



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

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PC, POnoPC, PO(cc)

Legal Owner
or Operator: TREND OFFSET PRINTING SERVICES, INC.
3722-382 CATALINA STREET
LOS ALAMITOS, CA 90720

ID: 53729

Equipment
Location: 3722-382 CATALINA STREET, LOS ALAMITOS, CA 90720

Equipment Description:

Section H

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<u>Process 1: Lithographic Printing</u>					
PRINTING PRESS, LITHOGRAPHIC, HEIDELBERG-HARRIS, M600-B24, FOUR COLOR STATIONS, 38 INCH WIDTH A/N: 536053 (PC)	D77			VOC: (9) [RULE 1130, 10-8-1999; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]	B59.8, B163.1, B163.4, H23.3, K67.1
DRYER, MEGTEC, 2-P-350-40, NATURAL GAS, WITH TWO 2.44-MMBTU/HR BURNERS, MAXON, OVENPAK LE, LOW NOX A/N: 536053 (PC)	D78	C59 C69	NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (4) [RULE 2005, 6-3-2011]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	D182.6, E133.1, I297.1
PRINTING PRESS, LITHOGRAPHIC, HEIDELBERG-HARRIS, M600-B24, FOUR COLOR STATIONS, 38 INCH WIDTH A/N: 541290 (PC)	D79			VOC: (9) [RULE 1130, 10-8-1999; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]	B59.8, B163.1, B163.4, H23.3, K67.1
DRYER, MEGTEC, 2-P-350-40, NATURAL GAS, WITH TWO 2.44-MMBTU/HR BURNERS, MAXON, OVENPAK LE, LOW NOX A/N: 541290 (PC)	D80	C59 C69	NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (4) [RULE 2005, 6-3-2011]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	D182.6, E133.1, I297.1



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Section D

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1: Lithographic Printing					
PRINTING PRESS, LITHOGRAPHIC, HEIDELBERG-HARRIS, M-8L, S/N OJ9798, FIVE COLOR STATIONS, 26.5 INCH WIDTH A/N: 534016 (PO no PC)	D75			VOC: (9) [RULE 1130, 10-8-1999; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]	B59.8, B163.1, B163.4, H23.3, K67.1
DRYER, MEGTEC, ATLAS 2700, S/N DT 98169-984819, NATURAL GAS, WITH TWO 1.5-MMBTU/HR BURNERS, MAXON, CYCLOMAX 1.5M, LOW NOX A/N: 534016 (PO no PC)	D76	C59 C69	NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (4) [RULE 2005, 6-3-2011]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	D182.6, E133.1, I297.2
PRINTING PRESS, LITHOGRAPHIC, GOSS, MODEL NO. M-500, FOUR COLOR, 28 INCH WIDTH A/N: 491092 536047 (R1401 CC)	D72			VOC: (9) [RULE 1130, 10-8-1999; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]	B59.7, B163.1, B163.4, H23.3, K67.1
DRYER, GOSS, MODEL ECOWEB PLUS 89-1020, NATURAL GAS, WITH LOW NOX BURNERS, TWO ZONES, EACH 1 MMBTU/HR, 2 MMBTU/HR A/N: 491092 536047 (R1401 CC)	D73	C59 C69	NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (4) [RULE 2005, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	E133.1
PRINTING PRESS, LITHOGRAPHIC, HARRIS, MODEL NO. M-110, FOUR COLOR, 26.5 INCH WIDTH A/N: 491090 542898 (R1401 CC)	D19			VOC: (9) [RULE 1130, 10-8-1999; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]	B59.7, B163.1, B163.4, H23.3, K67.1
DRYER, TEC, SERIES 80, NATURAL GAS, ONE ZONE, WITH LOW NOX BURNER, 1.50 MMBTU/HR A/N: 491090 542898 (R1401 CC)	D20	C59 C69	NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (4) [RULE 2005, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	E133.1



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PRINTING PRESS, LITHOGRAPHIC, HARRIS, MODEL NO. M-110, FOUR COLOR, 26.5 INCH WIDTH A/N: 491089 <u>542899</u> (R1401 CC)	D67			VOC: (9) [RULE 1130, 10-8-1999; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]	B59.7, B163.1, B163.4, H23.3, K67.1
DRYER, TEC, SERIES 80, NATURAL GAS, ONE ZONE, WITH LOW NOX BURNER, 1.50 MMBTU/HR A/N: 491089 <u>542899</u> (R1401 CC)	D68	C59 C69	NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (4) [RULE 2005, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	E133.1
AFTERBURNER, HOT ROCK, ADVANTAGE ENERGY GROUP, MODEL PREMIER 22.5 RTO, ONE 150 H.P. EXHAUST BLOWER, NATURAL GAS, ONE 10 H.P. COMB. AIR FAN, TWO HEAT EXCHANGERS AND ONE ABSORPTION CHILLER, 6.4 MMBTU/HR A/N: 491094 <u>534015</u>	C59	D7 D20 D40 D41 D56 D57 D61 D62 D68 D73 <u>D76 D78</u> <u>D80</u>	NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	A72.1, D182.4, D182.5, E193.2
AFTERBURNER, HOT ROCK, ADWEST, RETOX 25.0 RTO95, MAXON KINEMAX 6G BURNER, ONE 100-HP EXHAUST BLOWER, NATURAL GAS, ONE 10-HP COMBUSTION BLOWER, AND ONE 3-MMBTU/HR NATURAL GAS INJECTION SYSTEM, 7.225 MMBTU/HR A/N: 491093 <u>534014</u>	C69	D7 D20 D40 D41 D56 D57 D61 D62 D68 D73 <u>D76 D78</u> <u>D80</u>	NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 407, 4-2-1982]	A72.1, C1.1, D182.4, D182.5, E193.2

History

The company is a large lithographic printer, currently permitted to operate thirteen heat-set lithographic printing lines with the following operational status:

Printer Line No.	Printer(s)	Dryer(s)	Existing A/N	Control Equipment	Operational Status
1	D6	D7	450544	C59 C69	active
2	D8	D9 D10	450547	C26	REMOVED
3	D72	D73	491092	C59 C69	active
4	D14	D15	450551	C26	REMOVED



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5	D16	D17 D18	450553	C26	REMOVED
6	D19	D20	450554	C59 C69	active
7	D67	D68	491089	C59 C69	active
8	D39	D40 D41	450561	C59 C69	active
9	D51	D52	450563	C26	REMOVED
10	D53	D56	450566	C59 C69	active
11	D65	D57	475157	C59 C69	active
12	D60	D61	450568	C59 C69	active
13	D66	D62	475160	C59 C69	active

and four cold-set lithographic presses (D37, D38, D58 & D74), plus a solvent recovery centrifuge (D63).

