

Penn Industries, Inc.

Equipment Address:  
12630 Hiddencreek Way  
Cerritos, CA 90703

Mailing Address:  
16221 Arthur St.  
Cerritos, CA 90703

ID: 062851

**EQUIPMENT DESCRIPTION**

A/N 495784

PRINTING PRESS, LITHOGRAPHIC, SANDEN MACHINE, WEB-FED, OFFSET, MODEL NO. QUANTUM 1500XP, SERIAL NO. 1063, 8-COLOR, 27" WEB WIDTH, WITH TEN UV LAMPS, 5200 WATTS TOTAL AND A 150 HP DRIVE.

A/N xxxxxxx

TITLE V PERMIT REVISION APPLICATION

**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.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THE TOTAL QUANTITY OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS DISCHARGED TO THE ATMOSPHERE FROM THIS EQUIPMENT SHALL NOT EXCEED 900 POUNDS IN ANY CALENDAR MONTH.  
[RULE 212]
4. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC AIR CONTAMINANTS IDENTIFIED IN RULE 1401, TABLE 1, EXCEPT ETHYLENE GLYCOL, WITH AN EFFECTIVE DATE OF MARCH 7, 2008 OR EARLIER.  
[RULE 1401]
5. FOUNTAIN SOLUTIONS USED IN THIS EQUIPMENT SHALL BE 8% VOC BY VOLUME OR LESS, AS APPLIED, INCLUDING WATER AND EXEMPT COMPOUNDS.  
[RULE 1303(a)(1)-BACT]

**APPLICATION PROCESSING AND CALCULATION**

6. TO ENSURE COMPLIANCE WITH THE EMISSION LIMIT OF THIS PERMIT, THE OPERATOR SHALL:
- A. IN ADDITION TO THE RECORDKEEPING REQUIREMENTS OF RULE 109, KEEP ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY THE DAILY AND MONTHLY VOC EMISSIONS IN POUNDS AND THE VOC CONTENT OF EACH MATERIAL AS APPLIED (INCLUDING WATER AND EXEMPT COMPOUNDS).
- B. WITHIN 14 CALENDAR DAYS AFTER THE END OF EACH MONTH, TOTAL AND RECORD VOC EMISSIONS FOR THE MONTH FROM THIS EQUIPMENT. THE RECORDS SHALL INCLUDE ANY PROCEDURES USED TO ACCOUNT FOR CONTROL DEVICE EFFICIENCIES AND/OR WASTE DISPOSAL. IT SHALL BE SIGNED AND CERTIFIED FOR ACCURACY BY THE HIGHEST RANKING INDIVIDUAL RESPONSIBLE FOR COMPLIANCE WITH DISTRICT RULES.
- C. MAINTAIN A SINGLE LIST WHICH INCLUDES ONLY THE NAME AND ADDRESS OF EACH PERSON FROM WHOM THE FACILITY ACQUIRED VOC-CONTAINING MATERIAL REGULATED BY THE DISTRICT THAT WAS USED OR STORED AT THE FACILITY DURING THE PRECEDING 12 MONTHS.
- D. RETAIN ALL PURCHASE INVOICES FOR ALL VOC-CONTAINING MATERIAL USED OR STORED AT THE FACILITY AND ALL WASTE MANIFESTS FOR ALL WASTE VOC-CONTAINING MATERIAL REMOVED FROM THE FACILITY FOR FIVE YEARS.
- ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT, RETAINED AT THE FACILITY FOR FIVE YEARS AND MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.  
[RULE 109, 1303(b)(2)-OFFSET]

**Emissions And Requirements:**

7. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
- VOC: RULE 109  
VOC RULE 1130, SEE APPENDIX B FOR EMISSION LIMITS  
VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS

**BACKGROUND**

Penn Industries submitted application no. 495784 for a Permit to Construct a new lithographic UV printing press. Penn Industries is a large-sized commercial lithographic offset printing facility that operates seven printing presses and one regenerative thermal oxidizer under a facility-wide VOC emission cap of 16,740 lb/mon. They will operate the new press under this cap in addition to an equipment-specific VOC emission limit of 900 lb/month.

No citizen nuisance complaints have been filed on this facility. A Notice of Violation was issued to the facility on September 30, 2008 for failure to submit annual compliance certification for the period from January 1, 2007 to December 31, 2007 by the March 1, 2008

**APPLICATION PROCESSING AND CALCULATION**

deadline. The facility has since submitted the annual compliance certification and is currently operating in compliance with applicable rules and regulations.

Penn Industries is a Title V facility. A Title V renewal permit was issued to this facility on June 18, 2006. Penn Industries has proposed to revise their Title V renewal permit, under application no. xxxxxx by adding a new lithographic printing press. This permit revision is considered as a “de minimis significant permit revision” to the Title V permit, as described in the Regulation XXX evaluation.

**PROCESS DESCRIPTION**

Penn Industries is a large-sized commercial lithographic offset printing facility. They primarily print mailings, brochures, annual reports and advertisements. They operate five heat set lithographic printing presses, two infrared lithographic printing presses and a regenerative thermal oxidizer. They operate under a facility VOC emission cap of 16,740 lb/month. They are currently operating well below this limit by controlling emissions with the regenerative thermal oxidizer. Penn Industries, Inc. operates up to 24 hr/day, 7 day/wk and 52 wk/yr.

