not exceed 95.0 lb/day. [District NSR Rule] 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.

9. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
11. 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 material safety data sheet (MSDS) 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, 6.1.1] Federally Enforceable Through Title V Permit
12. 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 NSR Rule and District Rule 4607, 6.1.2 & 6.1.4] Federally Enforceable Through Title V Permit
13. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
14. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-16-5

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 6-COLOR KBA RAPIDA MODEL 162 SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 361-264) WITH AN INLINE COATER AND UV DRYER

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. 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, 5.7] Federally Enforceable Through Title V Permit
3. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
4. 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, 5.8.3] Federally Enforceable Through Title V Permit
5. 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, 5.8.4] Federally Enforceable Through Title V Permit
6. 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, 5.8.5] Federally Enforceable Through Title V Permit
7. 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, 5.9] 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.

8. The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); adhesives - 1.25 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 6% by volume; inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions for high end graphics - less than 8% by volume. [District NSR Rule and District Rule 4607, 5.1] Federally Enforceable Through Title V Permit
9. VOC emissions shall not exceed 70.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District NSR Rule and District Rule 4607, 6.3] Federally Enforceable Through Title V Permit
11. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
13. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607, 6.1.1] Federally Enforceable Through Title V Permit
14. 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. [District NSR Rule and District Rule 4607, 6.1.2] Federally Enforceable Through Title V Permit
15. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
17. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-19-3

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 110M II MATIC BOX MAKER (S/N 0349-063-01)

## PERMIT UNIT REQUIREMENTS

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1. 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. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The VOC content of the adhesives used shall not exceed 0.06 lb/gal (less water and exempt compounds). [District NSR Rule] Federally Enforceable Through Title V Permit
3. VOC emissions from this unit shall not exceed 10.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The combined VOC emissions from the box making lines shall not exceed 30.0 pounds during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The combined VOC emissions from the box making lines shall not exceed 950 pounds during any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
6. A record of the cumulative combined annual VOC emissions, in pounds, from the box making lines shall be kept. The record be updated at least monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District NSR Rule] Federally Enforceable Through Title V Permit
8. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District NSR Rule] Federally Enforceable Through Title V Permit
9. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District NSR Rule] Federally Enforceable Through Title V Permit
10. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-21-3

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STAUDE WINDOW MACHINE (S/N WSI-2307)

## PERMIT UNIT REQUIREMENTS

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1. 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. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The VOC content of the adhesives used shall not exceed 0.06 lb/gal (less water and exempt compounds). [District NSR Rule] Federally Enforceable Through Title V Permit
3. VOC emissions from this unit shall not exceed 5.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The combined VOC emissions from the box making lines shall not exceed 30.0 pounds during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The combined VOC emissions from the box making lines shall not exceed 950 pounds during any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
6. A record of the cumulative combined annual VOC emissions, in pounds, from the box making lines shall be kept. The record be updated at least monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District NSR Rule] Federally Enforceable Through Title V Permit
8. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District NSR Rule] Federally Enforceable Through Title V Permit
9. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District NSR Rule] Federally Enforceable Through Title V Permit
10. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-23-4

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL 105 (8 COLOR) SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS WITH AN INLINE COATER AND UV DRYING SYSTEM

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. 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, 5.7] Federally Enforceable Through Title V Permit
3. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
4. 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, 5.8.3] Federally Enforceable Through Title V Permit
5. 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, 5.8.4] Federally Enforceable Through Title V Permit
6. 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, 5.8.5] Federally Enforceable Through Title V Permit
7. 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, 5.9] 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.

8. The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); adhesives - 1.25 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 6% by volume; inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions for high end graphics - less than 8% by volume. [District NSR Rule and District Rule 4607, 5.1] Federally Enforceable Through Title V Permit
9. VOC emissions shall not exceed 70.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District NSR Rule and District Rule 4607, 6.3] Federally Enforceable Through Title V Permit
11. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
13. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607, 6.1.1] Federally Enforceable Through Title V Permit
14. 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. [District NSR Rule and District Rule 4607, 6.1.2] Federally Enforceable Through Title V Permit
15. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
17. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-24-3

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA RAPIDA 6-COLOR 47"X64" FORMAT NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 363-742) WITH AN ANILOX TOWER COATER

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. 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, 5.7] Federally Enforceable Through Title V Permit
3. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
4. 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, 5.8.3] Federally Enforceable Through Title V Permit
5. 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, 5.8.4] Federally Enforceable Through Title V Permit
6. 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, 5.8.5] Federally Enforceable Through Title V Permit
7. 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, 5.9] Federally Enforceable Through Title V Permit
8. The VOC content of the materials shall not exceed the following: inks less than 5% VOC by weight (less water and exempt compounds) and fountain solutions less than 6% by volume; for high end graphics, inks less than 30% VOC by weight (less water and exempt compounds) and fountain solutions less than 8% by volume. [District NSR Rule] 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.

9. VOC emissions shall not exceed 99.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District NSR Rule and District Rule 4607, 6.3] Federally Enforceable Through Title V Permit
11. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
13. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607, 6.1.1] Federally Enforceable Through Title V Permit
14. 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. [District NSR Rule and District Rule 4607, 6.1.2] Federally Enforceable Through Title V Permit
15. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 and District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
17. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2; and 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-25-1

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE INTERNATIONAL PAPERBOX MODEL 6FX-154 20" WEB WIDTH FOLDER GLUER

## PERMIT UNIT REQUIREMENTS

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1. 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. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The VOC content of the adhesives used shall not exceed 0.06 lb/gal (less water and exempt compounds). [District NSR Rule] Federally Enforceable Through Title V Permit
3. VOC emissions from this unit shall not exceed 10.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The combined VOC emissions from the box making lines shall not exceed 30.0 pounds during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The combined VOC emissions from the box making lines shall not exceed 950 pounds during any one calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
6. A record of the cumulative combined annual VOC emissions, in pounds, from the box making lines shall be kept. The record be updated at least monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District NSR Rule] Federally Enforceable Through Title V Permit
8. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District NSR Rule] Federally Enforceable Through Title V Permit
9. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District NSR Rule] Federally Enforceable Through Title V Permit
10. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4607, 6.1.6] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-26-4

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA MODEL RAPIDA 162A 64" NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 368-24)

## PERMIT UNIT REQUIREMENTS

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1. 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 NSR Rule and District Rule 4607, 5.10] Federally Enforceable Through Title V Permit
2. 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, 5.7] Federally Enforceable Through Title V Permit
3. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7, Rule 4607 (12/18/08). [District Rule 4607, 5.8.1] Federally Enforceable Through Title V Permit
4. 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, 5.8.3] Federally Enforceable Through Title V Permit
5. 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, 5.8.4] Federally Enforceable Through Title V Permit
6. 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, 5.8.5] Federally Enforceable Through Title V Permit
7. 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, 5.9] 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.

8. The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); adhesives - 1.25 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 6% by volume; inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions for high end graphics - less than 8% by volume. [District NSR Rule and District Rule 4607, 5.1] Federally Enforceable Through Title V Permit
9. VOC emissions shall not exceed 99.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Compliance with the daily VOC emissions limit shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District Rules 2201 and 4607, 6.3] Federally Enforceable Through Title V Permit
11. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 material safety data sheet (MSDS) 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, 6.1.1] Federally Enforceable Through Title V Permit
14. 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. [District Rule 2201 & 4607, 6.1.2] Federally Enforceable Through Title V Permit
15. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rule 1070 & 2201] Federally Enforceable Through Title V Permit
16. The permittee shall maintain a record of the cumulative annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. The cumulative total VOC emissions shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
17. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4607, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-3606-27-2

**EXPIRATION DATE:** 04/30/2014

**EQUIPMENT DESCRIPTION:**

CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STANDARD MAX 1100 30" WEB WIDTH FOLDER GLUER

## PERMIT UNIT REQUIREMENTS

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1. 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. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The VOC content of the adhesives used shall not exceed 0.044 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from this unit shall not exceed 10.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The combined VOC emissions from the box making lines permitted under N-3606-3, N-3606-19, N-3606-21, N-3606-25 and N-3606-27 shall not exceed 30.0 pounds during any one-day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The combined VOC emissions from the box making lines permitted under N-3606-3, N-3606-19, N-3606-21, N-3606-25 and N-3606-27 shall not exceed 950 pounds during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A record of the cumulative combined annual VOC emissions, in pounds, from the box making lines shall be kept. The record be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
9. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
10. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

## **Appendix B**

### **BACT Guidelines and Top Down BACT Analysis**

San Joaquin Valley  
Unified Air Pollution Control District

**Best Available Control Technology (BACT) Guideline 4.9.12\***

Last Update 9/22/2006

**Corrugated Box Gluer**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.044 lb/gal	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 adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal	

Replaces BACT 4.7.3

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 4.11.3\***

Last Update 9/22/2006

**Cardboard Box Laminator**

<b>Pollutant</b>	<b>Achieved in Practice or contained in the SIP</b>	<b>Technologically Feasible</b>	<b>Alternate Basic Equipment</b>
VOC	use of water-based adhesive with VOC content (less water and exempt compounds) of 0.021 lb/gal or less	1) capture of VOCs and thermal or catalytic oxidation 2) capture of VOCs and carbon adsorption 3) capture of VOCs and regenerative thermal oxidation	

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 9/22/2006

**Flexographic Printing - Corrugated Boxes, Low-end Graphics**

<b>Pollutant</b>	<b>Achieved in Practice or contained in the SIP</b>	<b>Technologically Feasible</b>	<b>Alternate Basic Equipment</b>
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**

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**

<b>Pollutant</b>	<b>Achieved in Practice or contained in the SIP</b>	<b>Technologically Feasible</b>	<b>Alternate Basic Equipment</b>
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

Corrugated Box Gluer (Permits N-3606-3-6, '11-8, '13-6, '14-6, '15-6, '19-4, '21-4, '25-2, '27-3)

BACT is required for VOC emissions.

### Step 1 - Identify All Possible Control Technologies

From the SJVAPCD BACT Clearinghouse, Guideline 4.9.12, Corrugated Box Gluer, 2<sup>nd</sup> quarter 2013, identifies BACT for VOC emissions as follows:

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.044 lb/gal	1) Capture of VOCs and thermal or catalytic oxidation 2) Capture of VOCs and carbon adsorption 3) Capture of VOCs and regenerative thermal oxidizer 4) Use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal	

### Step 2 - Eliminate Technologically Infeasible Options

None of the above listed options are technologically infeasible.

### Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank	Control Technology	Achieved in Practice
1	Capture of VOCs and thermal or catalytic oxidation	N
2	Capture of VOCs and carbon adsorption	N
3	Capture of VOCs and regenerative thermal oxidizer	N
4	Use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal	N
5	Use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.044 lb/gal	Y

There are no remaining control technologies for VOC.

### Step 4 - Cost Effectiveness Analysis

Pursuant to Section IX.D of District Policy APR 1305 – BACT Policy, a cost effectiveness analysis is required for the options that have not been determined to be achieved in practice. In accordance with the District's Revised BACT Cost Effectiveness Thresholds Memo

(5/14/08), to determine the cost effectiveness of particular technologically feasible control options or alternate equipment options, the amount of emissions resulting from each option will be quantified and compared to the District Standard Emissions allowed by the District Rule that is applicable to the particular unit. The emission reductions will be equal to the difference between the District Standard Emissions and the emissions resulting from the particular option being evaluated.

Option 1 or 3: Capture of VOCs and regenerative thermal/thermal or catalytic oxidation (Technologically Feasible)

The corrugated box gluers listed on permits N-3606-25 and '27 were originally permitted in projects N-1061044 and N-1080685 respectively. Those projects indicate that an enclosure the size of a truck paint booth would be required to capture VOC from the corrugated box gluers. The required air flow rate of such a paint booth would be approximately 14,000 cfm.

Capital Cost

Per Rick Cooley of Oxidation Technology, the cost of an RTO would be \$328,140 (2011 dollars) not including sales tax, freight expenses, operational and maintenance costs, site preparation, etc.

Regenerative Thermal Oxidizer Capital Cost = \$328,140 (2011 dollars)

<b>Regenerative Thermal/Thermal or Catalytic Oxidation</b>	
Cost Description	Cost (\$)
Regenerative Thermal Oxidizer cost (2011 dollars)	\$328,140
Adjusting factor from 2011 dollars to 2013 dollars (2.75% inflation/year)	1.055
Inflation adjusted Regenerative Thermal Oxidizer cost	\$346,188
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
<b>Direct Costs (DC)</b>	
Base Equipment Costs (Regenerative Thermal Oxidizer System) See Above	\$346,188
Instrumentation 10%	\$34,619
Sales Tax 3%	\$10,386
Freight 5%	\$17,309
<b>Purchased equipment cost</b>	<b>\$408,502</b>
Foundations & supports 8%	\$32,680
Handling & erection 14%	\$57,190
Electrical 4%	\$16,340
Piping 2%	\$8,170
Painting 1%	\$4,085
Insulation 1%	\$4,085
<b>Direct installation costs</b>	<b>\$122,550</b>
<b>Total Direct Costs</b>	<b>\$531,052</b>

<b>Indirect Costs (IC)</b>	
Engineering 10%	\$40,850
Construction and field expenses 5%	\$20,425
Contractor fees 10%	\$40,850
Start-up 2%	\$8,170
Performance test 1%	\$4,085
Contingencies 3%	\$12,255
<b>Total Indirect Costs</b>	<b>\$126,635</b>
<b>Total Capital Cost (DC + IC)</b>	<b>\$657,687</b>

### Annualized Capital Cost

Pursuant to District Policy APR 1305, section X (11/09/99), the capital cost for the purchase of the equipment will be spread over the expected life of the system using the capital recovery equation. The expected life of the entire system will be estimated at 10 years. A 10% interest rate is assumed in the equation and the assumption will be made that the equipment has no salvage value at the end of the ten-year cycle.

$$A = [P \times i(1+i)^n] / [(1+i)^n - 1]$$

Where: A = Annual Cost  
P = Present Value  
I = Interest Rate (10%)  
N = Equipment Life (10 years)

$$A = \$657,687 \times [0.1(1.1)^{10}] / [(1.1)^{10} - 1]$$

$$= \mathbf{\$107,036/year}$$

### Emission Reduction

Permit unit N-3606-11-8 has the highest potential VOC emissions of 10,950 lb/year (30.0 lb/day x 365 days/year). Conservatively assuming 100% capture and 98% control,

$$\text{Emission Reduction} = 10,950 \text{ lb-VOC/year} \times 0.98 \times \text{ton}/2,000 \text{ lb}$$

$$= 5.37 \text{ tons-VOC/year}$$

### Cost Effectiveness

$$\text{Cost Effectiveness} = \$107,036/year \div 5.37 \text{ tons-VOC/year}$$

$$= \$19,949/\text{ton-VOC}$$

The analysis demonstrates that the annualized capital cost of the regenerative thermal/thermal and catalytic oxidizer system results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. The actual cost is expected to be considerably more taking into account the costs of a permanent total enclosure and annual operating costs. Therefore, this option is not cost effective and is being removed from consideration.

