



**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
ENGINEERING AND COMPLIANCE DIVISION**

Coating, Printing, Aerospace & Metal Finishing Team

PERMIT APPLICATION EVALUATION

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Processed by	WW
Reviewed by	SMKE
Date	1/30/13

**PERMIT TO OPERATE
INKJETS**

Applicant's Name: *Lithographix, Inc*
Facility ID: 139799
Mailing Address: 12250 Crenshaw Blvd, Hawthorne, Ca 90250
Equipment Address: 12250 Crenshaw Blvd, Hawthorne, Ca 90250

EQUIPMENT DESCRIPTION

A/N 513409

TITLE V PERMIT - DE MINIMIS SIGNIFICANT PERMIT REVISION

A/N 500173 - PO

INKJET PRINTER NO. 7, HP, MODEL TURBOJET, SERIAL NUMBER IL4000U607, SIX-COLOR, 60 INCH WEB WIDTH, WITH A UV DRYER, 88 KW TOTAL.

A/N 500178 - PO

INKJET PRINTER NO. 6, DURST, MODEL 500R, SERIAL NUMBER 13854, SIX-COLOR, 192 INCH WEB WIDTH, WITH A UV DRYER, 28 KW TOTAL.

A/N 500180 - PO

INKJET PRINTER NO. 5, DURST, MODEL 500R, SERIAL NUMBER 13855, SIX-COLOR, 192 INCH WEB WIDTH, WITH A UV DRYER, 28 KW TOTAL.

A/N 500181 - PO

INKJET PRINTER NO. 4, VUTEK, MODEL 5330EC, SERIAL NUMBER 55144, EIGHT-COLOR, 192 INCH WEB WIDTH, WITH AN INFRARED DRYER, 18 KW TOTAL.

A/N 500184 - PO

INKJET PRINTER NO. 3, VUTEK, MODEL 5330EC, SERIAL NUMBER 55140, EIGHT-COLOR, 192 INCH WEB WIDTH, WITH AN INFRARED DRYER, 18 KW TOTAL.



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A/N 500185 - PO

INKJET PRINTER NO. 2, DURST, MODEL 800HS, SERIAL NUMBER 9006809, SIX-COLOR, 96 INCH WEB WIDTH, WITH A UV DRYER, 14 KW TOTAL.

A/N 500186 - PO

INKJET PRINTER NO. 1, DURST, MODEL 800HS, SERIAL NUMBER 9006808, SIX-COLOR, 96 INCH WEB WIDTH, WITH A UV DRYER, 14 KW TOTAL.

A/N 500189 – Cancel – removed from facility

INKJET PRINTER NO. 8, VUTEK, MODEL QS3200, SERIAL NUMBER 630023, EIGHT-COLOR, 120 INCH WEB WIDTH, WITH AN INFRARED DRYER, 16 KW TOTAL.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 442 AND 1171.
4. THE TOTAL QUANTITY OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM THE USE OF ALL VOC-CONTAINING MATERIALS IN EQUIPMENT AND ALL PROCESSES SUBJECT TO RULE 442 AT THIS FACILITY SHALL NOT EXCEED 833 POUNDS IN ANY ONE CALENDAR MONTH. WITHIN 14 CALENDAR DAYS AFTER THE END OF EACH CALENDAR MONTH, THE OPERATOR SHALL TOTAL AND RECORD VOC EMISSIONS FOR THE CALENDAR MONTH FROM ALL EQUIPMENT AND OPERATIONS SUBJECT TO RULE 442 AT THE FACILITY.(FAC CONDITION)
5. CLEAN-UP MATERIALS USED ON THIS EQUIPMENT SHALL NOT CONTAIN ANY VOC.
6. THE TOTAL QUANTITY OF VOC EMISSIONS FROM THIS FACILITY SHALL NOT EXCEED 9,750 POUNDS IN ANY ONE CALENDAR MONTH. (FAC CONDITION)



