



AUG 04 2014

Mr. Edward Burton
Evergreen Beverage Packaging
1500 W Main St
Turlock, CA 95380

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-1980
Project # N-1141880**

Dear Mr. Burton:

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 applicant proposes to install a flexographic printing operation with a drying oven served by an existing waste paperboard pick-up system.

After addressing all comments made during the school notice, 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.

Also enclosed is a copy of the California Health and Safety Code (sec. §42301.6) and the public notification letters sent out to the parents or guardians of students at Osborn Elementary School and residences within 1,000 feet of the proposed project.

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

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Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

Mr. Edward Burton
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Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Arnaud Marjollet". The signature is written in a cursive style with a horizontal line underneath the name.

Arnaud Marjollet
Director of Permit Services

Enclosures

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

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 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4309 Dryers, Dehydrators, and Ovens (12/15/05)
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 1500 W Main Street in Turlock, California. The District has verified that the equipment is 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 applicable to this project.

IV. Process Description

This facility operates five flexographic printing presses and houses associated ink mixing, roller design fabrication, water treatment, product trimming, and product sealing operations. The facility prints only on polyethylene coated bleached board paper primarily used as beverage containers (e.g. milk cartons). The presses print, score, and trim the webbing to produce containers of various shapes and sizes. Printed ink is heatset via a small natural gas-fired drying oven on each press.

A roll of polyethylene coated bleached board paper will be web-fed into the machine. The web passes through an adhesive application station, where a strip of adhesive material is applied. This strip will allow the carton lip to open easily. After this station, web passes through a natural gas-fired heater that heats the web such that it becomes pliable and easy to score. The web then enters the printing press where all of the required color inks will be applied. These inks will be dried in a natural gas-fired heater. The web is then split, die-cut and scored to form an unfinished carton. The paper wasteboard generated by the cutting process will be collected by the equipment permitted under permit N-1980-7.

Each press at the facility has a small natural gas-fired drying oven in order to dry ink. Combustion gases and vapors from ink drying are captured in a duct and sent directly to the atmosphere with a fan. The facility plans to install the new press in this project with a similar exhaust configuration. The heat treating operation which softens the web prior to printing is not separate from the drying oven and is accounted for in the rated heat capacity of the drying oven.

The existing printing presses all score and cut/trim the webbing that is printed. The scraps from the cutting/trimming process are captured by vacuum near the cutting/trimming operation and are sent to a common cyclone (South Cyclone) via ducting and a series of blowers. The new press will operate similarly and any scraps generated during the cutting/trimming process will be captured and routed to the same common cyclone via ducting and blowers. Note that the scraps are generally pieces of board and typically fall directly out of the cyclone as the pieces are large enough to collect in bales. Beneath the South Cyclone is a baler to consolidate and compress all scraps collected.

A second cyclone (North Cyclone) operates at the facility and controls any particulate generated from a shredding operation onsite. This cyclone will not be affected by this project. The facility has two cyclones independent of each other.

V. Equipment Listing

Pre-Project Equipment Description

Current Permit #	Pre-Project Equipment Description
N-1980-7-3	WASTE PAPERBOARD PICK-UP SYSTEM, BLOWER AND CHOPPER AND A SHREDDER/HOGGER SERVED BY TWO CYCLONES

ATC Equipment Description

ATC Permit #	ATC Equipment Description
N-1980-7-4	MODIFICATION OF WASTE PAPERBOARD PICK-UP SYSTEM CONSISTING OF BLOWERS/CHOPPERS, A SHREDDER/HOGGER, AND BALERS (2) SERVED BY TWO CYCLONES: CONNECT SCORING/CUTTING/TRIMMING SYSTEM LISTED IN PERMIT N-1980-10 TO PICK-UP SYSTEM
N-1980-10-0	FLEXOGRAPHIC PRINTING OPERATION CONSISTING OF A WEB-FED 4-COLOR EVERS FLEXOGRAPHIC PRINTING PRESS, A 0.6 MMBTU/HR NATURAL GAS-FIRED DRYING OVEN, AN ABHESIVE APPLICATION OPERATION, AND A SCORING/CUTTING/TRIMMING SYSTEM SERVED BY A PAPER WASTEBOARD PICK-UP SYSTEM LISTED IN PERMIT N-1980-7

Post-Project Equipment Description

Proposed Permit #	Post-Project Equipment Description
N-1980-7-4	WASTE PAPERBOARD PICK-UP SYSTEM CONSISTING OF BLOWERS/CHOPPERS, A SHREDDER/HOGGER, AND BALERS (2) SERVED BY TWO CYCLONES
N-1980-10-0	FLEXOGRAPHIC PRINTING OPERATION CONSISTING OF A WEB-FED 4-COLOR EVERS FLEXOGRAPHIC PRINTING PRESS, A 0.6 MMBTU/HR NATURAL GAS-FIRED DRYING OVEN, AN ABHESIVE APPLICATION OPERATION, AND A SCORING/CUTTING/TRIMMING SYSTEM SERVED BY A PAPER WASTEBOARD PICK-UP SYSTEM LISTED IN PERMIT N-1980-7

VI. Emission Control Technology Evaluation

N-1980-7-4

The paper wasteboard pick-up system uses two cyclones to collect paper trimmings. The applicant is not proposing any changes to the existing set-up, except that the system will now be serving the scoring/cutting/trimming section of the new carton manufacturing line.

The printed paper trimmings will be collected via vacuum applied by the south cyclone. The collected scrap will be baled and shipped to a recycler.

N-1980-10-0

The proposed printing press will use several types of inks, cleaning solvents, and other ink additives. VOC emissions will be minimized by using water-based inks. The flexographic presses are cleaned with solvents which contain VOC and are compliant with Rule 4607.

VII. General Calculations

A. Assumptions

- PM₁₀ emissions from scoring/cutting/trimming in permit N-1980-10 will be accounted for in permit N-1980-7.

N-1980-7-4

- Operational Schedule 24 hours per day, 365 days per year

Pre-Project

The current permit does not list a paper wasteboard collection limit. The applicant has stated the following paper wasteboard limit could have been collected by operating all of the carton production lines and shredder/hogger units full time.

Pre-Project Paper Wasteboard Collection		
Material	Annual Limit (tons/year)	Source
Paper Wasteboard	4,060	Per Applicant

Post-Project

The applicant has proposed the following paper wasteboard collection limit with the addition of the new flexographic printing operation with a scoring/cutting/trimming system in this project.

Post-Project Paper Wasteboard Collection		
Material	Throughput Limit	Source
Paper Wasteboard	20 tons/day	Per Applicant
	5,300 tons/year	

N-1980-10-0

- Operational Schedule 24 hours per day, 260 days per year
- Density of Adhesive = 8.15 lb/gal (per MSDS)
- Density of Ink pH Conditioner = 8.2 lb/gal (per MSDS)
- Molecular weight NH_4OH = 35.05 lb/lb-mol
- Molecular weight NH_3 = 17.03 lb/lb-mol

The applicant has proposed the following material usage limits.

Material Usage			
Material	Daily Limit (gal/day)	Annual Limit (gal/year)	Source
Flexographic Ink	32.85	7,000	Per Applicant
Flexographic Ink Additive		1,540	Per Applicant
Cleaning Solvent	1.92	500	Per Applicant
Abhesive	4.62	1,200	Per Applicant

B. Emission Factors

N-1980-7-4

The current permit does not list a PM_{10} emission factor. However, a similar waste paper collection system was permitted in project N-1061288 where an emission factor was established based upon a 1995 source test at Georgia Pacific in Madera, CA. This emission factor will be used for the operation in this project.

Emission Factor		
Permit	Emission Factor (lb-PM ₁₀ /lb-paper wasteboard collected)	Source
N-1980-7-4	8.2 x 10 ⁻⁶	Georgia Pacific Source Test Project N-1061288

N-1980-10-0

The applicant has proposed the following material emission factors.

Material Emission Factors		
Material	Emission Factor (less water and exempt compounds)	Source
Flexographic Ink	2.40 lb-VOC/gal	Rule 4607
Flexographic Ink Additive	2.40 lb-VOC/gal	Rule 4607
Cleaning Solvent	0.83 lb-VOC/gal	Rule 4607
Abhesive	2.40 lb-VOC/gal	Rule 4607
Abhesive	4.0 lb-NH ₄ OH/100 lb	Per MSDS
Ink pH Conditioner	13.0 lb-NH ₄ OH/100 lb-ink	Per MSDS

The following emission factors will be used for the natural gas-fired drying oven.

Drying Oven Emission Factors		
Pollutant	Emission Factor (lb/MMBtu)	Source
NO _x	0.1	AP-42 Table 1.4-1 (7/98)
SO _x	0.00285	District Policy APR 1720
PM ₁₀	0.0076	AP-42 Table 1.4-2 (7/98)
CO	0.084	AP-42 Table 1.4-1 (7/98)
VOC	0.0055	AP-42 Table 1.4-2 (7/98)

C. Calculations

1. Pre-Project Potential to Emit (PE1)

N-1980-7-4

$$PE1 = EF \text{ (lb-PM}_{10}\text{/lb paper wasteboard)} \times \text{Throughput (tons/day or tons/year)} \\ \times 2000 \text{ lb/ton}$$

Daily Pre-Project Potential to Emit				
Pollutant	Emission Factor (lb/lb)	Throughput (tons/year)	Schedule (days/year)	PE1 (lb/day)
PM ₁₀	8.2E-6	4,060	365	0.2

Annual Pre-Project Potential to Emit			
Pollutant	Emission Factor (lb/lb)	Throughput (tons/year)	PE1 (lb/year)
PM ₁₀	8.2E-6	4,060	67

N-1980-10-0

Since this is a new emissions unit, PE1 = 0.

