

**PUBLIC NOTICE OF INTENT TO ISSUE A TITLE V AIR QUALITY PERMIT**

**FORSYTH COUNTY  
OFFICE OF ENVIRONMENTAL ASSISTANCE AND PROTECTION  
WINSTON-SALEM, NORTH CAROLINA**

**January 14, 2014**

Notice is hereby given by the Forsyth County Office of Environmental Assistance and Protection (EAP) of an opportunity for the public to review and comment on a draft Title V air quality permit for:

**Oracle Flexible Packaging, Inc. – Liberty Complex  
Winston-Salem, NC  
Permit #00466-TV-24**

This facility has applied for renewal of its Title V Air Quality operation permit. The draft permit meets the Title V requirements as specified in FCAQTC Section 3Q .0500.

EPA will process this draft permit as a proposed permit and perform its 45-day review provided by Rule 3Q .0522 *Review by EPA and Affected States* concurrently with the public notice period. If public comments are received that result in a change to the permit, EPA's 45-day review period will cease to be performed concurrently with the public notice period. The deadline for citizen's petitions to the EPA Administrator will be determined based on EPA's 45-day review period beginning after the public comment period has ended. The status regarding EPA's 45-day review of this project and the deadline for citizen's petitions can be found at the following website address:

<http://www.epa.gov/region4/air/permits/northcarolina.htm>

The EAP will issue a final Air Quality Permit, in accordance with the conditions of the draft/proposed Air Quality Permit, unless there are public comments which result in a different decision or significant change in the permit.

A copy of the draft permit and statement of basis is available at the EAP's website:

[http://www.forsyth.cc/EAP/public\\_notices.aspx](http://www.forsyth.cc/EAP/public_notices.aspx)

Additional information regarding the draft permit may be obtained from the Office of Environmental Assistance and Protection, Forsyth County Government Center, 201 N. Chestnut Street, Winston-Salem, NC 27101-4120; telephone (336) 703-2440. The public may submit written comments on these proceedings to the address above or by e-mail to [lloydpb@forsyth.cc](mailto:lloydpb@forsyth.cc) on or before February 13, 2014, the close of the public comment period.

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Peter B. Lloyd, Ph.D., P.E., Manager  
Compliance Assistance & Permitting Division

**ENVIRONMENTAL AFFAIRS DEPARTMENT  
537 N. SPRUCE STREET  
WINSTON-SALEM, NC 27101-1362**

**PERMIT TO CONSTRUCT/OPERATE  
AIR QUALITY CONTROL  
CLASS: Title V**

<b>PERMIT NUMBER</b>	<b>EFFECTIVE DATE</b>	<b>EXPIRATION DATE</b>	<b>RENEWAL DUE</b>
<b>00466-TV-24</b>	<b>DATE, 2014</b>	<b>November 12, 2018</b>	<b>February 12, 2018</b>

**Facility Name:** Oracle Flexible Packaging, Inc. - Liberty Complex  
**Mailing Address:** 220 East Polo Road  
**City, State, ZIP Code:** Winston-Salem, NC 27105

**Facility Location:** 220 East Polo Road  
**City:** Winston-Salem, NC 27105

In accordance with the provisions set forth in the Forsyth County Air Quality Technical Code and Chapter 3 of the Forsyth County Code, "Air Quality Control", the facility identified above is authorized to operate, as outlined in Part I, "Air Quality Title V Operation Permit", and to construct and operate, as outlined in Part II, "Air Quality Construction and Operation Permit", the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations contained within this permit.

The permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete air quality permit application to the Forsyth County Environmental Affairs Department and received an Air Quality Permit, except as provided in this permit or in accordance with applicable provisions of the Forsyth County Air Quality Technical Code.

This permit supersedes all previous permits issued to the permittee by the Forsyth County Environmental Affairs Department.

Peter B. Lloyd, Ph.D., P.E., Manager  
Compliance Assistance & Permitting Division

Date:

# Oracle Flexible Packaging, Inc. - Liberty Complex Air Quality Permit # 00466-TV-24 DATE, 2014

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# PART I AIR QUALITY OPERATING PERMIT

## SECTION 1: FACILITY-WIDE PERMITTED EQUIPMENT AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S)

Emission Source ID #	Emission Source Description	Control Device ID #	Control Device Description
ES604-083	One eight-station rotogravure printing press P-12	CD604-006, CD604-007, and CD604-008	Three regenerative thermal oxidizers (each with a maximum heat input rate of 12.383 million Btu per hour) or Atmosphere
ES604-008, 009, and 081	Three ten-station rotogravure printing presses P-15, P-16, and P-19		
ES604-060	One eight-station rotogravure printing presses P-18		
ES604-010	One three-station rotogravure laminator L-9	CD604-004 and CD604-005	Two catalytic oxidizers operating in parallel firing natural gas or propane (each with a maximum heat input rate of 8.0 million Btu per hour) or Atmosphere
ES604-012	One two-station rotogravure laminator L-12	CD604-006, CD604-007, and CD604-008	Three regenerative thermal oxidizers (each with a maximum heat input rate of 12.383 million Btu per hour) or Atmosphere
ES604-075	One two-station rotogravure laminator L-14	CD604-004 and CD604-005	Two catalytic oxidizers operating in parallel firing natural gas or propane (each with a maximum heat input rate of 8.0 million Btu per hour) or Atmosphere

Emission Source ID #	Emission Source Description	Control Device ID #	Control Device Description
ES604-013, 014	Two two-station rotogravure extruders EX-1, EX-2	CD604-006, CD604-007, and CD604-008	Three regenerative thermal oxidizers (each with a maximum heat input rate of 12.383 million Btu per hour) or Atmosphere
ES604-015	One five-station rotogravure extruder EX-3		
ES604-079	One one-station pilot extruder EX-04	None	None
ES604-080	One enclosed hard chromium electroplating tank with a maximum rectifier capacity of 5,000 amperes	CD604-003	KCH Services, Inc. composite mesh-pad mist eliminator (1475 acfm)
ES604-084	One AESYS Technologies, LLC low-NO <sub>x</sub> Boiler fired by natural gas or propane with a maximum heat input rate of 28.1 MMBtu/hour <b>(NSPS)</b>	None	None

