



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

Pages 8	Page 1
A/N see below	Date 3-17-2010
Processed by RNL	Checked by

Minor Title V Permit Revision
Section H (PC)
Heatset Lithographic Dryers
Burner Upgrade

Legal Owner
or Operator:

VERTIS, INC.
250 W PRATT ST, 18TH FLOOR
BALTIMORE, MD 21201

ID 37881

Equipment

Location: 3200 POMONA BLVD, POMONA, CA 91768-3232

Equipment Description:

A/N 507126

Minor Title V Permit Revision (non RECLAIM)

SECTION H

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1: PRINTING, DRYING AND CONTROL SYSTEMS					
PRINTING PRESS, LITHOGRAPHIC, NO. 906, HARRIS, HEATSET A/N: 281429 <u>507128</u>	D1			VOC: (9) [RULE 1130, 10-8-1999, RULE 1171, 11-7-2003; RULE 1171, 5-1-2009)	B27.1, H23.2, K67.2
OVEN, DRYING, NO. 1, NATURAL GAS, 4.4 3.4 MMBTU/HR, TWO MAXON M-PAKT ULTRA EB-3 BURNERS, EACH 1.7 MMBTU/HR A/N: 281429 <u>507128</u>	D2	C3 C23		CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV (5) [RULE 1147, 12-5-2008] PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	D182.3, H23.6
PRINTING PRESS, LITHOGRAPHIC, HARRIS N-954-3, HEATSET A/N: 281430 <u>507129</u>	D4			VOC: (9) [RULE 1130, 10-8-1999, RULE 1171, 11-7-2003; RULE 1171, 5-1-2009)	B27.1, H23.2, K67.2
OVEN, DRYING, NO. 2, NATURAL GAS, 8.726 3.4 MMBTU/HR, TWO MAXON M-PAKT ULTRA EB-3 BURNERS, EACH 1.7 MMBTU/HR A/N: 281430 <u>507129</u>	D5	C3 C23		CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV (5) [RULE 1147, 12-5-2008] PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	D182.3, H23.6



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

Pages 8	Page 2
A/N see below	Date 3-17-2010
Processed by RNL	Checked by

PRINTING PRESS, LITHOGRAPHIC, NO. 701, GOSS, HEATSET A/N: 483695 507127	D6			VOC: (9) [RULE 1130, 10-8-1999, RULE 1171, 11-7-2003; RULE 1171, 5-1-2009)	B27.1, H23.2, K67.2
OVEN, DRYING, NO. 3, NATURAL GAS, 8.726 3.4 MMBTU/HR, TWO MAXON M-PAKT ULTRA EB-3 BURNERS, EACH 1.7 MMBTU/HR A/N: 483695 507127	D7	C3 C23		CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV (5) [RULE 1147, 12-5-2008] PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	D182.3, H23.6
PRINTING PRESS, LITHOGRAPHIC, HARRIS N-954-5, HEATSET A/N: 317535 507131	D15			VOC: (9) [RULE 1130, 10-8-1999, RULE 1171, 11-7-2003; RULE 1171, 5-1-2009)	B27.1, H23.2, K67.2
OVEN, DRYING, NO. 4, NATURAL GAS, 6.16 3.4 MMBTU/HR, TWO MAXON M-PAKT ULTRA EB-3 BURNERS, EACH 1.7 MMBTU/HR A/N: 317535 507131	D16	C3 C23		CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV (5) [RULE 1147, 12-5-2008] PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	D182.3, H23.6

History

The above pending applications were submitted as Class I to upgrade natural gas burners used in dryers to low-NO_x, emitting less than 30 ppmv at 3% O₂, in compliance with Rule 1147. The replaced burners will also be rated smaller in MMBTU/hr as compared to the existing burners. Emission reductions of all criteria pollutants and toxics are expected from this project. Therefore, this project is considered a Minor Title V permit revision.

A review of District compliance records indicates that there are no Citizen complaints, Notices to Comply, or Notices of Violation issued to this facility during the last two years. The facility is currently operating in compliance with the permit conditions, and applicable rules and regulations.



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

Pages 8	Page 3
A/N see below	Date 3-17-2010
Processed by RNL	Checked by

Emission Calculations

The following table summarizes the proposed changes in MMBTU/hr rating of various burners:

Device Nos.	Existing A/Ns	Current MMBTU/hr	Proposed MMBTU/hr	Pending A/Ns
D2	281129	4.4	3.4	507128
D5	281130	8.726	3.4	507129
D7	483695	8.726	3.4	507127
D16	317535	6.16	3.4	507131

In addition, the proposed burners are guaranteed by MAXON to emit less than 15 ppmv NOx at 3% O2, in compliance with Rule 1147 limit of 30 ppmv NOx at 3% O2. Therefore, emission reductions of all criteria pollutants and toxic air contaminants are expected from the proposed burner upgrade.