The current project consists of the following:

1. Adding three heat-set lithographic printing lines:

Printer Line No.	Printer(s)	Dryer(s)	Pending A/N	Control Equipment	Installation Status
14	D75	D76	534016	C59 C69	installed
15	D77	D78	536053	C59 C69	not yet installed
16	D79	D80	541290	C59 C69	not yet installed

2. The above additional lines replace the following four heat-set lithographic printing lines along with an oxidizer C26 serving them:

Printer Line No.	Printer(s)	Dryer(s)	Existing A/N	Control Equipment	Status
2	D8	D9 D10	450547	C26	REMOVED
4	D14	D15	450551	C26	REMOVED
5	D16	D17 D18	450553	C26	REMOVED
9	D51	D52	450563	C26	REMOVED



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- 3. Changes of R1401 Conditions for three heat-set lithographic printing lines:

Printer Line No.	Printer(s)	Dryer(s)	Existing A/N	Pending A/N	Control Equipment
3	D72	D73	491092	536047	C59 C69
6	D19	D20	491090	542898	C59 C69
7	D67	D68	491089	542899	C59 C69

- 4. Venting three additional heat-set lithographic lines to the two existing oxidizers:

Oxidizer	Existing A/N	Pending A/N	Current Basic Equipment	Additional Basic Equipment
C59	491094	534015	D7 D20 D40, D41, D56 D57, D61, D62, D68 & D73	D76, D78 & D80
C69	491093	534014	D7 D20 D40, D41, D56 D57, D61, D62, D68 & D73	D76, D78 & D80

The applicant has proposed to keep the existing facility-wide limit of 10,890 lbs per month of ROG. Therefore, the proposed new addition will not result in ROG emission increase facility-wide.

A review of District compliance records indicates that there are no citizen complaints filed against the facility during the last two years. However, the facility was issued a Notice of Violation (NOV) on 8/8/12 for using materials in device D72 that are not allowed by permit conditions, operating equipment with expired permits, and failure to maintain a temperature recorder on RTO C69. In addition, the facility was issued a Notice to Comply (NC) on 9/5/2012 requiring the operator to provide records demonstrating compliance with various operating conditions. The company resolved all the issues related to the NOV and provided the records requested in the NC. The company is currently operating in compliance with all District rules and regulations.

Los Alamitos Elementary School at 10862 Bloomfield Street is within 1000 feet of the proposed project. In addition, McAuliffe Middle School at 4112 Cerritos Avenue is within a quarter mile of the proposed project. Therefore, this project will be subject to Rule 212 public notice.



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Trend Offset is a Title V and NOx RECLAIM facility. This permit revision is a 1st revision to a renewed Title V permit issued on 7-6-10.

Process Description

General Lithographic Printing:

The company uses various graphic art materials such as inks, fountain solution and washes. Printing inks consist of pigments, binders, and solvents. Pigments are composed of finely divided organic and inorganic materials, which produce desired colors. Binders are composed of organic resins and polymers or oils and resins, which lock pigments to the substrate. Solvents are usually composed of organic compounds, which dissolve and disperse the pigments and binders. During the ink drying process, small portions of organic materials are released to the atmosphere.

In lithography, plate cylinders contain both the image and nonimage areas. The image area is ink wettable and water repellent. The nonimage area is chemically repellent to ink. First, to create the nonimage area, a fountain solution is applied on the plate cylinder in a desirable pattern. The fountain solution dampens the plate cylinder, making it repellent to ink in those areas that will not be printed. Then, applying ink to the dampened plate cylinder creates the image area. The applied ink only sticks to the areas of the plate cylinder that have not been covered with the fountain solution.

During printing, the ink from the image area is first transferred to another cylinder, known as a blanket cylinder. The blanket cylinder is a metal cylinder covered with a soft rubber layer. The soft rubber surface is used here to provide a clearer impression on papers with a variety of textures. The printing process is completed when ink from the soft rubber is transferred to a substrate. Thus, the ink from the plate cylinders is not directly transferred to the substrate as in normal printing, but must be transferring via the blanket cylinder. Hence, this printing method is called offset printing.

Paper to be printed is either in a continuous roll or separate sheets. If a continuous roll of paper is fed to the printer then it is called webfed printing or else it called sheetfed.

Printed inks can be cured by the following methods:

1. Coldset: Air dried
2. Heatset: Dried inside a gas-fired oven



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3. Quickset: Dried inside either infrared (IR) or electric ovens

The Printing presses operate on average 16 hour/day and 7 days/week with maximum operation at 24 hours/day and 7 days/week. Each oxidizer is capable of handling an exhaust flow of 25,000 CFM.

During low levels of VOC in the emissions stream, the main burner of each oxidizer will not be used to supplement heat, but a natural-gas injection system is used instead to provide additional heat, maintaining the combustion chamber at or above 1500 °F. Both oxidizers are expected to achieve a minimum destruction efficiency of 95%.

Control Equipment Evaluation

General Description

An exhaust fan is used to pull 25,000 CFM of VOC-laden process gas through the each oxidizer. Inside the combustion chamber with the temperature above 1500 °F, VOCs in the inlet gas stream are converted into carbon dioxide and water. In order to reduce fuel cost, each oxidizer is equipped with two ceramic beds serving as heat exchange media.

At startup, each oxidizer is equipped with dampers that only allow fresh air to enter the oxidizer. The main burner raises the combustion chamber to 1500 °F in about one hour. Afterward, the fresh air damper is closed and the inlet damper is opened, allowing the process gas to enter the oxidizer.

In operation, a valve arrangement provides for alternating and reversing the oxidizer influent and effluent through each ceramic bed. While the No. 1 bed is undergoing the heat absorption mode, the No. 2 bed is preheating the influent chamber. The cycles continue and the switching occurs automatically.

The heat recovery from the two beds is expected to be 95% efficient. The system heat loss can be offset by the combustion of VOC present in the emission streams. During low levels of VOC in the emissions stream, the main burner will not be used to supplement heat, but a natural-gas injection system is used instead to provide additional heat, maintaining the combustion chamber at above 1500 °F.

Each oxidizer is expected to achieve a minimum destruction efficiency of 95%. A source test will be conducted to confirm the control efficiency of the equipment in meeting the BACT requirement for VOC.



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Both oxidizers have been evaluated previously for burner capacity for providing sufficient heat during startup, and minimum retention time, and they satisfied the requirements.