Option 2: Capture of VOCs and carbon adsorption (Technologically Feasible)

Carbon adsorption occurs when air containing VOCs are blown through a carbon unit and the VOCs are adsorbed onto the surface of the cracks in the activated carbon particles. Assuming a working bed capacity of 20% for carbon (weight of vapor per weight of carbon) and a VOC control efficiency of 95%, the total amount of carbon required can be determined as follows:

$$\begin{aligned}\text{Carbon required} &= 10,590 \text{ lb-VOC/year} \times 0.95 \times 1/0.20 \\ &= 50,303 \text{ lb-carbon/year}\end{aligned}$$

Kurt Keefer of EAS Corp recently quoted a carbon disposal replacement cost range of \$2/lb to \$10/lb (see project N-1110320). The \$2/lb disposal replacement cost will be used to be conservative.

$$\text{Annual Carbon Cost} = 50,503 \text{ lb-carbon/year} \times \$2/\text{lb-carbon} = \$100,606/\text{year}$$

Emission Reductions

$$\begin{aligned}\text{Annual Emission Reduction} &= 10,950 \text{ lb-VOC/year} \times 0.95 \times \text{ton}/2,000 \text{ lb} \\ &= 5.2 \text{ tons-VOC/year}\end{aligned}$$

Cost Effectiveness

$$\begin{aligned}\text{Cost Effectiveness} &= \$100,606/\text{year} \div 5.2 \text{ tons-VOC/year} \\ &= \$19,347/\text{ton-VOC}\end{aligned}$$

The analysis demonstrates that the annual carbon cost alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. The actual cost is expected to be considerably more taking into account the costs of a permanent total enclosure and carbon adsorption equipment capital costs. Therefore this option is not cost-effective and will not be considered for this project.

Option 4: Use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal (Technologically Feasible)

*N-3606-3, '19, '21, '25, '27*

The facility uses Henkel's adhesive 56-5489 for folder/glue with a VOC content of 0.013 lb/gal, less water and exempt compounds.

*N-3606-13, '14, '15*

The facility uses Henkel's adhesive 33-672B and 33-763 for folder/glue with a VOC content of 0.01 lb/gal, less water and exempt compounds.

*N-3606-11*

The facility uses Henkel's adhesive 51-6367 HUV for folder/glueers with a VOC content of 0.013 lb/gal, less water and exempt compounds.

The proposed adhesives meet this control option. Therefore, the use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal is selected as BACT for this project.

**Step 5 - Select BACT**

All identified feasible options with control efficiencies higher than the option proposed by the facility have been shown to not be cost effective. The facility has proposed Option 4, use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal. These BACT requirements will be placed on the permits as enforceable conditions.

Asitrade Single Facer/Laminator (Permit N-3606-4-5)

BACT is required for VOC emissions.

**Step 1 - Identify All Possible Control Technologies**

From the SJVAPCD BACT Clearinghouse, Guideline 4.11.3, Cardboard Box Laminator, 2<sup>nd</sup> quarter 2013, identifies BACT for VOC emissions as follows:

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of water-based adhesive with a VOC content (less water and exempt compounds) of 0.021 lb/gal or less	1) Capture of VOCs and thermal or catalytic oxidation 2) Capture of VOCs and carbon adsorption 3) Capture of VOCs and regenerative thermal oxidizer	

**Step 2 - Eliminate Technologically Infeasible Options**

None of the above listed options are technologically infeasible.

**Step 3 - Rank Remaining Control Technologies by Control Effectiveness**

Rank	Control Technology	Achieved in Practice
1	Capture of VOCs and thermal or catalytic oxidation	N
2	Capture of VOCs and carbon adsorption	N
3	Capture of VOCs and regenerative thermal oxidizer	N
4	Use of water-based adhesive with a VOC content (less water and exempt compounds) of 0.021 lb/gal or less	Y

There are no remaining control technologies for VOC.

**Step 4 - Cost Effectiveness Analysis**

Pursuant to Section IX.D of District Policy APR 1305 – BACT Policy, a cost effectiveness analysis is required for the options that have not been determined to be achieved in practice. In accordance with the District's Revised BACT Cost Effectiveness Thresholds Memo (5/14/08), to determine the cost effectiveness of particular technologically feasible control options or alternate equipment options, the amount of emissions resulting from each option will be quantified and compared to the District Standard Emissions allowed by the District Rule that is applicable to the particular unit. The emission reductions will be equal to the difference between the District Standard Emissions and the emissions resulting from the particular option being evaluated.

Option 1 or 3: Capture of VOCs and regenerative thermal/thermal or catalytic oxidation  
(Technologically Feasible)

The corrugated box gluers listed on permits N-3606-25 and '27 were originally permitted in projects N-1061044 and N-1080685 respectively. Those projects indicate that an enclosure the size of a truck paint booth would be required to capture VOC from the corrugated box gluers. The required air flow rate of such a paint booth would be approximately 14,000 cfm.

Capital Cost

Per Rick Cooley of Oxidation Technology, the cost of an RTO would be \$328,140 (2011 dollars) not including sales tax, freight expenses, operational and maintenance costs, site preparation, etc.

A permanent total enclosure would be required to be built around the unit to capture the majority of the fugitive VOC emissions. The size of the permanent total enclosure would be at least 194 feet (L) x 35 feet (W) x 15 feet (H). The cost of the enclosure would be \$61/ft<sup>2</sup> (cost supplied by Dellabarca Design & Build Inc. on February 28, 2013 for a new corrugator system).

Regenerative Thermal Oxidizer Capital Cost = \$328,140 (2011 dollars)

Permanent Total Enclosure = 194 feet x 35 feet x \$61/ft<sup>2</sup> = \$414,190

<b>Regenerative Thermal/Thermal or Catalytic Oxidation</b>	
Cost Description	Cost (\$)
Regenerative Thermal Oxidizer cost (2011 dollars)	\$328,140
Adjusting factor from 2011 dollars to 2013 dollars (2.75% inflation/year)	1.055
Inflation adjusted Regenerative Thermal Oxidizer cost	\$346,188
Permanent Total Enclosure	\$414,190
<b>Total Equipment Costs</b>	<b>\$760,378</b>
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
<b>Direct Costs (DC)</b>	
Base Equipment Costs (Regenerative Thermal Oxidizer System and Permanent Total Enclosure) See Above	\$760,378
Instrumentation 10%	\$76,038
Sales Tax 3%	\$22,811
Freight 5%	\$38,019
<b>Purchased equipment cost</b>	<b>\$897,246</b>
Foundations & supports 8%	\$121,660
Handling & erection 14%	\$125,614
Electrical 4%	\$35,890
Piping 2%	\$17,945
Painting 1%	\$8,972
Insulation 1%	\$8,972

<b>Direct installation costs</b>	<b>\$319,053</b>
<b>Total Direct Costs</b>	<b>\$1,216,299</b>
<b>Indirect Costs (IC)</b>	
Engineering 10%	\$89,725
Construction and field expenses 5%	\$44,862
Contractor fees 10%	\$89,725
Start-up 2%	\$17,945
Performance test 1%	\$8,972
Contingencies 3%	\$26,917
<b>Total Indirect Costs</b>	<b>\$278,146</b>
<b>Total Capital Cost (DC + IC)</b>	<b>\$1,494,445</b>

### Annualized Capital Cost

Pursuant to District Policy APR 1305, section X (11/09/99), the capital cost for the purchase of the equipment will be spread over the expected life of the system using the capital recovery equation. The expected life of the entire system will be estimated at 10 years. A 10% interest rate is assumed in the equation and the assumption will be made that the equipment has no salvage value at the end of the ten-year cycle.

$$A = [P \times i(1+i)^n] / [(1+i)^n - 1]$$

Where: A = Annual Cost  
P = Present Value  
I = Interest Rate (10%)  
N = Equipment Life (10 years)

$$A = \$1,494,445 \times [0.1(1.1)^{10}] / [(1.1)^{10} - 1]$$

$$= \$243,214/\text{year}$$

### Annual Costs

The Direct annual costs include labor (operating, supervisory, and maintenance), maintenance materials, electricity, and fuel.

### Fuel Costs

Heat of Combustion for waste gas stream -dh(c):

heat of combustion -dHc = 20,276 Btu/lb  
Daily VOC emissions rate = 64.0 lb/day  
Air flow rate = 14,000 cfm

$$-dh(c) = (64.0 \text{ lb/day} \times 20,276 \text{ Btu/lb}) / (14,000 \text{ ft}^3/\text{min} \times 1440 \text{ min/day})$$

$$= 0.0644 \text{ Btu/ft}^3$$

Assuming the waste gas is principally air, with a molecular weight of 28.97 and a corresponding density of 0.0739 lb/scf, the heat of combustion per pound of incoming waste gas is:

$$\begin{aligned} -dh(c) &= 0.0644 \text{ Btu/ft}^3 / 0.0739 \text{ lb/ft}^3 \\ &= 0.871 \text{ Btu/lb} \end{aligned}$$

#### Fuel Flow Requirement

$$Q(\text{fuel}) = \frac{P_w \cdot Q_w \cdot \{C_p \cdot [1.1T_f - T_w - 0.1T_r] - [-dh(c)]\}}{P(\text{ef}) \cdot [-dh(m) - 1.1 C_p \cdot (T_f - T_r)]}$$

Where

$P_w$	=	0.0739 lb/ft <sup>3</sup>
$C_p$	=	0.255 Btu/lb-°F
$Q_w$	=	14,000 scfm
$-dh(m)$	=	21,502 Btu/lb for methane
$T_r$	=	77°F assume ambient conditions
$P(\text{ef})$	=	0.0408 lb/ft <sup>3</sup> m, methane at 77°F, 1 atm
$T_f$	=	1600°F
$T_w$	=	1150°F
$-dh(c)$	=	0.871 Btu/lb

$$\begin{aligned} Q &= \frac{0.0739 \cdot 14,000 \cdot \{0.255 \cdot [1.1 \cdot 1600 - 1150 - 0.1 \cdot 77] - 0.871\}}{0.0408 \cdot [21502 - 1.1 \cdot 0.255 \cdot (1600 - 77)]} \\ &= 157,999.46 / 859.9 = 183.74 \text{ ft}^3/\text{min} \end{aligned}$$

The cost for natural gas shall be based upon the average price of natural gas sold to "Commercial Consumers" in California for the years 2010 and 2011.<sup>2</sup>

2011	=	\$8.23/thousand ft <sup>3</sup> total monthly average
2010	=	\$8.30/thousand ft <sup>3</sup> total monthly average
Average for two years	=	\$8.265/thousand ft <sup>3</sup> total monthly average

$$\begin{aligned} \text{Fuel Cost} &= 183.74 \text{ cfm} \times (1 - 0.95 \text{ heat recovery}) \times 1440 \text{ min/day} \times 365 \text{ day/year} \times \\ &\quad \$0.008265/\text{ft}^3 \\ &= \$39,909/\text{year} \end{aligned}$$

#### Electricity Costs

#### Electricity Requirement

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

<sup>2</sup> Energy Information Administration/Natural Gas Monthly February 2012; Average Price of Natural Gas Sold to Commercial Consumers by State, 2010 - 2011

Where

- $\Delta P$  = Pressure drop Across system = 4 in. H<sub>2</sub>O  
 $\epsilon$  = Efficiency for fan and motor = 0.6  
 $Q_w$  = 14,000 scfm

$$\text{Power}_{\text{fan}} = \frac{1.17 \cdot 10^{-4} \cdot 14,000 \text{ cfm} \cdot 4 \text{ in. H}_2\text{O}}{0.60}$$

$$= 10.92 \text{ kW}$$

$$\text{Electricity Cost} = 10.92 \text{ kW} \times 24 \text{ hr/day} \times 365 \text{ days/yr} \times \$0.168/\text{kWh} = \$16,071/\text{yr}$$

### Operation and Maintenance Costs

Operating Labor			
Operator	0.5 h/shift	\$20.00/h	\$5,550
Supervisor	15% of operator		\$833
Maintenance			
Labor	0.5 h/shift	\$20.00	\$5,550
Material	100% of labor		\$5,550
Utility			
Natural Gas		\$8.265/kft <sup>3</sup>	\$39,909
Electricity		\$0.168/kWh	\$16,071
Indirect Annual Cost (IC)			
Overhead	60% of Labor Cost		\$3,330
Administrative Charge	2% TCI		\$29,889
Property Taxes	1% TCI		\$14,944
Insurance	1% TCI		\$14,944
Annual Costs			<b>\$136,570</b>

$$\begin{aligned} \text{Total Annual Cost} &= \text{Annualized Capital Investment} + \text{Annual Costs} \\ &= \$243,214 + \$136,570 \\ &= \$379,784 \end{aligned}$$

### Emission Reduction

Conservatively assuming 100% capture and 98% control,

$$\begin{aligned} \text{Emission Reduction} &= 64.0 \text{ lb-VOC/day} \times 365 \text{ days/year} \times 0.98 \times \text{ton}/2,000 \text{ lb} \\ &= 11.4 \text{ tons-VOC/year} \end{aligned}$$

### Cost Effectiveness

$$\begin{aligned} \text{Cost Effectiveness} &= \$379,784/\text{year} \div 11.4 \text{ tons-VOC/year} \\ &= \$33,179/\text{ton-VOC} \end{aligned}$$

The analysis demonstrates that the annualized capital cost of the regenerative thermal/thermal and catalytic oxidizer system and operating and maintenance costs results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. Therefore, this option is not cost effective and is being removed from consideration.