2. Post Project Potential to Emit (PE2)

N-1980-7-4

$$PE2 = EF \text{ (lb-PM}_{10}\text{/lb paper wasteboard)} \times \text{Throughput (tons/day or tons/year)} \\ \times 2000 \text{ lb/ton}$$

Daily Post-Project Potential to Emit			
Pollutant	Emission Factor (lb/lb)	Throughput (tons/day)	PE2 (lb/day)
PM ₁₀	8.2E-6	20	0.3

Annual Post-Project Potential to Emit			
Pollutant	Emission Factor (lb/lb)	Throughput (tons/year)	PE2 (lb/year)
PM ₁₀	8.2E-6	5,300	87

N-1980-10-0

Abhesive Application Operation

$$PE2 \text{ (VOC)} = EF \text{ (lb/gal)} \times \text{Usage (gal/day or gal/year)}$$

Daily Post-Project Potential to Emit Abhesive Application Operation			
Pollutant	Emission Factor (lb/gal)	Usage (gal/day)	PE2 (lb/day)
VOC	2.4	4.62	11.1

Annual Post-Project Potential to Emit Abhesive Application Operation			
Pollutant	Emission Factor (lb/gal)	Usage (gal/year)	PE2 (lb/year)
VOC	2.4	1,200	2,880

$$PE2 \text{ (NH}_3\text{)} = EF \text{ (lb-NH}_4\text{OH/lb adhesive)} \times \text{Usage (gal/day or gal/year)} \times \\ \text{Molecular weight NH}_3 \text{ (lb/lb-mol)} \times 1 \text{ mol NH}_3\text{/1 mol NH}_4\text{OH} \times \\ 1/\text{Molecular weight NH}_4\text{OH (lb-mol/lb)} \times \text{Density adhesive (lb/gal)}$$

Daily Post-Project Potential to Emit Adhesive Application Operation						
Pollutant	Emission Factor (lb/lb)	Usage (gal/day)	Molecular Weight NH ₃ (lb/lb-mol)	Molecular Weight NH ₄ OH (lb/lb-mol)	Density (lb/gal)	PE2 (lb/day)
NH ₃	0.04	4.62	17.03	35.05	8.15	0.7

Annual Post-Project Potential to Emit Adhesive Application Operation						
Pollutant	Emission Factor (lb/lb)	Usage (gal/year)	Molecular Weight NH ₃ (lb/lb-mol)	Molecular Weight NH ₄ OH (lb/lb-mol)	Density (lb/gal)	PE2 (lb/year)
NH ₃	0.04	1,200	17.03	35.05	8.15	190

Printing Operation

Ink

PE2 (VOC) = EF (lb/gal) × Usage (gal/day or gal/year)

Daily Post-Project Potential to Emit Ink and Ink Additive			
Pollutant	Emission Factor (lb/gal)	Usage (gal/year)	PE2 (lb/day)
VOC	2.4	32.85	78.8

Annual Post-Project Potential to Emit Ink and Ink Additive			
Pollutant	Emission Factor (lb/gal)	Usage (gal/year)	PE2 (lb/year)
VOC	2.4	8,540	20,496

Cleaning Solvents

PE2 (VOC) = EF (lb/gal) × Usage (gal/day or gal/year)

Daily Post-Project Potential to Emit Cleaning Solvents			
Pollutant	Emission Factor (lb/gal)	Usage (gal/year)	PE2 (lb/day)
VOC	0.83	1.92	1.6

Annual Post-Project Potential to Emit Cleaning Solvents			
Pollutant	Emission Factor (lb/gal)	Usage (gal/year)	PE2 (lb/year)
VOC	0.83	500	415

Ink pH Conditioner

$$PE2 (NH_3) = EF (lb-NH_4OH/lb \text{ ink}) \times Usage (gal/day \text{ or } gal/year) \times \frac{Molecular \text{ weight } NH_3 (lb/lb-mol)}{1 \text{ Molecular weight } NH_4OH (lb-mol/lb)} \times \frac{1 \text{ mol } NH_3/1 \text{ mol } NH_4OH}{Density \text{ ink conditioner (lb/gal)}}$$

Daily Post-Project Potential to Emit Ink and Ink Additive Operation						
Pollutant	Emission Factor (lb/lb)	Usage (gal/day)	Molecular Weight NH ₃ (lb/lb-mol)	Molecular Weight NH ₄ OH (lb/lb-mol)	Density (lb/gal)	PE2 (lb/day)
NH ₃	0.13	5.92	17.03	35.05	8.2	3.1

Annual Post-Project Potential to Emit Ink and Ink Additive Operation						
Pollutant	Emission Factor (lb/lb)	Usage (gal/year)	Molecular Weight NH ₃ (lb/lb-mol)	Molecular Weight NH ₄ OH (lb/lb-mol)	Density (lb/gal)	PE2 (lb/year)
NH ₃	0.13	1,540	17.03	35.05	8.2	798

Drying Oven

The post-project potential to emit (PE2) for each pollutant for the natural gas-fired drying oven is calculated with the following equation:

$$PE2 = EF \text{ (lb/MMBtu)} \times \text{Heat Input (MMBtu/hr)} \times \text{Op. Sched. (hr/day or hr/year)}$$

Daily Post-Project Potential to Emit Drying Oven				
Pollutant	Emission Factor (lb/MMBtu)	Heat Input (MMBtu/hr)	Hours of Operation (hr/day)	PE2 (lb/day)
NO _x	0.1	0.6	24	1.4
SO _x	0.00285	0.6	24	0.0
PM ₁₀	0.0076	0.6	24	0.1
CO	0.084	0.6	24	1.2
VOC	0.0055	0.6	24	0.1

Annual Post-Project Potential to Emit Drying Oven				
Pollutant	Emission Factor (lb/MMBtu)	Heat Input (MMBtu/hr)	Hours of Operation (hr/year)	PE2 (lb/year)
NO _x	0.1	0.6	8,760	526
SO _x	0.00285	0.6	8,760	15
PM ₁₀	0.0076	0.6	8,760	40
CO	0.084	0.6	8,760	442
VOC	0.0055	0.6	8,760	29

Summary

Daily Post-Project Potential to Emit Summary (N-1980-10-0)						
Operation	NO _x (lb/day)	SO _x (lb/day)	PM ₁₀ (lb/day)	CO (lb/day)	VOC (lb/day)	NH ₃ (lb/day)
Abhesive Application	-	-	-	-	11.1	0.7
Printing (Ink)	-	-	-	-	78.8	-
Printing (Cleaning Solvents)	-	-	-	-	1.6	-
Printing (Ink Additive)	-	-	-	-	-	3.1
Oven	1.4	0.0	0.1	1.2	0.1	-
Total	1.4	0.0	0.1	1.2	91.6	3.8

Annual Post-Project Potential to Emit Summary (N-1980-10-0)						
Operation	NO _x (lb/year)	SO _x (lb/year)	PM ₁₀ (lb/year)	CO (lb/year)	VOC (lb/year)	NH ₃ (lb/year)
Abhesive Application	-	-	-	-	2,880	190
Printing (Ink)	-	-	-	-	20,496	-
Printing (Cleaning Solvents)	-	-	-	-	415	-
Printing (Ink Additive)	-	-	-	-	-	798
Drying Oven	526	15	40	442	29	-
Total	526	15	40	442	23,820	988

3. Project Stationary Source Potential to Emit (SSPE)

Pursuant to District Rule 2201, the Project Stationary Source Potential to Emit (SSPE) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source.

Since the equipment listed in permit N-1980-1 was removed in 1999, the emissions from this unit will not be included in the SSPE calculations.

The non-combustion VOC emissions were taken from project N-980515.

All other pollutant emissions were calculated assuming full time operation using a heat input rating of 0.875 MMBtu/hr and AP-42 Section 1.4 emission factors or District Policy APR 1720.

$$\begin{aligned} \text{NO}_x &= 0.1 \text{ lb/MMBtu} \times 0.875 \text{ MMBtu/hr} \times 8760 \text{ hr/year} = 767 \text{ lb/year} \\ \text{SO}_x &= 0.00285 \text{ lb/MMBtu} \times 0.875 \text{ MMBtu/hr} \times 8760 \text{ hr/year} = 22 \text{ lb/year} \\ \text{PM}_{10} &= 0.0076 \text{ lb/MMBtu} \times 0.875 \text{ MMBtu/hr} \times 8760 \text{ hr/year} = 58 \text{ lb/year} \\ \text{CO} &= 0.084 \text{ lb/MMBtu} \times 0.875 \text{ MMBtu/hr} \times 8760 \text{ hr/year} = 644 \text{ lb/year} \\ \text{VOC} &= 0.0055 \text{ lb/MMBtu} \times 0.875 \text{ MMBtu/hr} \times 8760 \text{ hr/year} = 42 \text{ lb/year} \end{aligned}$$

SSPE1 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
N-1980-2-2	767	22	58	644	16,555 + 42 = 16,597
N-1980-3-2	767	22	58	644	13,342 + 42 = 13,384
N-1980-4-2	767	22	58	644	15,896 + 42 = 15,938
N-1980-5-2	767	22	58	644	15,855 + 42 = 15,897
N-1980-6-2	767	22	58	644	16,225 + 42 = 16,267
N-1980-7-3	0	0	67	0	0
SSPE1	3,835	110	357	3,220	78,083

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 _x	SO _x	PM ₁₀	CO	VOC	NH ₃
N-1980-2-2	767	22	58	644	16,597	0
N-1980-3-2	767	22	58	644	13,384	0
N-1980-4-2	767	22	58	644	15,938	0
N-1980-5-2	767	22	58	644	15,897	0
N-1980-6-2	767	22	58	644	16,267	0
N-1980-7-4	0	0	87	0	0	0
N-1980-10-0	526	15	40	442	23,820	988
SSPE2	4,361	125	417	3,662	101,903	988

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

Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	3,835	110	357	3,220	78,083
SSPE2	4,361	125	417	3,662	101,903
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	Yes

This source is an existing Major Source for VOC emissions 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.