Designed Flow Capacity Check

The following are emission stream flow rates from each dryer:

Dryers	Associated Presses	Measured Flow Rates (SCFM)
D7	M600-8	3,750
D20	M-110-4	1,100
D68	M-110-4	1,100
D40	M600-4	956
D41	M600-4	956
D56	M655	2,596
D57	M655	2,596
D61	SUNDAY 2000	4,417
D62	SUNDAY 2000	4,417
D73	M-500	2,150
D75	M-8L	1,300
D77	M600	2,156
D79	M600	2,156
TOTAL =		29,649

Each oxidizer has a design capacity of treating up to 25,000 SCFM for a combined total of 50,000 SCFM. Therefore, oxidizers C59 and C69 have a combined design capacity that can handle all emission streams from all of the existing dryers as well as the new dryers.

Emission Calculations

COMBUSTION RELATED EMISSIONS:

The following table summarizes the changes in burner ratings for this project:

Removed		Added		Delta (MBTU/hr)
Device No.	MMBTU/hr	Device No.	MMBTU/hr	
D9	0.804	D76	3	2.196
D10	0.804	D78	4.88	4.076
D15	1.4	D80	4.88	3.48
D17	0.804			-0.804



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Removed		Added		Delta (MBTU/hr)
Device No.	MMBTU/hr	Device No.	MMBTU/hr	
D18	0.804			-0.804
C26	4.536			-4.536
TOTAL =	9.152		12.76	3.608

New burners in dryers D76, D78 & D80 are low-NOx, guaranteed by the manufacturers to meet 30 ppmv NOx.

Combustion Emission Factors for VOC, NOx, CO, PM10, and Sox were obtained from AQMD's Emission Fee Billing guidelines.

NOx emission factor for low-NOx burners were based on manufacturer's data. The following is a summary of emission factors used in the emission calculations:

- NOx: 30 ppmv for units equipped with low-NOx burners
- NOX: 130 lb/mmscf (EFB Factor)
- CO: 35 lb/mmscf (EFB Factor)
- VOC: 7 lb/mmscf (EFB Factor)
- PM=PM10: 7.5 lb/mmscf (EFB Factor)
- SOx: 0.83 lb/mmscf (EFB Factor)

The following is a summary of criteria emission increases for this project:

Pollutant	Emission Factor (lb/mmcf)	NEW (12.76 MMBTU/hr) lb/hr	REMOVED (-9.152 MMBTU/hr) lb/hr	delta lb/hr	delta lb/dy
ROG	7	0.085	-0.061	0.024	0.57
NOx	39	0.474			
NOx	130		-1.133	-0.659	-15.82
CO	35	0.425	-0.305	0.120	2.88
PM10	7.5	0.091	-0.065	0.026	0.62
SOx	0.83	0.010	-0.007	0.003	0.07

The attached Excel worksheets calculate combustion-related emission increases from each drying oven. The following is a summary of emissions as entered in AEIS and NSR for each of the permit unit:



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<i>A/N 536053 (D78)</i>				
<i>Criteria Pollutants</i>	<i>AEIS (lb/hr)</i>		<i>NSR (lb/hr)</i>	
	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>
<i>SOx</i>	<i>0.002</i>	<i>0.002</i>	<i>0.004</i>	<i>0.004</i>
<i>NOx</i>	<i>0.302</i>	<i>0.089</i>	<i>0.604</i>	<i>0.178</i>
<i>CO</i>	<i>0.081</i>	<i>0.081</i>	<i>0.163</i>	<i>0.163</i>
<i>PM = PM10</i>	<i>0.017</i>	<i>0.017</i>	<i>0.035</i>	<i>0.035</i>
<i>ROG</i>	<i>0.016</i>	<i>0.016</i>	<i>0.033</i>	<i>0.033</i>

<i>A/N 541290 (D80)</i>				
<i>Criteria Pollutants</i>	<i>AEIS (lb/hr)</i>		<i>NSR (lb/hr)</i>	
	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>
<i>SOx</i>	<i>0.002</i>	<i>0.002</i>	<i>0.004</i>	<i>0.004</i>
<i>NOx</i>	<i>0.302</i>	<i>0.089</i>	<i>0.604</i>	<i>0.178</i>
<i>CO</i>	<i>0.081</i>	<i>0.081</i>	<i>0.163</i>	<i>0.163</i>
<i>PM = PM10</i>	<i>0.017</i>	<i>0.017</i>	<i>0.035</i>	<i>0.035</i>
<i>ROG</i>	<i>0.016</i>	<i>0.016</i>	<i>0.033</i>	<i>0.033</i>

<i>A/N 534016 (D76)</i>				
<i>Criteria Pollutants</i>	<i>AEIS (lb/hr)</i>		<i>NSR (lb/hr)</i>	
	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>
<i>SOx</i>	<i>0.001</i>	<i>0.001</i>	<i>0.002</i>	<i>0.002</i>
<i>NOx</i>	<i>0.186</i>	<i>0.055</i>	<i>0.371</i>	<i>0.109</i>
<i>CO</i>	<i>0.050</i>	<i>0.050</i>	<i>0.100</i>	<i>0.100</i>
<i>PM = PM10</i>	<i>0.011</i>	<i>0.011</i>	<i>0.021</i>	<i>0.021</i>
<i>ROG</i>	<i>0.010</i>	<i>0.010</i>	<i>0.020</i>	<i>0.020</i>



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ROG EMISSIONS RELATED TO USAGE OF GRAPHIC ART MATERIALS:

The emission sources are primarily organic solvents contained in ink, fountain solution, washes (washes of blankets, rollers, and trays), and other related equipment cleaners.

The company proposes to continue to comply with the current facility limit of 10,890 pounds of ROG per month. The three new printing lines (Nos. 14, 15 & 16) replace four removed printing lines (Nos. 2, 4, 5 & 9). Therefore, this project will not result in emission increases of ROG emissions facility-wide.