#### Option 2: Capture of VOCs and carbon adsorption (Technologically Feasible)

Carbon adsorption occurs when air containing VOCs are blown through a carbon unit and the VOCs are adsorbed onto the surface of the cracks in the activated carbon particles. Assuming a working bed capacity of 20% for carbon (weight of vapor per weight of carbon) and a VOC control efficiency of 95%, the total amount of carbon required can be determined as follows:

$$\begin{aligned}\text{Carbon required} &= 64.0 \text{ lb-VOC/day} \times 365 \text{ days/year} \times 0.95 \times 1/0.20 \\ &= 110,960 \text{ lb-carbon/year}\end{aligned}$$

Kurt Keefer of EAS Corp recently quoted a carbon disposal replacement cost range of \$2/lb to \$10/lb (see project N-1110320). The \$2/lb disposal replacement cost will be used to be conservative.

$$\text{Annual Carbon Cost} = 110,960 \text{ lb-carbon/year} \times \$2/\text{lb-carbon} = \$221,920/\text{year}$$

#### Emission Reductions

$$\begin{aligned}\text{Annual Emission Reduction} &= 64.0 \text{ lb-VOC/day} \times 365 \text{ days/year} \times 0.95 \times \text{ton}/2,000 \text{ lb} \\ &= 11.1 \text{ tons-VOC/year}\end{aligned}$$

#### Cost Effectiveness

$$\begin{aligned}\text{Cost Effectiveness} &= \$221,920/\text{year} \div 11.1 \text{ tons-VOC/year} \\ &= \$20,000/\text{ton-VOC}\end{aligned}$$

The analysis demonstrates that the annual carbon cost alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. The actual cost is expected to be considerably more taking into account the costs of a permanent total enclosure and carbon adsorption equipment capital costs. Therefore this option is not cost-effective and will not be considered for this project.

#### Option 4: Use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal (Technologically Feasible)

The facility uses adhesives with a VOC content of 0.013 lb/gal, less water and exempt compounds.

The proposed adhesives meet this control option. Therefore, the use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal is selected as BACT for this project.

### **Step 5 - Select BACT**

All identified feasible options with control efficiencies higher than the option proposed by the facility have been shown to not be cost effective. The facility has proposed Option 4, use of adhesives with a VOC content (less water and exempt compounds) not exceeding 0.021 lb/gal. These BACT requirements will be placed on the permits as enforceable conditions.

Flexographic Printers (Permits N-3606-13-6, '14-6, '15-6)

BACT is required for VOC emissions.

**Step 1 - Identify All Possible Control Technologies**

From the SJVAPCD BACT Clearinghouse, Guideline 4.7.15, Flexographic Printing – Corrugated Boxes, Low-end Graphics, 2<sup>nd</sup> quarter 2013, identifies BACT for VOC emissions as follows:

Pollutant	Achieved in Practice or contained in 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 coths/papers, not in active use, in closed containers.	1) Capture of VOCs and thermal or catalytic oxidation 2) Capture of VOCs and carbon adsorption 3) Capture of VOCs and regenerative thermal oxidizer	

**Step 2 - Eliminate Technologically Infeasible Options**

None of the above listed options are technologically infeasible.

**Step 3 - Rank Remaining Control Technologies by Control Effectiveness**

Rank	Control Technology	Achieved in Practice
1	Capture of VOCs and thermal or catalytic oxidation	N
2	Capture of VOCs and carbon adsorption	N
3	Capture of VOCs and regenerative thermal oxidizer	N
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 cloths/papers, not in active use, in closed containers.	Y

There are no remaining control technologies for VOC.

#### Step 4 - Cost Effectiveness Analysis

Pursuant to Section IX.D of District Policy APR 1305 – BACT Policy, a cost effectiveness analysis is required for the options that have not been determined to be achieved in practice. In accordance with the District's Revised BACT Cost Effectiveness Thresholds Memo (5/14/08), to determine the cost effectiveness of particular technologically feasible control options or alternate equipment options, the amount of emissions resulting from each option will be quantified and compared to the District Standard Emissions allowed by the District Rule that is applicable to the particular unit. The emission reductions will be equal to the difference between the District Standard Emissions and the emissions resulting from the particular option being evaluated.

#### Option 1 or 3: Capture of VOCs and regenerative thermal/thermal or catalytic oxidation (Technologically Feasible)

The corrugated box gluers listed on permits N-3606-25 and '27 were originally permitted in projects N-1061044 and N-1080685 respectively. Those projects indicate that an enclosure the size of a truck paint booth would be required to capture VOC from the corrugated box gluers. The required air flow rate of such a paint booth would be approximately 14,000 cfm.

#### Capital Cost

Per Rick Cooley of Oxidation Technology, the cost of an RTO would be \$328,140 (2011 dollars) not including sales tax, freight expenses, operational and maintenance costs, site preparation, etc.

A permanent total enclosure would be required to be built around the unit to capture the majority of the fugitive VOC emissions. The size of the permanent total enclosure would be at least 86 feet (L) x 35 feet (W) x 15 feet (H). The cost of the enclosure would be \$61/ft<sup>2</sup> (cost supplied by Dellabarca Design & Build Inc. on February 28, 2013 for a new corrugator system).

Regenerative Thermal Oxidizer Capital Cost = \$328,140 (2011 dollars)

Permanent Total Enclosure = 86 feet x 35 feet x \$61/ft<sup>2</sup> = \$183,610

<b>Regenerative Thermal/Thermal or Catalytic Oxidation</b>	
<b>Cost Description</b>	<b>Cost (\$)</b>
Regenerative Thermal Oxidizer cost (2011 dollars)	\$328,140
Adjusting factor from 2011 dollars to 2013 dollars (2.75% inflation/year)	1.055
Inflation adjusted Regenerative Thermal Oxidizer cost	\$346,188
Permanent Total Enclosure	\$183,610
<b>Total Equipment Costs</b>	<b>\$529,798</b>
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
<b>Direct Costs (DC)</b>	
Base Equipment Costs (Regenerative Thermal Oxidizer System and Permanent Total Enclosure) See Above	\$529,798

Instrumentation 10%	\$52,980
Sales Tax 3%	\$15,894
Freight 5%	\$26,490
<b>Purchased equipment cost</b>	<b>\$625,162</b>
Foundations & supports 8%	\$50,013
Handling & erection 14%	\$87,523
Electrical 4%	\$25,006
Piping 2%	\$12,503
Painting 1%	\$6,252
Insulation 1%	\$6,252
<b>Direct installation costs</b>	<b>\$187,549</b>
<b>Total Direct Costs</b>	<b>\$812,711</b>
<b>Indirect Costs (IC)</b>	
Engineering 10%	\$62,516
Construction and field expenses 5%	\$31,258
Contractor fees 10%	\$62,516
Start-up 2%	\$12,503
Performance test 1%	\$6,252
Contingencies 3%	\$18,755
<b>Total Indirect Costs</b>	<b>\$193,800</b>
<b>Total Capital Cost (DC + IC)</b>	<b>\$1,006,511</b>

### Annualized Capital Cost

Pursuant to District Policy APR 1305, section X (11/09/99), the capital cost for the purchase of the equipment will be spread over the expected life of the system using the capital recovery equation. The expected life of the entire system will be estimated at 10 years. A 10% interest rate is assumed in the equation and the assumption will be made that the equipment has no salvage value at the end of the ten-year cycle.

$$A = [P \times i(1+i)^n] / [(1+i)^n - 1]$$

Where: A = Annual Cost  
P = Present Value  
I = Interest Rate (10%)  
N = Equipment Life (10 years)

$$A = \$1,006,511 \times [0.1(1.1)^{10}] / [(1.1)^{10} - 1]$$

$$= \mathbf{\$163,805/year}$$

### Annual Costs

The Direct annual costs include labor (operating, supervisory, and maintenance), maintenance materials, electricity, and fuel.

## Fuel Costs

Heat of Combustion for waste gas stream -dh(c):

$$\begin{aligned} \text{heat of combustion -dHc} &= 20,276 \text{ Btu/lb} \\ \text{Daily VOC emissions rate} &= 95.0 + 95.0 + 95.0 \text{ lb/day} = 285.0 \text{ lb/day} \\ \text{Air flow rate} &= 14,000 \text{ cfm} \end{aligned}$$

$$\begin{aligned} -dh(c) &= (285.0 \text{ lb/day} \times 20,276 \text{ Btu/lb}) / (14,000 \text{ ft}^3/\text{min} \times 1440 \text{ min/day}) \\ &= 0.287 \text{ Btu/ft}^3 \end{aligned}$$

Assuming the waste gas is principally air, with a molecular weight of 28.97 and a corresponding density of 0.0739 lb/scf, the heat of combustion per pound of incoming waste gas is:

$$\begin{aligned} -dh(c) &= 0.287 \text{ Btu/ft}^3 / 0.0739 \text{ lb/ft}^3 \\ &= 3.88 \text{ Btu/lb} \end{aligned}$$

## Fuel Flow Requirement

$$Q(\text{fuel}) = \frac{P_w \cdot Q_w \cdot \{C_p \cdot [1.1T_f - T_w - 0.1T_r] - [-dh(c)]\}}{P(\text{ef}) \cdot [-dh(m) - 1.1 C_p \cdot (T_f - T_r)]}$$

Where

$$\begin{aligned} P_w &= 0.0739 \text{ lb/ft}^3 \\ C_p &= 0.255 \text{ Btu/lb-}^\circ\text{F} \\ Q_w &= 14,000 \text{ scfm} \\ -dh(m) &= 21,502 \text{ Btu/lb for methane} \\ T_r &= 77^\circ\text{F assume ambient conditions} \\ P(\text{ef}) &= 0.0408 \text{ lb/ft}^3 \text{ m, methane at } 77^\circ\text{F, 1 atm} \\ T_f &= 1600^\circ\text{F} \\ T_w &= 1150^\circ\text{F} \\ -dh(c) &= 3.88 \text{ Btu/lb} \end{aligned}$$

$$\begin{aligned} Q &= \frac{0.0739 \cdot 14,000 \cdot \{0.255 \cdot [1.1 \cdot 1600 - 1150 - 0.1 \cdot 77] - 3.88\}}{0.0408 \cdot [21502 - 1.1 \cdot 0.255 \cdot (1600 - 77)]} \\ &= 154,886.34 / 859.9 = 180.12 \text{ ft}^3/\text{min} \end{aligned}$$

The cost for natural gas shall be based upon the average price of natural gas sold to "Commercial Consumers" in California for the years 2010 and 2011.<sup>3</sup>

$$\begin{aligned} 2011 &= \$8.23/\text{thousand ft}^3 \text{ total monthly average} \\ 2010 &= \$8.30/\text{thousand ft}^3 \text{ total monthly average} \\ \text{Average for two years} &= \$8.265/\text{thousand ft}^3 \text{ total monthly average} \end{aligned}$$

<sup>3</sup> Energy Information Administration/Natural Gas Monthly February 2012; Average Price of Natural Gas Sold to Commercial Consumers by State, 2010 - 2011

$$\begin{aligned} \text{Fuel Cost} &= 180.12 \text{ cfm} \times (1-0.95 \text{ heat recovery}) \times 1440 \text{ min/day} \times 365 \text{ day/year} \times \\ &\quad \$0.008265/\text{ft}^3 \\ &= \$39,123/\text{year} \end{aligned}$$

### Electricity Costs

#### Electricity Requirement

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

Where

- $\Delta P$  = Pressure drop Across system = 4 in. H<sub>2</sub>O
- $\epsilon$  = Efficiency for fan and motor = 0.6
- QW = 14,000 scfm

$$\begin{aligned} \text{Power}_{\text{fan}} &= \frac{1.17 \cdot 10^{-4} \cdot 14,000 \text{ cfm} \cdot 4 \text{ in. H}_2\text{O}}{0.60} \\ &= 10.92 \text{ kW} \end{aligned}$$

$$\text{Electricity Cost} = 10.92 \text{ kW} \times 24 \text{ hr/day} \times 365 \text{ days/yr} \times \$0.168/\text{kWh} = \$16,071/\text{yr}$$

### Operation and Maintenance Costs

Operating Labor			
Operator	0.5 h/shift	\$20.00/h	\$5,550
Supervisor	15% of operator		\$833
Maintenance			
Labor	0.5 h/shift	\$20.00	\$5,550
Material	100% of labor		\$5,550
Utility			
Natural Gas		\$8.265/kft <sup>3</sup>	\$39,123
Electricity		\$0.168/kWh	\$16,071
Indirect Annual Cost (IC)			
Overhead	60% of Labor Cost		\$3,330
Administrative Charge	2% TCI		\$20,130
Property Taxes	1% TCI		\$10,065
Insurance	1% TCI		\$10,065
Annual Costs			<b>\$116,267</b>

$$\begin{aligned} \text{Total Annual Cost} &= \text{Annualized Capital Investment} + \text{Annual Costs} \\ &= \$163,805 + \$116,267 \\ &= \$280,072 \end{aligned}$$

### Emission Reduction

Conservatively assuming 100% capture and 98% control,

$$\begin{aligned}\text{Emission Reduction} &= 19,000 \text{ lb-VOC/year} \times 0.98 \times \text{ton}/2,000 \text{ lb} \\ &= 9.3 \text{ tons-VOC/year}\end{aligned}$$

### Cost Effectiveness

$$\begin{aligned}\text{Cost Effectiveness} &= \$280,072/\text{year} \div 9.3 \text{ tons-VOC/year} \\ &= \$30,083/\text{ton-VOC}\end{aligned}$$

The analysis demonstrates that the annualized capital cost of the regenerative thermal/thermal and catalytic oxidizer system and operating and maintenance costs results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. Therefore, this option is not cost effective and is being removed from consideration.

### Option 2: Capture of VOCs and carbon adsorption (Technologically Feasible)

Carbon adsorption occurs when air containing VOCs are blown through a carbon unit and the VOCs are adsorbed onto the surface of the cracks in the activated carbon particles. Assuming a working bed capacity of 20% for carbon (weight of vapor per weight of carbon) and a VOC control efficiency of 95%, the total amount of carbon required can be determined as follows:

$$\begin{aligned}\text{Carbon required} &= 19,000 \text{ lb-VOC/year} \times 0.95 \times 1/0.20 \\ &= 90,250 \text{ lb-carbon/year}\end{aligned}$$

Kurt Keefer of EAS Corp recently quoted a carbon disposal replacement cost range of \$2/lb to \$10/lb (see project N-1110320). The \$2/lb disposal replacement cost will be used to be conservative.

$$\text{Annual Carbon Cost} = 90,250 \text{ lb-carbon/year} \times \$2/\text{lb-carbon} = \$180,500/\text{year}$$

### Emission Reductions

$$\begin{aligned}\text{Annual Emission Reduction} &= 19,000 \text{ lb-VOC/year} \times 0.95 \times \text{ton}/2,000 \text{ lb} \\ &= 9.0 \text{ tons-VOC/year}\end{aligned}$$

### Cost Effectiveness

$$\begin{aligned}\text{Cost Effectiveness} &= \$180,500/\text{year} \div 9.0 \text{ tons-VOC/year} \\ &= \$20,000/\text{ton-VOC}\end{aligned}$$

The analysis demonstrates that the annual carbon cost alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. The actual cost is expected to be considerably more taking into account the costs of a permanent total enclosure and carbon adsorption equipment capital costs. Therefore this option is not cost-effective and will not be considered for this project.

