



**SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT**  
*ENGINEERING AND COMPLIANCE DIVISION*  
*COATING, PRINTING, AEROSPACE & METAL FINISHING TEAM*  
**PERMIT APPLICATION EVALUATION**

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A/N 481036-7	Date 5/20/08
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**PERMIT TO CONSTRUCT**

Flexographic Printing Press with Rotary Die Cutter

<b>APPLICANT:</b>	TIN Inc., dba Temple-Inland
<b>FACILITY ID:</b>	800240
<b>EQUIPMENT LOCATION:</b>	5100 East Jurupa Ave, Ontario, CA 91761
<b>MAILING ADDRESS:</b>	5100 East Jurupa Ave, Ontario, CA 91761

**EQUIPMENT DESCRIPTION:**

**A/N 481036**

*Title V Permit Revision – de minimis significant*

**A/N 481037 (D52)**

*Identical Replacement for A/N 287034 (D13)*

*FLEXOGRAPHIC PRINTING PRESS, EO-67, UNITED, MODEL CL, SERIAL # CL2F2864K, 2-COLOR, 113.5" WIDE SHEETFED, WITH A ROTARY DIE CUTTER.*

**Conditions**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE 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 1130 AND 1171.
4. THE TOTAL QUANTITY OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM THIS EQUIPMENT SHALL NOT EXCEED 360 POUNDS IN ANY CALENDAR MONTH.



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5. CLEANUP MATERIALS SHALL NOT CONTAIN VOC.
  6. VOC CONTENT OF INKS AND COATINGS SHALL NOT EXCEED 1.5 POUNDS PER GALLON AS APPLIED INCLUDING WATER AND EXEMPT SOLVENT.
  7. IN ADDITION TO THE RECORDKEEPING REQUIREMENTS IN RULE 109, THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY THE CALENDAR MONTHLY VOC EMISSIONS IN POUNDS AND THE VOC CONTENT OF EACH MATERIAL AS APPLIED (INCLUDING WATER AND EXEMPT COMPOUNDS).
  8. WITHIN 14 CALENDAR DAYS AFTER THE END OF EACH MONTH, THE OPERATOR SHALL TOTAL AND RECORD VOC EMISSIONS FOR THE MONTH FROM ALL EQUIPMENT AND OPERATIONS COVERED BY THE MONTHLY LIMITS. THE RECORD 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.
  9. THE OPERATOR SHALL 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.
  10. THE OPERATOR SHALL 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.
  11. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT, SHALL BE RETAINED AT THE FACILITY FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
  12. 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.



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13. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY COMPOUNDS IDENTIFIED AS TOXIC AIR CONTAMINANTS IN RULE 1401, TABLE I, WITH AN EFFECTIVE DATE OF MARCH 7, 2008 OR EARLIER WITH THE EXCEPTION OF ACRYLIC ACID (CAS# 79-10-7), AMMONIA (CAS# 7664-41-7), ETHYLENE GLYCOL MONOBUTYL ETHER (CAS# 111-76-2) AND STYRENE (CAS# 100-42-5).

**BACKGROUND:**

A/N 481037 for a new 2-color flexographic printing press with rotary die cutter was submitted on 4/17/08 to replace the permit unit D13, a flexo-folder gluer, A/N 287034. The company is a recycled corrugated cardboard manufacturer.

TIN, Inc is a NO<sub>x</sub> RECLAIM and Title V facility. The Title V permit was renewed on May 8, 2005 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.

This is a replacement of D13 which was limited to 360 lb/mo VOC on the original command and control permit. It appears that this permit condition was not included in the recent facility permits, however it will be added to this new press to ensure no emission increase as a result of this replacement.

The District database shows that the company received an NC in 4/2006 to provide CEMS hourly reports. There are no other NCs and NOV. The company is now in compliance.

**PROCESS DESCRIPTION:**

The proposed equipment will be used to apply coatings and inks and cut corrugated board. The equipment will use low VOC printing inks, low-VOC coatings and zero VOC clean-up solvent.

**EMISSIONS CALCULATIONS:**

This facility operates 24 hours/day, 7 days/week, 52 weeks/year. This equipment will not result in any facility emission increase. The new press with rotary die cutter will have the same emissions as the replaced flexographic printing press.



