MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION

July 11, 2024

PERMIT TO INSTALL
362-99G

ISSUED TO
TC Transcontinental

LOCATED AT
155 Brook Street
Battle Creek, Michigan 49037

IN THE COUNTY OF
Calhoun

STATE REGISTRATION NUMBER
B7628

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **June 17, 2024**	
DATE PERMIT TO INSTALL APPROVED: **July 11, 2024**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU_FLEXO-102	Flexographic printing press No. 102 with an In-line laminator.	1-1-2000	FG_FLEXO-ROTO-PW
EU_FLEXO-110	Flexographic Printing Press No. 110: 10-color Wide-web Central Impression (CI) Drum Equipped with an In-line Laminator.	11-15-2007	FG_FLEXO-ROTO-PW
EU_FLEXO-112	Flexographic Printing Press No. 112: 10-color Central Impression (CI) Drum printing press equipped with a Corona Treater. The corona treater uses an electrical charge to treat the film and it is emitting ozone.	5-25-2010 / 11-29-2010	FG_FLEXO-ROTO-PW
EU_FLEXO-114	Flexographic Printing Press No. 114: 53", wide-web, ten-color. Manufactured by Windmoeller and Hoelscher Corporation (Model No. Novoflex CL 52234).	TBD	FGFLEXO114LAM402
EU_SideLoad	Side (Front) Loading Renzman Parts Washer.	1-1-1993	FG_FLEXO-ROTO-PW
EU_TopLoad	Top Loading Renzman Parts Washer, Solvent Distillation Unit, Solvent Holding Tank.	1-1-1983	FG_FLEXO-ROTO-PW
EU_LAM-404	Solventless Laminator No. 404	1-1-1981	NA
EU_LAM-402	Comexi Nexus ML1 laminator (No. 402). Used to apply coatings and adhesives.	12-1-2022 / Permit Issuance	FGFLEXO114LAM402

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

EU_LAM-404
EMISSION UNIT CONDITIONS

DESCRIPTION

Solventless Laminator No. 404

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
VOC	1.88 x 10^{-3} pph[1]	Test Protocol	EU_LAM-404	GC 13	R 336.1225
VOC	0.01 tpy	12-month rolling time period	EU_LAM-404	SC V.1, SC VI.2 SC VI.3	R 336.1205(3) R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The VOC content of any material, as received and as applied, shall be determined using federal Reference Test Method 24 (inks, coatings, fountain solution additives and cleaning solvents) or 24A (only applies to solvent-borne inks and related coatings used in the publication rotogravure industry) pursuant to Rule 1040(5). Upon prior written approval by the AQD District Supervisor, VOC content may be determined from manufacturer's formulation data. If the Method 24 or 24A and the formulation values should differ, the Method 24 or 24A results shall be used to determine compliance. **(R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

2. The permittee shall keep written record of the following for the EU_LAM-404 on a calendar month averaging period:
   a) Gallons (with water) of each material (coatings, adhesives, *etc.*) used and reclaimed;
   b) As received and as applied, VOC content of each material (minus water and with water);
   c) VOC mass emission calculations determining the monthly emission rate in tons per month;
   d) VOC mass emission calculations determining the yearly emission rate in tons per 12-month rolling time period as determined at the end of each calendar month; and
   e) Actual hours of operations.

   The records are for the purpose of compliance demonstration and shall be kept in the format approved by the Air Quality Division District Supervisor. The records shall be kept on site for a period of at least five years and made available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

3. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702, R 336.1901)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV_LAM-404	30	23	R 336.1225, R 336.1901, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG_FLEXO-ROTO-PW	Three flexographic printing lines and two Parts Wash (PW) lines. All emission units are within a Permanent Total Enclosure (PTE) and controlled by two parallel Regenerative Thermal Oxidizers (RTO).	EU_FLEXO-102 EU_FLEXO-110 EU_FLEXO-112 EU_SideLoad EU_TopLoad
FGFLEXO114LAM402	One flexographic printing line equipped with a natural gas fired dryer and one laminator. All emission units are within a Permanent Total Enclosure (PTE) and controlled by two parallel Regenerative Thermal Oxidizers (RTOs).	EU_FLEXO-114 EU_LAM-402

FG_FLEXO-ROTO-PW
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three flexographic printing lines and two Parts Wash (PW) lines. All emission units are within a Permanent Total Enclosure (PTE) and controlled by two parallel Regenerative Thermal Oxidizers (RTO).