PSD Major Source Determination (tons/year)							
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀	CO _{2e}
Estimated Facility PE before Project Increase	1.9	39.0	0.1	1.6	0.2	0.2	2,242
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	N	N	N	N	N

GHG Calculations

The following table summarizes the combustion equipment at the facility.

Permit	Equipment	Rating
N-1980-2-2	Drying oven	0.875 MMBtu/hr
N-1980-3-2	Drying oven	0.875 MMBtu/hr
N-1980-4-2	Drying oven	0.875 MMBtu/hr
N-1980-5-2	Drying oven	0.875 MMBtu/hr
N-1980-6-2	Drying oven	0.875 MMBtu/hr
Total		4.375 MMBtu/hr

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

- CO₂ 53.02 kg/MMBtu (116.89 lb/MMBtu)
- CH₄ 1.0 x 10⁻³ kg/MMBtu (0.0022 lb/MMBtu)
- N₂O 1.0 x 10⁻⁴ kg/MMBtu (0.00022 lb/MMBtu)

GWP for CH₄ = 21 lb-CO₂(eq) per lb-CH₄
GWP for N₂O = 310 lb-CO₂(eq) per lb-N₂O

Calculations

CO₂ Emissions = 4.375 MMBtu/hr x 116.89 lb/MMBtu x 8,760 hr/year
= 4,479,809.25 lb-CO₂(eq)/year

CH₄ Emissions = 4.375 MMBtu/hr x 0.0022 lb/MMBtu x
21 lb-CO₂(eq) per lb-CH₄ x 8,760 hr/year
= 1,770.615 lb-CO₂(eq)/year

N₂O Emissions = 4.375 MMBtu/hr x 0.00022 lb/MMBtu x
310 lb-CO₂(eq) per lb-N₂O x 8,760 hr/year
= 2,613.765 lb-CO₂(eq)/year

Total = (4,479,809.25 + 1,770.615 + 2,613.765) lb-CO₂(eq)/year
= 4,484,193.63 lb-CO₂(eq)/year

Total = 4,484,193.63 lb-CO₂(eq)/year ÷ 2,000 lb/ton
= **2,242 short tons-CO₂(eq)/year**

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

N-1980-7-4

As shown in Section VII.C.5 above, the facility is not a Major Source for PM₁₀.

Therefore, BE = PE1.

N-1980-10-0

Since this is a new emissions unit, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

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

Since this facility is not a major source for NO_x, SO_x, PM₁₀, or CO, this project does not constitute an SB 288 Major Modification NO_x, SO_x, PM₁₀, or CO.

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.

SB 288 Major Modification Threshold (Existing Major Source)					
Pollutant	N-1980-7-4 PE (lb/year)	N-1980-10-0 PE (lb/year)	Project PE (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
VOC	0	23,820	23,820	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for NO_x, SO_x, PM₁₀, or CO, this project does not constitute a Federal Major Modification NO_x, SO_x, PM₁₀, or CO. Additionally, since the facility is not a major source for PM₁₀ (140,000 lb/year), it is not a major source for PM_{2.5} (200,000 lb/year).

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.

Significant Threshold (lb/year)	
Pollutant	Threshold (lb/year)
VOC	0
NO _x	0
PM ₁₀	30,000
SO _x	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.

Net Emission Increase for New Units (NEI_N)

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

$$NEI_N = PE_{2N} - BAE$$

$$BAE = 0 \text{ for the new unit therefore } NEI_N = PE_{2N}$$

Federal Major Modification Net Emissions Increase For New Units (NEI _N)	
Permit	VOC (lb/year)
N-1980-10-0	23,820

The NEI for this project is thus calculated as follows:

$$NEI = NEI_N$$

Federal Major Modification Threshold			
Pollutant	NEI (lb/year)	Threshold (lb/year)	SB 288 Major Modification?
VOC	23,820	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.

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

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Greenhouse gases (GHG): CO2, N2O, CH4, HFCs, PFCs, and SF6

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

In the case the facility is new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.

I. Potential to Emit for New or Modified Emission Units vs PSD Major Source Thresholds

As a screening tool, the project potential to emit from all new and modified units is compared to the PSD major source threshold, and if total project potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

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.

PSD Major Source Determination: Potential to Emit (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0.3	11.9	0.01	0.2	0.1	0.1	307
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	N	N	N	N	N	N	N

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

GHG Calculations

Permit	Equipment	Rating
N-1980-10-0	Drying oven	0.6 MMBtu/hr

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

CO₂ 53.02 kg/MMBtu (116.89 lb/MMBtu)

CH₄ 1.0 x 10⁻³ kg/MMBtu (0.0022 lb/MMBtu)

N₂O 1.0 x 10⁻⁴ kg/MMBtu (0.00022 lb/MMBtu)

GWP for CH₄ = 21 lb-CO₂(eq) per lb-CH₄

GWP for N₂O = 310 lb-CO₂(eq) per lb-N₂O

Calculations

$$\begin{aligned} \text{CO}_2 \text{ Emissions} &= 0.6 \text{ MMBtu/hr} \times 116.89 \text{ lb/MMBtu} \times 8,760 \text{ hr/year} \\ &= 614,373.84 \text{ lb-CO}_2(\text{eq})/\text{year} \end{aligned}$$

$$\begin{aligned} \text{CH}_4 \text{ Emissions} &= 0.6 \text{ MMBtu/hr} \times 0.0022 \text{ lb/MMBtu} \times \\ &\quad 21 \text{ lb-CO}_2(\text{eq}) \text{ per lb-CH}_4 \times 8,760 \text{ hr/year} \\ &= 242.8272 \text{ lb-CO}_2(\text{eq})/\text{year} \end{aligned}$$

$$\begin{aligned} \text{N}_2\text{O Emissions} &= 0.6 \text{ MMBtu/hr} \times 0.00022 \text{ lb/MMBtu} \times \\ &\quad 310 \text{ lb-CO}_2(\text{eq}) \text{ per lb-N}_2\text{O} \times 8,760 \text{ hr/year} \\ &= 358.4592 \text{ lb-CO}_2(\text{eq})/\text{year} \end{aligned}$$

$$\begin{aligned} \text{Total} &= (614,373.84 + 242.827 + 358.4592) \text{ lb-CO}_2(\text{eq})/\text{year} \\ &= 614,975.1262 \text{ lb-CO}_2(\text{eq})/\text{year} \end{aligned}$$

$$\begin{aligned} \text{Total} &= 614,975.1262 \text{ lb-CO}_2(\text{eq})/\text{year} \div 2,000 \text{ lb/ton} \\ &= \mathbf{307 \text{ short tons-CO}_2(\text{eq})/\text{year}} \end{aligned}$$

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

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. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

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

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

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Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	22	17	5
CO	0	0	0
VOC	0	0	0

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Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	132	0	132
SO _x	4	0	4
PM ₁₀	10	0	10
CO	111	0	111
VOC	5,955	0	5,955

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 flexographic printing press with a PE greater than 2 lb/day for VOC and NH3 emissions. BACT will be triggered for VOC and NH3 emissions for the flexographic printing press.

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

$$AIPE = PE2 - HAPE$$

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)

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

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

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

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Pollutant	Daily PE2 (lb/day)	Daily PE1 (lb/day)	EF2 (lb/MMBtu)	EF1 (lb/MMBtu)	AIPE (lb/day)	BACT Triggered?
PM ₁₀	0.3	0.2	8.2E-6	8.2E-6	0.1	No

As demonstrated above, the AIPE is not greater than 2 lb/day for PM₁₀ emissions. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections 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.

2. BACT Guideline

BACT Guideline 4.9.6 applies to permit N-1980-10-0. [Flexographic Printing – Paper Carton Manufacturing - Printing and Adhesive Application] (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 with the following:

VOC: Inks with a VOC content of ≤ 2.4 lb/gal (less water and exempt compounds)

VOC: Adhesive with a VOC content of ≤ 4.04 lb/gal (excluding water and exempt compounds) and Inks with a VOC content of ≤ 2.4 lb/gal (excluding water and exempt compounds)

NH₃: Inks with a NH₄OH content of 0 – 7% by weight

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 _x	SO _x	PM ₁₀	CO	VOC
SSPE2	4,361	125	417	3,662	101,903
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) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

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

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio

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:

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

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Offset Requirement	
Pollutant	VOC (lb/year)
PE2	23,820
BE	0
PE2 - BE	23,820

Calculating the appropriate quarterly emissions to be offset is as follows:

Quarterly Offset Requirement				
Pollutant	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)
VOC	5,955	5,955	5,955	5,955

The project is a Federal Major Modification and therefore the distance offset ratio for VOC is 1.5:1.

