

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	1
APPL. NO.	DATE
see below	06/26/14
PRCSD BY	CHCKD BY
REL	

Equipment Location

Flint Ink North America Corp.
13055 E. Temple Ave.
City of Industry, California 91746

Title V Permit Revision:

Application No. 563072

**PERMIT TO CONSTRUCT
MODIFICATION**

Equipment Description

Application No. 560793

MODIFICATION TO THE AIR POLLUTION CONTROL SYSTEM (Previous P/O P34389, a/n A52813)
CONSISTING OF:

1. BAGHOUSE, SLY DYNACLONE, NO. 6 TYPE C, 6'-0" W. x 7'-7" L. x 8'-1" H., SINGLE HOPPER WITH 748 SQ. FT FILTER CLOTH AND 1/4 H.P CONTINUOUS CLEANER DRIVE.
2. EXHAUST SYSTEM WITH A 7-1/2 H.P. BLOWER VENTING FIVE INK MIXER STATIONS

BY THE REMOVAL OF:

1. A MIXER FROM THE EXHAUST SYSTEM.

AND THE ADDITION OF:

1. MIXING SYSTEM #4 TO THE EXHAUST SYSTEM

Recommendation:

Permit to Construct is recommended for application No. 560793 subject to the following conditions:

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]
4. A GAUGE SHALL BE INSTALLED AND MAINTAINED TO INDICATE IN INCHES WATER COLUMN, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE BAG FILTERS. THE OPERATOR SHALL DETERMINE AND RECORD THE PARAMETER BEING MONITORED ONCE EVERY WEEK.
[RULE 1303(a)(1)-BACT]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	2
APPL. NO.	DATE
see below	09/02/04
PRCSD BY	CHCKD BY
REL	

5. THE PRESSURE DROP ACROSS THE FILTERS SHALL NOT EXCEED 4.0 INCHES WATER COLUMN AT ANY TIME DURING OPERATION.
[RULE 1303(a)(1)-BACT]

Periodic Monitoring:

6. THE OPERATOR SHALL PERFORM AN ANNUAL INSPECTION OF THE EQUIPMENT AND FILTER MEDIA FOR LEAKS, BROKEN OR TORN FILTER MEDIA AND IMPROPERLY INSTALLED FILTER MEDIA. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):
- A. THE NAME OF THE PERSON PERFORMING THE INSPECTION AND/OR MAINTENANCE OF THE FILTER MEDIA;
 - B. THE DATE, TIME AND RESULTS OF THE INSPECTION; AND
 - C. THE DATE, TIME AND DESCRIPTION OF ANY MAINTENANCE OR REPAIRS RESULTING FROM THE INSPECTION.

[RULE 3004 (a)(4)]

7. THE OPERATOR SHALL DISCHARGE DUST COLLECTED IN THIS EQUIPMENT ONLY INTO CLOSED CONTAINERS.

[RULE 3004 (a)(4)]

8. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON A QUARTERLY BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE QUARTERLY PERIOD. THE ROUTINE QUARTERLY INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED, THE OPERATOR SHALL TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN SECTION K OF THIS PERMIT.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. STACK OR EMISSION POINT IDENTIFICATION;
- B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS; AND
- C. DATE AND TIME VISIBLE EMISSION WAS ABATED.

[RULE 3004 (a)(4)]

Emissions And Requirements:

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

- PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
- PM: 0 PERCENT OPACITY
- PM: RULE 1155

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	3
APPL. NO.	DATE
see below	06/26/14
PRCSD BY	CHCKD BY
REL	

**PERMIT TO CONSTRUCT
NEW CONSTRUCTION**

Equipment Description

Application No. 560794

CLAY MIXING SYSTEM NO. 4 CONSISTING OF:

1. BULK BAG LIFTING FRAME WITH A 3.0-HP SCREW CONVEYOR, 4,000 POUND MAX CAPACITY.
2. FEED HOPPER
3. PORTABLE MIXER, SCHOLD MACHINERY CORPORATION, DUAL SHAFT, WITH A 30-HP AND A 125-HP MOTOR.
4. ONE 1,000 GALLON MIXING TANK.

