

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION	Page 1	Page 4
	A/N(s) 550631,	Date 5/21/13
	Processed by JPV	Reviewed by

APPLICANT'S NAME: MERCURY PLASTICS INC.

MAILING ADDRESS: 14849 SALT LAKE AVENUE
INDUSTRY, CA 91746

EQUIPMENT LOCATION: SAME AS ABOVE

COMPANY ID. NO.: 58563

EQUIPMENT DESCRIPTION:

Application no. 550631 (PC/PO)

FLEXOGRAPHIC PRINTING PRESS, UTECO, MODEL NO. IL 612, SIX COLOR, 54-INCH WEB WIDTH, WITH ONE 10-HP. PRESS DRIVE, AIR DRY.

Application no. 551368 (Title V Permit Revision)

TITLE V PERMIT REVISION, DE MINIMIS SIGNIFICANT.

BACKGROUND:

This company manufactures plastic bags from pellets which the bags are used for frozen foods, fertilizers, and trash bags. This application was submitted as a Class I (PC-PO) application on 4/30/13. The facility requested this application be processed under the XPP program, but did not file with the additional fee. As a result, an additional 50% of the permitting fee will be billed upon approval. Application no. 551368 was submitted on 5/14/13 for a Title V permit revision.

This printing press will be included under an existing facility-wide VOC emission limit of 4463 lbs in any one calendar month. In addition, the operation of this equipment will be limited to 900 lbs of VOC per month so they are not required to distribute a public notice under Rule 212(g).

A/N	Description	Action
550631	Flexographic printing press	P/C-P/O
551368	Title V permit revision	Approve Plan

This facility was issued a notice to comply, NC #E20883, which was issued on 4/2/13, to provide VOC usage records for 2012, daily gas usage records for ovens, and records of April 2013 start-up temperatures for the thermal oxidizer. Compliance was achieved on 4/24/13 and the facility was in compliance with all their permit conditions and applicable rules. No other NC's or notices of violation have been issued to this facility in the past two years. No complaints have been issued against this facility in the past two years.

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This facility is in the Title V program. This is the first revision since the second Title V renewal facility permit was issued on May 6, 2012. This is a de minimis significant revision to add a new air dry flexographic printing press.

PROCESS DESCRIPTION:

The plastic bags are manufactured onsite, and then cooled prior to printing in the flexographic press. Once printed, the web of plastic is perforated to form tear-off serrations. The web of bags is then wound up to rolls. This flexographic printing press is vented to atmosphere.

The maximum operating hours of the facility will be 24 hours/day, 7 days/wk and 52 weeks/year and the average operating time is 20 hrs/day, 6 days/wk and 52 wks/yr.

EMISSION CALCULATIONS:

Maximum Emissions:

Maximum VOC emissions to be based on maximum equipment VOC limit of 900 lb/mo.

$R1_{max}=R2_{max}$, VOC emissions are uncontrolled
900 lbs/mo → 30 lbs/day @ 30 days/mo
30 lbs/day → 1.25 lbs/hr @ 24 hrs/day
→ 10,800 lbs/yr @ 52 wks/yr

Average Emissions:

The average emissions are conservatively based on maximum material usage provided by the applicant.

Avg. ink usage = 30 lbs/day @ 1 lb VOC/gal
Avg. extender usage = 0.25 lbs/day @ 1.68 lb VOC/gal
Avg. operating hrs = 16 hrs/day

$$\begin{aligned}
\text{Avg VOC emissions } R1_{max}=R2_{max} &= \text{VOC}_{\text{ink}} + \text{VOC}_{\text{extender}} \\
&= \left[30 \frac{\text{lbs ink}}{\text{day}} \cdot \frac{1.0 \text{ lb VOC}}{100 \text{ lbs mat'l}} \right] + \left[\frac{0.25 \text{ lb mat'l}}{\text{day}} \cdot \frac{1.68 \text{ lb VOC}}{100 \text{ lbs mat'l}} \right] \\
&= 0.30 \text{ lb VOC/day} + 0.0042 \text{ lb/day} \\
&= 0.304 \text{ lb VOC/day} = 0.019 \text{ lb VOC/hr @ 16 hrs/day} \\
&= 111 \text{ lbs VOC/yr @ 16 hr/day; 7 days/wk; 52 wks/yr}
\end{aligned}$$

Rule 1401 Emissions

See attached spreadsheet for maximum emission estimates of the following toxic air contaminants per Rule 1401: ammonia (ammonium hydroxide), ethyl benzene, ethylene glycol monobutyl ether, formaldehyde, hexane, and methanol, which are components in several materials used in this equipment. These emissions are based on maximum material usage, as provided by the applicant and proposed permit conditions for inks containing carcinogenic compounds formaldehyde and ethyl benzene.