## SECTION 2 FACILITY GENERAL ADMINISTRATIVE CONDITIONS

### 2.1 **General Provisions** [Subchapter 3A and Rule 3Q .0508(i)(16)]

- A. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in Subchapters 3D and 3Q of the Forsyth County Air Quality Technical Code (FCAQTC).
- B. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Subchapter 3A of the Forsyth County Air Quality Ordinance (FCAQO), including assessment of civil and/or criminal penalties. This permit is valid only for the specific processes and operations applied for and indicated in the air quality permit application. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and enforcement action by this Office.
- C. This permit is not a waiver of or approval of any other permits that may be required for other aspects of the facility which are not addressed in this permit.
- D. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore. This permit does not allow the permittee to cause pollution in contravention of local laws or rules, unless specifically authorized by an order from the Director, or to cause pollution in contravention of state laws or rules.
- E. Terms and conditions contained herein shall be enforceable by this Office, the U.S. EPA and citizens of the United States as defined in the federal Clean Air Act, except those identified as **Locally Enforceable Only** requirements which are enforceable by this Office.
- F. Any stationary installation which will reasonably be expected to be a source of pollution shall not be operated, maintained or modified without the appropriate and valid permits issued by this Office, unless the source is exempted by rule. This Office may issue a permit only after it receives reasonable assurance that the installation will not cause pollution in violation of any of the applicable requirements.
- G. In addition to the authority found in Rules 3D. 0501 and 3Q .0508(i)(16), any deviation from the monitoring provisions of this permit may result in a request by this Office to submit data on rates of emissions in order to demonstrate compliance with any applicable regulation.

### 2.2 **Permit Availability** [Rules 3Q .0507(k), .0508(i)(16), .0508(i)(9) and .0110]

The permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of this Office or the U.S. EPA upon request.

**2.3 Submissions** [Rules 3Q .0507(c), .0508(i)(16) and .0104]

All documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required to be sent to this Office by this permit shall be submitted to the Forsyth County Office of Environmental Assistance and Protection, Forsyth County Government Center, 201 N. Chestnut Street, Winston-Salem, NC 27101-4120.

**2.4 Severability Clause** [Rule 3Q .0508(i)(2)]

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any specific circumstance, is challenged, the application of the provision in question to other circumstances, as well as the remainder of this permit's provisions, shall not be affected.

**2.5 Duty to Comply** [Rule 3Q .0508(i)(3)]

The permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

**2.6 Need to Halt or Reduce Activity Not a Defense** [Rule 3Q .0508(i)(4)]

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**2.7 Permit Shield** [Rule 3Q .0512(a)]

- A. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
- B. A permit shield shall not alter or affect:
  - 1. the power of the Forsyth County Board of Commissioners, Director, or Governor under NCGS 143-215.3(a)(12) or the U.S. EPA under Section 303 of the federal Clean Air Act;
  - 2. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
  - 3. the applicable requirements under Title IV of the Clean Air Act; or
  - 4. the ability of the Director or the U.S. EPA under Section 114 of the federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
- C. A permit shield shall not apply to any change made at a facility that does not require a permit or to any permit revision made under Rule 3Q .0523.
- D. A permit shield shall not extend to minor permit modifications made under Rule 3Q .0515.



## 2.8 **Circumvention** [Rules 3D .0502 and 3Q .0508(i)(16)]

No person shall circumvent any permitted air pollution control device, or allow the emissions of regulated air pollutants without the applicable air pollution control device operating properly. Unless otherwise specified by this permit, no permitted emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

## 2.9 **Good Air Pollution Control Practice** [Rules 3D .0502 and 3Q .0508(i)(16) ]

At all times, the equipment listed in *Section 1* shall be operated and maintained in a manner consistent with the design and emissions control as applied for in the application.

## 2.10 **Reporting Requirements for Excess Emissions and Permit Deviations** [Rules 3D .0535(f) and 3Q .0508(f)(2), 3Q .0508(i)(16) and 3Q .0508(g)]

“Excess Emissions” - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections 3D .0500, .0900, .1200 or .1400; or by a permit condition; or that exceeds a **Locally Enforceable Only** emission limit established in a permit issued under Section 3Q .0700. (*Note: This definition applies where the NSPS does not further define excess emissions for an affected NSPS emissions source.*)

“Deviation” - means any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions.

### A. Sources subject to Rules 3D .0524, .1110 or .1111 Excess Emissions and Permit Deviations

1. If the source specific NSPS (3D .0524) or NESHAP (3D .1110 or .1111) defines “excess emissions”, these shall be reported as prescribed in 3D .0524, .1110 or .1111.
2. If the source specific NSPS (3D .0524) or NESHAP (3D .1110 or .1111) does NOT define “excess emissions”, the permittee shall report excess emissions as deviations from permit requirements as prescribed in paragraph 3, below.
3. In addition to any specific NSPS or NESHAP reporting requirements the permittee shall upon becoming aware:
  - a. report to this Office any deviations from permit requirements by the next business day, unless an alternative reporting schedule is specifically provided in the permit, and
  - b. report in writing to this Office all deviations from permit requirements or any excess emissions within two business days, unless an alternative reporting schedule is specifically provided in the permit. The written report shall include the probable cause of such deviations and any corrective actions or preventative actions taken. Reports of all deviations from permit requirements shall be certified by a responsible official.

- B. Sources NOT subject to Rules 3D .0524, 1110 or .1111
1. Excess Emissions Greater than Four Hours in Duration [3D .0535(f)]  
The permittee shall report excess emissions greater than four hours in duration as prescribed in Rule 3D .0535(f) including, but not limited to the following:
    - a. Notify this Office of any such occurrence by 9:00 a.m. Eastern time of this Office's next business day of becoming aware of the occurrence as described in Rule 3D .0535(f)(1);
    - b. Notify this Office immediately when corrective measures have been accomplished; and
    - c. Submit, if requested, to this Office within 15 days after the request, a written report as described in Rule 3D .0535(f)(3).
  2. Excess Emissions Less than Four Hours in Duration and Deviations [3Q .0508(f)]  
The permittee shall report excess emissions less than four hours in duration and deviations from permit requirements as follows:
    - a. Report to this Office any excess emissions less than four hours in duration and any deviations from permit requirements quarterly, unless an alternative reporting schedule is specifically provided in the permit; and
    - b. Report in writing to this Office any excess emission less than four hours in duration or any deviations from permit requirements quarterly, unless an alternative reporting schedule is specifically provided in the permit. The written report shall include the probable cause of such excess emissions and deviations and any corrective actions or preventative actions taken. All reports of excess emissions and deviations from permit requirements shall be certified by a responsible official.
- C. Other Requirements under Rule 3D .0535 (Rule 3D .0535(g) is **Locally Enforceable Only.**)

The permittee shall comply with all other requirements contained in Rule 3D .0535.

## 2.11 **Emergency Provisions** <40 CFR 70.6(g)>

The permittee shall be subject to the following provision with regard to emergencies:

- A. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
- B. An emergency constitutes an affirmative defense to an action brought for

noncompliance with such technology-based emission limitations if the conditions specified in paragraph C below are met.