Assuming an offset ratio of 1.5:1, the amount of ERCs that need to be withdrawn is:

Offset Requirement x DOR = 1.5	
Pollutant	VOC (lb/year)
PE2	35,730
BE	0
PE2 – BE	35,730

Calculating the appropriate quarterly emissions to be offset is as follows:

Quarterly Offset Requirement x DOR = 1.5				
Pollutant	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)
VOC	8,932	8,932	8,933	8,933

The applicant has stated that the facility plans to use ERC certificates S-3779-1, S-4172-1, S-4252-1 to offset the increases in emissions associated with this project. The above certificates have available quarterly credits as follows:

Proposed VOC ERC Certificates				
ERC Certificate #	1 st Qtr (lb/qtr)	2 nd Qtr (lb/qtr)	3 rd Qtr (lb/qtr)	4 th Qtr (lb/qtr)
S-3779-1	82	82	82	82
S-4172-1	716	714	714	716
S-4252-1	5,302	5,304	5,304	5,302
S-4338-1	2,430	2,506	2,596	2,606
S-4288-1	407	332	241	232
Total	8,937	8,938	8,937	8,938

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

Proposed Rule 2201 (offset) Conditions

- Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 5,955 lb, 2nd quarter - 5,955 lb, 3rd quarter - 5,955 lb, and fourth quarter - 5,955 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201]
- ERC Certificate Numbers S-3779-1, S-4172-1, S-4252-1, S-4338-1, S-4288-1 (or a certificate split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

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 SSPE 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. As shown in Section VII.C.5 above, the SSPE2 is not greater than the Major Source threshold for any pollutant. Therefore, public noticing is not required for this project for new Major Source purposes.

As demonstrated in VII.C.7, this project does constitute a Federal Major Modification; therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a 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 Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	3,835	4,361	20,000 lb/year	No
SO _x	110	125	54,750 lb/year	No
PM ₁₀	357	417	29,200 lb/year	No
CO	3,220	3,662	200,000 lb/year	No
VOC	78,083	101,903	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 SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

SSIPE – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold (lb/year)	Public Notice Required?
NO _x	4,361	3,835	526	20,000	No
SO _x	125	110	15	20,000	No
PM ₁₀	417	357	60	20,000	No
CO	3,662	3,220	442	20,000	No
VOC	101,903	78,083	23,820	20,000	Yes

2. Public Notice Action

As discussed above, public noticing is required for this project for Federal Major Modification for VOC emissions and SSIPE greater than 20,000 lb/year for VOC emissions. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB), US Environmental Protection Agency (US EPA), and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC permit 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 permit and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions

N-1980-7-4

- The amount of material collected by the waste paperboard pick-up system and cyclones shall not exceed 20 tons in any one day. [District Rule 2201]
- PM10 emissions from the waste paperboard pick-up system and cyclones shall not exceed 0.0000082 lb per ton of waste paperboard. [District Rule 2201]

N-1980-10-0

- Drying oven emission rates shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM10/MMBtu, 0.084 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rule 2201]
- VOC content of the following materials shall not exceed any of the following limits: adhesive materials: 2.40 lb/gal excluding water and exempt compounds; ink and ink additive materials: 2.40 lb/gal excluding water and exempt compounds; cleaning solvent materials for specialty flexographic printing ink application equipment: 0.83 lb/gal. [District Rule 2201]
- NH₄OH content of the following materials shall not exceed any of the following limits: adhesive materials: 4.0 lb/100 lb adhesive; ink additive: 13.0 lb/100 lb ink additive. [District Rule 2201]
- Usage of the following materials shall not exceed any of the following limits: adhesive materials: 4.62 gallons per day; ink and ink additive materials: 32.85 gallons per day; cleaning solvent materials for specialty flexographic printing ink application equipment: 1.92 gallons per day. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

N-1980-7-4

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

N-1980-10-0

The VOC emissions emitted by the flexographic printing operation 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 emissions. 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 be listed on the permits to ensure compliance:

N-1980-7-4

- Permittee shall record on a daily basis the amount of waste paperboard collected in tons. [District Rule 2201]

N-1980-10-0

- Permittee shall maintain a current file of inks, adhesives, 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, less water and exempt compounds (or sufficient composition data to calculate this value), material VOC content (or VOC content "as packaged" from manufacturer), mixing instructions, and density. [District Rules 2201 and 4607]
- For each ink and solvent material used in this operation, the permittee shall record on a daily basis the product/material name, material type (e.g. ink), amount used (gallons), VOC content, less water and exempt compounds (lb-VOC/gal), material VOC content (lb-VOC/gal), and the VOC emissions in pounds (material VOC content in lb-VOC/gal multiplied by the usage in gallons). [District Rules 2201 and 4607]
- Permittee shall record on a daily basis, the type and amount of each specialty ink used at the facility, as defined in Rule 4607. [District Rules 1070 and 4607]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

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. However,

since this project involves only VOC and no ambient air quality standard exists for VOC, an AAQA is not required for this project.

G. Compliance Certification

Rule 2201 requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a Federal Major Modification and this project does constitute a Title I modification, therefore this requirement is applicable. The facility's compliance certification is included in Appendix C.

H. Alternative Siting Analysis

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

In addition to carton manufacturing lines, the operation of a paper product manufacturing operation requires a large number support equipment, services and structures.

Since the current project involves only a minimal increase in the facility's total production volume and no change to any other facets of the operation, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures and facilities on a much greater scale, and would therefore result in a much greater impact.

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 D); 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.

40 CFR Part 60 Subpart QQ – Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing

The affected facility to which the provisions of this subpart apply is each publication rotogravure printing press. This subpart defines rotogravure printing press as any device designed to print one color ink on one side of a continuous web or substrate using a gravure cylinder. The printing press in this project is not a rotogravure printing press as defined in this subpart.

Therefore, the requirements of this subpart are not applicable to 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 flexographic printing (the printing method used on these boxes) operations.

40 CFR Part 63 Subpart KK – National Emission Standards for the Printing and Publishing Industry

The provisions of this subpart apply to each new and existing facility that is a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated.

Section 63.820(a)(2) states each new and existing facility at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated for which the owner or operator chooses to commit to and meets the criteria of paragraphs (a)(2)(i) and (ii) of this section for purposes of establishing the facility to be an area source of HAP with respect to this subpart. A facility which establishes area source status through some other mechanism, as described in paragraph (a)(7) of this section, is not subject to the provisions of this subpart.

Section 63.820(a)(2)(i) states use less than 9.1 Mg (10 tons) per each rolling 12-month period of each HAP at the facility, including materials used for source categories or purposes other than printing and publishing.

Section 633.820(a)(2)(ii) states use less than 22.7 Mg (25 tons) per each rolling 12-month period of any combination of HAP at the facility, including materials used for source categories or purposes other than printing and publishing.

This facility is an area source of HAP because the potential HAP emissions for the facility are less than the major source thresholds of 10 tons per year for any individual HAP or 25 tons per year for the sum of all HAP emissions.

Section 63.820(3) states each facility for which the owner or operator chooses to commit to and meets the criteria stated in paragraph (a)(2) of this section shall be considered an area source, and is subject only to the provisions of §§63.829(d) and 63.830(b)(1) of this subpart.

Section 63.829(d) states the owner or operator of each facility which commits to the criteria of §63.820(a)(2) shall maintain records of all required measurements and calculations needed to demonstrate compliance with these criteria, including the mass of all HAP containing materials used and the mass fraction of HAP present in each HAP containing material used, on a monthly basis.

Section 63.830(b) states each owner or operator of an affected source subject to this subpart shall submit the reports specified in paragraphs (b)(1) through (b)(6) of this section to the Administrator: (1) An initial notification required in §63.9(b). (i) Initial notifications for existing sources shall be submitted no later than one year before the compliance date specified in §63.826(a). (ii) Initial notifications for new and reconstructed sources shall be submitted as required by §63.9(b). (iii) For the purpose of this subpart, a Title V or part 70 permit application may be used in lieu of the initial notification required under §63.9(b), provided the same information is contained in the permit application as required by §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. (iv) Permit applications shall be submitted by the same due dates as those specified for the initial notifications.

The following conditions will be listed on permit N-1980-10-0 to ensure compliance:

- The owner or operator of each facility which commits to the criteria of 63.820(a)(2) shall maintain records of all required measurements and calculations needed to demonstrate compliance with these criteria, including the mass of all HAP containing materials used and the mass fraction of HAP present in each HAP containing material used, on a monthly basis. [40 CFR 63.829(d)]
- Each owner or operator of an affected source subject to this subpart shall submit the reports specified in paragraphs (b)(1) through (b)(6) of this section to the Administrator: (1) An initial notification required in §63.9(b). (i) Initial notifications for existing sources shall be submitted no later than one year before the compliance date specified in §63.826(a). (ii) Initial notifications for new and reconstructed sources shall be submitted

as required by §63.9(b). (iii) For the purpose of this subpart, a Title V or part 70 permit application may be used in lieu of the initial notification required under §63.9(b), provided the same information is contained in the permit application as required by §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. (iv) Permit applications shall be submitted by the same due dates as those specified for the initial notifications. [40 CFR 63.830(b)]

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

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:

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

Compliance with the above requirement 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:

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

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (Appendix E), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and 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 E of this report, the emissions increases for this project was determined to be less than significant.