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. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS IT IS VENTED ONLY TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED AN OPERATING PERMIT BY THE EXECUTIVE OFFICER.
[RULE 1303(a)(1)-BACT]
4. MATERIALS PROCESSED IN THE MIXERS NUMBER 1, 2, 3 AND ~~34~~ SHALL NOT EXCEED 1,416,600 POUNDS IN ANY CALENDAR MONTH.
[RULE 1303(b)(2)-OFFSET]
5. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC COMPOUNDS WITH A LISTING DATE OF SEPTEMBER 10, 2010 OR EARLIER IDENTIFIED IN RULE 1401 EXCEPT NAPHTHALENE.
[RULE 1401]

Periodic Monitoring:

6. THE OPERATOR SHALL PERFORM SEMI-ANNUAL INSPECTION OF THE EQUIPMENT TO ENSURE THAT THE MOVABLE COVERS ARE CLOSED. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):
 - A. NAME OF THE PERSON PERFORMING THE INSPECTION OF THE COVER.
 - B. DATE, TIME, AND RESULT OF THE INSPECTION.[RULE 3004(a)(4)]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	4
APPL. NO.	DATE
see below	09/02/04
PRCSD BY	CHCKD BY
REL	

7. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE CLEANING LOG THAT INCLUDES STATEMENT OF THE APPROVED CLEANING METHOD.
[RULE 3004(a)(4)]

8. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON AN ANNUAL BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE ANNUAL PERIOD. THE ROUTINE ANNUAL INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS.

IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE-HOUR, THE OPERATOR SHALL VERIFY AND CERTIFY WITHIN 24 HOURS THAT THE EQUIPMENT CAUSING THE EMISSION AND ANY ASSOCIATED AIR POLLUTION CONTROL EQUIPMENT ARE OPERATING NORMALLY ACCORDING TO THEIR DESIGN AND STANDARD PROCEDURES AND UNDER THE SAME CONDITIONS UNDER WHICH COMPLIANCE WAS ACHIEVED IN THE PAST, AND EITHER:

- A. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN SECTION K OF THIS PERMIT;
OR
- B. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. STACK OR EMISSION POINT IDENTIFICATION;
- B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
- C. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
- D. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.
[RULE 3004 (a)(4)]

Emissions And Requirements:

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM: RULE 405, SEE APPENDIX B FOR EMISSION LIMITS
VOC: RULE 1141.1
VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS
VOC: RULE 109

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	5
APPL. NO.	DATE
see below	06/26/14
PRCSD BY	CHCKD BY
REL	

ADMINISTRATIVE
CHANGE OF CONDITION

Equipment Description:

Application no. 563075

MIXING SYSTEM NO.1 CONSISTING OF:

1. PORTABLE MIXER, SCHOLD MACHINERY CORPORATION, DUAL SHAFT, WITH A 40-HP AND A 75-HP MOTOR
2. ONE 800 GALLON MIXING TANK

Equipment Description:

Application no. 563073

MIXING SYSTEM NO.2 CONSISTING OF:

1. PORTABLE MIXER, SCHOLD MACHINERY CORPORATION, DUAL SHAFT, WITH A 40-HP AND A 100-HP MOTOR
2. ONE 1,000 GALLON MIXING TANK

Equipment Description:

Application no. 563074

MIXING SYSTEM NO.3 CONSISTING OF:

1. PORTABLE MIXER, SCHOLD MACHINERY CORPORATION, DUAL SHAFT, WITH A 40-HP AND A 100-HP MOTOR
2. ONE 1,000 GALLON MIXING TANK

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]
4. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS IT IS VENTED ONLY TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED AN OPERATING PERMIT BY THE EXECUTIVE OFFICER.
[RULE 1303(a)(1)-BACT]
4. MATERIALS PROCESSED IN THE MIXERS NUMBER 1, 2, 3 AND ~~34~~ SHALL NOT EXCEED 1,416,600 POUNDS IN ANY CALENDAR MONTH.
[RULE 1303(b)(2)-OFFSET]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	6
APPL. NO.	DATE
see below	09/02/04
PRCSD BY	CHCKD BY
REL	

5. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC COMPOUNDS WITH A LISTING DATE OF MAY 2, 2003 OR EARLIER IDENTIFIED IN RULE 1401 EXCEPT COPPER AND COPPER COMPOUNDS.
[RULE 1401]

Periodic Monitoring:

6. THE OPERATOR SHALL PERFORM SEMI-ANNUAL INSPECTION OF THE EQUIPMENT TO ENSURE THAT THE MOVABLE COVERS ARE CLOSED. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):
- A. NAME OF THE PERSON PERFORMING THE INSPECTION OF THE COVER.
 - B. DATE, TIME, AND RESULT OF THE INSPECTION.
- [RULE 3004(a)(4)]
7. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE CLEANING LOG THAT INCLUDES STATEMENT OF THE APPROVED CLEANING METHOD.
[RULE 3004(a)(4)]
8. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON AN ANNUAL BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE ANNUAL PERIOD. THE ROUTINE ANNUAL INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS.

IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE-HOUR, THE OPERATOR SHALL VERIFY AND CERTIFY WITHIN 24 HOURS THAT THE EQUIPMENT CAUSING THE EMISSION AND ANY ASSOCIATED AIR POLLUTION CONTROL EQUIPMENT ARE OPERATING NORMALLY ACCORDING TO THEIR DESIGN AND STANDARD PROCEDURES AND UNDER THE SAME CONDITIONS UNDER WHICH COMPLIANCE WAS ACHIEVED IN THE PAST, AND EITHER:

- A. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN SECTION K OF THIS PERMIT; OR
- B. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. STACK OR EMISSION POINT IDENTIFICATION;
- B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	7
APPL. NO.	DATE
see below	06/26/14
PRCSD BY	CHCKD BY
REL	

C. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND

D. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.
[RULE 3004 (a)(4)]**Emissions And Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM: RULE 405, SEE APPENDIX B FOR EMISSION LIMITS
 VOC: RULE 1141.1
 VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS
 VOC: RULE 109

Background

Flint Ink North America Corp is in the business of manufacturing inks for primarily news print. They submitted several applications to add a new mixer. This project will add a new mixer identified as number 4. The new mixer will be used to mix dry powder constituents currently mixed in the color mixers #1 through #3. This premix will be put in storage for later use in the color ink mixers. The material usage in the color mixers is limited to 1,416,600 pounds in any calendar month under condition no. 4. The new mixer will be added to this condition and no increase in material usage will occur.

The new mixer will be vented to an existing baghouse that is currently venting four small 219 exempt mixers. The current permit, P/O P34389, a/n A52813, has an exhaust system that shows five mixers being vented. Flint has removed one mixer and capped the exhaust duct to that mixer. This exhaust duct will be used to vent the new mixer.

Flint Ink is a Title V facility and has submitted an application for the permit revision. The following table lists the applications submitted for this project.

Application No.	Equipment	Permit Action	Description
560793	Baghouse	Modification	Add new mixer #4 to exhaust
560794	Clay Mixing System	New Construction	Add new mixer #4 (clay mixer)
563072	NA	Title V Permit Revision	
563073	Mixing System	Change of condition	add Mixer #4 to material usage limit
563074	Mixing System	Change of condition	add Mixer #4 to material usage limit
563075	Mixing System	Change of condition	add Mixer #4 to material usage limit

Flint Ink has a notice to Comply issued against it on 9/27/2012. The NC was issued for Flint to correct their responsible official and submit a form 500RO. There are no other Notices to

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	8
APPL. NO.	DATE
see below	09/02/04
PRCSD BY	CHCKD BY
REL	

Comply, Notices of Violation or Complaints issued against this facility over the past two years as of 6/17/2014.

Process Description:

The operation of the existing color mixers is a “batch” process in which raw materials are charged to the mixing tanks and then mixed or blended into a homogeneous mixture. The raw materials are listed and described below:

<u>Raw Material</u>	<u>Approx Wt%</u>	<u>Description</u>
Petroleum Oil	0-35	Petroleum Distillates, b.p. > 400 ⁰ F
Varnish Vehicle	10-25	Mixture, soy bean oil and resin
Soy Bean Oil	10-23	Soy bean oil
Pigment Flush	20-40	Concentrated mixture of pigment and soy bean oil.
Clay (Only Dry addition)	10-12	Kaolin Clay

From the MSDS, the Petroleum Distillate has only a 3.4 wt% volatile volume and a VOC content of 0.26 lbs/gal.

The soy oil and resin is a semi solid with a zero VOC content.

The Pigment flush is a semi solid with a VOC content of 0.38 lb/gal and the Kaolin clay is 100% solid with no VOC content.