- C. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs, or other relevant evidence that include information as follows:
1. an emergency occurred and that the permittee can identify the cause(s) of the emergency;
  2. the permitted facility was at the time being properly operated;
  3. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the standards, or other requirements in the permit; and
  4. the permittee submitted notice of the emergency to this Office within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, and steps taken to mitigate emissions, and corrective actions taken.
- D. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- E. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

**2.12 Permit Fees** [Rules 3Q .0206(b), .0508(i)(10) and .0519(a)(4)]

If, within 30 days after being billed, the permittee fails to pay an annual permit fee required under Subchapter 3Q .0200 of the FCAQTC, the Director may initiate action to terminate this permit under Rule 3Q .0519 of the FCAQTC.

**2.13 Annual Emission Inventory Requirements** [Rule 3Q .0207]

The permittee shall report to the Director by June 30<sup>th</sup> of each year the actual emissions of each air pollutant listed in Rule 3Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form(s) as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

**2.14 Compliance Certification** <40 CFR 70.6(c)> [Rules 3Q .0508(n) and .0508(i)(16)]

By March 1<sup>st</sup> unless another date is established by the Director, the permittee shall submit to this Office and the U.S. EPA (**U.S. EPA Region 4, Air Enforcement Section, Mail Code: 4APT-AEEB, 61 Forsyth Street, S.W., Atlanta, GA 30303**) a compliance certification by a responsible official with all terms and conditions in the permit, including emissions limitations, standards, or work practices. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the federal Clean Air Act. The compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):

- A. the identification of each term or condition of the permit that is the basis of the certification;
- B. the status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the methods or means designated in 40 CFR 70.6(c)(5)(iii)(B). The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR 64 occurred;
- C. whether compliance was continuous or intermittent;
- D. the identification of the method(s) or other means used by the owner and operator for determining the compliance status with each term and condition during the certification period; these methods shall include the methods and means required under 40 CFR Part 70.6(a)(3); and
- E. such other facts as the Director may require to determine the compliance status of the source.

**2.15 Retention of Records** [Rule 3Q .0508(f)]

The permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit.

**2.16 NESHAP - Recordkeeping Requirement for Applicability Determinations** <40 CFR 63.10(b)(3)> [Rule 3D .1111]

If the permittee determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants is not subject to a relevant standard or other requirement established under 40 CFR Part 63, the permittee shall keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source. This record shall include all of the information required under 40 CFR 63.10(b)(3).

**2.17 Duty to Provide Information [Rule 3Q .0508(i)(9)]**

- A. The permittee shall furnish to this Office, in a timely manner, any reasonable information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
- B. The permittee shall furnish this Office copies of records required to be kept by the permit when such copies are requested by the Director.

**2.18 Duty to Supplement or Correct Application [Rule 3Q .0507(f)]**

The permittee, upon becoming aware that any relevant facts were omitted from the application or that incorrect information was submitted with the application, shall promptly submit such supplementary facts or corrected information to this Office. The permittee shall also provide additional information necessary to address any requirements that become applicable to the source after the date a complete application was submitted but prior to release of the draft permit.

**2.19 Certification by Responsible Official [Rule 3Q .0520]**

A responsible official (as defined in 40 CFR 70.2) shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statement and information in the document are true, accurate, and complete.

**2.20 Inspection and Entry [Rule 3Q .0508(l)]**

- A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of this Office to perform the following:
  - 1. enter upon the permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
  - 2. have access to and copy, at reasonable times, any records that must be kept under conditions of the permit;
  - 3. inspect, at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
  - 4. sample or monitor substances or parameters, at reasonable times and using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements.

Nothing in this condition shall limit the ability of the U.S. EPA to inspect or enter the premises of the permittee under Section 114 or other provisions of the Clean Air Act.

- B. No person shall obstruct, hamper or interfere with any such authorized representative while in the process of carrying out his official duties.

**2.21 Averaging Times** <40 CFR 70.6(a)(3)> [Rule 3Q .0508(f)]

Unless otherwise specified in *Section 3* of this permit for a specific emission standard or limitation, the applicable averaging period for determining compliance with an emission standard or limitation during compliance testing shall be based on the applicable U.S. EPA reference test method.

**2.22 Compliance Testing** [Rule 3D .0501(b)]

When requested by this Office for determining compliance with emission control standards, the permittee shall provide sampling ports, pipes, lines, or appurtenances for the collection of samples and data required by the test procedure; scaffolding and safe access to the sample and data collection locations; and light, electricity, and other utilities required for sample and data.

**2.23 General Emissions Testing and Reporting Requirements** [Rules 3D .2602 and 3Q .0508(i)(16)]

Testing shall be conducted in accordance with FCAQTC Section 3D .2600 except as may be otherwise required in FCAQTC Rules 3D .0524, 3D .0912, 3D .1110, 3D .1111, 3D .1415 or a permit condition specific to the emissions source. Requests to use an alternative test method or procedure must be made in writing at least 45 days prior to the test and approved by this Office. Alternatives to test methods or procedures specified for emissions sources subject to test requirements under 40 CFR 60, 40 CFR 61 or 40 CFR 63, may require approval by the U.S. EPA. When required to conduct emissions testing under the terms of the permit:

- A. The permittee shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved prior to air pollution testing. Emission testing protocols must be submitted at least 45 days before conducting the test for pre-approval prior to testing if requested by the permittee.
- B. The permittee shall notify this Office of the specific test dates at least 15 days prior to the scheduled test date in order to afford this Office the opportunity to have an observer on-site during the sampling program.
- C. During all sampling periods, the permittee shall operate the emission source(s) under operating conditions that best fulfills the purpose of the test and are approved by the Director or his delegate.
- D. The permittee shall submit one copy of the test report to this Office not later than 30 days after sample collection. The permittee may request an extension to submit the final test report if the extension request is a result of actions beyond the control of the permittee. The test report shall contain at a minimum the following information:
  - 1. a certification of the test results by sampling team leader and facility representative;

2. a summary of emissions results expressed in the same units as the emission limits given in the rule for which compliance is being determined and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s) as appropriate;
  3. a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics as necessary;
  4. all field, analytical and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
  5. example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
  6. documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.
- E. This Office will review emission test results with respect to the specified testing objectives as proposed by the permittee and approved by this Office.

#### 2.24 **Termination, Modification, and Revocation of the Permit** [Rule 3Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

- A. the information contained in the application or presented in support thereof is determined to be incorrect;
- B. the conditions under which the permit or permit renewal was granted have changed;
- C. violations of conditions contained in the permit have occurred;
- D. the permit holder fails to pay fees required under Section 3Q .0200 within 30 days after being billed;
- E. the permittee refuses to allow the Director or his authorized representative upon presentation of credentials:
  1. to enter, at reasonable times and using reasonable safety practices, the permittee's premises in which a source of emissions is located or in which any records are required to be kept under terms and conditions of the permit;
  2. to have access, at reasonable times, to any copy or records required to be kept under terms and conditions of the permit;
  3. to inspect, at reasonable times and using reasonable safety practices, any source of emissions, control equipment, and any monitoring equipment or method required in the permit; or
  4. to sample, at reasonable times and using reasonable safety practices, any emission sources at the facility;



- F. the U.S. EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d);  
or
- G. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of Chapter 3 of the Forsyth County Code.