Rule 4301 Fuel Burning Equipment

Rule 4301 Section 3.1 defines Fuel Burning Equipment as any furnace, boiler, apparatus, stack, etc. used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.

The drying oven in this project is a direct-fired unit and is not subject to this rule. Therefore, the requirements of this rule are not applicable to this project.

Rule 4309 Dryers, Dehydrators, and Ovens

The purpose of this rule is to limit emissions of oxides of nitrogen (NO_x) and carbon monoxide (CO) from dryers, dehydrators, and ovens. This rule applies to any dryer, dehydrator, or oven that is fired on gaseous fuel, liquid fuel, or is fired on gaseous and liquid fuel sequentially, and the total rated heat input for the unit is 5.0 million British thermal units per hour (5.0 MMBtu/hr) or greater.

Since the drying oven in this project has a heat input rating less than 5.0 MMBtu, the drying oven is not subject to the requirements of this rule. Therefore, the requirements of this rule are not applicable to this project.

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 unit in this project employ a flexographic method of printing, the unit is subject to this rule.

Section 5.1 Graphic Arts Printing Operation

Section 5.1 states an operator performing a graphic arts printing operation, not subject to Section 5.2, 5.3, 5.4, or 5.5, shall not use graphic arts materials in excess of the VOC content limits in Table 1 and Table 2, in accordance with the corresponding effective date.

Table 1 VOC Content Limits for Inks, Coatings, and Adhesives	
Material	Grams of VOC per liter (lb/gal), less water and exempt compounds
	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)

Section 5.2 Flexographic Specialty Ink

Section 5.2 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.

Table 3 VOC Content Limits for Flexographic Specialty Ink	
Material	Grams of VOC per liter (lb/gal), less water and exempt compounds
	Effective 1/1/10
Metallic Ink	460 (3.8)
Matte Finish Ink	535 (4.5)
Metallic Ink and Matte Finish Ink on Flexible Package Printing	383 (3.2)

The unit in this project employs a flexographic method of printing and also use "specialty" inks as defined in Rule 4607. Therefore, the VOC content limits in Section 5.1, Table 1 and Section 5.2, Table 3 are applicable.

The following conditions will be listed on permit N-1980-10-0 to ensure compliance with the VOC content limits of Table 1 and Table 3:

- For flexographic printing operations, VOC content of graphic arts materials, less water and less exempt compounds, as applied, shall not exceed any of the following limits:

flexographic ink on porous substrates: 225 g/l (1.88 lb/gal); all other inks: 300 g/l (2.5 lb/gal); coating: 300 g/l (2.5 lb/gal); adhesive: 150 g/l (1.25 lb/gal); web splicing adhesive: 150 g/l (1.25 lb/gal). [District Rules 2520 and 4607]

- For flexographic printing operations, VOC content of specialty ink, less water and less exempt compounds, as applied, shall not exceed any of the following limits: metallic ink: 300 g/l (2.5 lb/gal); matte finish ink: 300 g/l (2.5 lb/gal); metallic ink and matte finish ink on flexible package printing: 300 g/l (2.5 lb/gal). In addition, the specialty inks used shall not exceed two gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2520 and 4607]

Section 5.4 Screen Printing Operations

This section applies to screen printing operations. The carton manufacturing machine has a flexographic printer; therefore, Section 5.4 does not apply.

Section 5.5 Paper or Fabric Coating Operation

The carton manufacturing machine in this project does not perform paper or fabric coating as defined in the rule; therefore, the VOC content limits of this section do not apply.

Section 5.6 Approved Emission Control System

The carton manufacturing machine is 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 (HVLP) spray for air dried coatings.

The applicant did not propose a coating-type operation¹ as defined in this rule; therefore, this section does not apply to the carton manufacturing machine.

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. The facility will use solvents for cleaning based upon the flexographic specialty ink printing.

¹ Rule 4607 defines "coating" as the application of a uniform layer of material across the entire width of a substrate. Those machines which have both coating and printing units should be considered as performing a printing operation.

Table 7	
Cleaning Solvent Use	VOC Content Limit grams/liter (lb/gal)
A. Cleaning of Ink Application Equipment 3. Specialty Flexographic Printing	100 (0.83)

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 be listed on permit N-1980-10-0 to ensure compliance:

- Cleaning activities that use solvents with a VOC content greater than 25 g/l (0.21 lb/gallon) shall 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. [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 condition will be listed on permit N-1980-10-0 to ensure compliance:

- 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. 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 non-propellant-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 condition will be listed on permit N-1980-10-0 to ensure compliance:

- 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 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 condition will be listed on permit N-1980-10-0 to ensure compliance:

- Permittee shall store or dispose of fresh or spent solvents, waste solvent cleaning materials, adhesives, 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 condition will be listed on permit N-1980-10-0 to ensure compliance:

- Permittee shall maintain a current file of inks, adhesives, 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, less water and exempt compounds (or sufficient composition data to calculate this value), material VOC content (or VOC content "as packaged" from manufacturer), mixing instructions, and density. [District Rules 2201 and 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, Section 6.1.2.2 requires the facility to record, on a monthly basis, the type and amount of each coating, adhesive, fountain solution, wash primer, and solvent used.

Since the facility is not making use of the 400 lb-VOC/month exemption under Section 4.1 of this rule, and the Rule 2201 recordkeeping requirements require a daily record of the printing materials used, the following current, more stringent Rule 2201-based condition on permit N-1980-10-0 will ensure compliance:

- For each ink, adhesive, and solvent used in this operation, the permittee shall record on a daily basis the product/material name, material type (e.g. ink), amount used (gallons), VOC content, less water and exempt compounds (lb-VOC/gal), material VOC content (lb-VOC/gal), and the VOC emissions in pounds (material VOC content in lb-VOC/gal multiplied by the usage in gallons). [District Rules 2201 and 4607]

Section 6.1.4 applies to the use of flexographic specialty inks. The applicant has not proposed any flexographic specialty inks; therefore, this section is not applicable.

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 be listed on permit N-1980-10-0 to ensure compliance:

- 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]

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 is not applicable to flexographic-type printing operations.

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

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

Rule 4653 Adhesives

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

The carton manufacturing operation uses adhesives which is a material that prevents two surfaces from sticking together. The facility does not use adhesive products, sealant products, and associated solvent cleaning operations as defined in the rule.

Therefore, the requirements of this rule are not applicable to this project.

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 SO₂, 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:

$$\text{Volume SO}_2 = \frac{nRT}{P}$$

With:

N = moles SO₂

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

P (Standard Pressure) = 14.7 psi

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

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

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

Natural Gas Combustion

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

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

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

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is located within 1,000 feet of the following school.

School Name: Osborn Elementary School

Address: 201 North Soderquist Rd, Turlock, CA

Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is required. Prior to the issuance of the ATC permit for this equipment, notices will be provided to the parents/guardians of all students of the affected school, and will be sent to all residents within 1,000 ft of the site.

Since a school notice has been triggered (due to the above-listed school within 1,000 of the emission source), notices will also be provided to the parents/guardians of all students from all school sites within ¼ mile of the emission source. The following school is within ¼ mile of the emission source.

School Name: Osborn Elementary School

Address: 201 N Soderquist Rd, Turlock, CA

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

Facilities subject to the Cap and Trade regulation are subject to an industry-wide cap on overall GHG emissions. As such, any growth in emissions must be accounted for under that cap, such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Therefore, it is reasonable to conclude that implementation of the Cap and Trade program will and must fully mitigate project-specific GHG emissions.

Regardless of, and independent to, the above significance determination, the District finds that, through compliance with the Cap and Trade regulation, project-specific GHG emissions would be fully mitigated. The District therefore concludes that projects occurring at facilities subject to ARB's Cap and Trade regulation would have a less than significant individual and cumulative impact on global climate change.

The drying oven in this project is fired on PUC-regulated natural gas. The fuel supplier is a covered entity under ARB's Cap and Trade Program. Therefore, this project has a less than significant individual and cumulative 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 and School Noticing period, issue Authority to Construct permits N-1980-7-4 and '10-0 subject to the permit conditions on the attached draft Authority to Construct permits in Appendix F.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-1980-7-4	3020-01-C	50 HP	\$197
N-1980-10-0	3020-02-C	0.6 MMBtu/hr	\$197

Appendices

- A: Current Permit to Operate
- B: BACT Guideline 4.9.6 and Top Down BACT Analysis
- C: Compliance Certification
- D: Certificate of Conformity
- E: Health Risk Assessment and Ambient Air Quality Analysis
- F: Draft Authority to Construct Permits

Appendix A
Current Permit to Operate

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-1980-7-3

EXPIRATION DATE: 09/30/2015

EQUIPMENT DESCRIPTION:

WASTE PAPERBOARD PICK-UP SYSTEM, BLOWER AND CHOPPER AND A SHREDDER/HOGGER SERVED BY TWO CYCLONES

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]

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

Appendix B

BACT Guideline 4.9.6 and Top Down BACT Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.6*

Last Update 11/28/2000

**Paper Carton Manufacturing - Printing and Adhesive
Application**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1. Adhesive with a VOC content of = or < 5.7 lb/gal (excluding water and exempt compounds) and Inks with a VOC content of = or < 2.5 lb/gal (excluding water and exempt compounds)	1. Capture and thermal incineration. 2. Capture and carbon adsorption. 3. Adhesive with a VOC content of = or < 4.04 lb/gal (excluding water and exempt compounds) and Inks with a VOC content of = or < 2.4 lb/gal (excluding water and exempt compounds)	