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7. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC AIR CONTAMINANTS IDENTIFIED IN RULE 1401, TABLE 1 WITH AN EFFECTIVE DATE OF JUNE 5, 2009 OR EARLIER.
8. IN ADDITION TO THE RECORDKEEPING REQUIREMENTS IN RULE 109, THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY VOC EMISSIONS IN POUNDS. THE VOC EMISSIONS FROM THE UV CURABLE INKS AND COATINGS SHALL BE CALCULATED USING THE APPROPRIATE VOC EMISSION FACTOR DETERMINED PURSUANT TO THE APPROPRIATE CURRENT DISTRICT APPROVED TEST METHOD. IN CASE NO LABORATORY TESTED EMISSION FACTOR IS AVAILABLE, THEN AN EMISSION FACTOR OF 0.02 POUND OF VOC PER POUND OF INK/COATING APPLIED SHALL BE USED.
9. MATERIAL SAFETY DATA SHEETS FOR ALL MATERIALS USED AT THIS FACILITY AND SUBJECT TO DISTRICT RULES SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. (FAC CONDITION)
10. PERMIT SHIELD: NOT WITHSTANDING THE OTHER REQUIREMENTS AND CONDITIONS IN THIS PERMIT, THIS EQUIPMENT IS NOT SUBJECT TO THE FOLLOWING RULE REQUIREMENTS:
 - A. RULE 1128 - VERSION DATED 3/8/96
 - B. COMPLIANCE WITH THE CONDITIONS OF THIS TITLE V PERMIT SHALL BE DEEMED IN COMPLIANCE WITH ANY REGULATORY REQUIREMENTS APPLICABLE AS OF THE DATE OF PERMIT ISSUANCE TO THIS EQUIPMENT, PROVIDED THAT SUCH REGULATORY REQUIREMENTS ARE INCLUDED AND SPECIFICALLY IDENTIFIED IN THIS PERMIT. NOTHING IN THIS PERMIT OR IN ANY PERMIT SHIELD CAN ALTER OR AFFECT: (a) UNDER SECTION 303 OF THE FEDERAL CLEAN AIR ACT, THE PROVISIONS FOR EMERGENCY ORDERS; (b) THE LIABILITY OF THE OPERATOR FOR ANY VIOLATION OF APPLICABLE REQUIREMENTS PRIOR TO OR AT THE TIME OF PERMIT ISSUANCE; (c) THE APPLICABLE REQUIREMENTS OF THE ACID RAIN PROGRAM; (d) THE ABILITY OF EPA TO OBTAIN INFORMATION FROM THE OPERATOR PURSUANT TO SECTION 114 OF THE FEDERAL CLEAN AIR ACT; (e) THE APPLICABILITY OF STATE OR LOCAL REQUIREMENTS THAT ARE NOT "APPLICABLE REQUIREMENTS", AS DEFINED IN RULE 3000, AT THE TIME OF PERMIT ISSUANCE BUT WHICH DO NOT APPLY TO THE FACILITY, SUCH AS TOXICS REQUIREMENTS UNIQUE TO THE STATE; OR (f) THE APPLICABILITY OF REGULATORY REQUIREMENTS WITH COMPLIANCE



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DATES AFTER THE PERMIT ISSUANCE DATE. THIS PERMIT SHIELD SHALL NOT APPLY TO ANY OPERATIONAL CHANGE MADE PURSUANT TO THE OPERATIONAL FLEXIBILITY PROVISIONS OF DISTRICT RULE 3005.

BACKGROUND

Lithographix submitted eight Class III applications on 6/30/09 for Permit to Operate UV/IR inkjet printers. The printers were previously exempt under Rule 219(h)(1)(A). The company wants to increase the inkjets' emissions and is subject to Rule 442 under the existing 833 pounds per month VOC emissions limit. The facility will also continue to operate under the existing facility-wide VOC emission limit of 9,750 lb/month. There will be no combustion contaminants since the dryers are electric (IR and UV). Therefore, this project will not result in any emission increase from the facility. Lithographix is a commercial lithographic printing shop. They produce mostly reports, inserts, magazines, brochures, calendars, and other printed articles.