**2.25 Permit Reopenings, Modifications, Revocations and Reissuances, or Terminations** [Rule 3Q .0508(i)(5)]

The Director may reopen, modify, revoke and reissue, or terminate this permit for reasons specified in Rule 3Q .0517 or .0519. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition in this permit.

**2.26 Permit Renewal** [Rule 3Q .0508(e) and Rule 3Q .0513]

This permit is issued for a term not to exceed five years. Permits issued under Title IV of the Clean Air Act shall be issued for a fixed period of five years. This permit shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete renewal application is submitted at least nine months before the date of permit expiration. If the permittee or applicant has complied with Rule 3Q .0512(b)(1), this permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of this permit shall remain in effect until the renewal permit has been issued or denied.

**2.27 Reopening for Cause** [Rules 3Q .0517 and .0508(g)]

This permit shall be reopened and revised in accordance with Rule 3Q .0517 prior to its expiration date, for any of the following reasons:

- A. Additional applicable requirements become applicable to the facility with remaining permit term of three or more years.
- B. Additional requirements, including excess emissions requirements, become applicable to this source under Title IV of the Clean Air Act. Excess emissions offset plans for this source shall become part of this permit upon approval by the U.S. EPA.
- C. The Director or the U.S. EPA finds that a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.
- D. The Director or the U.S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

**2.28 Construction and Operation Permits** [Sections 3Q .0100 and .0300]

A construction and operating permit shall be obtained by the permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of Sections 3Q .0100 and .0300.



**2.29 Permit Modifications** [Rules 3Q .0514, .0515, .0516, .0517, .0523 and .0524]

- A. Permit modifications may be subject to the requirements of Rules 3Q .0514, .0515, .0516 and .0524.
- B. Changes made pursuant to Rules 3Q .0523(a) and (b) do not require a permit modification.
- C. The permittee shall submit an application for reopening for cause in accordance with Rule 3Q .0517 if notified by this Office.
- D. To the extent that emissions trading is allowed under FCAQTC Subchapter 3D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to Rule 3Q .0523(c).

**2.30 Insignificant Activities** [Rules 3Q .0503 and .0508(i)(15)]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The permittee shall have available at the facility at all times and made available to an authorized representative of this Office upon request, documentation, including calculations if necessary, to demonstrate that an emission source or activity is insignificant.

**2.31 Standard Application Form and Required Information** [Rules 3Q .0505 and .0507]

The permittee shall submit applications and required information in accordance with the provision of Rules 3Q .0505 and .0507.

**2.32 Property Rights** [Rule 3Q .0508(i)(8)]

This permit does not convey any property rights of any sort, or any exclusive privileges.

**2.33 Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [Rule 3Q .0508(b)]

- A. If the permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR 82 Subpart A, Appendices A and B, the permittee shall service, repair, and maintain such equipment according to the work practices and personnel certification requirements, and the permittee shall use certified recycling and recovery equipment specified in 40 CFR 82 Subpart F.
- B. The permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR 82 Subpart F.
- C. The permittee shall comply with all reporting and recordkeeping requirements of 40

CFR 82.166. Reports shall be submitted to the U.S. EPA or its designee as required.

**2.34 Prevention of Accidental Releases - Section 112(r)** [Rule 3Q .0508(h)]

If the permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the federal Clean Air Act, then the permittee is required to register this plan in accordance with 40 CFR Part 68.

**2.35 Title IV Allowances** [Rule 3Q .0508(i)(1)]

The facility's emissions are prohibited from exceeding any allowances that the facility lawfully holds under Title IV of the Clean Air Act. This permit shall not limit the number of allowances held by the permittee, but the permittee may not use allowances as a defense to noncompliance with any other applicable requirement.

**2.36 Air Pollution Alert, Warning or Emergency** [Section 3D .0300]

Should the Director of this Office declare an Air Pollution Alert, Warning or Emergency, the permittee will be required to operate in accordance with the permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in Section 3D .0300.

**2.37 Registration of Air Pollution Sources** [Rule 3D .0202]

The Director of this Office may require the permittee to register a source of air pollution. If the permittee is required to register a source of air pollution, this registration and required information shall be in accordance with Rule 3D .0202(b).

**2.38 Ambient Air Quality Standards** [Rule 3D .0501(e)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in Rule 3D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

**2.39 Odor** [Rule 3D .0522] *Locally Enforceable Only*

The permittee shall not cause or permit the emission of odors beyond the facility's property lines which are harmful, irritating or which unreasonably interfere with the use and enjoyment of any person's properties or living conditions, or any public properties or facilities. Such odors are prohibited by Rule 3D .0522. No violation shall be cited, provided that the best practical treatment, maintenance, and control of odor(s) currently available is used. This requirement does not apply to normal agricultural practices, nor to accidental emissions of odors which are not normally produced during routine operations and activities as determined by the Director.

**2.40 Fugitive Dust Control Requirement** [Rule 3D .0540]

The permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR 60, Appendix A), the owner or operator may be required to submit and implement a fugitive dust control plan as described in 3D .0540(f).

**National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP) General Conditions - [Rule 3D .1111]**

Following are conditions found in the 40 CFR Part 63 NESHAP General Provisions. The following conditions only apply to sources subject to a relevant standard of a subpart of 40 CFR Part 63 except when otherwise specified in a particular subpart or in a relevant standard.

**2.41 NESHAP - General Provisions <40 CFR 63 Subpart A> [Rule 3D .1111]**

The permittee shall comply with all applicable requirements specified in the general provisions of the National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR 63 Subpart A) including but not limited to requirements concerning notifications, testing, monitoring, recordkeeping, modifications, construction, and reconstruction.

**2.42 NESHAP - Startup Shutdown and Malfunction Plan <40 CFR 63.6(e)(3)> [Rule 3D .1111]**

The permittee shall develop and implement a written startup, shutdown and malfunction plan in accordance with the requirements in 40 CFR 63.6(e)(3).

**2.43 NESHAP - Good Air Pollution Control Practice <40 CFR 63.6(e) and 63.8(c)> [Rule 3D .1111]**

At all times, including periods of startup, shutdown, and malfunction, the permittee shall maintain and operate any affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions at least to the levels required by all relevant standards. The permittee also shall maintain and operate each continuous monitoring system (CMS) as specified in 40 CFR 63.8, or in a relevant standard, and in a manner consistent with good air pollution control practices. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required by 40 CFR 63.6(e)(3). Operation and maintenance requirements established pursuant to Section 112 of the Clean Air Act are enforceable independent of emissions limitations or other requirements in relevant standards.