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

***This is a Summary Page for this Class of Source**

Top Down BACT Analysis for Flexographic Printing Operation for VOC Emissions for Permit N-1980-10-0

Step 1 - Identify All Possible Control Technologies

From the SJVUAPCD BACT Clearinghouse, Guideline 4.9.6, Paper Carton Manufacturing - Printing and Adhesive Application, 3rd quarter 2014, identifies BACT for VOC emissions as follows:

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1. Abhesive with a VOC content of = or < 5.7 lb/gal (excluding water and exempt compounds) and Inks with a VOC content of = or < 2.5 lb/gal (excluding water and exempt compounds)	1. Capture and thermal incineration. 2. Capture and carbon adsorption. 3. Abhesive with a VOC content of = or < 4.04 lb/gal (excluding water and exempt compounds) and Inks with a VOC content of = or < 2.4 lb/gal (excluding 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	Achieved in Practice
1	Capture and thermal incineration	N
2	Capture and carbon adsorption	N
3	Abhesive with a VOC content of = or < 4.04 lb/gal (excluding water and exempt compounds) and Inks with a VOC content of = or < 2.4 lb/gal (excluding water and exempt compounds)	N
4	Abhesive with a VOC content of = or < 5.7 lb/gal (excluding water and exempt compounds) and Inks with a VOC content of = or < 2.5 lb/gal (excluding water and exempt compounds)	Y

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: Capture and thermal incineration (Technologically Feasible)

Assumptions

- Hours of Operation for the drying oven = 8,760 per year (proposed by applicant)
- Natural gas F-Factor = 8,578 dscf/MMBtu (60 °F) (40 CFR 60, Appendix B)
- The majority of VOC associated with the inks/ink additives/adhesives solutions are released when the web passes through the drying oven.
- Drying oven exhaust flow rate = 6,200 scfm (per applicant)

Capital Cost

Per Rick Cooley of Oxidation Technology (650-573-1011), the cost of a regenerative thermal oxidizer (RTO) sized for a flow rate of 6,200 scfm would be \$240,000 in 2011 dollars. This cost does not include sales tax, freight expenses, operational and maintenance costs, etc.

Capital Cost = \$240,000 (2011 dollars)

Adjusting from 2011 dollars to 2014 dollars (multiply by 1.0825, 2.75% inflation/year).

Capital Cost = \$240,000 x 1.0825 = \$259,800 (2014 dollars)

The direct and indirect costs shown below are taken from EPA's Office of Air Quality Planning and Standards (OAQPS) Air Pollution Control Cost Manual EPA/452/B-02-001.

Thermal or Catalytic Oxidation	
Capital Cost	
Cost Description	Cost (\$)
6,200 cfm Regenerative Thermal Oxidizer cost (2011 dollars)	\$240,000
Adjusting factor from 2005 dollars to 2014 dollars (2.75% inflation/year)	1.0825
Inflation adjusted Regenerative Thermal Oxidizer cost	\$259,800
Direct Costs (DC)	
Base Equipment Costs (Regenerative Thermal Oxidizer System) See Above, A	\$259,800
Instrumentation 10%A	\$25,980
Sales Tax 3%A	\$7,794
Freight 5%A	\$12,990
Purchased equipment cost, B	\$306,564
Foundations & supports 8%B	\$24,525
Handling & erection 14%B	\$42,919
Electrical 4%B	\$12,263
Piping 2%B	\$6,131
Painting 1%B	\$3,066
Insulation 1%B	\$3,066
Direct installation costs	\$91,970
Total Direct Costs	\$398,534
Indirect Costs (IC)	
Engineering 10%B	\$30,656
Construction and field expenses 5%B	\$15,328
Contractor fees 10%B	\$30,656
Start-up 2%B	\$6,131
Performance test 1%B	\$3,066
Contingencies 3%B	\$9,197
Total Indirect Costs	\$139,951
Total Capital Investment (TCI) (DC + IC)	\$538,485

Annualized Capital Cost

Pursuant to District Policy APR 1305, section X (11/09/99), 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)

$$A = \$538,485 \times [0.1(1.1)^{10}] / [(1.1)^{10} - 1]$$

$$= \mathbf{\$87,636/\text{year}}$$

Annual Costs

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

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

heat of combustion $-\Delta h(m)$ = 21,502 Btu/lb
Daily VOC emissions rate = 91.5 lb/day (excluding drying oven emissions)
Blower flow rate = 6,200 scfm
= 8,928,000 ft³/day

$$-dh(c) = 91.5 \text{ lb/day} \times 21,502 \text{ Btu/lb} \div 8,928,000 \text{ ft}^3/\text{day}$$

$$= 0.220 \text{ Btu/ft}^3$$

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:

$$-dh(c) = 0.220 \text{ Btu/ft}^3 / 0.0739 \text{ lb/ft}^3$$

$$= 2.98 \text{ Btu/lb}$$

Fuel Flow Requirement

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

Where

P_w = 0.0739 lb/ft³, air at 77°F, 1 atm
 C_p = 0.248 Btu/lb-F
 Q_w = 6,200 scfm
 $-dh(m)$ = 21,502 Btu/lb for methane
 T_r = 77 F assume ambient conditions
 $P(\text{ef})$ = 0.0408 lb/ft³, methane at 77°F, 1 atm
 T_f = 1600°F
 T_w = 1150°F
 $-dh(c)$ = 2.98 Btu/lb

$$Q = \frac{0.0739 * 6,200 * \{0.248 * [1.1 * 1600 - 1150 - 0.1 * 77] - 2.98\}}{0.0408 * [21,502 - 1.1 * 0.248 * (1600 - 77)]}$$

$$= 67072.26 / 860.33 = 77.96 \text{ ft}^3/\text{min}$$

Fuel Costs

The cost for natural gas shall be based upon the average price of natural gas sold to "Commercial Consumers" in California for the years 2011 and 2012. The following values were taken from Energy Information Administration/Natural Gas; Average Price of Natural Gas Sold to Commercial Consumers by State, 2011 – 2012.

2012 = \$8.28/thousand ft³ total monthly average
 2011 = \$7.13/thousand ft³ total monthly average
 Average for two years = \$7.705/thousand ft³ total monthly average

$$\text{Fuel Cost} = 77.96 \text{ cfm} \times 1440 \text{ min/day} \times 365 \text{ day/year} \times \$7.705/1000 \text{ ft}^3$$

$$= \$315,723/\text{year}$$

Electricity Requirement

The electricity costs are primarily associated with the fan needed to move the gas through the incinerator. The power (in kilowatts) needed to move a given inlet volumetric flow rate of air at a total flange-to-flange pressure drop of ΔP inches of water and combined motor/fan efficiency, ε.

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

Where

ΔP = Pressure drop Across system = 4 in. H₂O
 ε = Efficiency for fan and motor = 0.6
 Q_w = 6,200 scfm

$$\text{Power}_{\text{fan}} = \frac{1.17 * 10^{-4} * 6,200 \text{ cfm} * 4 \text{ in. H}_2\text{O}}{0.60}$$

$$= 4.836 \text{ kW}$$

Electricity Costs

Average cost of electricity to commercial users in California was taken from Energy Information Administration/Electric Power; Average Retail Price of Electricity to Ultimate Customers by End-Use Sector, by State, 2011 – 2012.

2012 = \$0.1023
 2011 = \$0.1012
 AVG = \$0.102

$$\text{Electricity Cost} = 4.836 \text{ kW} \times 24 \text{ hours/day} \times 365 \text{ days/year} \times \$0.102/\text{kWh} = \$4,321/\text{year}$$

Total Annual Costs

Total Annual Cost (Data from: Annual Costs for Thermal and Catalytic Incinerators, Table 3.10 – OAQPS Control Cost Manual, Fifth Edition)

Total Annual Cost			
Direct Annual Cost (DC)			
Operating Labor			
Operator	0.5 h/shift	\$18.5/h x 0.5 h x 365 days/year	\$3,376
Supervisor	15% of operator		\$506
Maintenance			
Labor	0.5 h/shift	\$18.5/h x 0.5 h x 365 days/year	\$3,376
Material	100% of labor		\$3,376
Utility			
Natural Gas			\$315,723
Electricity			\$4,321
Total DC			\$330,678
Indirect Annual Cost (IC)			
Overhead	60% of Labor Cost	0.6 x (\$3,376 + \$506 + \$3,376)	\$4,355
Administrative	2% TCI		\$10,770
Property Taxes	1% TCI		\$5,385
Insurance	1% TCI		\$5,385
Total IC			\$25,895
Total Annual Cost (DC + IC)			\$356,573

Total Costs

Total Costs = Annualized TCI + Total Annual Cost

Total Costs = \$87,636 + \$356,573 = \$444,209/year

Emission Reductions

Assuming 100% capture and 98% control efficiency,

Annual Emission Reduction = Uncontrolled Emissions (excluding drying oven emissions)
x 0.98
= 23,791 lb-VOC/year x 0.98
= 23,315 lb-VOC/year
= 11.66 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Total Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = \$444,209/year ÷ 11.66 tons-VOC/year
= \$38,105/ton-VOC

The analysis demonstrates that the annualized purchase cost of the regenerative thermal oxidizer system and annual costs alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. Therefore this option is not cost-effective and will not be considered for this project.