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A/N	Previous A/N	NSR			AEIS
		R1=R2 lb/hr	Max lb/day	30 day AVG	R1=R2 AVG lb/hr
481037	287034	0.5	12	12	0.5

**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, a public notice will not be required by this section.

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

This is a replacement. There is no emission increase from the facility due to this project. The new rotary die cutter will have the same emissions as the replaced flexographic printing press. Public notice is not required.

LB/DAY	CO	NOX	PM10	ROG	LEAD	SOX
Max Limit	220	40	30	30	3	60
<b>Increases</b>	0	0	0	0	0	0

**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 MICR greater than  $1E^{-6}$  per permit unit or greater than  $10E^{-6}$  per facility.*

This is a replacement and the company will use low-VOC printing inks, low-VOC coatings and zero VOC clean-up solvent which contain small amount of toxic air contaminants listed in Rule 1401 as amended 3/7/08. However, the calculations show that the propose project complies with all applicable R1401 requirements. Public notice will not be required per this section. .



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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 maximum as specified by Rule 212 (g).*

This is a replacement. The emissions from the new equipment are 12 lb/day VOC. The new press/rotary die cutter will have the same emissions as the replaced flexographic printing press. Public notice is not required.

	<u>ROG</u>	<u>NO<sub>x</sub></u>	<u>PM<sub>10</sub></u>	<u>SO<sub>2</sub></u>	<u>CO</u>	<u>Pb</u>
Per Equipment	12	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.

**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.

**RULE 1130**Graphic Arts

This operation complies with the VOC content requirements

<b>Material</b>	<b>Rule 1130 VOC Limit</b>	<b>Actual VOC Content</b>
Flexo Coatings	300 g/l (2.5 lb/gal) of coating	0.01-0.5 lb/gal of coating
Inks	300 g/l (2.5 lb/gal) of coating	0.01-0.5 lb/gal of coating

**RULE 1171**Solvent Cleaning Operations

The company uses zero VOC solvent cleaner. Compliance with this rule is expected.



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**REG XIII**

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

Low VOC inks and coatings with less than 1.5 lb/gal less water and exempt solvent will be used, along with zero VOC cleanup. Therefore, this project will comply with BACT.

Rule 1303 (b)(1), Modeling

Modeling is not required for VOC.

Rule 1303 (b)(2) & Rule 1304 (a)(1), Offsets Exemption

Offsets are not required since there is no emission increase from the facility. This is a functionally identical replacement that will be limited to the same VOC cap as the press to be replaced. This meets the offset exemption of Rule 1304(a)(1).

**RULE 1401**

There will be a small amount of toxic contaminants listed in Rule 1401 as amended 3/7/08 due to the identical replacement. However there are no carcinogenic compounds present. The acute and chronic compound emissions summarized below are well below the individual Tier I screening levels and the Tier 2 screening risk assessment attached shows HIA and HIC below 1.

TAC	CAS	Emissions lbs/yr	Emissions lbs/hr	Screening Level 25 meters (lb/hr)
Ammonia	7664-41-7	633	0.076	1.6
EGBE	111-76-2	132	0.016	7.0
Styrene	100-42-5	106	0.013	29800 lb/yr
Acrylic Acid	79-10-7	26	0.003	NA

**REG XXX**

The proposed project is considered as a “De Minimis significant permit revision” to the renewed Title V permit issued to this facility on May 9, 2005. 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



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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

Rule 3003 specifies that a proposed permit for the initial Title V permit shall be submitted to EPA for review. To determine if a project qualifies for a “De Minimis significant permit revision”, emission increases resulting from all permit revisions that are made after the submittal of proposed permit to EPA shall be accumulated and compared to the above threshold levels. The proposed project is the second permit revision to the Title V permit renewed on 5/9/05. This permit revision is to replace device D13 with D52 from the facility permit. The cumulative emission increases resulting from this proposed permit revision are summarized as follows:

<i>Revision</i>	<i>HAP</i>	<i>VOC</i>	<i>NOx</i>	<i>PM10</i>	<i>SOx</i>	<i>CO</i>
3 <sup>rd</sup> Permit Revision: Add Device D52 to replace Device D13.	0	0	0	0	0	0
2 <sup>nd</sup> Permit Revision: Correct typo in condition F14.2 - Administrative	0	0	0	0	0	0
1 <sup>st</sup> Permit Revision: Add Device D51, remove Device D30.	0	0.3	2.3	0.1	0.1	0.3
Maximum Daily Allowed Increase	30	30	40	30	60	220

*RECLAIM pollutant (Temple-Inland is in NOx RECLAIM program)*

Since NOx 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” even though the cumulative increase in NOx emissions is less than the threshold level of 40 lbs/day. 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 no increase of NOx emissions from the proposed permit revisions, the total NOx emissions from this facility is expected to be less than



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the starting Allocation. As a result, the proposed permit revision is not considered as a “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. A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003. If EPA does not raise any objections within the review period, a revised Title V permit will be issued to this facility.