Their 2013 usage records show an annual process rate of 6,827,441 lbs per year or 1641.2 lbs/hour based on a 16 hr/day, 5 days per week and 52 weeks per year. Flint is well below the 1,416,600 lbs material per month limitation under condition no. 4 of their permits.

The original Color Mixing area has three identical mixers used to mix the inks in covered 1,000 gallon mixing tanks. These mixing tanks are approximately 8 feet in diameter and 6 feet tall. They mixing tanks are not heated, heat is generated during the mixing process because of the viscous nature of the ink materials.

Initially Flush (pigment) and oils are put into a mixing tank. The flush is very thick almost a solid. The flush is mixed with oils to break it down into a thick paste. This paste is sent to their lab for Q/C. If Q/C results are satisfactory, they will add clays and more oils to the batch and mix until smooth. This material is then sent to the lab for analysis before packaging. The clays are the only particulates that may become airborne. These are added to the mixing tank which is vented to a baghouse to reduce the dust generated. There was no dust on the floors around the mixing tanks during the last field evaluation conducted in 2012. Currently, the facility adds all the material including clay to make the inks in the three color mixers.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	9
APPL. NO.	DATE
see below	06/26/14
PRCSD BY	CHCKD BY
REL	

In this project, the facility is proposing to prepare the clay portion of the ingredient to make ink in the new clay base mixer (mixer #4). After the clay base is prepared in the mixer, it is piped to storage. The clay base will be piped to the color mixers to make the final product. If additional clay is needed, it will be added directly to the color mixer in a dry form. Some products will require a 2 to 3 percent dry clay addition. The new clay base mixer will have a permanent discharge frame attached to it that will be used to add the dry constituents to the mixing vessel. A bulk bag is hoisted into the frame which rest above a feed hopper. At the base of the hopper, a screw conveyor driven by a 3.0-hp motor, transfers the material to the mixing vessel. A mixture of 10 wt% Petro Free Flow Varnish, 38 wt% Raffene 2000 L oil, 50 wt% Buca, and 2.0 wt% Alkyd is mixed in the new mixer and sent to storage. No flush will be used in this mixer so no toxic related to the pigment (copper) will be emitted from this clay mixer. There is however a fraction, 0.02 wt% naphthalene contained in the Free Flow Varnish used to make the Clay Base. Because of naphthalene's limited presence, it is not listed in the final product (News Ink Clay Base). However, the 1401 condition for the clay base mixer will have the usage of naphthalene as an exception of toxic material used in the process. The color mixer's 1401 condition will remain unchanged. When a new color mix is to be made up in the color mixers, Flint will pull from storage the pre-mix clay base and pipe it to one of the color mixers. The remaining materials such as pigments soy oils will be added to finish the color mix.

The new mixer is vented to the baghouse. The baghouse uses a reverse pulse jet to clean the bags. The dust collected is discharged into an enclosed 55 gallon drum. The particulate waste is reused in the manufacture of the black inks. Scheduled maintenance on the baghouse is performed once a year.

Emissions Calculations

The process emission factor taken from The National Association of Printing Ink Manufactures (NAPIM) is 0.013 lbs VOC/100 lbs Ink for sheet fed inks. This number, according to NAPIM is considered to be appropriate provided the VOC content does not exceed the amount of the tested ink, which was 38.4%. Flint's paste inks have a maximum VOC content of 4%.

The clay base product is less than 1.0% VOC. The NAPIM emission factor will be a conservative VOC estimate. The new clay mixer will be subject to the same condition that currently limits the three color mixers. As a result, there will not be a VOC emission increase from the facility due to the operation of the clay base mixer.

Clay base Mixer:

Maximum clay base production:

Batch size – 10,200 lbs, 4 batches per week

Estimated usage: 41,000 lbs/week, 177,653 lbs/month

Operating Schedule: 16 hr/day, 5 days per week and 52 weeks per year
4160 hrs/yr

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	10
APPL. NO.	DATE
see below	09/02/04
PRCSD BY	CHCKD BY
REL	

VOC:

Hourly: Clay Base Mixer

$$\begin{aligned}
 R1/R2 &= 177,653 \text{ lbs /month (0.013 lb VOC/100 lb Ink)} = 23.09 \text{ lbs VOC/month} \\
 &= (23.09 \text{ lbs VOC/month})/(30 \text{ day/month}) = 0.77 \text{ lbs VOC/day} \\
 &= (0.77 \text{ lbs VOC/day})/(16 \text{ hrs/day}) \\
 &= 0.05 \text{ lbs VOC/hr}
 \end{aligned}$$

Daily:

$$R1 = R2 = 0.77 \text{ lbs VOC/day}$$

Annual:

$$R1 = R2 = 23.09 \text{ lbs VOC/month (12 month/yr)} = 277.08 \text{ lbs/yr}$$

Particulates:

The emission factor from NAPIM is 0.1 lb PM/100 lb ink.