Option 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 cloths/papers, not in active use, in closed containers (Achieved in Practice)

The facility uses coatings with a VOC content of 0.3 lb/gal (less water and exempt compounds) and evaporative minimization methods which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers.

The proposed coatings meet this control option. Therefore, the use of coatings with a VOC content of 0.3 lb/gal (less water and exempt compounds) and evaporative minimization methods which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers is selected as BACT for this project.

#### **Step 5 - Select BACT**

All identified feasible options with control efficiencies higher than the option proposed by the facility have been shown to not be cost effective. The facility has proposed Option 4, use of coatings with a VOC content of 0.3 lb/gal (less water and exempt compounds) and evaporative minimization methods which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers. These BACT requirements will be placed on the permits as enforceable conditions.

Lithographic Printers (Permits N-3606-9-7, '16-6, '23-5, '24-4, '26-5)

BACT is required for VOC emissions.

**Step 1 - Identify All Possible Control Technologies**

From the SJVAPCD BACT Clearinghouse, Guideline 4.7.2, Offset Lithographic Printing – Non-heat Set Press, 2<sup>nd</sup> quarter 2013, identifies BACT for VOC emissions as follows:

Pollutant	Achieved in Practice or contained in 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> <ul style="list-style-type: none"> <li>- Inks: less than 5% VOC by weight (less water and exempt compounds) for high end graphics</li> <li>- 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</li> </ul>	

**Step 2 - Eliminate Technologically Infeasible Options**

None of the above listed options are technologically infeasible.

**Step 3 - Rank Remaining Control Technologies by Control Effectiveness**

Rank	Control Technology	Achieved in Practice
1	VOC capture and incineration	N
2	VOC capture and carbon adsorption and using materials with the following VOC contents:  Inks: less than 5% VOC by weight (less water and exempt compounds) for high end graphics  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	N
3	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 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	Y

There are no remaining control technologies for VOC.

**Step 4 - Cost Effectiveness Analysis**

Pursuant to Section IX.D of District Policy APR 1305 – BACT Policy, a cost effectiveness analysis is required for the options that have not been determined to be achieved in practice. In accordance with the District’s Revised BACT Cost Effectiveness Thresholds Memo (5/14/08), to determine the cost effectiveness of particular technologically feasible control options or alternate equipment options, the amount of emissions resulting from each option will be quantified and compared to the District Standard Emissions allowed by the District Rule that is applicable to the particular unit. The emission reductions will be equal to the difference between the District Standard Emissions and the emissions resulting from the particular option being evaluated.

Option 1: VOC capture and incineration (Technologically Feasible)

Per project N-960717, the required air flow rate for a lithographic printing station is 7,000 cfm.

Capital Cost

Per Rick Cooley of Oxidation Technology, the cost of an RTO would be \$328,140 (2011 dollars) not including sales tax, freight expenses, operational and maintenance costs, site preparation, etc.

A permanent total enclosure would be required to be built around the unit to capture the majority of the fugitive VOC emissions. The size of the permanent total enclosure would be at least 86 feet (L) x 35 feet (W) x 15 feet (H). The cost of the enclosure would be \$61/ft<sup>2</sup> (cost supplied by Dellabarca Design & Build Inc. on February 28, 2013 for a new corrugator system).

Regenerative Thermal Oxidizer Capital Cost = \$328,140 (2011 dollars)

Permanent Total Enclosure = 86 feet x 35 feet x \$61/ft<sup>2</sup> = \$183,610

<b>Regenerative Thermal/Thermal or Catalytic Oxidation</b>	
Cost Description	Cost (\$)
Regenerative Thermal Oxidizer cost (2011 dollars)	\$328,140
Adjusting factor from 2011 dollars to 2013 dollars (2.75% inflation/year)	1.055
Inflation adjusted Regenerative Thermal Oxidizer cost	\$346,188
Permanent Total Enclosure	\$183,610
<b>Total Equipment Costs</b>	<b>\$529,798</b>
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
<b>Direct Costs (DC)</b>	
Base Equipment Costs (Regenerative Thermal Oxidizer System and Permanent Total Enclosure) See Above	\$529,798
Instrumentation 10%	\$52,980
Sales Tax 3%	\$15,894
Freight 5%	\$26,490
<b>Purchased equipment cost</b>	<b>\$625,162</b>
Foundations & supports 8%	\$50,013
Handling & erection 14%	\$87,523
Electrical 4%	\$25,006
Piping 2%	\$12,503
Painting 1%	\$6,252
Insulation 1%	\$6,252
<b>Direct installation costs</b>	<b>\$187,549</b>
<b>Total Direct Costs</b>	<b>\$812,711</b>
<b>Indirect Costs (IC)</b>	
Engineering 10%	\$62,516
Construction and field expenses 5%	\$31,258
Contractor fees 10%	\$62,516
Start-up 2%	\$12,503
Performance test 1%	\$6,252
Contingencies 3%	\$18,755
<b>Total Indirect Costs</b>	<b>\$193,800</b>
<b>Total Capital Cost (DC + IC)</b>	<b>\$1,006,511</b>

### Annualized Capital Cost

Pursuant to District Policy APR 1305, section X (11/09/99), the capital cost for the purchase of the equipment will be spread over the expected life of the system using the capital recovery equation. The expected life of the entire system will be estimated at 10 years. A 10% interest rate is assumed in the equation and the assumption will be made that the equipment has no salvage value at the end of the ten-year cycle.

$$A = [P \times i(1+i)^n] / [(1+i)^n - 1]$$

Where: A = Annual Cost  
P = Present Value  
I = Interest Rate (10%)  
N = Equipment Life (10 years)

$$\begin{aligned} A &= \$1,006,511 \times [0.1(1.1)^{10}] / [(1.1)^{10} - 1] \\ &= \mathbf{\$163,805/\text{year}} \end{aligned}$$

### Annual Costs

The Direct annual costs include labor (operating, supervisory, and maintenance), maintenance materials, electricity, and fuel.

### Fuel Costs

Heat of Combustion for waste gas stream -dh(c):

heat of combustion -dHc = 20,276 Btu/lb  
Daily VOC emissions rate = 170.0 + 99.9 + 99.0 lb/day = 368.0 lb/day  
Air flow rate = 14,000 cfm

$$\begin{aligned} -dh(c) &= (368.0 \text{ lb/day} \times 20,276 \text{ Btu/lb}) / (7,000 \text{ ft}^3/\text{min} \times 1440 \text{ min/day}) \\ &= 0.74 \text{ Btu/ft}^3 \end{aligned}$$

Assuming the waste gas is principally air, with a molecular weight of 28.97 and a corresponding density of 0.0739 lb/scf, the heat of combustion per pound of incoming waste gas is:

$$\begin{aligned} -dh(c) &= 0.74 \text{ Btu/ft}^3 / 0.0739 \text{ lb/ft}^3 \\ &= 10.02 \text{ Btu/lb} \end{aligned}$$

### Fuel Flow Requirement

$$Q(\text{fuel}) = \frac{P_w \cdot Q_w \cdot \{C_p \cdot [1.1T_f - T_w - 0.1T_r] - [-dh(c)]\}}{P(\text{ef}) \cdot [-dh(m) - 1.1C_p \cdot (T_f - T_r)]}$$

Where

$$\begin{aligned}
 P_w &= 0.0739 \text{ lb/ft}^3 \\
 C_p &= 0.255 \text{ Btu/lb-}^\circ\text{F} \\
 Q_w &= 7,000 \text{ scfm} \\
 -dh(m) &= 21,502 \text{ Btu/lb for methane} \\
 T_r &= 77^\circ\text{F assume ambient conditions} \\
 P(ef) &= 0.0408 \text{ lb/ft}^3 \text{ m, methane at } 77^\circ\text{F, 1 atm} \\
 T_f &= 1600^\circ\text{F} \\
 T_w &= 1150^\circ\text{F} \\
 -dh(c) &= 10.02 \text{ Btu/lb}
 \end{aligned}$$

$$\begin{aligned}
 Q &= \frac{0.0739 \times 7,000 \times \{0.255 \times [1.1 \times 1600 - 1150 - 0.1 \times 77] - 10.02\}}{0.0408 \times [21502 - 1.1 \times 0.255 \times (1600 - 77)]} \\
 &= 74,266.95 / 859.9 = 86.37 \text{ ft}^3/\text{min}
 \end{aligned}$$

The cost for natural gas shall be based upon the average price of natural gas sold to "Commercial Consumers" in California for the years 2010 and 2011.<sup>4</sup>

$$\begin{aligned}
 2011 &= \$8.23/\text{thousand ft}^3 \text{ total monthly average} \\
 2010 &= \$8.30/\text{thousand ft}^3 \text{ total monthly average} \\
 \text{Average for two years} &= \$8.265/\text{thousand ft}^3 \text{ total monthly average}
 \end{aligned}$$

$$\begin{aligned}
 \text{Fuel Cost} &= 86.37 \text{ cfm} \times (1 - 0.95 \text{ heat recovery}) \times 1440 \text{ min/day} \times 365 \text{ day/year} \times \\
 &\quad \$0.008265/\text{ft}^3 \\
 &= \$18,759/\text{year}
 \end{aligned}$$

### Electricity Costs

#### Electricity Requirement

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

Where

$$\begin{aligned}
 \Delta P &= \text{Pressure drop Across system} = 4 \text{ in. H}_2\text{O} \\
 \epsilon &= \text{Efficiency for fan and motor} = 0.6 \\
 Q_w &= 7,000 \text{ scfm}
 \end{aligned}$$

$$\begin{aligned}
 \text{Power}_{\text{fan}} &= \frac{1.17 \times 10^{-4} \times 7,000 \text{ cfm} \times 4 \text{ in. H}_2\text{O}}{0.60} \\
 &= 5.46 \text{ kW}
 \end{aligned}$$

$$\text{Electricity Cost} = 5.46 \text{ kW} \times 24 \text{ hr/day} \times 365 \text{ days/yr} \times \$0.168/\text{kWh} = \$8,035/\text{yr}$$

<sup>4</sup> Energy Information Administration/Natural Gas Monthly February 2012; Average Price of Natural Gas Sold to Commercial Consumers by State, 2010 - 2011

Operation and Maintenance Costs

Operating Labor			
Operator	0.5 h/shift	\$20.00/h	\$5,550
Supervisor	15% of operator		\$833
Maintenance			
Labor	0.5 h/shift	\$20.00	\$5,550
Material	100% of labor		\$5,550
Utility			
Natural Gas		\$8.265/kft <sup>3</sup>	\$18,759
Electricity		\$0.168/kWh	\$8,035
Indirect Annual Cost (IC)			
Overhead	60% of Labor Cost		\$3,330
Administrative Charge	2% TCI		\$20,130
Property Taxes	1% TCI		\$10,065
Insurance	1% TCI		\$10,065
Annual Costs			<b>\$87,867</b>

$$\begin{aligned}
 \text{Total Annual Cost} &= \text{Annualized Capital Investment} + \text{Annual Costs} \\
 &= \$163,805 + \$87,867 \\
 &= \$251,672
 \end{aligned}$$

Emission Reduction

Conservatively assuming 100% capture and 98% control,

$$\begin{aligned}
 \text{Emission Reduction} &= 11,500 \text{ lb-VOC/year} \times 0.98 \times \text{ton}/2,000 \text{ lb} \\
 &= 5.6 \text{ tons-VOC/year}
 \end{aligned}$$

Cost Effectiveness

$$\begin{aligned}
 \text{Cost Effectiveness} &= \$251,672/\text{year} \div 5.6 \text{ tons-VOC/year} \\
 &= \$44,662/\text{ton-VOC}
 \end{aligned}$$

The analysis demonstrates that the annualized capital cost of the regenerative thermal system and operating and maintenance costs results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. Therefore, this option is not cost effective and is being removed from consideration.

Option 2: VOC capture and carbon adsorption and using materials with the following VOC contents: Inks: less than 5% VOC by weight (less water and exempt compounds) for high end graphics; 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 (Technologically Feasible)

Carbon adsorption occurs when air containing VOCs are blown through a carbon unit and the VOCs are adsorbed onto the surface of the cracks in the activated carbon particles. Assuming a working bed capacity of 20% for carbon (weight of vapor per weight of carbon) and a VOC control efficiency of 95%, the total amount of carbon required can be determined as follows:

$$\begin{aligned}\text{Carbon required} &= 11,500 \text{ lb-VOC/year} \times 0.95 \times 1/0.20 \\ &= 54,625 \text{ lb-carbon/year}\end{aligned}$$

Kurt Keefer of EAS Corp recently quoted a carbon disposal replacement cost range of \$2/lb to \$10/lb (see project N-1110320). The \$2/lb disposal replacement cost will be used to be conservative.

$$\text{Annual Carbon Cost} = 54,625 \text{ lb-carbon/year} \times \$2/\text{lb-carbon} = \$109,250/\text{year}$$

#### Emission Reductions

$$\begin{aligned}\text{Annual Emission Reduction} &= 11,500 \text{ lb-VOC/year} \times 0.95 \times \text{ton}/2,000 \text{ lb} \\ &= 5.46 \text{ tons-VOC/year}\end{aligned}$$

#### Cost Effectiveness

$$\begin{aligned}\text{Cost Effectiveness} &= \$109,250/\text{year} \div 5.46 \text{ tons-VOC/year} \\ &= \$20,000/\text{ton-VOC}\end{aligned}$$

The analysis demonstrates that the annual carbon cost alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. The actual cost is expected to be considerably more taking into account the costs of a permanent total enclosure and carbon adsorption equipment capital costs. Therefore this option is not cost-effective and will not be considered for this project.

Option 3: 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 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 (Achieved in Practice)

The facility uses inks with a VOC content less than 5% by weight (less water and exempt compounds) or less than 30% by weight (less water and exempt compounds) for high end graphics and fountain solutions with a VOC content less than 5% by volume for coldset web offset lithographic and 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.

The proposed VOC content meets this control option. Therefore, the use of inks with a VOC content less than 5% by weight (less water and exempt compounds) or less than 30% by weight (less water and exempt compounds) for high end graphics and fountain solutions with a VOC content less than 5% by volume for coldset web offset lithographic and 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 is selected as BACT for this project.