Emission Unit: EU_FLEXO-102, EU_FLEXO-110, EU_FLEXO-112, EU_SideLoad, EU_TopLoad

POLLUTION CONTROL EQUIPMENT

Two parallel RTOs

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	75.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG_FLEXO-ROTO-PW	SC VI.3 SC VI.4	R 336.1205(3) R 336.1225 R 336.1702(a) R 336.1707
2. VOC	33.1 pph[1]	Hourly	FG_FLEXO-ROTO-PW	SC V.3	R 336.1225

II. MATERIAL LIMITS

1. Permittee shall not operate the EU_SideLoad or EU_TopLoad portions of FG_FLEXO-RTO-PW unless all applicable provisions of R 336.1707 are met. **(R 336.1707)**

2. The overall reduction in VOC emissions from rotogravure and flexographic operations of the FG_FLEXO-RTO-PW shall exceed all applicable provisions of R 336.1624. **(R 336.1225, R 336.1624, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate the FG_FLEXO-ROTO-PW, unless the pressure within the permanent total enclosure (PTE) is a minimum of 0.007 inches of water less than the adjacent area on a continuous basis. The differential pressure shall be monitored in a manner and with instrumentation acceptable to the Air Quality Division. The differential pressure monitoring instrument shall display the differential pressure as the pressure within the PTE minus the adjacent room pressure (e.g., an acceptable pressure reading is equal to or less than -0.007 inches of water). **(R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FG_FLEXO-ROTO-PW unless the PTE is installed and operating properly. Proper operation requires that the PTE is operating at a pressure lower than all adjacent areas, so that air flows into the PTE through all natural draft openings (NDO). An NDO is defined as any opening that is not connected to a duct in which a fan or blower is installed. **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall not operate FG_FLEXO-ROTO-PW unless one or both thermal oxidizers are installed and operating properly. Proper operation of each thermal oxidizer includes a minimum VOC capture

efficiency of 100 percent (by weight), a minimum VOC destruction efficiency of 98 percent (by weight), maintaining a minimum temperature of 1590°F, and a minimum retention time of 0.5 seconds. **(R 336.1225, R 336.1702(a), R 336.1910)**

3. The permittee shall install a continuous pressure monitoring device equipped with a visual or audible alarm in the common duct to the thermal oxidizers. **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. If applicable, the permittee shall determine the VOC content, water content, and density of any coating, as applied and as received, using federal Reference Test Method 24 (inks, coatings, fountain solution additives, and cleaning solvents) or 24A (only applies to solvent-borne inks and related coatings used in the publication rotogravure industry) pursuant to Rule 1040(5). Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 or 24A results and the formulation values should differ, the permittee shall use the Method 24 or 24A results to determine compliance. **(R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**

2. Upon written request from the AQD District Supervisor, the permittee shall verify the capture efficiency of the PTE, by testing at owner's expense, in accordance with the Department requirements. No less than 60 days prior to testing, a complete testing plan shall be submitted to the AQD District Supervisor. This testing plan must be approved by the Department prior to testing. A complete report of the test results must be submitted to the AQD District Supervisor within 60 days following the testing. When the PTE or equipment in the PTE has been modified, testing will not be required if it is demonstrated to and approved by the AQD District Supervisor that the modification does not significantly change the equipment and does not alter the capture efficiency of the PTE. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)**

3. Within 60 days of achieving the maximum production rate, but not later than 180 days after the commencement of operation of any new or modified equipment in FG_FLEXO-ROTO-PW, the permittee shall verify and quantify VOC emission rates from FG_FLEXO-ROTO-PW, capture efficiency and destruction efficiency of both RTOs (RTO-1 & RTO-2), by testing at owner's expense, in accordance with Department requirements, will be required. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. Testing will not be required if it is demonstrated to and approved by the AQD District Supervisor that the modification does not significantly change the equipment and does not alter the capture efficiency of the PTE and destruction efficiency of the RTO (RTO-1 & RTO-2). **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

2. For FG_FLEXO-ROTO-PW, the permittee shall monitor and record the pressure differential between the PTE and the outside area on a continuous basis to verify that air is entering the PTE. If there is any new or modified equipment added to the PTE, or if the PTE is modified, the permittee shall prepare and submit a revised air pressure differential monitoring plan to the Air Quality Division, Technical Programs Unit (formerly known as Compliance Support Unit) within 90 days of the proposed change. The monitoring plan shall include a quality assurance plan stating the method proposed to calibrate/audit the monitor in order to verify the monitoring equipment has been installed and is operating properly. The plan shall be submitted and approved by the Air Quality Division prior to any change in monitoring. **(R 336.1207(a), R 336.1702(a))**

3. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702(a))**

4. The permittee shall keep the following information on a monthly basis for FG_FLEXO-ROTO-PW:
   a) Gallons (with water) of each material used and, if applicable, reclaimed.
   b) VOC content (minus water and with water) of each MATERIAL, as received and as applied.
   c) A demonstration of compliance with SC II.1 and II.2.
   d) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
   e) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1707)**