Hourly:

$$\begin{aligned}
 R1 &= (177,653 \text{ lbs clay base/month})(0.1 \text{ lb PM/100 lb Ink}) = 177.65 \text{ lbs/month} \\
 &= (177.65 \text{ lbs PM/month})/(30 \text{ day/month}) = 5.92 \text{ lbs/day} \\
 &= (5.92 \text{ lbs/day})/16 \text{ hrs/day} \\
 &= 0.37 \text{ lbs/hr}
 \end{aligned}$$

$$\begin{aligned}
 R2 &= 0.37 \text{ lbs/hr (1-0.99)} \\
 &= 0.004 \text{ lb/hr}
 \end{aligned}$$

Daily:

$$\begin{aligned}
 R2 &= 5.92 \text{ lbs/day (1-0.99)} \\
 &= 0.0592 \text{ lb/day}
 \end{aligned}$$

Annual:

$$\begin{aligned}
 R2 &= 0.0592 \text{ lbs/day (5day/wk)(52 wk/yr)} \\
 &= 15.39 \text{ lbs/yr}
 \end{aligned}$$

Baghouse Evaluation

The baghouse, P/O P34389, a/n A52813 was originally issued on Sept. 8, 1969. It was venting 5 ink mixers with a 7.5-hp blower. These mixers never required a permit. Currently under Rule 219 (K)(4) 251 gallons mixers or less with no supplemental heat do not require a permit. Flint has removed mixer #5 (25 HP Hockmier, 120 gal). Using the Velocity Pressure method to determine the pressure drop over the duct system, the friction loss over the ducting was estimated around 7.0 inches of water. Using an original pressure drop over the baghouse of 3.0 inches of water, a total pressure drop of 10.0 inches of water is expected. The fan has a capacity of pulling 2500 cfm at the calculated pressure. The exhaust system will be sufficient to vent the five mixers vented by this baghouse.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	11
APPL. NO.	DATE
see below	06/26/14
PRCSD BY	CHCKD BY
REL	

Baghouse total filter area: 768.4 sqft
 Air Flow: 2,403 scfm

Air to cloth ratio: 2,403 scfm/768.4 sqft = 3.13 falls within recommended filter velocities

The system has a reverse pulse jet cleaning system which automatically cleans the bags.

Grain loading = 0.004 lb/hr (7000gr/lb) (hr/60 min) = 0.466 gr/min

Air Flow – 2,403 scfm

$$(0.466 \text{ gr/min}) / (2,403 \text{ ft}^3/\text{min}) = 1.942\text{E-}04 \text{ gr/scf}$$

	SCFM	GR/SCF Allowed	Estimated GR/SCF	
Rule 404:	2472	0.134	0.0002	PASS

Rule 405:

Ink Material Processed: 4059 lbs/hr

3858	5.27
4059	x
4409	5.65

$$X = 5.6 \text{ lbs/hr}$$

Process Weight	PM emission allowed	Estimated	
lbs/hr	lbs/hr	lbs/hr	
513	5.6	0.004	PASS

Risk Assessment:

The materials used in this device are subject to the cap imposed on the ink mixers. The Risk associated with the use of this mixer will remain the same as the previous Risk Screening associated with the color mixers

The Risk associated with this mixer passed the following Risk Screening:

The emissions of Naphthalene will pass the tier 1 screening:

Cancer/Chronic ASI
 3.10E-02
 Passed

With an MICR:

Residential	Commercial
1.32E-09	2.77E-09
Passed	Passed

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	12
APPL. NO.	DATE
see below	09/02/04
PRCSD BY	CHCKD BY
REL	

With no Hazard index in excess of 1.0 for targeted organs. Compliance with Rule 1401 is expected.

Evaluation & Rule Review

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.

No public notice is required since no school is located within 1,000 ft from the above site.