#### **Step 5 - Select BACT**

All identified feasible options with control efficiencies higher than the option proposed by the facility have been shown to not be cost effective. The facility has proposed Option 3, use of inks with a VOC content less than 5% by weight (less water and exempt compounds) or less than 30% by weight (less water and exempt compounds) for high end graphics and fountain solutions with a VOC content less than 5% by volume for coldset web offset lithographic and 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. These BACT requirements will be placed on the permits as enforceable conditions.

## **Appendix C**

**BACT Determination – Corrugator**

## New BACT Determination 4.9.XX: Corrugator

Facility Name: Pacific Southwest Container      Date: April 15, 2013  
Mailing Address: 4530 Leckron Road      Engineer: Stanley Tom  
Modesto, CA 95353      Lead Engineer: Joven Refuerzo  
Contact Person: Mac McCullough  
Telephone: (209) 526-0444  
Application #: N-3606-31-0  
Project #: N-1130130  
Location: 4530 Leckron Road, Modesto, CA  
Complete: March 20, 2013

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### I. Proposal

Pacific Southwest Container prints and manufactures containers and packing materials. The facility has requested Authority to Construct (ATC) permits to install the following new equipment:

- 1) Starch receiving and storage operation (permit N-3606-29-0)
- 2) 19.9 MMBtu/hr natural gas-fired boiler (permit N-3606-30-0)
- 3) Corrugated board manufacturing operation served by a cyclone (permit N-3606-31-0)

This BACT determination is specific to the corrugated board manufacturing operation served by a cyclone listed on permit N-3606-31-0.

### II. Equipment Listing

Proposed Permit #	Post-Project Equipment Description
N-3606-31-0	CORRUGATED BOARD MANUFACTURING OPERATION WITH A FOSBER SMART 400-98' CORRUGATOR SYSTEM AND A STARCH CONVEYING AND MIXING SYSTEM

### IV. Process Description

Pacific Southwest Container manufactures corrugated cardboard and corrugated cardboard boxes. The facility first produces corrugated cardboard and then cuts the cardboard into box blanks with die-cutters and applies graphic with lithographic/flexographic printing presses.

In this project, the facility proposes to install a new starch receiving and storage operation, one 19.9 MMBtu/hr natural gas-fired boiler, and one corrugated box manufacturing operation served by a cyclone.

## Corrugated Board Manufacturing Operation (Permit N-3606-31-0)

The corrugator system consists of a set of in-line machines designed to adhere together multiple sheets of paper to form single or double wall corrugated cardboard. Reels of paper are fed into the corrugator, where the paper is conditioned with heat and steam, and fed between large corrugating rollers that give the paper its fluted shape. Starch is applied to the tips of the flutes on one side and the inner liner is glued to the fluting. The corrugated fluting medium with one liner attached to it is called single face web and travels along the machine toward double backer where the single face web meets the outer line and forms corrugated board. The corrugated board is then cut and stacked.

The proposed corrugator is capable of producing double wall corrugated cardboard. Double layer corrugated cardboard is made up of two corrugated layers separated by a center flat layer all between two outer flat layers.

The adhesives for the corrugator will be prepared onsite from various ingredients. A typical batch will consist of water, starch, a liquid resin, borax, and sodium hydroxide. These ingredients are loaded into a mixer in appropriate proportions along with the starch, which is mechanically conveyed from the starch silo to the mixer. Once the mixing process is complete, the adhesive will be pumped into the holding tanks, to be used in the corrugator system.

The facility may operate 24 hours per day, 365 days per year.

### **V. Control Equipment Evaluation**

#### N-3606-31-0

The applicant has proposed the use of low VOC content starch-based adhesives to minimize VOC emissions.

#### **A. Best Available Control Technology (BACT) for Permit Unit N-3606-31-0**

##### **Applicability**

District Rule 2201 states that 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, and/or
- c) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day.
- d) When a Major Modification is triggered for a modification project at a facility that is a Major Source.

As shown below, BACT is triggered for VOC emissions for the corrugator.

N-3606-31-0

**I. Assumptions**

- The facility operates 24 hr/day, 365 days/year for worst case emissions.
- Maximum corrugated board production rate = 208,333 ft<sup>2</sup>/hour, 5,000,000 ft<sup>2</sup>/day, 1,040,000,000 ft<sup>2</sup>/year
- Maximum Velocity SP29-962A Performance Enhancer Resin usage = 183 gallons/day and 43900 gallons/year
- Maximum Ultraguard 29-9734 WRA Thermosetting Resin usage = 211 gallons/day and 50,634 gallons/year
- Velocity SP29-962A Performance Enhancer Resin VOC content = 0.008 lb/gal (less water and exempt compounds)
- Ultraguard 29-9734 WRA Thermosetting Resin VOC content = 0.21% by weight
- Ultraguard 29-9734 WRA Thermosetting Resin Specific gravity = 1.16

**II. Emission Factors**

Corrugator

Paper used in the corrugating process (i.e. softening paper with steam and then feeding the paper between corrugating rollers to give the paper a fluted shape) are potential sources of VOC emissions. In July 2003, this facility performed a source test on a corrugator and revealed VOC emissions appears to be most influenced by the source of fiber used to make the corrugated board. The manufacturer established a VOC emission factor of 8 lb-VOC/million square foot of board produced.

Per project N-1082244,

$$EF_{VOC} = 8 \text{ lb}/10^6 \text{ ft}^2 \text{ of product}$$

Note this emission factor may already account for VOC emissions from the adhesive. To be conservative, the adhesive VOC emissions will be assessed separately.

Adhesive

<b>Adhesive Composition</b>	
Constituent	Volume %
Velocity SP29-962A Performance Enhancer Resin	1.04
Ultraguard 29-9734 WRA Thermosetting Resin	1.48
Water	71.84
Starch	24
Aquence CG 905B Solids Saver	0.2
Sodium Hydroxide	1.44
Borax	

Of the constituents listed above, only the resin constituents contain VOCs.

Velocity Resin  $EF_{VOC} = 0.008 \text{ lb/gal}$  (less water and exempt compounds)

Ultraguard Resin  $EF_{VOC} = (0.21 \text{ lb/100 lb resin}) \times 1.16 \times 8.34 \text{ lb/gal}$   
 $= 0.0203 \text{ lb/gal}$

Adhesive  $EF_{VOC} = [(0.008 \text{ lb/gal})(1.04 \text{ gal}) + (0.0203 \text{ lb/gal})(1.48 \text{ gal})] \div (1.04 \text{ gal} + 1.48 \text{ gal})$   
 $= 0.015 \text{ lb/gal}$  (less water and exempt compounds)

### III. Post Project Potential to Emit (PE2)

#### Corrugator

Daily PE2 =  $8 \text{ lb-VOC}/10^6 \text{ ft}^2 \times 5,000,000 \text{ ft}^2/\text{day} = 40.0 \text{ lb-VOC}/\text{day}$

Annual PE2 =  $8 \text{ lb-VOC}/10^6 \text{ ft}^2 \times 1,040,000,000 \text{ ft}^2/\text{year} = 8,320 \text{ lb-VOC}/\text{year}$

Post-Project Potential to Emit (Corrugator)		
Permit Unit	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/year)
N-3606-31-0	40.0	8,320

#### Adhesive

##### *Velocity SP29-962A Performance Enhancer Resin*

Daily PE2 =  $183 \text{ gallons}/\text{day} \times 0.008 \text{ lb-VOC}/\text{gal} = 1.5 \text{ lb-VOC}/\text{day}$

Annual PE2 =  $43,900 \text{ gallons}/\text{year} \times 0.008 \text{ lb-VOC}/\text{gal} = 351 \text{ lb-VOC}/\text{year}$

##### *Ultraguard 29-9734 WRA Thermosetting Resin*

Daily PE2 =  $211 \text{ gallons}/\text{day} \times 0.0203 \text{ lb-VOC}/\text{gal} = 4.3 \text{ lb-VOC}/\text{day}$

Annual PE2 =  $50,634 \text{ gallons}/\text{year} \times 0.0203 \text{ lb-VOC}/\text{gal} = 1,028 \text{ lb-VOC}/\text{year}$

Post-Project Potential to Emit (Adhesive)			
Permit Unit	Constituent	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/year)
N-3606-31-0	Velocity SP29-962A Performance Enhancer Resin	1.5	351
	Ultraguard 29-9734 WRA Thermosetting Resin	4.3	1,028
	Total	5.8	1,379

Daily Post-Project Potential to Emit	
Permit Unit	VOC (lb/day)
N-3606-31-0	$40.0 + 5.8 = 45.8$

Annual Post-Project Potential to Emit	
Permit Unit	VOC (lb/year)
N-3606-31-0	8,320 + 1,379 = 9,699

Post-Project Potential to Emit		
Pollutant	PE2 (lb/day)	BACT Triggered?
NO <sub>x</sub>	0.0	No
SO <sub>x</sub>	0.0	No
PM <sub>10</sub>	0.0	No
CO	0.0	No
VOC	45.8	Yes

Post-Project Potential to Emit			
Permit Unit	Description	Source	PE (lb-VOC/day)
N-3606-31-0	Corrugator	Steam conditioning of paper	40.0
		Starch adhesive application and drying paper	5.8

As demonstrated above, the PE is greater than 2 lb/day for VOC for permit N-3606-31-0; therefore BACT is triggered for VOC for permit N-3606-31-0.

## B. BACT Policy

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 District's 2<sup>nd</sup> quarter 2013 BACT Clearinghouse was surveyed to determine if an existing BACT guideline was applicable for this class and category of operation. No BACT guidelines were found that cover corrugators. Pursuant to the District's BACT policy, a Top-Down BACT analysis will be performed for inclusion of a new determination in the District's BACT Clearinghouse.

## C. BACT Determination for Corrugators

The Environmental Protection Agency (EPA), California Air Resources Board (CARB), San Diego County Air Pollution Control District (SDCAPCD), South Coast Air Quality Management District (SCAQMD), Bay Area Air Quality Management District (BAAQMD) and the San Joaquin Valley Air Pollution Control District (SJVAPCD) BACT clearinghouses were reviewed to determine potential control technologies for this class and category of operation.

EPA's RACT/BACT/LAER database search resulted in an entry RBLC IC OK-0123 for International Paper but did not list information on the type of unit and did not list any add-on control equipment.

Rule 4607, Graphic Arts and Paper, Film, Foil and Fabric Coatings and Rule 4653, Adhesives and Sealants are SIP-approved rules and contain applicable limits for corrugator operations that may be considered to be a BACT limit.

Paper Steam Conditioning

In July 2003, this facility performed a source test on a corrugator and revealed VOC emissions appears to be most influenced by the source of fiber used to make the corrugated board. The manufacturer established a VOC emission factor of 8 lb-VOC/million square foot of board produced (the same limit is listed on permits C-1396-13-1 and S-3990-7-2). This value will be established as the Achieved in Practice limit for steam conditioning of the corrugator paper.

Adhesive Application

SJVAPCD's permit database search resulted in the following permits:

Facility Name	Permit Number	Adhesives Limit (lb-VOC/gal less water and exempt compounds)	VOC Control (Yes/No)
International Paper	S-3990-7-2	0.167	No
International Paper	C-1396-13-1	0.167	No
International Paper	N-1982-19-1	0.167	No
Rocktenn CP LLC	C-7165-2-4	0.167	No

The adhesive VOC content proposed in this project is lower than the limits found on other corrugator permits and lower than the limit in Rule 4607. The facility proposed value of 0.015 lb-VOC/gal (less water and exempt compounds) will be listed as the Achieved in Practice limit for adhesive application.

VOC Control

District staff contacted Dave Brown of International Paper to determine if the facility uses control equipment to reduce VOC emissions from a corrugator system. Mr. Brown stated he has visited about 20 different plants around the country that run corrugator systems and none of them operate control equipment to control VOC emissions.

District staff contacted Atul Shah of CSM Worldwide, Rick Cooley of Oxidation Technology, and Richard Whitford of Adwest Technologies, oxidizer vendors with installations in the San Joaquin Valley, to determine if the companies have installed a thermal/catalytic oxidizer for a corrugator system. Mr. Shah, Mr. Cooley, and Mr. Whitford stated none of their companies have installed a thermal/catalytic oxidizer for a corrugator system.

**1. VOC Top-Down BACT Analysis for Permit Unit N-3606-31-0**

Similar to existing BACT Guidelines 4.7.15, 4.9.12, and 4.11.3, the primary control option for a corrugator would be capture of the VOCs and sending the vapors for incineration in a thermal/catalytic oxidizer or control using carbon adsorption.

**Step 1 – Identify all control technologies**

The following control technologies have been identified for corrugators.

- 1) VOC Capture and Thermal/Catalytic Oxidation
- 2) VOC Capture and Carbon Adsorption
- 3) Steam conditioning of paper – 8 lb-VOC/10<sup>6</sup> ft<sup>2</sup>; Adhesives – 0.015 lb-VOC/gal (less water and exempt compounds)

**Step 2 – Eliminate Technologically Infeasible Options**

None of the above listed options are technologically infeasible.

**Step 3 – Rank Remaining Control Technologies by Control Effectiveness**

Rank	Control Technology	Control Efficiency	Achieved in Practice
1	VOC Capture and Thermal/Catalytic Oxidizer	98%	N
2	VOC Capture and Carbon Adsorption	95%	N
3	Steam conditioning of paper – 8 lb-VOC/10 <sup>6</sup> ft <sup>2</sup> ; Adhesives – 0.015 lb-VOC/gal (less water and exempt compounds)	Baseline	Y

There are no remaining control technologies for VOC.

**Step 4 – Cost Effectiveness Analysis**

Pursuant to Section IX.D of District Policy APR 1305 – BACT Policy, a cost effectiveness analysis is required for the options that have not been determined to be achieved in practice. In accordance with the District’s Revised BACT Cost Effectiveness Thresholds Memo (5/14/08), to determine the cost effectiveness of particular technologically feasible control options or alternate equipment options, the amount of emissions resulting from each option will be quantified and compared to the District Standard Emissions allowed by the District Rule that is applicable to the particular unit. The emission reductions will be equal to the difference between the District Standard Emissions and the emissions resulting from the particular option being evaluated.

Option 1: VOC Capture and thermal/catalytic oxidation (Technologically Feasible)

The corrugated box gluers listed on permits N-3606-25 and '27 were originally permitted in projects N-1061044 and N-1080685 respectively. Those projects indicate that an enclosure the size of a truck paint booth would be required to capture VOC from the corrugated box gluers. The required air flow rate of such a paint booth would be approximately 14,000 cfm.