5. For FG_FLEXO-RTO-PW, the permittee shall keep records of the pressure differential between the PTE and the adjacent area, in accordance with the differential pressure monitoring plan. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1225, R 336.1702(a))**

6. The permittee shall monitor and record the temperature in each RTO on a continuous basis in a manner and with instrumentation acceptable to the Air Quality Division. All records are for the purpose of compliance demonstration, shall be kept on file for a period of at least five years, and made available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV_RTO-1	60	40	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV_RTO-2	60	40	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

1. Within fifteen days of installation of an emission unit, the permittee shall label each emission unit of FG_FLEXO-ROTO-PW according to a method acceptable to the AQD District Supervisor. Within seven days of completing the labeling, the permittee shall notify the AQD District Supervisor, in writing, as to the date the labeling was completed. **(R 336.1201)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FGFLEXO114LAM402
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

One flexographic printing line equipped with a natural gas fired dryer and one laminator. All emission units are within a Permanent Total Enclosure (PTE) and controlled by two parallel Regenerative Thermal Oxidizers (RTOs).

Emission Unit: EU_FLEXO-114, EU_LAM-402

POLLUTION CONTROL EQUIPMENT

Two parallel RTOs

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	66.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFLEXO114LAM402	VI.3 VI.4	R 336.1702(a)
2. VOC	18.0 pph[1]	Hourly	FGFLEXO114LAM402	SC V.3	R 336.1225

II. MATERIAL LIMITS

1. The permittee shall burn only natural gas in the dryer portion of EU_FLEXO-114. **(R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGFLEXO114LAM402 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the RTOs have been submitted and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee

shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1702, R 336.1910)**

2. The permittee shall not operate the FGFLEXO114LAM402, unless the pressure within the permanent total enclosure (PTE) is a minimum of 0.007 inches of water less than the adjacent area on a continuous basis. The differential pressure shall be monitored in a manner and with instrumentation acceptable to the Air Quality Division. The differential pressure monitoring instrument shall display the differential pressure as the pressure within the PTE minus the adjacent room pressure (e.g., an acceptable pressure reading is equal to or less than -0.007 inches of water). **(R 336.1225, R 336.1702(a))**

3. The permittee shall handle all VOC and/or HAP containing materials, including coatings, reducers, solvents and thinners, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FGFLEXO114LAM402 unless the PTE is installed and operating properly. Proper operation requires that the PTE is operating at a pressure lower than all adjacent areas, so that air flows into the PTE through all natural draft openings (NDO). An NDO is defined as any opening that is not connected to a duct in which a fan or blower is installed. **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall not operate FGFLEXO114LAM402 unless one or both thermal oxidizers are installed and operating properly. Proper operation of each thermal oxidizer includes a minimum VOC capture efficiency of 100 percent (by weight), a minimum VOC destruction efficiency of 98 percent (by weight), maintaining a minimum temperature of 1590°F, and a minimum retention time of 0.5 seconds. **(R 336.1225, R 336.1702(a), R 336.1910)**

3. The permittee shall install a continuous pressure monitoring device equipped with a visual or audible alarm in the common duct to the thermal oxidizers. **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. If applicable, the permittee shall determine the VOC content, water content, and density of any coating, as applied and as received, using federal Reference Test Method 24 (inks, coatings, fountain solution additives, and cleaning solvents) or 24A (only applies to solvent-borne inks and related coatings used in the publication rotogravure industry) pursuant to Rule 1040(5). Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 or 24A results and the formulation values should differ, the permittee shall use the Method 24 or 24A results to determine compliance. **(R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**

2. Upon written request from the AQD District Supervisor, the permittee shall verify the capture efficiency of the PTE, by testing at owner's expense, in accordance with the Department requirements. No less than 60 days prior to testing, a complete testing plan shall be submitted to the AQD District Supervisor. This testing plan must be approved by the Department prior to testing. A complete report of the test results must be submitted to the AQD District Supervisor within 60 days following the testing. When the PTE or equipment in the PTE has been modified, testing will not be required if it is demonstrated to and approved by the AQD District Supervisor that the modification does not significantly change the equipment and does not alter the capture efficiency of the PTE. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)**

3. Within 180 days of permit issuance, the permittee shall verify and quantify VOC emission rates from FGFLEXO114LAM402, capture efficiency and destruction efficiency of both RTOs (RTO-1 & RTO-2), by testing at owner's expense, in accordance with Department requirements, will be required. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the

test results to the AQD within 60 days following the last date of the test. Testing will not be required if it is demonstrated to and approved by the AQD District Supervisor that the modification does not significantly change the equipment and does not alter the capture efficiency of the PTE and destruction efficiency of the RTO (RTO-1 & RTO-2). **(R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1224, R 336.1225, R 336.1702(a))**