**2.44 NESHAP - Circumvention <40 CFR 63.4(b)> [Rule 3D .1111]**

The permittee shall not build, erect, install, or use any article, machine, equipment or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere, the use of diluents to achieve

compliance with a relevant standard for visible emissions, and the fragmentation of an operation such that the operation avoids regulation by a relevant standard.

**2.45 NESHAP - Maintain Records** <40 CFR 63.10(b)(2)> [Rule 3D .1111]

For affected sources, the permittee shall maintain relevant records of:

- A. the occurrence and duration of each startup, shutdown, or malfunction of operation;
- B. the occurrence and duration of each malfunction of the air pollution control equipment;
- C. all maintenance performed on the air pollution control equipment;
- D. actions taken during periods of startup, shutdown, and malfunction;
- E. all information necessary to demonstrate compliance with the affected source's startup, shutdown, and malfunction plan when all actions taken are consistent with the procedures specified in the plan;
- F. each period during which a CMS is malfunctioning or inoperative;
- G. all required measurement needed to demonstrate compliance with a relevant standard;
- H. all results of performance tests, CMS performance evaluations, and opacity and visible emission observations;
- I. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations;
- J. all CMS calibration checks;
- K. all adjustments and maintenance performed on CMS;
- L. any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements if the source has been granted a waiver under 40 CFR 63.10(f);
- M. all emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test if the source has been granted such permission under 40 CFR 63.8(f)(6); and
- N. all documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.

**2.46 NESHAP - Files Available for Inspection** <40 CFR 63.10(b)(1)> [Rule 3D .1111]

The permittee shall maintain files of all information required by 40 CFR Part 63 recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least five years following the date of each occurrence,

measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site.

**2.47 NESHAP - Performance Testing Facilities Provided by Permittee** <40 CFR 63.7(d)> [Rule 3D .1111]

For any performance testing for each new source and, at the request of the Director, for each existing source, the permittee shall provide performance testing facilities as follows:

- A. Sampling ports adequate for test methods applicable to the affected source. This includes:
  - 1. Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and
  - 2. Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
- B. Safe sampling platform(s).
- C. Safe access to sampling platform(s).
- D. Utilities for sampling and testing equipment.
- E. Any other facilities that the Director deems necessary for safe and adequate testing of a source.
- F. Unless otherwise specified in the applicable subpart, each performance test shall be conducted according to the requirements in 40 CFR 63.7.

**Compliance Assurance Monitoring for Major Stationary Sources (CAM) General Conditions - [40 CFR Part 64]**

Following are conditions based on the requirements found in 40 CFR Part 64. These conditions only apply to sources subject to the CAM requirements.

**2.48 CAM - Proper Maintenance** <40 CFR 64.7(b)> [Rule 3D .0614]

At all times, the permittee shall maintain the monitoring equipment, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

**2.49 CAM - Continued Operation** <40 CFR 64.7(c)> [Rule 3D .0614]

Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities

shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**2.50 CAM - Response to Excursions or Exceedances** <40 CFR 64.7(d)> [Rule 3D .0614]

Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designed condition, or below the applicable emissions limitation or standard, as applicable.

Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. Based on the results of this determination, this Office may require the permittee to develop and implement a Quality Improvement Plan (QIP). The elements of a QIP are identified in 40 CFR 64.8(b).

**2.51 CAM - Documentation of Need for Improved Monitoring** <40 CFR 64.7(e)> [Rule 3D .0614]

After approval of the CAM plan, if the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify this Office and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conduction monitoring and collecting data, or the monitoring of additional parameters.

**New Source Performance Standards (NSPS) General Conditions - [Rule 3D .0524]**

Following are conditions found in the 40 CFR Part 60 NSPS General Provisions. The following conditions only apply to sources subject to a relevant standard of a subpart of 40 CFR Part 60 except when otherwise specified in a particular subpart or in a relevant standard.

**2.52 NSPS - General Provisions** <40 CFR 60 Subpart A> [Rule 3D .0524]

The permittee shall comply with all applicable requirements specified in the general provisions of the New Source Performance Standards (40 CFR 60 Subpart A) including but not limited to requirements concerning notifications, testing, monitoring, recordkeeping, modifications and reconstruction.

**2.53 NSPS - Good Air Pollution Control Practice** <40 CFR 60.11(d)> [Rule 3D .0524]

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

**2.54 NSPS - Circumvention** <40 CFR 60.12> [Rule 3D .0524]

Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard under 40 CFR 60. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

**2.55 NSPS - Maintain Records - Startup/Shutdown/Malfunction** <40 CFR 60.7(b)> [Rule 3D .0524]

The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

**2.56 NSPS - Files Available for Inspection** <40 CFR 60.7(f)> [Rule 3D .0524]

The permittee shall maintain a file of all measurements, including, if applicable, performance test measurements and all other information required in 40 CFR 60. This file shall be kept in a permanent form suitable for inspection and shall be retained at least two years following the date of such measurements, maintenance, reports, and records.

**2.57 NSPS - Performance Testing Facilities Provided by Permittee** <40 CFR 60.8(e)> [Rule 3D .0524]

For any performance testing, the permittee shall provide, or cause to be provided, performance testing facilities as follows:

- A. Sampling ports adequate for the applicable test methods. This includes:
  - 1. constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and
  - 2. providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.



- B. Safe sampling platform(s) with safe access.
- C. Utilities for sampling and testing equipment.
- D. Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For purposes of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply.



### **SECTION 3: SPECIFIC LIMITATIONS AND CONDITIONS**

The emission source(s) and associated air pollution control device(s) listed below are subject to the following specific terms, conditions, and limitations, including the monitoring recordkeeping, and reporting requirements to which those requirements apply:

**3.1 ROTOGRAVURE PRINTING PRESSES P-12, P-15, P-16, P-18, and P-19 (Eight, Ten, Ten, Eight, and Ten Stations Respectively, ID Nos. ES604-083, 008, 009, 060, and 081), ROTOGRAVURE LAMINATOR L-12 (Two Station, ID No. ES604-012), and ROTOGRAVURE EXTRUDERS EX-1, EX-2, AND EX-3 (Two, Two and Five Stations Respectively, ID Nos. ES604-013, 014 and 015) EXHAUSTING TO:**

**THREE REGENERATIVE THERMAL OXIDIZERS OPERATING IN PARALLEL (12.383 Million Btu per Hour Heat Input Rate Each, ID Nos. CD604-006, 007, and 008), or ATMOSPHERE; and**