Capital Cost

Per Rick Cooley of Oxidation Technology, the cost of an RTO would be \$328,140 (2011 dollars) not including sales tax, freight expenses, operational and maintenance costs, site preparation, etc.

Regenerative Thermal Oxidizer Capital Cost = \$328,140 (2011 dollars)

<b>Thermal/Catalytic Oxidation</b>	
Cost Description	Cost (\$)
Regenerative Thermal Oxidizer cost (2011 dollars)	\$328,140
Adjusting factor from 2011 dollars to 2013 dollars (2.75% inflation/year)	1.055
Inflation adjusted Regenerative Thermal Oxidizer cost	\$346,188
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
<b>Direct Costs (DC)</b>	
Base Equipment Costs (Regenerative Thermal Oxidizer System) See Above	\$346,188
Instrumentation 10%	\$34,619
Sales Tax 3%	\$10,386
Freight 5%	\$17,309
<b>Purchased equipment cost</b>	<b>\$408,502</b>
Foundations & supports 8%	\$32,680
Handling & erection 14%	\$57,190
Electrical 4%	\$16,340
Piping 2%	\$8,170
Painting 1%	\$4,085
Insulation 1%	\$4,085
<b>Direct installation costs</b>	<b>\$122,550</b>
<b>Total Direct Costs</b>	<b>\$531,052</b>
<b>Indirect Costs (IC)</b>	
Engineering 10%	\$40,850
Construction and field expenses 5%	\$20,425
Contractor fees 10%	\$40,850
Start-up 2%	\$8,170
Performance test 1%	\$4,085
Contingencies 3%	\$12,255
<b>Total Indirect Costs</b>	<b>\$126,635</b>
<b>Total Capital Cost (DC + IC)</b>	<b>\$657,687</b>

### Annualized Capital Cost

Pursuant to District Policy APR 1305, section X (11/09/99), the capital cost for the purchase of the equipment will be spread over the expected life of the system using the capital recovery equation. The expected life of the entire system will be estimated at 10 years. A 10% interest rate is assumed in the equation and the assumption will be made that the equipment has no salvage value at the end of the ten-year cycle.

$$A = [P \times i(1+i)^n] / [(1+i)^n - 1]$$

Where: A = Annual Cost  
P = Present Value  
I = Interest Rate (10%)  
N = Equipment Life (10 years)

$$\begin{aligned} A &= \$657,687 \times [0.1(1.1)^{10}] / [(1.1)^{10} - 1] \\ &= \mathbf{\$107,036/\text{year}} \end{aligned}$$

### Emission Reduction

The proposed emissions in this project from the corrugator (steam conditioning of paper plus adhesives application) is equal to 9,699 lb/year. District standard emissions will not be utilized in this analysis and the emission reduction will be based upon the proposed emission rate of the unit and the control efficiency of the control technology. Conservatively assuming 100% capture and 98% control,

$$\begin{aligned} \text{Emission Reduction} &= 9,699 \text{ lb-VOC/year} \times 0.98 \times \text{ton}/2,000 \text{ lb} \\ &= 4.75 \text{ tons-VOC/year} \end{aligned}$$

### Cost Effectiveness

$$\begin{aligned} \text{Cost Effectiveness} &= \$107,036/\text{year} \div 4.75 \text{ tons-VOC/year} \\ &= \$22,522/\text{ton-VOC} \end{aligned}$$

The analysis demonstrates that the annualized capital cost of the regenerative thermal/thermal and catalytic oxidizer system results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. The actual cost is expected to be considerably more taking into account the costs of a permanent total enclosure and annual operating costs. Therefore, this option is not cost effective and is being removed from consideration.

### Option 2: Capture of VOCs and carbon adsorption (Technologically Feasible)

Carbon adsorption occurs when air containing VOCs are blown through a carbon unit and the VOCs are adsorbed onto the surface of the cracks in the activated carbon particles. Assuming a working bed capacity of 20% for carbon (weight of vapor per weight of carbon) and a VOC control efficiency of 95%, the total amount of carbon required can be determined as follows:

$$\begin{aligned}\text{Carbon required} &= 9,699 \text{ lb-VOC/year} \times 0.95 \times 1/0.20 \\ &= 46,070 \text{ lb-carbon/year}\end{aligned}$$

Kurt Keefer of EAS Corp recently quoted a carbon disposal replacement cost range of \$2/lb to \$10/lb (see project N-1110320). The \$2/lb disposal replacement cost will be used to be conservative.

$$\text{Annual Carbon Cost} = 46,070 \text{ lb-carbon/year} \times \$2/\text{lb-carbon} = \$92,141/\text{year}$$

#### Emission Reductions

$$\begin{aligned}\text{Annual Emission Reduction} &= 9,699 \text{ lb-VOC/year} \times 0.95 \times \text{ton}/2,000 \text{ lb} \\ &= 4.6 \text{ tons-VOC/year}\end{aligned}$$

#### Cost Effectiveness

$$\begin{aligned}\text{Cost Effectiveness} &= \$92,141/\text{year} \div 4.6 \text{ tons-VOC/year} \\ &= \$20,000/\text{ton-VOC}\end{aligned}$$

The analysis demonstrates that the annual carbon cost alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. The actual cost is expected to be considerably more taking into account the costs of a permanent total enclosure and carbon adsorption equipment capital costs. Therefore this option is not cost-effective and will not be considered for this project.

#### **Step 5 – Select BACT**

Pursuant to the above Top-Down BACT Analysis, there are no cost effective BACT options for corrugators. Therefore, BACT is satisfied with no control equipment.

## **Proposed Pages For the BACT Clearinghouse**

# San Joaquin Valley Unified Air Pollution Control District

## Best Available Control Technology (BACT) Guideline 4.9.XX

**Emission Unit:** Corrugator

**Industry Type:** All

**Equipment Rating:** None

**Last Update:** April 16, 2013

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Steam conditioning of paper – 8 lb-VOC/10 <sup>6</sup> ft <sup>2</sup> ;  Adhesives – 0.015 lb-VOC/gal (less water and exempt compounds)	<ol style="list-style-type: none"> <li>1. VOC Capture and Thermal/Catalytic Oxidation</li> <li>2. VOC Capture and Carbon Adsorption</li> </ol>	

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 - Permit Specific BACT Determinations on Next Page(s)**

DRAFT

4.9.XX

2<sup>nd</sup> Qtr. '13

**San Joaquin Valley  
Unified Air Pollution Control District**

**Best Available Control Technology (BACT) Guideline 4.9.XX A**

**Emission Unit:** Corrugator

**Equipment Rating:** None

**Facility:** Pacific Southwest Container

**References:** ATC #: N-3606-31-0  
Project #: 1123183

**Location:** 4530 Leckron Road, Modesto, CA

**Date of Determination:** April 16, 2013

Pollutant	BACT Requirements
VOC	Steam conditioning of paper – 8 lb- VOC/10 <sup>6</sup> ft <sup>2</sup> ; Adhesives – 0.015 lb-VOC/gal (less water and exempt compounds)

- BACT Status:**
- Achieved in practice  Small Emitter  T-BACT
  - Technologically feasible BACT
  - At the time of this determination achieved in practice BACT was equivalent to technologically feasible BACT
  - Contained in EPA approved SIP
  - The following technologically feasible options were not cost effective:
  - Alternate Basic Equipment
  - The following alternate basic equipment was not cost effective:

# BACT CLEARINGHOUSE

## --Submission Form--

### Category

Source Category	Corrugated & Solid Fiber Boxes	
SIC Code	2653	<b>View SIC Code List</b>
NAICS Code		<u>View NAICS Code List</u>

## Emission Unit Information

Manufacturer	Fosber
Type	
Model	Smart 400
Equipment Description	CORRUGATED BOARD MANUFACTURING OPERATION WITH A FOSBER SMART 400-98' CORRUGATOR SYSTEM AND A STARCH CONVEYING AND MIXING SYSTEM
Capacity/Dimensions	
Fuel Type	
Multiple Fuel Types	
Operating Schedule	Continuous 24 hrs/day, 8,760 hrs/yr
Function of Equipment	The corrugator system consists of a set of in-line machines designed to adhere together multiple sheets of paper to form single or double wall corrugated cardboard.

## Facility/District Information

Facility Name	Pacific Southwest Container
Facility County	Stanislaus County
Facility Zip Code	95353
District Contact	David Warner, San Joaquin Valley Air Pollution District
District Contact Phone	(559) 230-6000
District Contact E-mail	<u><a href="mailto:carlos.garcia@valleyair.org">carlos.garcia@valleyair.org</a></u>

## Project/Permit Information

Application or Permit Number	N-3606-31-0
New Construction/Modification	New
ATC Date (mm-dd-yyyy)	TBD
PTO Date (mm-dd-yyyy)	TBD
Startup Date (mm-dd-yyyy)	TBD



# **Appendix D**

## **Compliance Certification**



RECEIVED

FEB 20 2013

February 20/2013

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

SJVAPCD
NORTHERN REGION

Subject: Compliance Statement for Pacific Southwest Container LLC

Dear Mr. Gill:

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 corrugator project N-1130130 in facility N-3606.

All major stationary sources in California owned or operated by Pacific Southwest Container LLC, 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: PSC Modesto - 4330 Leckron Road - Modesto, CA 95357
Facility #2: PSC Visalia - 9525 West Nicholas Avenue - Visalia, CA 93291
Facility #3: PSC Stockton - 4343 East Fremont Street - Stockton, CA 95212

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,

[Handwritten signature]

"Mac" McCullough
Sr Vice President Quality & Environmental Mgmt

RECEIVED

FEB 20 2013

SJVAPCD
NORTHERN REGION

# **Appendix E**

## **Certificate of Conformity**

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                      AMENDMENT

COMPANY NAME: <b>Pacific Southwest Container L.L.C.</b>	FACILITY ID: <b>N<sup>o</sup> 3606</b>
1. Type of Organization: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input checked="" type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: <b>Pacific Southwest Container L.L.C.</b>	
3. Agent to the Owner: <b>"Mac" McCullough</b>	

**II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):**

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

*Mac McCullough*

February 19<sup>th</sup>, 2013

Signature of Responsible Official

Date

**Mac McCullough**

Name of Responsible Official (please print)

**Sr. VP Quality & Environmental Mgmt.**

Title of Responsible Official (please print)

## **Appendix F**

Health Risk Assessment Analysis and Ambient Air Quality  
Analysis

# San Joaquin Valley Air Pollution Control District Risk Management Review

To: Stanely Tom – Permit Services  
 From: Kou Thao – Technical Services  
 Date: 4-22-13  
 Facility Name: Pacific Southwest Container  
 Location: 4530 Leckron Rd, Modesto, CA  
 Application #(s): N-3606-29-0, 30-0, 31-0  
 Project #: N-1130130

## A. RMR SUMMARY

RMR Summary					
Categories	Starch Receiving (Unit 29-0)	NG boiler (Unit 30-0)	Corrugator (Unit 31-0)	Project Totals	Facility Totals
Prioritization Score	N/A <sup>1</sup>	0.04	N/A <sup>1</sup>	<1	>1
Acute Hazard Index	N/A <sup>1</sup>	2.20E-04	N/A <sup>1</sup>	2.20E-04	7.89E-03
Chronic Hazard Index	N/A <sup>1</sup>	5.30E-06	N/A <sup>1</sup>	5.30E-06	1.53E-01
Maximum Individual Cancer Risk (10 <sup>-6</sup> )	N/A <sup>1</sup>	2.01E-10	N/A <sup>1</sup>	2.01E-10	5.89E-07
T-BACT Required?	No	No	No		
Special Permit Conditions?	No	No	No		

<sup>1</sup>There are no HAP's associated with the emissions from these units.

### Proposed Permit Conditions

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

#### Unit # 29-0 & 31-0

No special conditions are required.

#### Unit # 30-0

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

## B. RMR REPORT

### I. Project Description

Technical Services received a request on April 4, 2013 to perform a Risk Management Review for a proposed installation of a Starch receiving operation, corrugator cardboard manufacturing operation, and a 19.9 mmbtu/hr natural gas boiler. The project also consists of a modification to the current permitted units; -3-6, -4-5, -11-8, -14-6, -15-6, 16-6, 19-4, 21-4, -23-5, -24-4, -25-2, -26-5, -26-3, and -27-3. The proposed modification to these permit units consist of revising the annual VOC limits to each permitted unit. As per the permitting engineer, these new VOC limits will result in annual limits lower than what each unit is currently permitted to emit, and therefore will result in no increased emissions.

### II. Analysis

Per the permitting engineer, the only emissions associated to proposed units -29-0 and 31-0 are VOCs. After reviewing the MSDS sheets submitted by the applicant for these two proposed units, it was determined that there are no HAPs present. No prioritization or further analysis was required or performed for units -29-0 and -31-0.