Option 2: Capture and carbon adsorption (Technologically Feasible)

Total Annual Cost

Assuming a carbon adsorption unit achieves a control efficiency of 95% and that the carbon will absorb 20% of its weight in VOCs, the amount of carbon required is determined as follows:

$$\begin{aligned}\text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.95 \\ &= 23,820 \text{ lb-VOC/year} \times 0.95 \\ &= 22,629 \text{ lb-VOC/year} \\ &= 11.31 \text{ tons-VOC/year}\end{aligned}$$

$$\begin{aligned}\text{Carbon required} &= 11.31 \text{ tons-VOC/year} \times 2000 \text{ lb/ton} \times 1/0.20 \\ &= 113,145 \text{ lb carbon}\end{aligned}$$

Per Kurt Keefer of EAS Corp. (916-967-9007), the cost range of a carbon disposal/replacement is \$2/lb to \$10/lb (see project N-1110320). The value of \$2/lb will be used as a conservative estimate.

$$\text{Carbon capital cost} = \$2/\text{lb} = \$2/\text{lb} \times 113,145 \text{ lb carbon} = \$226,290$$

Emission Reductions

Assuming 100% capture and 95% control efficiency,

$$\begin{aligned}\text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.95 \\ &= 23,820 \text{ lb-VOC/year} \times 0.95 \\ &= 22,629 \text{ lb-VOC/year} \\ &= 11.31 \text{ tons-VOC/year}\end{aligned}$$

Cost Effectiveness

$$\text{Cost Effectiveness} = \text{Total Annual Cost} \div \text{Annual Emission Reductions}$$

$$\begin{aligned}\text{Cost Effectiveness} &= \$226,290/\text{year} \div 11.31 \text{ tons-VOC/year} \\ &= \$20,008/\text{ton-VOC}\end{aligned}$$

The analysis demonstrates that the cost of the carbon replacement alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC. 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, BACT for the carton manufacturing operation is satisfied with the following:

VOC: Abhesive with a VOC content of ≤ 4.04 lb/gal (excluding water and exempt compounds)
and Inks with a VOC content of ≤ 2.4 lb/gal (excluding water and exempt compounds)
(Technologically Feasible)

The applicant has proposed adhesives and inks with a VOC content of 2.40 lb/gal. Therefore, the BACT requirements for VOC are satisfied.

Top Down BACT Analysis for Flexographic Printing Operation for NH₃ Emissions for Permit N-1980-10-0

BACT is required for ammonia emissions from the ink additive in permit N-1980-10-0.

Step 1 - Identify All Possible Control Technologies

SJVUAPCD BACT Clearinghouse, Guideline 4.9.6, Paper Carton Manufacturing – Printing and Adhesive Application, 3rd quarter 2014, does not identify BACT for ammonia emissions. Therefore, a project specific top down BACT analysis will be performed.

As the District does not have a published cost effectiveness threshold for ammonia emissions, only Achieved-in-Practice controls for ammonia will be examined.

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. There were no BACT guidelines that listed control options for ammonia.

There is no add-on equipment used to reduce ammonia emissions from a printing operation at any of the permitted flexographic printing operations in the San Joaquin Valley. The "industry standard" for the amount of ammonium hydroxide (NH₄OH) in various water based inks is determined by identifying projects that were similar to this project.

Permit #	Company	Project	Inks	NH ₄ OH content (% by wt.)	Source/Comments
N-1982-20-0, '21-0	International Paper	N1123587	Flexographic Inks (water based inks)	0-3%	Almost all inks are water based and contain 0-3% ammonium hydroxide.
			Flexographic ink #239	0-2%	MSDS
N-7464-1-1, '4-0 and '5-0	Pacific Southwest Container	N1110821	INX Technaflex 300S Pantone 341 CGR-FR	3-7%	MSDS
C-7165-5-2, '6-2, '7-1 and '8-1	Rocktenn CP LLC	C1120324	--	N/A	MSDS are not available in the project file
S-8142-3-0, '4-0 and '5-0	Kaweah Container, Inc	S1120827	Flexographic Inks (water based inks)	0-3%	MSDS
S-8142-7-0 and '8-0		S1122931	Flexographic inks (water based)	0-3%	MSDS
S-165-1-7, '2-6, '4-2, '10-1 to '12-1		S1114324	--	N/A	MSDS are not available in the project file

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	Inks containing ammonium hydroxide content of 0 – 7% by weight	Y

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.

For ammonia, the only option is an Achieved-in-Practice standard. Therefore, a cost effectiveness analysis is not required.

Step 5 - Select BACT

Pursuant to the above Top-Down BACT Analysis, BACT for the flexographic printing operation is satisfied with the following:

NH₃: Inks containing ammonium hydroxide content of 0 – 7% by weight (Achieved in Practice)

Project Proposal

Ink usage = 7,000 gallons per year
Ink additive usage = 1,540 gallons per year
Ink density = 7.58 lb/gal (worst case)
Ink additive density = 8.2 lb/gal
Ink NH₄OH content = 0% by weight
Ink additive NH₄OH content = 13% by weight
Operating schedule = 260 days per year

Mass of Ink = 7,000 gal/year x 7.58 lb/gal = 53,060 lb/year
Mass of Ink additive = 1,540 gal/year x 8.2 lb/gal = 12,628 lb/year

Mass of NH₄OH in mixture = 53,060 lb x 0% + 12,628 lb x 13% = 1,641.64 lb

Weight % NH₄OH in mixture = 1,641.64 lb ÷ (53,060 + 12,628) lb = 2.5%

The applicant has proposed inks with a NH₄OH content of 2.5% by weight. Therefore, the BACT requirements for ammonia are satisfied.

Appendix C
Compliance Certification



Memphis Office
5350 Poplar Avenue • Suite 600 • Memphis, TN 38119

June 16, 2014

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

**Subject: Compliance Statement for Evergreen Packaging, Inc.
Facility N-1980, Project No. N-1141880**

Dear Mr. Gill:

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications," Evergreen Packaging Inc. doing business in California as Evergreen Beverage Packaging (Evergreen) is pleased to provide this compliance statement regarding its proposed installation of a new flexographic printing press at the Turlock Facility, identified as Project No. N-1141880 by San Joaquin Valley Air Pollution Control District (SJVAPCD).

Evergreen is controlled by Reynolds Group Holdings Inc. (RGHI), which owns 100% of Evergreen's shares. In addition to Evergreen, RGHI controls Graham Packaging Company Inc. and its subsidiaries (Graham) and Pactiv LLC (Pactiv). Graham and Pactiv own and operate facilities in California which are subject to emissions limitations.

All major stationary sources in California owned or operated by Evergreen, or by any entity controlling, controlled by, or under common control with Evergreen, 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: Evergreen Beverage Packaging (SJVAPCD Facility N-1980)
1500 W Main St., Turlock, CA 95380

Facility #2: Graham Packaging LC LP
4500 Finch Road, Modesto, CA 95357

Facility #3: Graham Packaging Pet Technologies Inc.
513 South McClure Road, Modesto, CA 95357

Facility #4: Graham Packaging PX Company
10660 Acacia Street, Rancho Cucamonga, CA 91730

fresh by design.

Mr. Rupi Gill
San Joaquin Valley Air Pollution Control District
June 16, 2014
Page 2

Facility #5: Graham Packaging Company LP
3300 West Segerstrom Street, Santa Ana, CA 92704

Facility #6: Pactiv LLC
2024 Norris Road, Bakersfield, CA 93308

Facility #7: Pactiv LLC
18752 San Jose Avenue, City of Industry, CA 91748

Facility #8: Pactiv LLC
5370 E. Home Avenue, Fresno, CA 93727

Facility #9: Pactiv LLC
1000 Diamond Avenue, Red Bluff, CA 96080

Facility #10: Pactiv LLC
12500 E. Slauson Avenue, Suite H-1, Santa Fe Springs, CA 90670

Facility #11: Pactiv LLC
4545 Qantas Lane, Stockton, CA 95206

Facility #12: Pactiv LLC
3751 Seville Avenue, Vernon, CA 90058

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.

Very truly yours,

EVERGREEN PACKAGING

By: 
John C. Pekar
Vice President & General Counsel
Telephone: 901.821.4398
E-Mail: john.pekar@everpack.com

Appendix D
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: Evergreen Beverage Packaging	FACILITY ID: N-1980
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Evergreen Packaging Inc.	
3. Agent to the Owner: N/A	

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:

Edward Burton
Signature of Responsible Official

5-15-2014
Date

Edward Burton
Name of Responsible Official (please print)

Plant Manager
Title of Responsible Official (please print)

Appendix E

Health Risk Assessment and Ambient Air Quality Analysis

San Joaquin Valley Air Pollution Control District
***REVISED* Risk Management Review**

To: Stanley Tom – Permit Services
 From: Yu Vu – Technical Services
 Date: July 29, 2014
 Facility Name: Evergreen Beverage Packaging
 Location: 1500 W. Main St., Turlock, CA 95380
 Application #(s): N-1980-7-4 and -10-0
 Project #: N-1141880

A. RMR SUMMARY

RMR Summary				
Categories	Paper Scrap Collection System (Unit 7-4)	Carton Manufacturing Line (Unit 10-0)	Project Totals	Facility Totals
Prioritization Score	0.01	0.09	0.09	0.09
Acute Hazard Index	N/A ¹	N/A ¹	N/A ¹	N/A
Chronic Hazard Index	N/A ¹	N/A ¹	N/A ¹	N/A
Maximum Individual Cancer Risk (10⁻⁶)	N/A ¹	N/A ¹	N/A ¹	N/A
T-BACT Required?	No	No		
Special Permit Conditions?	No	No		

¹Acute and Chronic Hazard Index and Maximum Individual Cancer Risk were not calculated since the total facility prioritization score was less than 1.0.