## TIER 2 SCREENING RISK ASSESSMENT

**A/N:** 481037  
**Fac:** 800240

**Application deemed complete date:** 05/05/08

### 2. Tier 2 Data

MET Factor	1.19
4 hr	0.92
6 or 7 hrs	0.78

### Dispersion Factors

3	3A & 3B For Chronic X/Q
6	For Acute X/Q

### Dilution Factors (ug/m3)/(tons/yr)

Receptor	X/Q	X/Qmax
Residential	1.695	79.85
Commercial	2.12	92.4

### Adjustment and Intake Factors

	Afann	DBR	EVF
Residential	1	302	0.96
Worker	1	149	0.38





A/N: 481037

Application deemed complete date: 05/05/08

**TIER 2 RESULTS**

**5a. MICR**

$MICR = CP \text{ (mg/(kg-day))}^{-1} * Q \text{ (ton/yr)} * (X/Q) * Afann * Met * DBR * EVF * 1.E-6 * MP$

Compound	Residential	Commercial
Ammonia		
Ethylene glycol monobutyl ether		
Styrene (vinyl benzene)		
Acrylic acid		
<b>Total</b>	<b>PASS</b>	<b>PASS</b>

No Cancer Burden, MICR<1.0E-6

<b>5b. Cancer Burden</b>	<b>no</b>
X/Q for one-in-a-million:	
Distance (meter)	no data
Area (km2):	
Population:	
<b>Cancer Burden:</b>	

**6. Hazard Index**

HIA = [Q(lb/hr) \* (X/Q)max] \* AF / Acute REL

HIC = [Q(ton/yr) \* (X/Q) \* MET \* MP] / Chronic REL

Target Organs	Acute	Chronic	Acute Pass/Fail	Chronic Pass/Fail
Alimentary system (liver) - AL			Pass	Pass
Bones and teeth - BN			Pass	Pass
Cardiovascular system - CV			Pass	Pass
Developmental - DEV			Pass	Pass
Endocrine system - END			Pass	Pass
Eye	2.40E-03		Pass	Pass
Hematopoietic system - HEM			Pass	Pass
Immune system - IMM			Pass	Pass
Kidney - KID			Pass	Pass
Nervous system - NS		1.59E-04	Pass	Pass
Reproductive system - REP			Pass	Pass
Respiratory system - RES	2.40E-03	4.19E-03	Pass	Pass
Skin			Pass	Pass

A/N: 481037

Application deemed complete date:

05/05/08

6a. Hazard Index Acute

HIA = [Q(lb/hr) \* (X/Q)max] \*AF/ Acute REL

Compound	HIA - Residential									
	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Ammonia				1.90E-03					1.90E-03	
Ethylene glycol monobutyl ether				9.13E-05					9.13E-05	
Styrene (vinyl benzene)				4.94E-05					4.94E-05	
Acrylic acid				3.99E-05					3.99E-05	
<b>Total</b>				2.08E-03					2.08E-03	

HIA - Commercial										
Compound	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Ammonia				2.19E-03					2.19E-03	
Ethylene glycol monobutyl ether				1.06E-04					1.06E-04	
Styrene (vinyl benzene)				5.72E-05					5.72E-05	
Acrylic acid				4.62E-05					4.62E-05	
<b>Total</b>				2.40E-03					2.40E-03	

**6b. Hazard Index Chronic**

$$HIC = [Q(\text{ton/yr}) * (X/Q) * MET * MP] / \text{Chronic REL}$$

Compound	HIC - Residential												
	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Ammonia												3.35E-03	
Ethylene glycol monobutyl ether													
Styrene (vinyl benzene)										1.27E-04			
Acrylic acid													
<b>Total</b>										1.27E-04		3.35E-03	

6b. Hazard Index Chronic (cont.)

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HIC - Commercial													
Compound	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Ammonia												4.19E-03	
Ethylene glycol monobutyl ether													
Styrene (vinyl benzene)										1.59E-04			
Acrylic acid													
<b>Total</b>										1.59E-04		4.19E-03	