The following is a summary of ROG emission increases entered in AEIS and NSR for the three printing lines. However, the 30-day average values are manually adjusted to zero since there will be no emission increases facility-wide (still under an existing facility-cap):

ROG (lb/hr)				
Printing Line	AEIS		NSR	
	R1	R2	R1	R2
D75 & D76	50.99	2.55	314.93	15.75
D77 & D78	93.27	4.66	162.75	8.14
D79 & D80	93.27	4.66	162.75	8.14

Rule 1401 Evaluation

The following is a summary of toxic air contaminants resulting from combustion of natural gas inside the three ovens (D76, D78 & D80):

	Maximum lb/hr		
	D76	D78	D80
Acetaldehyde	1.2E-05	2.0E-05	2.0E-05
Acrolein	7.7E-06	1.3E-05	1.3E-05
Amonia	9.1E-03	1.5E-02	1.5E-02
Benzene	2.3E-05	3.7E-05	3.7E-05
Ethyl Benzene	2.7E-05	4.4E-05	4.4E-05
Formaldehyde	4.9E-05	7.9E-05	7.9E-05
Hexane	1.8E-05	2.9E-05	2.9E-05
Napthalene	8.6E-07	1.4E-06	1.4E-06
PAH's	2.9E-07	4.6E-07	4.6E-07
Propylene	2.1E-03	3.4E-03	3.4E-03



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Toluene	1.0E-04	1.7E-04	1.7E-04
Xylenes	7.8E-05	1.3E-04	1.3E-04

The following is a summary of TAC emissions resulting from the use of TAC-containing graphic-art materials in the three new printing lines (consisting of D75, D76, D77, D78, D79 & D80) and the use of new TAC-containing graphic-art materials in the other two existing printing lines (consisting of D19, D20, D72 & D73):

<i>Ethylene Glycol Butyl Ether (lb/hr)</i>				
<i>Printing Line</i>	<i>Average</i>		<i>Maximum</i>	
	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>
<i>D75 & D76</i>	<i>0.98</i>	<i>0.05</i>	<i>4.42</i>	<i>0.22</i>
<i>D77 & D78</i>	<i>1.62</i>	<i>0.08</i>	<i>2.49</i>	<i>0.12</i>
<i>D79 & D80</i>	<i>1.62</i>	<i>0.08</i>	<i>2.49</i>	<i>0.12</i>
<i>D19 & D20</i>	<i>0.40</i>	<i>0.02</i>	<i>1.07</i>	<i>0.05</i>
<i>D67 & D68</i>	<i>0.40</i>	<i>0.02</i>	<i>1.07</i>	<i>0.05</i>
<i>D72 & D73</i>	<i>0.77</i>	<i>0.04</i>	<i>4.82</i>	<i>0.24</i>

<i>Ethylene Glycol (lb/hr)</i>				
<i>Printing Line</i>	<i>Average</i>		<i>Maximum</i>	
	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>
<i>D75 & D76</i>	<i>1.37</i>	<i>0.07</i>	<i>4.74</i>	<i>0.24</i>
<i>D77 & D78</i>	<i>1.62</i>	<i>0.08</i>	<i>2.71</i>	<i>0.14</i>
<i>D79 & D80</i>	<i>1.62</i>	<i>0.08</i>	<i>2.71</i>	<i>0.14</i>
<i>D19 & D20</i>	<i>0.80</i>	<i>0.04</i>	<i>2.13</i>	<i>0.11</i>
<i>D67 & D68</i>	<i>0.80</i>	<i>0.04</i>	<i>2.13</i>	<i>0.11</i>
<i>D72 & D73</i>	<i>0.54</i>	<i>0.03</i>	<i>3.42</i>	<i>0.17</i>

<i>Sodium Hydroxide (lb/hr)</i>				
<i>Printing Line</i>	<i>Average</i>		<i>Maximum</i>	
	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>



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D75 & D76	0.28	0.01	1.12	0.06
D77 & D78	0.80	0.04	1.13	0.06
D79 & D80	0.80	0.04	1.13	0.06
D19 & D20	0	0	0	0
D67 & D68	0	0	0	0
D72 & D73	0	0	0	0

Xylene (lb/hr)				
Printing Line	Average		Maximum	
	R1	R2	R1	R2
D75 & D76	0.25	0.01	5.19	0.26
D77 & D78	0.07	0.00	0.52	0.03
D79 & D80	0.07	0.00	0.52	0.03
D19 & D20	1.56	0.08	0.25	0.01
D67 & D68	1.56	0.08	0.25	0.01
D72 & D73	0.12	0.01	0.52	0.03

The following is a summary of calculated MICRs, HIAs and HICs from each of the permit unit, indicating compliances with Rule 1401:

MICR

	D77,D78/D79, D80		D75, D76		D72, D73		D19, D20/D67,D68	
	Residential	Commercial	Residential	Commercial	Residential	Commercial	Residential	Commercial
EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NAOH	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	2.72E-11	1.25E-11	1.67E-11	7.70E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	5.05E-10	2.33E-10	3.11E-10	1.43E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethyl benzene	5.22E-11	2.41E-11	3.21E-11	1.48E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	2.25E-10	1.04E-10	1.39E-10	6.40E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	2.27E-11	1.05E-11	1.40E-11	6.45E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PAHs	7.33E-09	1.66E-09	4.51E-09	1.02E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



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Xylenes	0.00E+00							
TOTAL	8.16E-09	2.05E-09	5.02E-09	1.26E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PASS							

HIA/HIC

	D77,D78/D79, D80		D75, D76		D72, D73		D19, D20/D67,D68	
	Acute	Chronic	Acute	Chronic	Acute	Chronic	Acute	Chronic
Alimentary	0.00E+00	2.45E-08	0.00E+00	1.50E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bones and teeth	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cardiovascular	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Developmental	4.61E-07	3.76E-04	2.83E-07	6.56E-04	0.00E+00	4.74E-04	0.00E+00	2.95E-04
Endocrine	0.00E+00	2.45E-08	0.00E+00	1.50E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eye	9.87E-02	0.00E+00	9.76E-02	0.00E+00	1.01E-04	0.00E+00	1.02E-04	0.00E+00
Hematopoietic	3.97E-07	6.86E-07	2.44E-07	4.22E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Immune	3.97E-07	0.00E+00	2.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kidney	0.00E+00	3.75E-04	0.00E+00	6.56E-04	0.00E+00	4.74E-04	0.00E+00	2.95E-04
Nervous	6.38E-08	4.28E-05	3.92E-08	4.12E-04	0.00E+00	4.12E-05	0.00E+00	1.24E-04
Reproductive	4.61E-07	0.00E+00	2.83E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Respiratory	9.87E-02	5.50E-04	9.76E-02	1.15E-03	1.01E-04	5.15E-04	1.02E-04	4.19E-04
	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

BACT Evaluation

VOC BACT:

The proposed fountain solution mixture may contain up to 8% of VOC by volume for certain printing jobs. As such, 8% VOC by volume is imposed as a permit condition (B163.1).

The composite vapor pressure for the newer blanket/roller wash may be up to 2 mm Hg, in compliance with BACT.

All the proposed dryers are vented to the existing RTOs, C59 and C69, which are conditioned (A72.1) to achieve a minimum 95% overall control efficiency, in compliance with BACT.