2. For FGFLEXO114LAM402, the permittee shall monitor and record the pressure differential between the PTE and the outside area on a continuous basis to verify that air is entering the PTE. If there is any new or modified equipment added to the PTE, or if the PTE is modified, the permittee shall prepare and submit a revised air pressure differential monitoring plan to the Air Quality Division, Technical Programs Unit (formerly known as Compliance Support Unit) within 90 days of the proposed change. The monitoring plan shall include a quality assurance plan stating the method proposed to calibrate/audit the monitor in order to verify the monitoring equipment has been installed and is operating properly. The plan shall be submitted and approved by the Air Quality Division prior to any change in monitoring. **(R 336.1207(a))**

3. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702(a))**

4. The permittee shall keep the following information on a monthly basis for FGFLEXO114LAM402:
   a) Gallons (with water) of each material used and, if applicable, reclaimed.
   b) VOC content (minus water and with water) of each material, as received and as applied.
   c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
   d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

5. For FGFLEXO114LAM402, the permittee shall keep records of the pressure differential between the PTE and the adjacent area, in accordance with the differential pressure monitoring plan. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1225, R 336.1702(a))**

6. The permittee shall monitor and record the temperature in each RTO on a continuous basis in a manner and with instrumentation acceptable to the Air Quality Division. All records are for the purpose of compliance demonstration, shall be kept on file for a period of at least five years, and made available to the Department upon request. **(R 336.1225, R 336.1702(a), R 336.1910)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGFLEXO114LAM402. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV_RTO-1	60	40	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV_RTO-2	60	40	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FGFACILITY CONDITIONS

DESCRIPTION:

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

POLLUTION CONTROL EQUIPMENT

Two parallel RTOs

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	Less than 90 tpy	12-month rolling time period as determined at the end of each calendar month	FG_FACILITY	SC VI.1 SC VI.2 SC VI.4	R 336.1205(3)
2. Each Individual HAP	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG_FACILITY	SC VI.1 SC VI.3 SC VI.4	R 336.1205(3)
3. Aggregate HAPs	Less than 22.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG_FACILITY	SC VI.1 SC VI.3 SC VI.4	R 336.1205(3)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. All waste inks, coatings, cleanup solvents, adhesives, etc. (materials) shall be captured and stored in closed containers and disposed of in an acceptable manner in compliance with all applicable rules and regulations. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. If applicable, the VOC content of any material, as received and as applied, shall be determined using federal Reference Test Method 24 (inks, coatings, fountain solution additives and cleaning solvents) or 24A (only applies to solvent-borne inks and related coatings used in the publication rotogravure industry) pursuant to Rule 1040(5). Upon prior written approval by the AQD District Supervisor, VOC content may be determined from manufacturer's formulation data. If the Method 24 or 24A and the formulation values should differ, the Method 24 or 24A results shall be used to determine compliance. **(R 336.1205(3), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**

2. The HAP content of any material, as received/as applied, shall be determined using manufacturer's formulation data. Upon request of the AQD District Supervisor, the manufacturer's HAP formulation data shall be verified using EPA Test Method 311. **(R 336.1205(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1901)**

2. The permittee shall keep written record of the following for the FG_FACILITY on a calendar month averaging period:
   a) Gallons (with water) of each material (inks—solvent inks & waterborne inks, coatings, adhesives, *etc.*) used and reclaimed;
   b) As received, VOC content of each material (with water);
   c) VOC mass emission calculations determining the monthly emission rate in tons per month; and
   d) Total combined VOC mass emission calculations determining the yearly emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   The records are for the purpose of compliance demonstration and shall be kept using mass balance or an alternate method and format approved by the Air Quality Division District Supervisor. The records shall be kept on site for a period of at least five years and made available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

3. The permittee shall keep written record of the following for the FG_FACILITY on a calendar month averaging period:
   a) Gallons used of each material;
   b) Gallons reclaimed of each material, where applicable (typically cleanup or purge solvent);
   c) HAP content, in pounds per gallon, of each material;
   d) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per month; and
   e) Individual and aggregate HAP emission calculations determining the yearly emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

   The records are for the purpose of compliance demonstration and shall be kept using mass balance or an alternate method and format approved by the Air Quality Division District Supervisor. The records shall be kept on site for a period of at least five years and made available to the Department upon request. **(R 336.1205(3))**

4. The applicant shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both. The data shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1224, R336.1225, R 336.1702(a))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b