The following equation is used to compute the hourly emissions:

Emissions of ith compound from the combustion of natural gas (lb/hr) =

$$\frac{\text{Max. Heat Input Rating} (10^6 \frac{\text{BTU}}{\text{hr}}) \cdot \text{Emission Factor of } i^{\text{th}} \text{ compound} (\frac{\text{lb}}{10^6 \text{ft}^3})}{\text{Gross Heating Value} (\frac{\text{BTU}}{\text{ft}^3})}$$

Criteria pollutant emission factors are taken from AP-42, section 1.4, revised 10/96, and toxic air contaminant emission factors are AB2588 combustion emission factors published by Ventura County APCD on 8-24-95, except for NOx factor, which is based on the Rule 1147 limit of 30 ppmv at 3% O2.

Please see the attached Excel worksheets for detailed calculations. The following table summarizes the calculated results:

EMISSION SUMMARY FOR NSR ENTRIES

30-day Average Emissions (lb/dy)

A/Ns	Device Nos.	ROG	NOx	SOx	CO	PM10
507128	D2	0.54	3.03	0.06	2.72	0.58
507129	D5	0.54	3.03	0.06	2.72	0.58
507127	D7	0.54	3.03	0.06	2.72	0.58



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

Pages	8	Page	4
A/N	see below	Date	3-17-2010
Processed by	RNL	Checked by	

A/Ns	Device Nos.	ROG	NO _x	SO _x	CO	PM ₁₀
507131	D16	0.54	3.03	0.06	2.72	0.58

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.

Since this project will result in emission decreases, a public notice will not be required.

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).

	Controlled Emissions (lb/dy)					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
Increase from Facility	0	0	0	0	0	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 emission increases are less than the limits, a public notice will not be required.

Rule 212(c)(3): Since this project will result in emission decreases of TACs, a public notice will not be required.

Rule 212(g): This section requires a public notice for all new or modified sources that have 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 the project:



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

Pages	8	Page	5
A/N	see below	Date	3-17-2010
Processed by	RNL	Checked by	

	Controlled Emissions (lb/dy)					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
Increase from Project	0	0	0	0	0	0
MAX Limit	30	40	30	60	220	3
Required Public Notice	No	No	No	No	No	No

Thus, this section will not trigger a public notice requirement.

- 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 1147: The proposed installation of low-NO_x burners that have been guaranteed to emit less than 15 ppmv NO_x at 3% O₂ in compliance with Rule 1147 requirements.
- Rule 1401: Since this project will result in emission decreases of TACs, Rule 1401 compliance is expected.
- Reg XIII: The proposed project will not result in any emission increases of criteria pollutants. Therefore, compliance with this regulation is expected.
- Reg XXX: The proposed project is considered as a Minor Title V Permit Revision pursuant to Rule 3000(b)(12) (A)(vi) since this project does not result in any increases in criteria pollutant emissions that are subject to Regulation XIII - New Source Review or a hazardous air pollutant (HAP).



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

Pages 8	Page 6
A/N see below	Date 3-17-2010
Processed by RNL	Checked by

Recommendation

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "minor 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 with the following proposed conditions:

B27.1

The operator shall not use materials containing any compounds identified in the SCAQMD Rule 1401, as amended 07-dec-1990. [D1, D4, D6, D15]

H23.2

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

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109

[D1, D4, D6, D15]

H23.6

This equipment is subject to the applicable requirement of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
NOX	District Rule	1147

[D2, D5, D7, D16]

K67.2

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

Usage of inks, fountain solution, roller wash, blanket wash and any other materials containing VOC, in gallons or pounds per day of each material.

Density of inks, in pounds per gallon and percentage by weight of lithographic oils in ink.

Ink absorption factor as specified by current AQMD Guidelines.

Emissions in pounds of VOC per day.

MSDS shall be kept current for all materials used.

[D1, D4, D6, D15]



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

Pages 8	Page 7
A/N see below	Date 3-17-2010
Processed by RNL	Checked by

D182.3

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

- A. The source test shall be conducted no later than 180 days after the initial start-up of this equipment unless otherwise approved in writing by the District.
- B. 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.
- C. 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.
- D. The source tests shall consist of, but may not be limited to, testing of the dryer NO_x and CO emissions, referenced at 3 percent volume stack gas oxygen on a dry basis, during as-found operating conditions of each dryer.
- E. NO_x 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.
- F. 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.
- G. 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.
- H. 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.
- I. Sampling facilities shall comply with the District guidelines for construction of sampling and testing facilities, pursuant to Rule 217.
- J. The results of all tests (including preliminary tests) that are conducted on this equipment for informational purposes shall be



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE OFFICE

APPLICATION PROCESSING AND CALCULATIONS

Pages 8	Page 8
A/N see below	Date 3-17-2010
Processed by RNL	Checked by

submitted to the District within 45 days after the testing date
unless otherwise approved in writing by the District.
[D2, D5, D7, D16]