NOx BACT:

Burners used in dryers are low NOx, emitting less than 30 ppm NOx at 3% O2, based on burner manufacturer literature. Therefore, these burners are considered BACT.



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Emission Offset Evaluation

ROG Emissions:

The company is not proposing to increase any ROG emissions facility wide. It will manage its graphic art material usages from all printing lines so to comply with the existing facility ROG emission cap of 10,890 pounds per month. In this project, the three new printing lines (Nos. 14, 15 & 16) replace four printing lines (Nos. 2, 4, 5 & 9). Therefore, external ROG emission offset will not be needed for this project.

Other Criteria Pollutant Emissions:

Accounting for the emission reductions resulting from the removed equipment in this project, the net emission increases for this project are summarized below:

Pollutant	NEW (12.76 MMBTU/hr) lb/hr	REMOVED (-9.152 MMBTU/hr) lb/hr	delta lb/hr	delta lb/dy
NOx	0.474	-1.133	-0.659	-15.82
CO	0.425	-0.305	0.120	2.88
PM=PM10	0.091	-0.065	0.026	0.62
SOx	0.010	-0.007	0.003	0.07

The facility is not a major source of CO and PM10. The following is a summary of annual emissions in tons per year as reported for the last five years:

Year	CO	TSP*
2011	1.345	8.727
2010	1.318	8.698
2009	1.253	8.660
2008	1.215	8.683
2007	0.646	4.352

*Total suspended particulates

Almost all of total suspended particulate emissions are from fugitive emissions created from trimming and cutting of paper products. The PM10 emissions are much less. With the existing permitted equipment, the company has a potential to emit about 5



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pounds of PM10 per day, which is equivalent to less than one ton per year of PM10.

Since the facility is not a major source of CO or PM10, it is not required to offset the increases of these emissions.

Air Quality Modeling Evaluation

Further modeling analysis is not required since the hourly emissions are less than the limits specified in Table A-1 of Rule 1303:

MHC (lb/hr)						
LIMIT				Estimated		
Rating (BTU/hr)	NO _x (lb/hr) Limit	CO (lb/hr) Limit	PM ₁₀ (lb/hr) Limit	NO _x (lb/hr) Calculated	CO (lb/hr) Calculated	PM ₁₀ (lb/hr) Calculated
>2 <5	0.31	17.1	1.9			
>5 <10	0.47	25.9	2.8	0.11 (D76)	0.10 (D76)	0.02 (D76)
				0.18 (D78)	0.16 (D78)	0.04 (D78)
				0.18 (D80)	0.16 (D80)	0.04 (D80)

Rule Evaluation

Rule 212(c)(1): This section requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school.

Los Alamitos Elementary School at 10862 Bloomfield Street is within 1000 feet of the proposed project. In addition, McAuliffe Middle School at 4112 Cerritos Avenue is within a quarter mile of the proposed project.

Therefore, a Rule 212(c)(1) public notice is required.



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Rule 212(c)(2): This section requires a public notice for all new or modified facilities that have on-site emission increases exceeding any of the daily maximums as specified by Rule 212(g).

	Maximum Controlled Emissions (lb/dy)					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
This Project	0	-16	0.62	0.07	2.88	0
MAX Limit	30	40	30	60	220	3
Required Public Notice	No	No	No	No	No	No

The above table summarizes the emission limits and increases. Since the emission increases are not more than the limits, a public notice is not required per this section.

Rule 212(c)(3): The calculated MICRs, HICs and HIAs are less than 1E-6, 1 and 1. Therefore, a Rule 212(c)(3) public notice is not required.

Rule 212(g): This section requires a public notice for all new or modified sources that have equipment emission increases exceeding any of the daily maximums as specified by Rule 212(g).

The following table summarizes the limit and Potential-to-Emit (PTE) emissions from this project:

	Controlled Emissions (lb/dy)					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
This project	0	-16	0.62	0.07	2.88	0
MAX Limit	30	40	30	60	220	3
Required Public Notice	No	No	No	No	No	No

Since the emission increase are less than the Rule limit, a Rule 212(g) public notice is not required.



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- Rule 401: Visible emissions are not expected with the proper operation and maintenance of the equipment.
- Rule 402: Nuisance is not expected with the proper operation and maintenance of the equipment.
- Rule 1130: The printing presses use complying fountain solutions with VOC less than 8% by volume, blanket washes with VOC composite partial pressure less than 10 mmHg, and inks with a VOC content less than 300 g/L. Emissions from printing dryers are vented to two approved air pollution control systems. Permit conditions are imposed to ensure compliance.
- Rule 1171: The presses use complying cleaning solvents. A permit condition requires compliance.
- Rule 1303(a): Please see BACT Evaluation section.
- Rule 1303(b)(1): Please see Air Quality Modeling Evaluation section.
- Rule 1303(b)(2): Please see Emission Offset Evaluation section.
- Rule 1401: Please see Toxic Evaluation section.

REGULATION XX: REGIONAL CLEAN AIR INCENTIVE MARKET (RECLAIM)

RULE 2005(c)(1)(A): Burners used in the ovens of the three new dryers are equipped with a low-NOx natural-gas fired burners. The burners are designed to operate at 30 ppm of NOx or less. Therefore, the ovens are expected to operate in compliance with BACT requirements.

The startup burner used in the C69 regenerative thermal oxidizer is limited to a natural gas usage of 7,690 cubic feet per day to maintain the NOx emissions below one pound per day (Condition C1.1).



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RULE 2005(c)(1)(B), MODELING:

The Screening Analysis limit was taken from the values in Table A-1 of this rule. Further modeling analysis is not required since the hourly NOx emissions are less than the limits specified in the Table:

Rating (BTU/hr)	MHC (lb/hr)					
	LIMIT			Estimated		
	NO _x (lb/hr) <u>Limit</u>	CO (lb/hr) <u>Limit</u>	PM ₁₀ (lb/hr) <u>Limit</u>	NO _x (lb/hr) <u>Calculated</u>	CO (lb/hr) <u>Calculated</u>	PM ₁₀ (lb/hr) <u>Calculated</u>
>2 <5	0.31	17.1	1.9			
>5 <10	0.47	25.9	2.8	0.11 (D76)	0.10 (D76)	0.02 (D76)
				0.18 (D78)	0.16 (D78)	0.04 (D78)
				0.18 (D80)	0.16 (D80)	0.04 (D80)

RULE 2005(c)(2): The company is required to hold sufficient NOx RTCs in its allocation account to offset the annual NOx emissions increase for the first year of operation. The following is a summary of the required NOx RTCs for each drying oven:

Device No.	NOx RTC (lbs/year)
D76	954
D78	1551
D80	1551

Proposed permit conditions (I297) have been added, one for each device, to satisfy these requirements.