Lithographix is a Title V facility. A Title V permit revision application no. 513409 was also submitted with these applications. The Title V permit was renewed on May 11, 2010 and this is the second revision to the renewal. The proposed project is considered as a "de minimis significant permit revision" to the renewed Title V permit, as described in the Regulation XXX evaluation. Also included in this revision is the administrative permit revision to convert a P/C to P/O for litho press M10 under A/N 513562.

The District compliance data base showed NOV P57957 dated 5/31/11 for failure to submit forms 500-ACC and SAM reports. The company is now in compliance. There are no complaints, other NOV's or N/Cs on file in the last two years.

PROCESS DESCRIPTION

The facility uses lithographic and inkjet printing process on paper substrate. Inkjet printing offers the advantages of excellent accuracy and surface finishes. However, the limitations include slow build speeds, few material options, and fragile parts. As a result, the most common application of inkjet printing is prototypes used for form and fit testing.

EMISSION CALCULATIONS

The facility will operate under an emission cap of 9,750 lbs/month of VOC and the inkjets will have a combined VOC emissions limit of 833 lbs/month from the inks since subject to Rule 442. The clean-up solvent used (subject to Rule 1171) contains no VOC so the 833 lb/mo is effectively the equipment cap. This equipment will not result in any facility emission increase.

Operating schedule: 24 hrs/day, 6 days/wk, 52 wks/yr (max)



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AEIS VOC emissions:

A/N	Inks	Density		Usage	R1 = R2		
		lb/gal	VOC lb/gal		gal	lb/day	lb/hr
500173	HP Scitex UV Inks	8.33	0.793*	10	7.9	0.3	206.2
500178	Durst RHO UV Inks	8.33	0.167*	20	3.3	0.1	86.8
500180	Durst RHO UV Inks	8.33	0.167*	20	3.3	0.1	86.8
500181	UltraVu 5 Inkjet Ink	8.09	7.4	3.75	27.8	1.2	721.5
500184	UltraVu 5 Inkjet Ink	8.09	7.4	3.75	27.8	1.2	721.5
500185	Durst RHO UV Inks	9.18	0.184*	20	3.7	0.2	95.7
500186	Durst RHO UV Inks	9.18	0.184*	20	3.7	0.2	95.7

*UV curable inks – VOC emissions are 2% by wt. for 100% solids inks per 7/17/2008 policy memo from Fred Lettice

RULE EVALUATION

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

Since there are no schools within 1,000 feet of the facility, public notice is not required.

RULE 212(c)(2) *This section requires a public notice for any new and modified equipment or facility which have an on-site emission increase exceeding any of the daily maximums specified in subdivision (g).*

There is no emission increase from the facility. The facility will maintain the same facility cap of 9,750 lb/month of VOC and the inkjets will operate under this cap. Public notice will not be required under this section.

RULE 212(c)(3) *This section requires a public notice for all new or modified permit units with increases in emissions of toxic air contaminants listed in Table I of Rule 1401 resulted in MICR greater than $1E^{-6}$ per permit unit or greater than $10E^{-6}$ per facility.*

There will be no emissions of TAC from this equipment. Therefore, public notice is not required.



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

As shown in the following table, the emissions increase from the equipment will not exceed the daily maximum limits specified by Rule 212(g) since the inkjet printers are limited by the 833 lb/mo VOC cap for Rule 442 compliance. Therefore, public notice will not be required by this section.

	<u>ROG</u>	<u>NO_x</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>CO</u>	<u>Pb</u>
Per Equipment/group	28	0	0	0	0	0
MAX MDC Limit (lb/day)	30	40	30	60	220	3
Required Public Notice	No	No	No	No	No	No

RULE 401 Visible Emissions

Visible emissions are not expected with proper maintenance and operation of this equipment. The system shows no visible emissions complaints in the last two years.