**ROTOGRAVURE LAMINATORS L-9 AND L-14 (Three and Two Stations Respectively, ID Nos. ES604-010 and 075) EXHAUSTING TO:**

**TWO CATALYTIC OXIDIZERS OPERATING IN PARALLEL (16.0 Million Btu per Hour Combined Heat Input Rate, ID Nos. CD604-004 and 005), or ATMOSPHERE; and**

**ROTOGRAVURE EXTRUDER EX-04 (One Station Pilot Extruder, ID No. ES604-079) EXHAUSTING TO:  
ATMOSPHERE**

**Table 3.1: Summary of Emission Limits, Standards and Other Applicable Requirements.**

Regulated Pollutants	Applicable Standard		Applicable Regulation
	Specific Limit	Specific Unit	
HAP	0.05 kg HAP/kg HAP applied, 0.04 kg HAP/kg material applied, or 0.20 kg HAP/kg of solids applied	ES604-008, 009, 010, 012 through 015, 060, 075, 081, and 083	Rule 3D .1111 (40 CFR 63 Subpart KK)
VOC	4728 tons per 12 month period	ES604-008, 009, 010, 012 through 015, 060, 075, 079, 081, and 083	Rule 3D .0530
VOC	966 tons per 12-month period	ES604-008, 010, and 012	Rule 3D .0530
VOC	112 tons per 12-month period	ES604-009	Rule 3D .0530
VOC	39.9 tons per 12-month period	ES604-060	Rule 3D .0530
VOC	97.6 tons per 12-month period	ES604-010	Rule 3D .0530
VOC	39.9 tons per 12-month period	ES604-075	Rule 3D .0530
VOC	39.9 tons per 12-month period	ES604-079	Rule 3D .0530
VOC	124.2 tons per 12-month period	ES604-081	Rule 3D .0530
VOC	57.3 tons per 12-month period	ES604-083	Rule 3D .0530
VOC	Work Practice Standards	ES604-008, 009, 010, 012 through 015, 060, 075, 079, 081, and 083	Rule 3D .0958(c) and (d)
*Particulate Matter	E = 4.10 x P <sup>0.67</sup> ; Where: E = allowable emission rate in lbs per hr P = process weight in tons per hr		Rule 3D .0515
*Sulfur Dioxide	2.3 lb SO <sub>2</sub> /mmBtu		Rule 3D .0516
*Visible emissions	40 % opacity**	ES604-010, 013, and 014	Rule 3D .0521(c)
*Visible emissions	20 % opacity	ES604-008, 009, 060, 012, 015, 075, 079, 081, and 083	Rule 3D .0521(d)

\*3D .0516 - Sulfur Dioxide Emissions from Combustion Sources, 3D .0515 - Particulates from Miscellaneous Processes and 3D .0521 - Control of Visible Emissions apply to the direct-fired natural gas and propane burners associated with these emission units. Use of only natural gas and propane assures compliance with these standards. No monitoring, recordkeeping, or reporting is required to assure compliance, however, excess visible emissions shall be grounds for this Office to require testing from these sources using appropriate U.S. EPA reference test methods for particulate matter as approved by this Office. The emissions from natural gas and propane combustion shall be included in emission inventories.

\*\*Although these emissions sources are allowed up to 40% opacity under the standard, the emission stack is common with sources subject to the 20% opacity standard. In order to practically ensure all sources comply with the appropriate standard, stack emissions must be limited to the more stringent standard.

**A. National Emission Standards for the Printing and Publishing Industry [Rule 3D .1111, 40 CFR 63 Subpart KK]**

**1. Emission Standard [Rule 3D .1111, 40 CFR 63.825(b)]**

- a. Emissions of hazardous air pollutants (HAP), as defined in 40 CFR 63.2 and Section 112(b) of the Clean Air Act, shall not exceed
- Five percent of the organic HAP applied for the month;
  - Four percent of the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month;
  - 20 percent of the mass of solids applied for the month; **or**
  - a calculated equivalent allowable mass based on the organic HAP and solids contents of the inks coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month.
- b. The permittee shall demonstrate compliance with this standard according to one of the following procedures:
- Demonstrate that the ratio of monthly average as-applied organic HAP content,  $H_L$ , of all material applied is less than 0.04 kg HAP per kg of material applied using the following equation:

$$H_L = \frac{\sum_{i=1}^p M_i C_{hi} + \sum_{j=1}^q M_j C_{hj}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_j}$$

- Demonstrate that the monthly average as-applied organic HAP content on the basis of solids applied,  $H_S$ , is less than 0.20kg HAP per kg solids using the following equation:

$$H_S = \frac{\sum_{i=1}^p M_i C_{hi} + \sum_{j=1}^q M_j C_{hj}}{\sum_{i=1}^p M_i C_{si}}$$

- Demonstrate the monthly average as-applied organic HAP emission rate,  $L$ , while operating a capture system and control device is no more than 0.20 kg organic HAP emitted per kg solids applied using the following equation:

$$L = \frac{H_{OX} + H_{UC}}{\left[ \sum_{i=1}^p M_{Ci} C_{Si} \right]_{OX} + \left[ \sum_{i=1}^p M_{Bi} C_{Si} \right]_{UC}}$$

**2. Testing [Rule 3D .1111, 40 CFR 63.7 and 63.825(d)(1)(ii)]**

- If performance testing or another form of compliance testing is required by this Office or USEPA, the permittee shall perform such testing in accordance with the appropriate EPA reference method(s) in accordance with 40 CFR 63.7 and as approved by this Office.
- The permittee shall submit a site-specific test plan to the Director at least 60

calendar days before the performance test is scheduled to take place, or on a mutually agreed upon date.

3. **Monitoring and Recordkeeping Requirements** [Rule 3D .1111, 40 CFR 63.825(f)]