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RULES AND REGULATIONS

RULE 212, SIGNIFICANT PROJECT PUBLIC NOTIFICATION

A public notice will be required if one or more of the criteria is met:

- a. this equipment is located within 1000 feet of a school
- b. the increase in emissions from the equipment or facility exceeds the limits in subdivision (g), or
- c. the toxic emissions result in an MICR of more than one in a million on a worst-case basis.

This facility is not within 1000 feet of a school, nor does the project result in increase of criteria pollutants that exceed the limits, or of toxic air contaminants that result in an MICR of more than one-in-a-million or an HIA/HIC over one. Therefore, this project will not need a public notice per this rule.

RULE 401, VISIBLE EMISSIONS

Visible emissions from the operation of this equipment are not expected. There have been no complaints for visible emissions issued against this facility in the past two years.

RULE 402, NUISANCE

The operation of this equipment is not expected to cause a public nuisance. There have been no complaints for nuisances issued against this facility in the past two years.

RULE 1130, GRAPHIC ARTS

Waterbased printing inks used will have a VOC content of less than 74 gm/l (0.62 lb/gal), less water and less exempt compounds limitation. The rule limit VOC content is 300 g/l (2.5 lb/gal) for flexographic inks on non-porous substrates. Therefore, compliance with this rule is expected.

RULE 1171, SOLVENT CLEANING OPERATIONS

The rule requires washes with VOC of 25 g/l or less. Water will be used as a cleanup solvent on this press. Therefore, compliance is expected.

REGULATION XIII:

BACT for flexographic printing presses is use of low VOC inks with ≤ 1.5 lb VOC/gal and washes that comply with Rule 1171. BACT is met by use of low-VOC inks, which contain ≤ 1.0 lb/gal, including any VOC containing materials added to the original inks (less water and less exempt compounds), and no-VOC cleanup solvents. The operation of this equipment will not result in a net increase of criteria pollutants from the facility since this equipment will operated under an existing facility-wide VOC limit of 4463 lbs/mo. Therefore, no emission offsets will be required. And, there is no modeling required for VOC emissions.

RULE 1401, MAXIMUM INDIVIDUAL CANCER RISK ASSESSMENT

The operation of this equipment will result in emissions from the following toxic air contaminants: ammonia (CAS no. 7664-41-7), ethyl benzene (CAS no. 100-41-4), ethylene glycol monobutyl ether (CAS no. 111-76-2), formaldehyde (CAS no. 50-00-0), hexane (CAS no. 110-54-3), methanol (CAS no. 67-56-1) and propylene oxide (CAS no. 75-56-9). However, when quantities of inks containing ethyl benzene and formaldehyde is limited to 50 lbs/day, the percent content by weight of ethyl benzene and formaldehyde within in these inks are limited to less than 0.2%, and

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maximum material usage rates are limited by a maximum VOC emission rate of 900 lbs /month, the health risk impact of these compounds are not expected to result in MICR above 1×10^{-6} and HIA/HIC's above 1.0. See attached spreadsheet. Therefore, compliance with the rule is expected with additional permit conditions.

40 CFR Part 63, Subpart KK, NESHAP

This press is considered as a wide-web flexographic printing since it is a flexographic press capable of printing substrates greater than 18 in. wide. However, the facility will not be using more than 10 tons per year of any one HAP nor more than 25 tpy of any combination of HAPs at the facility. Therefore, the facility is an area source subject to recordkeeping and report requirements of this NESHAP. See Section J: Air Toxics of the Title V facility permit.

REG XXX, TITLE V

This project is considered as a “de minimis significant permit revision” to the second Title V permit renewal, issued to this facility on May 6, 2012. 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 (HAP) from these permit revisions 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
NO _x	40
PM ₁₀	30
SO _x	60
CO	220

This proposed project consists of the installation of a new flexographic air dry printing press. The following table summarizes the permit revision that is the first revision since the second Title V renewal.

Revision	HAP	VOC	NO _x	PM ₁₀	SO _x	CO
1 st Permit Revision: Addition of a new flexographic printing press, PC-PO, A/N 550631	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0
Maximum Daily	30	30	40	30	60	220

RECOMMENDATIONS:

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 renewal 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 Title V permit renewal will be issued to this facility with this equipment included in Section D as a Permit to Construct/Operate.