40 CFR PART 64: COMPLIANCE ASSURANCE MONITORING

The VOC emissions from the printing lines are vented to air pollution control equipment thermal oxidizer. The uncontrolled VOC emissions to the oxidizer is greater than the major source threshold for VOC of 10 tons per year. As a result, the thermal oxidizer is subject to the Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64. Existing permit conditions (E193) had been added to satisfy the CAM requirements. Such permit conditions were developed using the design criteria and other pertinent requirements identified in 40 CFR



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64- Compliance Assurance Monitoring and Technical Guidance Document and in the August 1998 Revised Draft CAM.

REGULATION XXX: TITLE V

The proposed project is considered as a "de minimis significant permit revision" and is the 1st revision to a renewed Title V permit issued on 7-6-10. Rule 3000(b)(6) defines a "de minimis significant permit revision" as any Title V permit revision where the cumulative emission increases on non-RECLAIM pollutants or hazardous air pollutants (HAP) from each permit revision during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NOx	40
PM10	30
SOx	60
CO	220

The cumulative emission increases resulting from the proposed permit revision are summarized as follows:

REVISION DESCRIPTION	HAP	VOC	NOx*	PM ₁₀	SOx	CO
Current Project	0	0	-16	1	0	3
CUMULATIVE TOTAL =	0	0	0	0	0	0
Maximum Daily Limit =	30	30	40	30	60	220

*RECLAIM pollutant (Trend Offset is in NOx RECLAIM program)

Since NO_x is a RECLAIM pollutant for this facility, an analysis must be made to ensure that the proposed permit revision is not considered a "significant permit revision". Rule 3000(b)(28)(D) defines a "significant permit revision" as any modification at a RECLAIM facility that results in an emission increase of RECLAIM pollutants over the facility's starting Allocation plus the Non-Tradable Allocations. With an increase of zero pounds of NO_x emissions from the proposed permit revision, the proposed permit revision is considered as a "minor permit revision" for RECLAIM pollutants.



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Recommendation

The proposed project is expected to comply with all applicable District rules and regulations. Since the proposed project is considered as a "de minimis significant permit revision," it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V permit will be issued to this facility.

SECTION D

A72. 1 The operator shall maintain this equipment to achieve a minimum overall control efficiency of 95 percent for VOC during the normal operation of the equipment it vents.

[RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1 303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C26, C59, C69]

B59.7 The operator shall not use the following material(s) in this device

Materials containing any toxic air contaminants (TAC) identified in Rule 1401, Table 1, with an effective date of September 10, 2010 or earlier, except ethylene glycol butyl ether (CAS No. 111-76-2), ethylene glycol (CAS No. 107-21-1), and xylenes (CAS No. 1330-20-7).

[RULE 1401, 9-10-2010]

[Devices subject to this condition : D19, D67, D72]

B59.8 The operator shall not use the following material(s) in this device

Materials containing any toxic air contaminants (TAC) identified in Rule 1401, Table 1, with an effective date of September 10, 2010 or earlier, except ethylene glycol butyl ether (CAS No. 111-76-2), ethylene glycol (CAS No. 107-21-1), sodium hydroxide (CAS No. 1310-73-2), and xylenes (CAS No. 1330-20-7).

[RULE 1401, 9-10-2010]

[Devices subject to this condition : D75]

B 163.1 The operator shall not use fountain solution containing the following:

more than 8 percent by volume of volatile organic compounds (VOC) as applied.

[RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1 303(a)(1)-BACT, 12-6-2002]



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[Devices subject to this condition: D6, D8, D14, D16, D19, D37, D38, D39, D51, D53, D58, D60, D65, D66, D67, D72, D74, D75]

B163 .4 The operator shall not use equipment clean-up solvent containing the following:
more than 10 mm Hg VOC composite partial pressure.

[RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1 303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D19, D67, D72, D74, D75]

C1.1 The operator shall limit the natural gas fuel usage to no more than 7690 cubic feet in any one day.

To comply with this condition, the operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage in the natural gas fired startup burner.

The natural gas usage being monitored shall be recorded at the end of each day. A hard copy of the daily natural gas usage log shall be maintained as part of the facility operating records.

[RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1 303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C69]

DI82.4 The operator shall test this equipment in accordance with the following specifications:

A. The test shall be conducted once every five years.

B. The test shall be conducted no later than May 8, 2014 unless otherwise approved in writing by the District.

C. The test shall be conducted to determine the voc emissions using an approved District method to demonstrate compliance with all applicable permit condition(s), rules and regulations.

D. The source test shall be conducted while the oxidizer is operating at a temperature of not less than the minimum operating temperature specified in this permit. If the operating temperature during the source test is greater than the minimum operating temperature specified in this permit, the minimum operating temperature specified in this permit may be increased to reflect the operating temperature during the source test.

E. The operator shall comply with administrative conditions nos. 8, 9, and 10 of section E of this facility permit.

F. The operator shall submit two complete copies of the source test report specified in condition no. 9 of section E of this facility permit to the District Engineering and Compliance Division.

G. The Engineering copy of the report shall be sent to: South Coast Air Quality Management District, Coating, Printing and Aerospace Operations, attn: Air Quality and Compliance Supervisor, 21865 Copley Drive, Diamond Bar, CA 91765.



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D. The Compliance copy of the report shall be sent to: South Coast Air Quality management District, p.o. box 4941, Diamond Bar, CA 91765

[RULE 1130, 10-8-1999; RULE 3004(a) (4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: C26, C59, C69]

D182.5 THE OPERATOR SHALL TEST THIS EQUIPMENT IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

The source tests shall be conducted no later than June 30, 2013.

A testing laboratory certified by the California Air Resources Board in the required test methods for criteria pollutants to be measure, and in compliance with District Rule 304 (no conflict of interest) shall conduct the tests.

Sampling facilities shall comply with the District guidelines for construction of sampling and testing facilities, pursuant to Rule 217.

A source test protocol shall be submitted to the District no later than 30 days from the permit issuance date and shall be approved in writing by the District before the test commences unless otherwise approved in writing by the District.

The test protocol shall include the completed District Forms ST-1 and ST-2 specifying the proposed operating conditions of the equipment during the test, the identity of the testing laboratory, a statement from the testing laboratory certifying it meets the criteria in District Rule 304(k), and a description of the sampling and analytical procedures to be used.