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).

The proposed project will not result in an emission increase for the entire facility. A Rule 212(c) (2) notice will not be triggered since there is no emission increase that is above the daily maximum specified in Rule 212(g).

Rule 212(c)(3): This section requires a public notice for all new or modified permit unit 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.

The proposed project will not result in an emission increase which will exceed a MICR of one in a million or a HIC/HIA of 1.0. Public notice is not required under this section of the rule.

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).

The daily maximum emissions as specified in Rule 212(g) will not be exceeded. The following summarizes the emissions:

	Maximum Daily Emissions					
	<u>ROG</u>	<u>NO_x</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>CO</u>	<u>Pb</u>
Emissions	1	0	0	0	0	0
MAX Limit (lb/day)	30	40	30	60	220	3
Compliance Status	Yes	Yes	Yes	Yes	Yes	Yes

A public notice is not required since the emission increase is not above the thresholds.

Rule 401: With proper maintenance, compliance with this rule is expected.

Rule 402: With proper maintenance, compliance with this rule is expected.

Rule 404:	SCFM	GR/SCF	Estimated GR/SCF
	2472	0.134	0.0002 PASS

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	13
APPL. NO.	DATE
see below	06/26/14
PRCSD BY	CHCKD BY
REL	

Rule 405:	Process Weight Lbs/hr 4059	PM emission allowed lbs/hr 5.6	Estimated lbs/hr 0.004	PASS
-----------	----------------------------------	--------------------------------------	------------------------------	------

Rule 1141.1: This facility is expected to comply with all work practice standards and recordkeeping requirements specified in this rule.

Rule 1155: This rule prohibits visible emissions from the PM control devices. Visible emissions are not expected. The control device is required to operate and maintained per manufacturer's specifications. The baghouse will operate and maintained per manufacturer's specifications. The rule requires dust collected by the air pollution control unit to be discharged into closed containers. A permit condition will be included to enforce this requirement. The baghouse is equipped with a automatic shaker unit thus satisfying a requirement under this rule Therefore, compliance with this rule is expected.

Rule 1171: The inks manufactured at this facility are water-base and can be cleaned-up using water and a detergent. Compliance with this rule is expected.

REG XIII: New Source Review.
BACT: The particulate emissions are controlled by a baghouse which is considered BACT for controlling PM/PM10 emissions from the mixer. The VOC emissions are less than one pound per day and do not trigger BACT.

1303(b) States that a new permit unit must meet each of the four requirements:

- 1) Modeling:
No modeling is required for PM10 since the PM10 emissions for the mixer is 0.004 lbs/hr, less than the 0.41 lbs/hr PM10 threshold limit in Rule 1303, Table A-1. No modeling is required for VOC.
- 2) Emission Offsets:
No increase in VOC emissions will occur by the use of this mixer from the facility. The new mixer will operate under the current limit applicable to the three color ink mixers. PM10 emission increase from the new mixer is negligible. No offsets required.
- 3) Facility Compliance:
This facility is in compliance with all applicable rule and regulations of the AQMD.
- 4) Major Polluting Facilities:
This is not considered a major modification to a major polluting facility.

Rule 1401: Toxics

The materials used in this equipment will not exceed the tier 1 thresholds for Naphthalene. The equipment will be conditioned such that no toxic compounds with a listing date of 9/10/10

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	14
APPL. NO.	DATE
see below	09/02/04
PRCSD BY	CHCKD BY
REL	

may be used except Naphthalene. Compliance with this rule is expected.

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:

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NO _x	40
PM ₁₀	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 initial Title V permit shall be accumulated and compared to the above threshold levels. This proposed project is the 2nd permit revision to the Title V renewal permit issued to this facility on November 16, 2010. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

Revision	HAP	VOC	NO _x	PM ₁₀	SO _x	CO
Previous Revision	0	0	0	0	0	0
2 nd Permit Revision; Addition of mixer#4 vented to an existing baghouse and capping the usage under the existing material cap for the color mixers. application no. 560793, 560794, 563073, 563074 & 563075	0	1	0	0	0	0
Cumulative Total	0	1	0	0	0	0
Maximum Daily	30	30	40	30	60	220

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES	PAGE
15	15
APPL. NO.	DATE
see below	06/26/14
PRCSD BY	CHCKD BY
REL	

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.