Technical Services performed a prioritization for proposed unit -30-0 using the District's HEARTs database. Since the total facility prioritization score was greater than one, a refined health risk assessment was required. Emissions calculated using Ventura County emission factors for internal combustion of natural gas were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2005-2009 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 Hot Spots Analysis and Reporting Program (HARP) risk assessment module to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

<b>Analysis Parameters Unit -30-0</b>			
<b>Source Type</b>	Point	<b>Location Type</b>	Rural
<b>Stack Height (m)</b>	7.32	<b>Closest Receptor (m)</b>	82
<b>Stack Diameter. (m)</b>	0.61	<b>Type of Receptor</b>	Business
<b>Stack Exit Velocity (m/s)</b>	12.78	<b>Max Hours per Year</b>	8760
<b>Stack Exit Temp. (°K)</b>	515.22	<b>Fuel Type</b>	NG
<b>Burner Rating (MMBtu/hr)</b>	19.9		

In addition to the RMR, Technical Services performed modeling for criteria pollutants CO, NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>10</sub>; as well. The emission rates used for criteria pollutant modeling were 1.473 lb/hr CO, 0.123 lb/hr NO<sub>x</sub>, 0.057 lb/hr SO<sub>x</sub>, and 0.151 lb/hr PM<sub>10</sub>. The engineer supplied the maximum fuel rate for the natural gas boiler used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:

#### Criteria Pollutant Modeling Results\*

NG Boiler	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO <sub>x</sub>	Pass <sup>1</sup>	X	X	X	Pass
SO <sub>x</sub>	Pass	Pass	X	Pass	Pass
PM <sub>10</sub>	X	X	X	Pass <sup>2</sup>	Pass <sup>2</sup>
PM <sub>2.5</sub>	X	X	X	Pass <sup>2</sup>	Pass <sup>2</sup>

<sup>1</sup>The project was compared to the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

<sup>2</sup>The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

### III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **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.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

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

# **Appendix G**

## **Greenhouse Gas Calculations**

## GHG Calculations

### Basis and Assumptions

- Emission factors and global warming potentials (GWP) are taken from EPA 40 CFR Part 98, Subpart A, Tables C-1 and C-2:

#### *Natural Gas*

CO<sub>2</sub> 53.02 kg/MMBtu (116.89 lb/MMBtu)  
CH<sub>4</sub>  $1.0 \times 10^{-3}$  kg/MMBtu (0.0022 lb/MMBtu)  
N<sub>2</sub>O  $1.0 \times 10^{-4}$  kg/MMBtu (0.00022 lb/MMBtu)

GWP for CH<sub>4</sub> = 21 lb-CO<sub>2</sub>(eq) per lb-CH<sub>4</sub>  
GWP for N<sub>2</sub>O = 310 lb-CO<sub>2</sub>(eq) per lb-N<sub>2</sub>O

### Calculations

#### *Hourly Emissions (Natural Gas Fuel)*

CO<sub>2</sub> Emissions = 19.9 MMBtu/hr x 116.89 lb/MMBtu = 2,326.111 lb-CO<sub>2</sub>(eq)/hour  
CH<sub>4</sub> Emissions = 19.9 MMBtu/hr x 0.0022 lb/MMBtu x 21 lb-CO<sub>2</sub>(eq) per lb-CH<sub>4</sub>  
= 0.919 lb-CO<sub>2</sub>(eq)/hour  
N<sub>2</sub>O Emissions = 19.9 MMBtu/hr x 0.00022 lb/MMBtu x 310 lb-CO<sub>2</sub>(eq) per lb-N<sub>2</sub>O  
= 1.357 lb-CO<sub>2</sub>(eq)/hour

Total = 2,326.111 + 0.919 + 1.357 = 2,328.387 lb-CO<sub>2</sub>(eq)/hour

#### *Annual Emissions (Natural Gas Fuel)*

2,328.387 lb-CO<sub>2</sub>(eq)/hour x 8,760 hr/year ÷ 2,000 lb/ton = 10,198 short tons-CO<sub>2</sub>(eq)/year

10,198 short tons-CO<sub>2</sub>e/year x 0.9072 metric tons/short ton = **9,252 metric tons-CO<sub>2</sub>(eq)/year**

This exceeds the District's threshold of 230 metric tons of CO<sub>2</sub> equivalent. To address the potential increase in GHG emissions, the applicant is proposing to comply with the best performance standard (BPS) developed by the District.

# **Appendix H**

Best Performance Standard

**San Joaquin Valley  
Unified Air Pollution Control District  
Best Performance Standard (BPS) x.x.xx**

<b>Class</b>	<b>Gaseous Fuel-Fired Boilers</b>
<b>Category</b>	<b><i>New Boilers with Rated Steam Pressure Less Than 75 psig, Fired Exclusively on Natural Gas or LPG</i></b>
<b>Best Performance Standard</b>	<p><i>Applicability Note: Boilers with operating steam pressure less than 75 psig but fired with gaseous fuels other than natural gas or LPG (either exclusively or mixed with natural gas or LPG) and which meet the following standards shall be considered to meet BPS for their respective category.</i></p>
	<p>Boilers meeting this Best Performance Standard must comply with all three elements of this BPS (items 1, 2 and 3 listed below) where applicable:</p> <ol style="list-style-type: none"> <li>1. The boiler shall be either equipped with an economizer system meeting the following design criteria or shall be equipped with an approved alternate heat recovery system which will collectively provide heat recovery from the boiler flue gas which is equivalent. Equivalent heat recovery systems may utilize recovered heat for purposes other than steam generation provided such uses offset other fuel usage which would otherwise be required.             <ol style="list-style-type: none"> <li>A. Except for boilers subject to the requirements of items B or C below, the economizer system shall be designed at maximum boiler firing rate to either 1) reduce the temperature of the economizer flue gas outlet to a value no greater than 20°F above the temperature of the boiler feed water at maximum firing rate, or 2) reduce the final temperature of the boiler's flue gas to a temperature no greater than 200°F.                 <p style="margin-left: 40px;"><i>Note: For purposes of this BPS, feedwater temperature is defined as the temperature of the water stream delivered to the boiler from the deaerator or feedwater tank.</i></p> </li> <li>B. For boilers with a water supply temperature of 170°F or greater, the boiler shall be designed, in lieu of the requirements of item A above, to achieve a flue gas temperature no greater than the sum of the steam saturation temperature (°F at the steam drum operating pressure) plus 100°F.</li> <li>C. For boilers with rated capacity in excess of 20 MMBtu/hr which have a average water supply temperature which is equal to or less than 150°F, the boiler shall equipped with an economizer designed to reduce the temperature of the flue gas outlet to a value no greater than 50°F above the water supply temperature when the boiler is operating at maximum firing rate.                 <p style="margin-left: 40px;"><i>Note: For purposes of this BPS, water supply temperature is defined as the weighted average temperature of the combined makeup water and the recovered condensate delivered to the boiler upstream of any deaerator or other feedwater preheater but after benefit of any other heat recovery operations which recover waste heat from the boiler by transfer to the boiler water supply (such as boiler blowdown heat recovery).</i></p> </li> </ol> </li> </ol>

2. Electric motors driving combustion air fans or induced draft fans shall have an efficiency meeting the standards of the National Electrical Manufacturer's Association (NEMA) for "premium efficiency" motors and shall each be operated with a variable speed control or equivalent for control of flow through the fan.
3. For boilers with rated fired duty in excess of 20 MMBtu/hr and a boiler blowdown rate exceeding 8 % of steam production, the boiler shall be equipped with 1) an automatic boiler blowdown control system which will minimize boiler blowdown while controlling dissolved solids in the boiler water at an optimum level and 2) a flash steam recovery system which will recover flash steam from the blowdown pressure reduction and utilize it for feedwater heating in the deaerator or feedwater heater.

<b>Percentage Achieved GHG Emission Reduction Relative to Baseline Emissions</b>	<b>4.8%</b>
--	-------------

<b>District Project Number</b>	C-1100388
<b>Evaluating Engineer</b>	Dennis Roberts, P.E.
<b>Lead Engineer</b>	Martin Keast
<b>Initial Public Notice Date</b>	October 14, 2010
<b>Final Public Notice Date</b>	November 12, 2010
<b>Determination Effective Date</b>	January 19, 2011

**Best Performance Standard (BPS) Project Analysis**

**Boiler (Permit N-3606-30-0)**

**Step 1 – Identify Best Performance Standard**

Best Performance Standard that applies to this project has been established for Class and Category Gaseous Fuel-Fired Boilers New Boilers with Rated Steam Pressure Less Than 75 psig, Fired Exclusively on Natural Gas or LPG.

<b>Class</b>	<b>Gaseous Fuel-Fired Boilers</b>
<b>Category</b>	<b>New Boilers with Rated Steam Pressure Less Than 75 psig, Fired Exclusively on Natural Gas or LPG</b>

**Best Performance Standard**

Boilers meeting this Best Performance Standard must comply with all three elements of this BPS (items 1, 2 and 3 listed below) where applicable:

1. The boiler shall be either equipped with an economizer system meeting the following design criteria or shall be equipped with an approved alternate heat recovery system which will collectively provide heat recovery from the boiler flue gas which is equivalent. Equivalent heat recovery systems may utilize recovered heat for purposes other than steam generation provided such uses offset other fuel usage which would otherwise be required.

A. Except for boilers subject to the requirements of items B or C below, the economizer system shall be designed at maximum boiler firing rate to either 1) reduce the temperature of the economizer flue gas outlet to a value no greater than 20F above the temperature of the boiler feed water at maximum firing rate, or 2) reduce the final temperature of the boiler's flue gas to a temperature no greater than 200F. Note: For purposes of this BPS, feedwater temperature is defined as the temperature of the water stream delivered to the boiler from the deaerator or feedwater tank.

B. For boilers with a water supply temperature of 170F or greater, the boiler shall be designed, in lieu of the requirements of item A above, to achieve a flue gas temperature no greater than the sum of the steam saturation temperature (°F at the steam drum operating pressure) plus 100F.

C. For boilers with rated capacity in excess of 20 MMBtu/hr which have a average water supply temperature which is equal to or less than 150F, the boiler shall equipped with an economizer designed to reduce the temperature of the flue gas outlet to a value no greater than 50F above the water supply temperature when the boiler is operating at maximum firing rate. Note: For purposes of this BPS, water supply temperature is defined as the weighted average temperature of the combined makeup water and the recovered condensate delivered to the boiler upstream of any deaerator or other feedwater preheater but after benefit of any other heat recovery operations which recover waste heat from the boiler by transfer to the boiler water supply (such as boiler blowdown heat recovery).

2. Electric motors driving combustion air fans or induced draft fans shall have an efficiency meeting the standards of the National Electrical Manufacturer's Association (NEMA) for "premium efficiency" motors and shall each be operated with a variable speed control or equivalent for control of flow through the fan.

3. For boilers with rated fired duty in excess of 20 MMBtu/hr and a boiler blowdown rate exceeding 8 % of steam production, the boiler shall be equipped with 1) an automatic boiler blowdown control system which will minimize boiler blowdown while controlling dissolved solids in the boiler water at an optimum level and 2) a flash steam recovery system which will recover flash steam from the blowdown pressure reduction and utilize it for feedwater heating in the deaerator or feedwater heater.

## **Step 2 – Select Best Performance Standard**

The applicant has proposed to meet the Best Performance Standard by the boiler achieving a flue gas temperature no greater than the sum of the steam saturation temperature (°F at the steam drum operating pressure) plus 100F. The boiler will also be equipped with electric motors driving combustion air fans or induced draft fans with an efficiency meeting the standards of the National Electrical Manufacturer's Association (NEMA) for "premium efficiency" motors and will be operated with a variable speed control or equivalent for control of flow through the fan.

Therefore, the requirements of Best Performance Standard are satisfied in this project.

## **Step 3 – Best Performance Standard Conditions**

The following conditions shall be listed on the permit to ensure compliance:

- The boiler flue gas temperature shall be no greater than the sum of the steam saturation temperature (degrees Fahrenheit at the steam drum operating pressure) plus 100 degrees Fahrenheit. [Public Resources Code 21000-21177: California Environmental Quality Act]
- Electric motors driving combustion air fans or induced draft fans shall have an efficiency meeting the standards of the National Electrical Manufacturer's Association (NEMA) for "premium efficiency" motors and shall each be operated with a variable speed control or equivalent for control of flow through the fan. [Public Resources Code 21000-21177: California Environmental Quality Act]

# **Appendix I**

## **Draft Authority to Construct Permits**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-3-6

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER

**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 165/MATIC BOX MAKER: REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emissions from this unit shall not exceed 10.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The combined VOC emissions from the box making lines shall not exceed 30.0 pounds during any one day. [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

**DAVID WARNER**, Director of Permit Services

N-3606-3-6 : May 30 2013 10:50AM -- TOMS : Joint Inspection NOT Required

7. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
10. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-3606-4-5

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF CORRUGATED BOARD MANUFACTURING OPERATION CONSISTING OF AN ASITRADE LAMINATOR SERVED BY A RINGWOOD STARCH MIXING SYSTEM AND A PERMIT EXEMPT STEAM GENERATOR (NATURAL GAS-FIRED, 5.0 MMBTU/HR OR LESS): REMOVE ANNUAL VOC LIMIT AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] 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

**DAVID WARNER, Director of Permit Services**

N-3606-4-5, May 30 2013 10:50AM -- TOMS : Joint Inspection NOT Required

5. 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] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. The PM10 emissions shall not exceed 0.24 pounds per ton of dry starch adhesive mixed. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The maximum amount of dry starch adhesive used in the mixer shall not exceed 4,158 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
12. VOC emissions from this unit shall not exceed 64.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall maintain a current file of coatings, inks, adhesives, fountain solutions, wash primers, and solvents in use and in storage. For each material, the file shall include a material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instructions, and density. [District Rule 4607] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit
16. Average daily VOC emissions shall be calculated from monthly records of adhesives, primers, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The permittee shall maintain daily records of the quantity, in pounds, of dry starch used for this operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The permittee shall maintain a record of the cumulative annual VOC emissions from this permit. The cumulative total VOC emissions shall be updated monthly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, and 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-3606-9-7

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL VARIMAT 127 (7-COLOR) SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 13112943 AKA P50) WITH AN INLINE COATER AND AN INFRA-RED DRYING SYSTEM: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS AND GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. Only flow coater, roll coater, dip coater, foam coater, die coater, and 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] 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

**DRAFT**

DAVID WARNER, Director of Permit Services

N-3606-9-7 : May 30 2013 10:50AM -- TOMS : Joint Inspection NOT Required

5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 5% alcohol substitute by weight and no alcohol. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
11. VOC emissions from this unit shall not exceed any of the following: 170.0 lb/day or 11,500 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
13. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
15. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607] Federally Enforceable Through Title V Permit
16. 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. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

17. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
18. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, and 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**

**PERMIT NO:** N-3606-11-8

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER

**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF CORRUGATED BOARD FINISHING OPERATION CONSISTING OF AN AUTOMATAN MODEL 7000 SHEETFED GLUER; REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] 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

DAVID WARNER, Director of Permit Services

N-3606-11-8 : May 30 2013 10:50AM - TOMS : Joint Inspection NOT Required

6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. VOC emissions from this unit shall not exceed 30.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
16. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
18. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, and 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-3606-13-6

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 4-COLOR MARTIN MIDLINE MODEL 924 FLEXOGRAPHIC PRINTER (S/N 6208) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT); REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS AND GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] 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

**DAVID WARNER, Director of Permit Services**

N-3606-13-6 : May 30 2013 10:50AM - TOMS : Joint Inspection NOT Required

6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. The VOC content of the materials shall not exceed the following: (a) For standard 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 1.1 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) Fountain solutions - 8.0% 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 and 4607] Federally Enforceable Through Title V Permit
11. VOC emissions from this unit shall not exceed any of the following limits: 95.0 lb/day or 19,000 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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 material safety data sheet (MSDS) 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit
16. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit

18. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
19. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, and 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-3606-14-6

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FFG FLEXOGRAPHIC PRINTER (S/N 6506) WITH A FOLDER, GLUER, AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT); REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS AND GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] 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