The source tests shall consist of, but may not be limited to, testing at the inlet and the exhaust of the oxidizer for: (1) Volatile organic compound (VOC) in ppmv and lbs/hr, (2) Oxides of nitrogen in ppmv and lbs/hr (oxidizer exhaust only), (3) Carbon monoxide in ppmv and lbs/hr (oxidizer exhaust only), (4) VOC destruction efficiency, (5) VOC collection efficiency, (6) Usage of all VOC-containing materials (coatings, inks, solvents, etc.) during the test, (7) Oxygen content, (8) Moisture content, (9) flow rate, and (10) temperature

The source tests shall be conducted while the oxidizer is operating at a temperature of not less than the minimum operating temperature specified in this permit. If the operating temperature during the source test is greater than the minimum operating temperature specified in this permit, the minimum operating temperature specified in this permit may be increased to reflect the operating temperature during the source test.

The operating temperature in the combustion chamber shall be recorded during the entire testing period and included in the source test report.



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The C59 oxidizer shall be source tested during normal operation when all printing lines served by the C59 oxidizer are in operation and while the C69 oxidizer is not in operation.

The C69 oxidizer shall be source tested during normal operation when all printing lines served by the C69 oxidizer are in operation and while the C59 oxidizer is not in operation.

A written notice of the source tests shall be submitted to the District (addressed to South Coast Air Quality Management District, P.O. Box 4941, Diamond Bar, CA 91765) at least 14 days prior to the source testing date so that an observer from the District may be present.

Two complete copies of the source test report shall be submitted to the District (addressed to South Coast Air Quality Management District, P.O. Box 4941, Diamond Bar, CA 91765) within 45 days after the source testing date. The source test report shall include by may not be limited to, all testing data required by this condition, and results of all tests (including preliminary tests) that are conducted on this equipment for informational purposes.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C59, C69]

D182.6 THE OPERATOR SHALL TEST THIS EQUIPMENT IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

- A. A source test protocol shall be submitted to the District no later than 60 days after the initial start-up of this equipment unless otherwise approved in writing by the District. The test protocol shall be approved in writing by the District before the test commences.
- B. The test protocol shall include the proposed operating conditions of the equipment during the test, the identity of the testing laboratory, a statement from the testing laboratory certifying that it meets the criteria in District Rule 304(k), and a description of the sampling and analytical procedures to be used.
- C. The source tests shall consist of, but may not be limited to, testing the exhaust of the dryer during normal operating conditions for (1) Nitrogen oxides in ppmv and lb/hr, (2) Carbon Monoxide in ppmv and lb/hr, (3) Oxygen content, (4) Moisture content, (5) Flow rate, (6) temperature, (7) Natural gas usage.
- D. NOx and CO Emission determination shall be averaged over a period of at least 15 and no more than 60 consecutive minutes, and at least 15 minutes after unit start-up.
- E. A written notice of the source tests shall be submitted to the District at least 14 days prior to the source testing date so that an observer from the District may be present.
- F. Two complete copies of the source test report shall be submitted to the District within 45 days after source testing date unless otherwise approved in writing by the District. The source test report shall include, but may not be limited to, all testing data required by this condition.
- G. A testing laboratory certified by the California Air Resources Board in the required test methods for the criteria pollutants to be measured, and in compliance with District Rule 304 (no conflict of interest) shall conduct the test.



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H. Sampling facilities shall comply with the District guidelines for construction of sampling and testing facilities, pursuant to Rule 217.

I. The results of all tests (including preliminary tests) that are conducted on this equipment for informational purposes shall be submitted to the District within 45 days after the testing date unless otherwise approved in writing by the District.

[RULE 1147, 9-9-2011]

[Devices subject to this condition : D76]

E133.1 The operator shall maintain an interlock that automatically controls the damper between the afterburner and printing equipment.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D7, D9, D10, D12, D17, D18, D20, D40, D41, D52, D56, D57, D61, D62, D68, D73, D76]

E193 .2 The operator shall upon completion of construction, operate and maintain this equipment according to the following requirements:

The combustion chamber temperature shall be maintained at a minimum of 1,500 degrees Fahrenheit whenever the equipment it serves is in operation.

The operator shall operate and maintain a temperature measuring and recording system to continuously measure and record the combustion chamber temperature pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. Such a system shall have an accuracy within 1 % of the temperature being monitored and shall be inspected, maintained, and calibrated on an annual basis in accordance with the manufacturer’s specifications using an applicable AQMD or EPA approved method.

For the purpose of this condition, a deviation shall be defined as when the combustion chamber temperature of less than 1,500 degrees Fahrenheit occurs during the normal operation of the equipment it serves. The operator shall review the records of the combustion chamber temperature on a daily basis to determine if a deviation occurs or shall install an alarm system to alert the operator when a deviation occurs.

Whenever a deviation occurs, the operator shall inspect this equipment to identify the cause of such a deviation, take immediate corrective actions to maintain the combustion chamber temperature at or above 1,500 degrees Fahrenheit, and keep records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective actions taken.



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All deviations shall be reported to the AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit. The semi-annual monitoring report shall include the total operating time of this equipment and the total accumulated duration of all deviations for each semi-annual reporting period specified in Condition No. 23 in Section K of this permit.

The operator shall submit an application with an Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to the AQMD if an accumulation of deviations exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required QIP shall be submitted to the AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

The operator shall inspect and maintain all components of this equipment on an annual basis in accordance with the manufacturer's specifications.

The operator shall keep adequate records in a format that is acceptable to the AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR Part 64.9 for a minimum of five years.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; 40CFR Part 64, 10-22-1997]

[Devices subject to this condition : C59, C69]

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109

[RULE 109, 5-2-2003]

[Devices subject to this condition: D6, D8, D14, D16, D19, E23, D37, D38, D39, D51, D53, D58, D60, E64, D65, D66, D67, D72, D74, D75]

I297.2 This equipment shall not be operated unless the facility holds 954 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

In lieu of holding RTCs for the entire duration specified above, RTCs held for the purpose of demonstrating compliance with this condition may be transferred as specified below, provided quarterly emissions do not exceed the corresponding quarterly limit listed in the table below. The amount available for transfer shall be as specified in Rule 2005(0(3)). Such amount may be transferred only after the end of the subject quarter. If the first day of operation does not coincide



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with the first day of a calendar quarter, the emission limit for that calendar quarter shall be prorated based on the number of days remaining in the calendar quarter as of the first day of operation and the amount available for transfer after that calendar quarter shall be the prorated emission limit minus the actual emissions reportable for that calendar quarter pursuant to RECLAIM Monitoring, Recordkeeping, and Reporting protocols (MRR) and the emission limit for the portion of the first year of operation falling in the fifth calendar quarter shall be prorated based on the number of days of the first year of operation occurring in that calendar quarter and the amount available for transfer after that calendar quarter shall be the prorated emission limit minus the actual emissions reportable for the portion of the first year of operation occurring in that calendar quarter pursuant to RECLAIM MRR. If the quarterly certified emissions for any quarter (or portion of a quarter occurring within the first year of operation) exceed the corresponding quarterly emission limit or prorated quarterly emission limit, as applicable, the facility may only sell RTCs held pursuant to Rule 2005(f) after the first calendar quarter ending at least one year after operation commences.