- a. The following nomenclature is used to specify the required monitoring and recordkeeping:
- $C_{Hi}$  is the organic HAP content of ink or other solid containing material,  $i$ , (kg HAP/kg),
  - $C_{Hj}$  is the organic HAP content of solvent or other diluent,  $j$ , (kg HAP/kg),
  - $C_{Vi}$  is the volatile matter content of ink or other solid containing material,  $i$ , (kg volatile matter/kg),
  - $C_{Si}$  is the solids content of ink or other solid containing material,  $i$ , (kg solids/kg),
  - $M_{Ci}$  is the mass applied of ink or other solid containing material,  $i$ , applied at controlled workstations (kg),
  - $M_{Cj}$  is the mass of solvent or other diluent,  $j$ , applied at controlled workstations (kg),
  - $M_{Bi}$  is the mass of ink or other solid containing material,  $i$ , applied at uncontrolled workstations (kg),
  - $M_{Bj}$  is the mass of solvent or other diluent,  $j$ , applied at uncontrolled workstations (kg),
  - $M_i$  is the mass of ink or other solid containing material,  $i$ , applied in a month,
  - $M_j$  is the mass of solvent, thinner, reducer, diluent or other non-solids containing material,  $j$ , added to solids containing material,  $i$ , in a month,
  - $i$  denotes each ink or solid containing material,
  - $p$  is the total number inks or solid containing materials,
  - $j$  denotes each solvent or other diluent,
  - $q$  is the total number of solvents or other diluents,
  - $E$  is the oxidizer (either regenerative thermal or catalytic) destruction efficiency (%),
  - $F$  is the capture efficiency at P-12, P-15, P-16, P-19, L-9, L-12, L-14, EX-1, EX-2, or EX-3 (ID Nos. ES604-083, 008, 009, 081, 010, 012, 075, 013, 014, or 015) when exhausting to the oxidizers (either regenerative thermal or catalytic) (%).
- b. For periods that demonstrate compliance according to the procedures specified in **3.1(A)(1)(b)(i)**, the permittee shall:
- i. Determine the HAP content of each ink and other solids containing material,  $C_{hi}$ , (kg HAP/kg), applied during the month following the procedures in 40 CFR 63.827(b)(2).
  - ii. Determine the sum of the mass of all inks and other solids-containing materials,  $M_i$ , (kg), and the sum of the mass of all solvents and other diluents,  $M_j$ , applied during the month.
- c. For periods that demonstrate compliance according to the procedures specified in **3.1(A)(1)(b)(ii)**, the permittee shall:
- i. Follow the requirements of **3.1(A)(1)(b)(i) and (ii)**.
  - ii. Determine the solids content of each ink, and other solids containing material,  $C_{si}$ , (kg solids/kg), applied during the month following the procedures in 40 CFR 63.827(c)(2).
- d. For periods that demonstrate compliance according to the procedures specified in **3.1(A)(1)(b)(iii)**, the permittee shall:
- i. Whenever emissions are exhausted to the regenerative thermal oxidizers or the catalytic oxidizers for the intermittently-controlled workstations associated

with rotogravure printing presses P-12, P-15, P-16, P-18, and P-19 (ID Nos. ES604-083, 008, 009, 060, and 081), laminators L-9, L-12, and L-14 (ID Nos. ES604-010, 012, and 075), and extruders EX-1, EX-2, and EX-3 (ID Nos. ES604-013, 014, and 015):

- a. Secure bypass line valves in the closed position with a lock-and-key type configuration, or
- b. Continuously monitor bypass line valve positions.

The permittee shall maintain records sufficient to determine bypass line valve positions as specified in 40 CFR 63.828(a)(1).

- ii. For all periods that the workstations for the rotogravure printing presses P-12, P-15, P-16, P-18, and P-19 (ID Nos. ES604-083, 008, 009, 060, and 081), laminator L-12 (ID Nos. ES604-012), and extruders EX-1, EX-2, and EX-3 (ID Nos. ES604-013, 014, and 015) are vented to the regenerative thermal oxidizers, the permittee shall:
  - a. Operate the regenerative thermal oxidizers to ensure the combustion chamber temperature of each unit is maintained at a minimum of 1500 °F to ensure a minimum destruction efficiency, E (%), is maintained.
  - b. Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device in accordance with 40 CFR 63.828(a)(5).
  - c. For extruders EX-2, and EX-3 (ID Nos. ES604-014 and 015):
    1. Operate the exhaust system to ensure the negative static pressure at the inlet to the exhaust fan is greater than the value determined during the most recent capture efficiency performance test minus 0.5 inches of water column to ensure the minimum capture efficiency, F (%), is maintained. Compliance with this requirement shall be determined using a daily block average over the periods of operation.

$$|SP_{\text{minimum}}| > |SP_{\text{test average}}| - 0.5'' \text{ w.c.}$$

2. Install, calibrate, operate, and maintain a static pressure monitor at the inlet to the exhaust fan in accordance with 40 CFR 63.8. The static pressure shall be measured and recorded at least once every 15 minutes.
- d. For extruder EX-1 (ID No. ES604-013):
  1. Until a performance test establishing an actual capture efficiency and corresponding monitorable parameter range, the permittee shall determine hazardous air pollutant emissions from EX-1 using an assumed overall control efficiency of 65%.
  2. To ensure the minimum capture efficiency for stations 1 and 2 of EX-1 are maintained, the negative static pressures shall be maintained such that the magnitudes,  $\square SP \square$  are greater than or equal to 0.5" w.c. and 1.0" w.c. respectively. The static pressure shall be measured and recorded at least once every 15 minutes.
- e. For presses P-12, P-15, P-16, P-19, and laminator L-12 (ID Nos. ES604-083, 008, 009, 081, and 012):
  1. Comply with EPA Method 204 -Criteria for and Verification of a Permanent or Temporary Total Enclosure specified in Appendix M to 40 CFR Part 51 unless an alternative method is approved by this Office.
  2. Maintain a minimum pressure drop of 0.007" w.c. across the

permanent total enclosures. Pressure drop readings shall be recorded at least four times equally spaced over an hour. The pressure drop monitors shall be inspected at least once monthly and the results of the inspections maintained in a log. The pressure drop monitors shall be calibrated and tested at least semiannually and the results maintained in a log.

- f. For press P-18 (ID Nos. ES604-060):
1. Until a performance test establishes an actual capture efficiency and corresponding monitorable parameter range, the permittee shall determine hazardous air pollutant emissions from P-18 as uncontrolled emissions.
- g. Determine the organic HAP content of each ink and other solids containing material,  $C_{Hi}$  (kg HAP/kg), and each solvent and other diluent,  $C_{Hj}$  (kg HAP/kg), applied at each press during the month following the procedure in 40 CFR 63.827(b)(2).
- h. Determine the sum of the mass of all inks, and other solids-containing materials,  $M_{Ci}$  (kg), and the sum of the mass of all solvents, and other diluents which are applied during the month,  $M_{Cj}$  (kg).
- i. Calculate the organic HAP emitted through the regenerative thermal oxidizers,  $H_{ox}$  (kg), from each press, laminator, and extruder during the month according to:

$$H_{OX} = \sum_{P12,15,16,18,19,L12,Ex1,2,3} \left[ \sum_{i=1}^p M_{Ci} C_{Hi} + \sum_{j=1}^q M_{Cj} C_{Hj} \right] \left[ 1 - \left( \frac{E}{100} \frac{F}{100} \right) \right]$$