RULE 402 Nuisance

Operation of this equipment is not expected to create complaints or nuisance with proper maintenance and operation. The system shows no nuisance complaints in the last two years.

RULE 442 Usage of Solvents

This rule pertains to solvent usage requirements. Equipment is exempt from Rule 442 requirements if other rules, like Regulation XI, apply. However, the inks used in the inkjets are not subject to VOC limits in any Regulation XI rule, therefore, Rule 442 applies. Rule 442 limits VOC emissions from inks used in this equipment to 833 pounds per month. The VOC from the ink used in the inkjets will be maintained under the facility limit of 833 pounds per month of VOC emissions from all equipment and processes subject to Rule 442, therefore compliance with Rule 442 is expected.

RULE 1171 Solvent Cleaning Operations

Cleanup is subject to this rule. Cleanup material used is acetone, which is not a VOC. Compliance is expected.



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REG XIII

Rule 1303(a), Best Available Control Technology (BACT)

The inkjets are limited to 833 pounds of VOC per month. The use of UV curable inks is BACT for the UV printers. Add-on control is not required at this level of emissions for the other two inkjet printers.

Rule 1303 (b)(1), Modeling

Modeling is not required for VOC.

Rule 1304 (c)(1), Offsets Exemption

Offsets are not required since there is no emission increase from the facility. The company will continue to operate under the existing facility VOC cap of 9,750 lbs/month of VOC.

RULE 1401

New Source Review of Toxic air Contaminants

There will be no emissions of TAC from this equipment. A permit condition will be added to restrict usage of TAC to ensure compliance.

REG XXX

This facility is not in the RECLAIM program. The proposed project is considered as a “de minimis significant permit revision” to the Title V permit for this facility.

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 these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

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

To determine if a project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed



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project is the 2nd permit revision to the Title V renewal permit issued to this facility on May 11, 2010. Also part of this revision, the permit for the replaced press under A/N 431032 (P/O F78612) will be removed from Section D as this equipment has been removed and is no longer operating at this facility. In addition, another press (Mitsubishi GCX) under A/N 431033 (P/O F78613) has been removed so will be removed from Section D. The permit is already inactive. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

<i>Revisions</i>	<i>HAP</i>	<i>HAP</i>	<i>VOC</i>	<i>NOx</i>	<i>PM₁₀</i>	<i>SOx</i>	<i>CO</i>
1 st	Replacement of litho press under A/N 431032 with new press under A/N 513552 & removal of litho press under A/N 431028.	0	0	0	0	0	0
2 nd	Add 7 inkjets (A/Ns 500173, 500178, 500180, 500181, 500184, 500185 & 500186) & removal of litho web press under A/N 431033 (P/O F78613)	0	0	0	0	0	0
	Administrative – P/C to P/O for litho press M10 (A/N 531562) & remove replaced M6 press under A/N 431032 (P/O F78609)						
Cumulative Total since Renewal (5-14-09)		0	0	0	0	0	0
Maximum Daily Limit		30	30	40	30	60	220

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as an “administrative permit revision”, it is exempt from the public participation requirements under Rule 3006 (b). However, since this will be included with the de minimis significant permit revision described above, a proposed permit incorporating both permit revisions will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). Upon completion of the EPA review period, a revised Section D of the facility permit will be issued with Permits to Operate for this press and the 7 inkjets. In addition the replaced press M6 and Mitsubishi GCX web press will be removed.

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 and the administrative revision described above will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not raise any objections within the review period, a revised Title V permit will be issued to this facility with permits to operate for the 7 inkjets and the M10 press under A/N 513562, removal of the replaced press M6 under A/N 431032, and removal of the web press GCX under A/N 431033 from Section D.