Calendar Quarter	Emission Limit (Pounds of NOx RTCs)
July 1 through September 30	239
October 1 through December 31	239
January 1 through March 31	239
April 1 through June 30	239

[RULE 2005, 6-3-2011]

[Devices subject to this condition: D76]

K67. 1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

current Material Safety Data Sheets (MSDS) for all coatings and solvents used.

ink absorption factor as specified by current SCAQMD guidelines.

daily usage of inks, fountain solution including water, roller wash, blanket wash and any other materials containing volatile organic compound (VOC).

density of inks, in pounds/gallon and percentage by weight of lithographic oils in ink. VOC content of fountain solution, wash materials and any other materials, in pounds/gallon, monthly VOC emissions for each coating and solvent used in this equipment.

[RULE 109, 5-2-2003; RULE 1130, 10-8-1999; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D6, D8, D14, D16, D37, D38, D39, D51, D53, D58, D60, D65, D66, D67, D19, D72, D74, D75]



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SECTION H

B59.8 The operator shall not use the following material(s) in this device

Materials containing any toxic air contaminants (TAC) identified in Rule 1401, Table 1, with an effective date of September 10, 2010 or earlier, except ethylene glycol butyl ether (CAS No. 111-76-2), ethylene glycol (CAS No. 107-21-1), sodium hydroxide (CAS No. 1310-73-2), and xylenes (CAS No. 1330-20-7).

[RULE 1401, 9-10-2010]

[Devices subject to this condition : D77, D79]

B 163.1 The operator shall not use fountain solution containing the following:

more than 8 percent by volume of volatile organic compounds (VOC) as applied.

[RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1 303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: D77, D79]

B163 .4 The operator shall not use equipment clean-up solvent containing the following:

more than 10 mm Hg VOC composite partial pressure.

[RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1 303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D77, D79]

D182.6THE OPERATOR SHALL TEST THIS EQUIPMENT IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

A. A source test protocol shall be submitted to the District no later than 60 days after the initial start-up of this equipment unless otherwise approved in writing by the District. The test protocol shall be approved in writing by the District before the test commences.

B. The test protocol shall include the proposed operating conditions of the equipment during the test, the identity of the testing laboratory, a statement from the testing laboratory certifying that it meets the criteria in District Rule 304(k), and a description of the sampling and analytical procedures to be used.

C. The source tests shall consist of, but may not be limited to, testing the exhaust of the dryer during normal operating conditions for (1) Nitrogen oxides in ppmv and lb/hr, (2) Carbon Monoxide in ppmv and lb/hr, (3) Oxygen content, (4) Moisture content, (5) Flow rate, (6) temperature, (7) Natural gas usage.

D. NOx and CO Emission determination shall be averaged over a period of at least 15 and no more than 60 consecutive minutes, and at least 15 minutes after unit start-up.



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- E. A written notice of the source tests shall be submitted to the District at least 14 days prior to the source testing date so that an observer from the District may be present.
- F. Two complete copies of the source test report shall be submitted to the District within 45 days after source testing date unless otherwise approved in writing by the District. The source test report shall include, but may not be limited to, all testing data required by this condition.
- G. A testing laboratory certified by the California Air Resources Board in the required test methods for the criteria pollutants to be measured, and in compliance with District Rule 304 (no conflict of interest) shall conduct the test.
- H. Sampling facilities shall comply with the District guidelines for construction of sampling and testing facilities, pursuant to Rule 217.
- I. The results of all tests (including preliminary tests) that are conducted on this equipment for informational purposes shall be submitted to the District within 45 days after the testing date unless otherwise approved in writing by the District.

[RULE 1147, 9-9-2011]

[Devices subject to this condition : D78, D80]

E133.1 The operator shall maintain an interlock that automatically controls the damper between the afterburner and printing equipment.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D78, D80]

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109

[RULE 109, 5-2-2003]

[Devices subject to this condition: D77, D79]

I297.1 This equipment shall not be operated unless the facility holds 1551 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.



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In lieu of holding RTCs for the entire duration specified above, RTCs held for the purpose of demonstrating compliance with this condition may be transferred as specified below, provided quarterly emissions do not exceed the corresponding quarterly limit listed in the table below. The amount available for transfer shall be as specified in Rule 2005(0(3)). Such amount may be transferred only after the end of the subject quarter. If the first day of operation does not coincide with the first day of a calendar quarter, the emission limit for that calendar quarter shall be prorated based on the number of days remaining in the calendar quarter as of the first day of operation and the amount available for transfer after that calendar quarter shall be the prorated emission limit minus the actual emissions reportable for that calendar quarter pursuant to RECLAIM Monitoring, Recordkeeping, and Reporting protocols (MRR) and the emission limit for the portion of the first year of operation falling in the fifth calendar quarter shall be prorated based on the number of days of the first year of operation occurring in that calendar quarter and the amount available for transfer after that calendar quarter shall be the prorated emission limit minus the actual emissions reportable for the portion of the first year of operation occurring in that calendar quarter pursuant to RECLAIM MRR. If the quarterly certified emissions for any quarter (or portion of a quarter occurring within the first year of operation) exceed the corresponding quarterly emission limit or prorated quarterly emission limit, as applicable, the facility may only sell RTCs held pursuant to Rule 2005(f) after the first calendar quarter ending at least one year after operation commences.

Calendar Quarter	Emission Limit (Pounds of NOx RTCs)
July 1 through September 30	388
October 1 through December 31	388
January 1 through March 31	388
April 1 through June 30	388

[RULE 2005, 6-3-2011]

[Devices subject to this condition: D78, D80]

K67. 1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

current Material Safety Data Sheets (MSDS) for all coatings and solvents used.

ink absorption factor as specified by current SCAQMD guidelines.

daily usage of inks, fountain solution including water, roller wash, blanket wash and any other materials containing volatile organic compound (VOC).

density of inks, in pounds/gallon and percentage by weight of lithographic oils in ink. VOC content of fountain solution, wash materials and any other materials, in pounds/gallon, monthly VOC emissions for each coating and solvent used in this equipment.



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[RULE 109, 5-2-2003; RULE 1130, 10-8-1999; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D77, D79]