Proposed Permit Conditions

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

Unit #s 7-4 and 10-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a revised RMR request on July 28, 2014, to perform a Risk Management Review and Ambient Air Quality Analysis for a proposed modification to a carton manufacturing operation. In the original project, the applicant was proposing to duct the scoring/cutting/trimming system in unit 7-4 to the south cyclone. The applicant was also proposing to install a new carton manufacturing machine that will include adhesive application, flexographic printing, and a natural gas-fired drying oven.

In this revised RMR request, the applicant has increased the amount of ink, ink additive, adhesive, and cleaning solvents used. The result is an increase in VOC and Ammonia emissions. The engineer has also revised the emissions from natural gas oven. Because of this, the AAQA will be reevaluated.

II. Analysis

Toxic emissions for the inks/abhesives/cleaning solvents used in unit 10-0 were determined using MSDSs provided by the applicant and emissions provided by the engineer. Toxic emissions from the natural gas combustion in unit 10-0 were determined using Ventura County emission factors for natural gas combustion (<10 MMBtu/hr). Toxic emissions from the paper scrap collection system were determined using District approved emission factors for paperboard scrap handling. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

Analysis Parameters Unit 7-4¹			
PM₁₀ Emissions (lb/hr)	0.0023	Max Hours per Year	8,760
PM₁₀ Emissions (lb/yr)	20	Closest Receptor (m)	~76

¹Unchanged in this revision

Analysis Parameters Unit 10-0 (Inks/Abhesives/Cleaning Solvents)			
Closest Receptor (m)	~100	Max Hours per Year	8,760
Isopropyl Alcohol Emissions (lb/hr)	0.328	Ammonia Emissions (lb/hr)	0.092
Isopropyl Alcohol Emissions (lb/yr)	2,049.652	Ammonia Emissions (lb/yr)	3,273

Analysis Parameters Unit 10-0 (NG Combustion)¹			
NG Consumption (MMSCF/hr)	0.0006	Max Hours per Year	8,760
NG Consumption (MMSCF/yr)	5.256	Closest Receptor (m)	~100

¹Unchanged in this revision

Technical Services also performed modeling for criteria pollutants CO, NO_x, SO_x, PM₁₀ and PM_{2.5}. The emission rates used for criteria pollutant modeling are listed in the table below. Please note that VOC emissions were not modeled because there are currently no available ambient air quality standards for VOC.

Pollutant	Emissions (NG combustion)	
	lb/hr	lb/yr
NO _x	0.06	526
SO _x	0.0017	15
PM ₁₀	0.0046	40
PM _{2.5}	0.0046	40
CO	0.0504	442
Pollutant	Emissions (Paperboard Scrap Collection)	
	lb/hr	lb/yr
PM ₁₀	0.0023	20
PM _{2.5}	0.0023	20

Analysis Parameters Unit 7-0 (Horizontal Release)			
Source Type	Point	Location Type	Urban
Stack Height (m)	15.24	Closest Receptor (m)	~76
Stack Diameter (m)	1.219	Type of Receptor	Business
Stack Exit Velocity (m/s)	3.962	Max Hours per Year	8760
Stack Exit Temp. (°K)	Ambient		

Analysis Parameters Unit 10-0 (Vertical Release)			
Source Type	Point	Location Type	Urban
Stack Height (m)	15.24	Closest Receptor (m)	~100
Stack Diameter (m)	0.406	Type of Receptor	Residential
Stack Exit Velocity (m/s)	26.966	Max Hours per Year	8760
Stack Exit Temp. (°K)	344.261	Fuel Type	NG
Burner Rating (MMBtu/hr)	0.6		

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass ¹	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ²	Pass ²
PM _{2.5}	X	X	X	Pass ²	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The prioritization score is less than 1.0. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

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 F

Draft Authority to Construct Permits

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-1980-7-4

LEGAL OWNER OR OPERATOR: EVERGREEN BEVERAGE PACKAGING

MAILING ADDRESS:

ATTN: EHS MANAGER
1500 W MAIN ST
TURLOCK, CA 95380

LOCATION:

1500 W MAIN ST
TURLOCK, CA 95380-0000

EQUIPMENT DESCRIPTION:

MODIFICATION OF WASTE PAPERBOARD PICK-UP SYSTEM CONSISTING OF BLOWERS/CHOPPERS, A SHREDDER/HOGGER, AND BALERS (2) SERVED BY TWO CYCLONES: CONNECT SCORING/CUTTING/TRIMMING SYSTEM LISTED IN PERMIT N-1980-10 TO PICK-UP 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. 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
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. 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

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.

Sayed Sadredin, Executive Director APCO

Arnaud Marjollet, Director of Permit Services

N-1980-7-4 : Aug 1 2014 11:28AM - TOMS : Joint Inspection NOT Required

7. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The amount of material collected by the waste paperboard pick-up system and cyclones shall not exceed 20 tons in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. PM10 emissions from the waste paperboard pick-up system and cyclones shall not exceed 0.0000082 lb per lb of waste paperboard. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall record on a daily basis the amount of waste paperboard collected in tons. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All records shall be maintained and retained on-site 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

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-1980-10-0

LEGAL OWNER OR OPERATOR: EVERGREEN BEVERAGE PACKAGING

MAILING ADDRESS: ATTN: EHS MANAGER
1500 W MAIN ST
TURLOCK, CA 95380

LOCATION: 1500 W MAIN ST
TURLOCK, CA 95380-0000

EQUIPMENT DESCRIPTION:

FLEXOGRAPHIC PRINTING OPERATION CONSISTING OF A WEB-FED 4-COLOR EVERS FLEXOGRAPHIC PRINTING PRESS, A 0.6 MMBTU/HR NATURAL GAS-FIRED DRYING OVEN, AN ABHESIVE APPLICATION OPERATION, AND A SCORING/CUTTING/TRIMMING SYSTEM SERVED BY A PAPER WASTEBOARD PICK-UP SYSTEM LISTED IN PERMIT N-1980-7

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. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 5,955 lb, 2nd quarter - 5,955 lb, 3rd quarter - 5,955 lb, and fourth quarter - 5,955 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/19/02). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers S-3779-1, S-4172-1, S-4252-1, S-4338-1, S-4288-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

Arnaud Marjolle, Director of Permit Services

N-1980-10-0: Jul 30 2014 4:48PM - TOMS : Joint Inspection NOT Required

5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. 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
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. The drying oven shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
9. Drying oven emission factors shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 0.084 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC content of the following materials shall not exceed any of the following limits: adhesive materials: 2.40 lb/gal excluding water and exempt compounds; ink and ink additive materials: 2.40 lb/gal excluding water and exempt compounds; cleaning solvent materials for specialty flexographic printing ink application equipment: 0.83 lb/gal. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Ammonia Hydroxide (NH₄OH) content of the following materials shall not exceed any of the following limits: adhesive materials: 4.0 lb/100 lb adhesive; ink additive: 13.0 lb/100 lb ink additive. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Usage of the following materials shall not exceed any of the following limits: adhesive materials: 4.62 gallons per day, ink and ink additive materials: 32.85 gallons per day; cleaning solvent materials for specialty flexographic printing ink application equipment: 1.92 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. For flexographic printing operations, VOC content of graphic arts materials, less water and less exempt compounds, as applied, shall not exceed any of the following limits: flexographic ink on porous substrates: 225 g/l (1.88 lb/gal); all other inks: 300 g/l (2.5 lb/gal); coating: 300 g/l (2.5 lb/gal); adhesive: 150 g/l (1.25 lb/gal); web splicing adhesive: 150 g/l (1.25 lb/gal). [District Rules 2520 and 4607] Federally Enforceable Through Title V Permit
14. For flexographic printing operations, VOC content of specialty ink, less water and less exempt compounds, as applied, shall not exceed any of the following limits: metallic ink: 300 g/l (2.5 lb/gal); matte finish ink: 300 g/l (2.5 lb/gal); metallic ink and matte finish ink on flexible package printing: 300 g/l (2.5 lb/gal). In addition, the specialty inks used shall not exceed two gallons in a calendar day and 120 gallons in a calendar year. [District Rules 2520 and 4607] Federally Enforceable Through Title V Permit
15. 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
16. Cleaning activities that use solvents with a VOC content greater than 25 g/l (0.21 lb/gallon) shall 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. [District Rule 4607] Federally Enforceable Through Title V Permit
17. 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

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CONDITIONS CONTINUE ON NEXT PAGE

18. 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 materials 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
19. 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
20. 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 Rule 4607] Federally Enforceable Through Title V Permit
21. Permittee shall maintain a current file of inks, adhesives, 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, less water and exempt compounds (or sufficient composition data to calculate this value), material VOC content (or VOC content "as packaged" from manufacturer), mixing instructions, and density. [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
22. For each ink and solvent material used in this operation, the permittee shall record on a daily basis the product/material name, material type (e.g. ink), amount used (gallons), VOC content, less water and exempt compounds as applied (lb-VOC/gal), material VOC content as applied (lb-VOC/gal). [District Rules 2201 and 4607] Federally Enforceable Through Title V Permit
23. Permittee shall record on a daily basis, the type and amount of each specialty ink used at the facility, as defined in Rule 4607. [District Rules 1070 and 4607] Federally Enforceable Through Title V Permit
24. 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

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