**DRAFT**

DAVID WARNER, Director of Permit Services

N-3606-14-6 : May 30 2013 10:50AM - TOMS : Joint Inspection NOT Required

6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. The VOC content of the materials shall not exceed the following: (a) For standard 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 1.1 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) Fountain solutions - 8.0% 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 and 4607] Federally Enforceable Through Title V Permit
11. VOC emissions from this unit shall not exceed any of the following limits: 95.0 lb/day or 19,000 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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 material safety data sheet (MSDS) 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit
16. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

18. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
19. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, and 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-15-6

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 3-COLOR MARTIN MODEL DRO 1628 FLEXOGRAPHIC PRINTER (S/N 6036) AND PERMIT EXEMPT ROTARY DIE-CUTTER (LOW EMITTING UNIT); REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS AND GLUING OPERATION, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] 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

**DRAFT**

DAVID WARNER, Director of Permit Services

N-3606-15-6 : May 30 2013 10:50AM - TOMS : Joint Inspection NOT Required

6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. The VOC content of the materials shall not exceed the following: (a) For standard 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 1.1 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) Fountain solutions - 8.0% 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 and 4607] Federally Enforceable Through Title V Permit
11. VOC emissions from this unit shall not exceed any of the following limits: 95.0 lb/day or 19,000 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The combined annual VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 53,875 pounds in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
15. 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 material safety data sheet (MSDS) 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] Federally Enforceable Through Title V Permit
16. 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] Federally Enforceable Through Title V Permit
17. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

18. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, and 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-3606-16-6

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A 6-COLOR KBA RAPIDA MODEL 162 SHEETFEED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 361264 AKA UV64) WITH AN INLINE COATER AND UV DRYER: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. 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] 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

**DAVID WARNER, Director of Permit Services**

N-3606-16-6 : May 30 2013 10:50AM - TOMS : Joint Inspection NOT Required

5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 5% alcohol substitute by weight and no alcohol. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
11. VOC emissions from this unit shall not exceed any of the following: 70.0 lb/day or 11,500 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
13. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
15. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607] Federally Enforceable Through Title V Permit
16. 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. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

17. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
18. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-19-4

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER

**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE DOMINO MODEL 110M II MATIC BOX MAKER (S/N 0349-063-01): REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emissions from this unit shall not exceed 10.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The combined VOC emissions from the box making lines shall not exceed 30.0 pounds during any one day. [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

**DAVID WARNER, Director of Permit Services**

N-3606-19-4, May 30 2013 10:50AM - TOMS : Joint Inspection NOT Required

7. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
10. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-21-4

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STAUDE WINDOW MACHINE (S/N WSI-2307); REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emissions from this unit shall not exceed 5.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The combined VOC emissions from the box making lines shall not exceed 30.0 pounds during any one day. [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

**DAVID WARNER, Director of Permit Services**

N-3606-21-4 : May 30 2013 10:51AM - TOMS : Joint Inspection NOT Required

7. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
10. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-3606-23-5

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER

**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A PLANETA MODEL 105 (8 COLOR) SHEETFED NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 364565 AKA UV40) WITH AN INLINE COATER AND UV DRYING SYSTEM: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. 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] 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

**DAVID WARNER**, Director of Permit Services

N-3606-23-5 : May 30 2013 10:51AM -- TOMS : Joint Inspection NOT Required

5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 5% alcohol substitute by weight and no alcohol. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
11. VOC emissions from this unit shall not exceed any of the following limits: 70.0 lb/day or 11,500 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
13. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
15. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607] Federally Enforceable Through Title V Permit
16. 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. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit

17. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
18. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, and 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-24-4

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA RAPIDA 6-COLOR 47"X64" FORMAT NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 363742 AKA P64) WITH AN ANILOX TOWER COATER: REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL LIMIT FOR PRINTING PRESS, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. 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] Federally Enforceable Through Title V Permit
5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] 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

**DRAFT**

DAVID WARNER, Director of Permit Services

N-3606-24-4 May 30 2013 10:51AM - TOMS : Joint Inspection NOT Required

6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. The VOC content of the materials shall not exceed the following: inks less than 5% VOC by weight (less water and exempt compounds) and fountain solutions less than 6% by volume; for high end graphics, inks less than 30% VOC by weight (less water and exempt compounds) and fountain solutions less than 5% alcohol substitute by weight and no alcohol. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC emissions from this unit shall not exceed any of the following limits: 99.0 lb/day or 11,500 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Compliance with the daily VOC emissions limit for this lithographic printing operation using non-heatset inks shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
13. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
15. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607] Federally Enforceable Through Title V Permit
16. 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. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
17. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2520, and 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-25-2

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE INTERNATIONAL PAPERBOX MODEL 6FX-154 20" WEB WIDTH FOLDER GLUER: REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emissions from this unit shall not exceed 10.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The combined VOC emissions from the box making lines shall not exceed 30.0 pounds during any one day. [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

**DAVID WARNER, Director of Permit Services**

N-3606-25-2 : May 30 2013 10:51AM - TOMS : Joint Inspection NOT Required

7. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A record of the cumulative combined daily VOC emissions, in pounds, from the box making lines shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
11. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**

**PERMIT NO:** N-3606-26-5

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GRAPHIC ARTS PRINTING OPERATION CONSISTING OF A KBA MODEL RAPIDA 162A 64" NON-HEATSET OFFSET LITHOGRAPHIC PRINTING PRESS (S/N 368024 AKA C64); REMOVE COMBINED ANNUAL VOC LIMIT FOR CORRUGATED BOX FINISHING AND PRINTING PRESSES, ESTABLISH ANNUAL VOC LIMIT FOR PRINTING PRESS, AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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] Federally Enforceable Through Title V Permit
4. 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] Federally Enforceable Through Title V Permit
5. No owner or operator shall use organic solvents for cleaning operations that exceed the VOC content limit specified in Table 7. [District Rule 4607] 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

DAVID WARNER, Director of Permit Services

N-3606-26-5 May 30 2013 10:51AM - TOMS : Joint Inspection NOT Required

6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. The VOC content of the materials shall not exceed any of the following limits: inks - less than 5% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); coatings - 2.5 lb/gallon (less water and exempt compounds, as applied); inks for high end graphics - less than 30% VOC by weight (less water and exempt compounds), or 2.5 lb/gallon (less water and exempt compounds, as applied); fountain solutions - less than 5% alcohol substitute by weight and no alcohol. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
11. VOC emissions from this unit shall not exceed any of the following limits: 99.0 lb/day or 11,500 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Compliance with the daily VOC emissions limit shall be calculated as follows: Total daily VOC emissions = {[VOC Content (ink #1) x Daily usage (ink #1) x (1 - 0.95)] + ... + [VOC Content (ink #n) x Daily usage (ink #n) x (1 - 0.95)]} + {[VOC Content (fountain solution #1) x Daily usage (fountain solution #1)] + [VOC Content (wash primer #1) x Daily usage (wash primer #1)] + [VOC Content (cleanup solvent #1) x Daily usage (cleanup solvent #1)] + ... + [VOC Content (fountain solution #n) x Daily usage (fountain solution #n)] + [VOC Content (wash primer #n) x Daily usage (wash primer #n)] + [VOC Content (cleanup solvent #n) x Daily usage (cleanup solvent #n)]}. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
13. The combined daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations shall not exceed 870 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
15. 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 material safety data sheet (MSDS) 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] Federally Enforceable Through Title V Permit
16. 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. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

17. Daily VOC emissions may be calculated from monthly records of inks, fountain solutions, wash primers, coatings, solvents, and cleaning materials used in a calendar month and number of days this unit is operated in a calendar month in order to calculate average daily VOC emissions. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
18. The permittee shall maintain a record of the cumulative daily VOC emissions from all facility permitted graphic arts printing and corrugated board finishing operations. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4607] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-27-3

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF CORRUGATED BOX MANUFACTURING OPERATION CONSISTING OF ONE STANDARD MAX 1100 30" WEB WIDTH FOLDER GLUER: REMOVE COMBINED ANNUAL VOC LIMIT FOR BOX MAKING LINES AND ESTABLISH A FACILITY-WIDE VOC LIMIT

**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. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The VOC content of the adhesives used shall not exceed 0.021 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emissions from this unit shall not exceed 10.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The combined VOC emissions from the box making lines permitted under N-3606-3, N-3606-19, N-3606-21, N-3606-25 and N-3606-27 shall not exceed 30.0 pounds during any one-day. [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

**DRAFT**

DAVID WARNER, Director of Permit Services

N-3606-27-3, May 30 2013 10:51AM - TOMS : Joint Inspection NOT Required

7. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A record of the cumulative combined daily VOC emissions, in pounds, from the box making lines shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Monthly records shall be maintained and shall include the following information: (a). The manufacturer and the product ID of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (b). The VOC content (as applied) and the VOC content (less water and exempt compounds) of each adhesive, primer, solvent and cleaning material utilized by the box making lines; (c). The combined monthly VOC emissions from the box making lines (in pounds); (d). The dates of operation of this permit unit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. A record of the daily VOC emissions from this unit, in pounds, shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
11. A record of the combined daily VOC emissions, in pounds, from the box making lines shall be kept. The daily VOC emissions shall be calculated from the monthly adhesive, primer, solvent, and cleaning material usage records and the number of days per calendar month this unit was operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-3606-29-0

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER

**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**

STARCH RECEIVING AND STORAGE OPERATION CONSISTING OF 12' DIAMETER AND 42' HIGH SILO WITH CPE FILTER BIN VENT SYSTEM

**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. Visible emissions from the bin vent filter serving the storage silo shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The bin vent filter system shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The differential pressure gauge reading range (inches of water column gauge) shall be established per manufacturer's recommendation at time of start-up inspection. The established gauge reading shall be listed on the Permit to Operate. [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

**DAVID WARNER, Director of Permit Services**

N-3606-29-0 : May 30 2013 10:51AM - TOMS : Joint Inspection NOT Required

7. Replacement bags numbering at least 10% of the total number of bags shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Material removed from the bin vent filter system shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Bin vent filter shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter breakthrough and shall be replaced as needed. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled PM10 emissions shall not exceed 0.00238 pounds per ton of starch loaded into the silo. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The amount of starch loaded into the silo shall not exceed 66 tons in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall keep records of date and quantity of starch loaded into the silo. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Differential operating pressure shall be monitored and recorded on each day that the bin vent filter system is in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Records of all maintenance of the bin vent filter system, including all change outs of bags or filter media, shall be maintained. These records shall include identification of the equipment, date of inspection, any corrective action taken, and identification of the personnel performing the inspection. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Visible emissions shall be inspected annually during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2520] Federally Enforceable Through Title V Permit
16. All records shall be retained for a minimum of five years and made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-30-0

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**  
19.9 MMBTU/HR CLEAVER-BROOKS MODEL CBEX-700-500-200ST BOILER EQUIPPED WITH A CLEAVER-BROOKS MODEL NT INTEGRAL TYPE ULTRA LOW-NOX BURNER

**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. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. 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
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

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

**DRAFT**

DAVID WARNER, Director of Permit Services

N-3606-30-0 May 30 2013 10:51AM - TOMS : Joint Inspection NOT Required

8. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. This unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions from this unit shall not exceed any of the following limits: 5.0 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.0060 lb/MMBtu, 0.00285 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 50 ppmvd CO @ 3% O<sub>2</sub> or 0.037 lb-CO/MMBtu, 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emissions monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 operation days of the first exceedance. An operational day is any calendar day in which the unit operates. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All NO<sub>x</sub>, CO, and O<sub>2</sub> emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub>, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Source testing to measure NO<sub>x</sub> and CO emissions from this unit shall be conducted at least once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every 12 months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
20. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The permittee shall obtain, maintain, and submit at least once per year a copy of valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts that contains the methane content (%), heating value (Btu/dscf), and sulfur content (gr-S/100 dscf) of the natural gas and propane fuel. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
26. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**  
**DRAFT**

**PERMIT NO:** N-3606-31-0

**LEGAL OWNER OR OPERATOR:** PACIFIC SOUTHWEST CONTAINER  
**MAILING ADDRESS:** ATTN: ACCOUNTS PAYABLE  
4530 LECKRON RD  
MODESTO, CA 95357

**LOCATION:** 4530 LECKRON RD  
MODESTO, CA 95357

**EQUIPMENT DESCRIPTION:**  
CORRUGATED BOARD MANUFACTURING OPERATION WITH A FOSBER SMART 400-98' CORRUGATOR SYSTEM  
AND A STARCH CONVEYING AND MIXING SYSTEM

**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. VOC emissions from the corrugator shall not exceed 8 pounds per million square feet of corrugated boards produced. [District Rule 2201] Federally Enforceable Through Title V Permit
6. No more than 5 million square feet of corrugated board shall be processed in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC emissions from this permit unit shall not exceed 9,699 pounds in any 12 consecutive month rolling period. [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

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DAVID WARNER, Director of Permit Services

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8. Facility-wide VOC emissions shall not exceed 73,403 lb/year on a rolling 12-month basis. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC content of the adhesives used shall not exceed 0.015 lb/gal (less water and exempt compounds). [District Rule 2201] Federally Enforceable Through Title V Permit
10. The VOC content of organic solvents used to perform surface preparation or cleanup shall not exceed the VOC content limits specified in Rule 4607. [District Rule 4607] Federally Enforceable Through Title V Permit
11. 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
12. 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 or containers which solvents are dispensed without a propellant-induced force. [District Rule 4607] Federally Enforceable Through Title V Permit
13. 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 spray guns, cups, nozzles, bowls, and other parts 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] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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 material safety data sheet (MSDS) or product data sheet showing the material name, manufacturer's name, VOC content as applied, mixing instruction, and density. [District Rule 4607] Federally Enforceable Through Title V Permit
16. The permittee shall keep records of the date and total amount of the corrugated boards produced in million square feet. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The permittee shall maintain monthly records of the name, type, VOC content (in lb/gal, less water and exempt compounds), and the amount of all adhesives, primers, solvents, and cleaning materials used in this operation. [District Rule 4607] Federally Enforceable Through Title V Permit
18. The permittee shall keep monthly records of the total VOC emissions from this permit unit. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The facility shall keep a record of the cumulative facility-wide VOC emissions on a rolling 12-month basis. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All records shall be retained on-site for a minimum of five years and shall be made available to the District, ARB, and EPA upon request. [District Rules 1070 and 4607] Federally Enforceable Through Title V Permit

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