**EMISSION ESTIMATES**

Penn Industries will use a small variety of materials in the new press. All materials are compliant with Rules 1130 and 1171. The VOC emissions from the use of all materials in the press will not exceed 30 lb/day. The materials are tabulated as follows:

<b>Material</b>	<b>Density (lb/gal)</b>	<b>VOC Content (lb/gal)</b>	<b>Rule Limit (lb/gal)</b>	<b>Max Usage (gal/day)</b>	<b>Max Emissions (lb/day)</b>
UV black ink	9.82	0.003	2.5 (Rule 1130)	12	0.036
Liberty Pro yellow ink	8.46	0.035	2.5 (Rule 1130)	12	0.42
H-8P Fountain Concentrate	8.93	0.017*	0.83 (Rule 1130)	31.4	0.5
E-Cure UV 3.0	7.34	2.94	5 (Rule 1171)	2	5.88
<b>Total</b>					<b>6.8</b>

\*The as-applied VOC content of the fountain concentrate plus water is 0.017 lb/gal [(1.4 gal/day fountain concentrate)(0.38 lb/gal)/31.4 gals/day]. The as-applied VOC volume percent of the fountain solution is 0.23% (0.017 lb/gal/7.36 lb/gal).

Daily VOC emissions = 30 lb/day

Hourly VOC emissions = 30 ÷ 24 hr/day = 1.25 lb/hr

**RISK ASSESSMENT**

The materials that will be used in the new press will contain a single toxic air contaminant,

**APPLICATION PROCESSING AND CALCULATION**

ethylene glycol, found in the fountain solution concentrate. Expected emissions of this TAC are 3.8 lb/day (0.3 x 9.18 lb/gal x 1.4 gal/day) and 1,387 lb/yr (3.8 lb/day x 365 day/yr). Expected emissions are well below Tier 1 Screening Emission Levels at the most conservative receptor distance of 25 meters, and it can be concluded that there will not be an acute or chronic hazard index risk from operating the press. The following tabulates TAC emissions from the press.

<b>TAC</b>	<b>Expected daily emissions (lb/day)</b>	<b>Expected annual emissions (lb/yr)</b>	<b>Screening Emission Level (lb/yr)</b>
Ethylene glycol	3.8	1,387	13,200

**RULE ANALYSIS**

RULE 212 (c)(1): This section requires a public notice for all new or modified permit units that emit air contaminants located within 1,000 feet from the outer boundary of a school. The closest school located to this facility is 2.7 miles away, Nazarene Christian School of Norwalk.

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). There will not be an emission increase with the proposed project, the press will operate under the existing facility VOC emission cap.

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 resulting in a cancer risk equal or greater than one in a million. There will not be a cancer risk.

RULE 212(g): This section requires a public notice for all new or modified sources that result in emission increases exceeding any of the daily maximums as specified by Rule 212(g). VOC emissions are limited to 900 lbs/month.

	<b>Maximum Daily Emissions</b>					
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>CO</b>	<b>Pb</b>
Emission increase	0	0	0	0	0	0
MAX Limit (lb/day)	<b>30</b>	<b>40</b>	<b>30</b>	<b>60</b>	<b>220</b>	<b>3</b>
Compliance Status	Yes	Yes	Yes	Yes	Yes	Yes

RULES 401 & 402: AQMD database has no records of visible emissions or nuisance complaints against this facility. Compliance with these requirements is expected with the proper operation of the equipment.

RULE 1130: Penn Industries will operate the new press in compliance with this rule. VOC compliant inks, coatings and fountain solution will be used. The VOC content of the UV inks range from 0.003 to 0.035 lb/gal, below the 2.5 lb/gal limit.

RULE 1171: The 1/1/2009 effective date for the use of low-VOC cleanup solvents for UV inks was extended indefinitely per the 2/6/2009 Board Meeting, Agenda No. 30. Consequently, the current VOC limit for the cleanup solvents reverts back to the pre-1/1/2009 limit of 5.0 lb/gal. Penn Industries uses a cleanup solvent that has a VOC content of 2.94 lb/gal. Compliance is achieved.

RULE 1303:

(a): Penn Industries will operate the new press meeting the following BACT requirements: (1) the volume percent of VOC of their fountain solution is 2%, below the 8% limit, (2) UV-inks will be used and (3) the press will be operated in compliance with Rules 1130 and 1171. Compliance with BACT is achieved.

(b)(1): Modeling is not required for VOC emissions, the only criteria pollutant from this project.

(b)(2): Emission offsets are not required since there is not an emission increase. VOC emissions from the new press will be bubbled into the existing facility cap.

(b)(4): The facility is expected to be in full compliance with all applicable rules and regulations of the District.

RULE 1401: Compliance is expected, please see **RISK ASSESSMENT** section above.

### **REGULATION 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 of non-RECLAIM pollutants or hazardous air pollutants (HAPs) from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

**APPLICATION PROCESSING AND CALCULATION**

<b>Air Contaminant</b>	<b>Daily Maximum (lbs/day)</b>
HAP	30
VOC	30
NO <sub>x</sub>	40
PM <sub>10</sub>	30
SO <sub>x</sub>	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 project is the 4<sup>th</sup> permit revision to the Title V renewal permit issued to this facility on June 18, 2006. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

<b>Revision</b>	<b>HAP</b>	<b>VOC</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>SO<sub>x</sub></b>	<b>CO</b>
4 <sup>th</sup> Permit Revision; add lithographic printing press	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0
Maximum Daily	30	30	40	30	60	220

Since the cumulative emission increases resulting from all permit revisions are not greater than any of the emission threshold levels, this proposed project is considered as a “de minimis significant permit revision”.

**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.