- iii. For all periods that the workstations for the laminators L-9 and L-14 (ID Nos. ES604-010, and 075) are vented to the catalytic oxidizers, the permittee shall:
- a. Operate the catalytic oxidizers to ensure the pre-catalyst bed temperatures are maintained at a minimum of 500 °F to ensure a minimum destruction efficiency, E (%), is maintained.
  - b. Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device in accordance with 40 CFR 63.828(a)(5).
  - c. For laminators L-9 and L-14 (ID Nos. ES604-010 and 075):
    1. Comply with EPA Method 204 -Criteria for and Verification of a Permanent or Temporary Total Enclosure specified in Appendix M to 40 CFR Part 51 unless an alternative method is approved by this Office.
    2. Maintain a minimum pressure drop of 0.007" w.c. across the permanent total enclosures. Pressure drop readings shall be recorded at least four times equally spaced over an hour. The pressure drop monitors shall be inspected at least once monthly and the results of the inspections maintained in a log. The pressure drop monitors shall be calibrated and tested at least semiannually and the results maintained in a log.
  - d. Determine the organic HAP content of each ink and other solids containing material,  $C_{Hi}$  (kg HAP/kg), and each solvent and other diluent,  $C_{Hj}$  (kg HAP/kg), applied at each laminator during the month following the procedure in 40 CFR 63.827(b)(2).
  - e. Determine the sum of the mass of all inks, and other solids-containing

materials,  $M_{Ci}$  (kg), and the sum of the mass of all solvents, and other diluents which are applied during the month,  $M_{Cj}$  (kg).

- f. Calculate the organic HAP emitted through the catalytic oxidizers,  $H_{ox}$  (kg), from each laminator during the month according to:

$$H_{OX} = \sum_{L9,14} \left[ \left[ \sum_{i=1}^p M_{Ci} C_{Hi} + \sum_{j=1}^q M_{Cj} C_{Hj} \right] \left[ 1 - \left( \frac{E}{100} \frac{F}{100} \right) \right] \right]$$

- iv. For laminators L-9, L-12, and L-14 (ID Nos. ES-604-010, 012, and 075), extruders EX-1, EX-2, and EX-3 (ID Nos. ES604-013, 014, and 015), and all periods that the workstations for the rotogravure printing presses P-12, P-15, P-16, P-18, and P-19 (ID Nos. ES604-083, 008, 009, 060, and 081), are operated in bypass mode, the permittee shall:
- Determine the organic HAP content of each ink and other solids containing material,  $C_{Hi}$  (kg HAP/kg), and each solvent and other diluent,  $C_{Hj}$  (kg HAP/kg), applied during the month following the procedure in 40 CFR 63.827(b)(2).
  - Determine the sum of the mass of all inks and other solids-containing materials,  $M_{Bi}$  (kg), which are applied at uncontrolled workstations during the month, and the sum of the mass of all solvents, and other diluents,  $M_{Bj}$  (kg), which are applied during the month at uncontrolled workstations.
  - Calculate the uncontrolled organic HAP,  $H_{uc}$  (kg), emitted during the month according to:

$$H_{UC} = \left[ \sum_{i=1}^p M_{Bi} C_{Hi} + \sum_{j=1}^q M_{Bj} C_{Hj} \right]$$

The organic HAP emitted from an uncontrolled press is equal to the organic HAP applied on that press.

- v. The permittee shall determine the solids content of each ink, and other solids containing materials,  $C_{Si}$  (kg solids/kg), applied during the month following the procedure in 40 CFR 63.827(c)(2).
- e. In addition to the monitoring and recordkeeping requirements specified above, the permittee shall maintain records of:
- records specified in 40 CFR 63.10(b)(2) of all measurements needed to demonstrate compliance with this standard, such as continuous emission monitor data, control device and capture system operating parameter data, material usage, HAP usage, volatile matter usage, solids usage, and liquid-liquid material balances that support data that the source is required to report,
  - each applicability determination performed by the owner or operator in accordance with the requirements of 40 CFR 63.820(a), and
  - records specified in 40 CFR 63.10(c) for each continuous monitoring system operated by the owner or operator in accordance with the requirements of 40 CFR 63.828(a).

#### 4. Reporting [Rules 3D .1111, 40 CFR 63.830]



- a. The permittee shall submit the following reports to this Office:
  - i. A Notification of Performance Tests specified in 40 CFR 63.7 and 63.9(e). This notification, and the site-specific test plan required under 40 CFR 63.7(c)(2) shall identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. The operating parameter identified in the site-specific test plan shall be considered to be approved unless explicitly disapproved, or unless comments received from the Administrator require monitoring of an alternate parameter.
  - ii. Performance test reports specified in 40 CFR 63.10(d)(2).
  - iii. Start-up, shutdown, and malfunction reports for the control devices specified in 40 CFR 63.830(b)(5) and 63.10(d)(5).
- b. A summary report specified in 40 CFR 63.10(e)(3) shall be submitted to this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December. In addition to a report of operating parameter exceedances as required by 40 CFR 63.10(e)(3)(i), the summary report shall include exceedances of the standard in **3.1(A)(1)** and 40 CFR 63.825(b)(8). If no deviations have occurred, the permittee shall make this statement in the report.

**B. Prevention of Significant Deterioration (PSD) and Compliance Assurance Monitoring (CAM) - Printing, Coating, Laminating, and Extruding Equipment**  
**NOTE: The pilot extruder (ID No. ES604-079) is uncontrolled and therefore not subject to CAM.**

These emission sources have federally enforceable limits applied to them in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

**1. Standard [Rule 3D .0530]**

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications for rotogravure printing presses P-6 and P-13 (both removed from site), and laminator L-9, and L-12 (ID Nos. ES604-010, and 012) the following requirements shall apply:

- a. Volatile organic compound emissions from the rotogravure printing, coating laminating, and extruding operations (ID Nos. ES604-008, 009, 010, 012 through 015, 060, 075, 079, 081, and 083) shall not exceed 4728 tons per 12-month period.
- b. Except during periods of malfunction or breakdown as provided under Rule 3D .0535, volatile organic compound emissions for the affected sources shall be vented to the regenerative thermal oxidizers, catalytic oxidizers, or to atmosphere as applicable unless water-based materials are used.

**2. Testing [Rule 3D .0501(b)]**

If emissions testing is required by this Office or US EPA, or the Permittee submits emissions testing to this Office in support of a permit application or other submittal, the Permittee shall perform such testing in accordance with the appropriate EPA reference method(s) as approved by the EAD. The Permittee must request approval from the EAD for an alternate test method or procedure in writing. Details of the emissions testing and reporting requirements can be found in General Condition **2.22**.



### 3. Monitoring/Recordkeeping [Rule 3Q .0508(f)]

In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:

- a. For each source, determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
- b. For each source, determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Ci}$  (lb), and the weight of all solvent and other diluents,  $W_{Cj}$  (lb), that are applied when emissions are directed to the thermal oxidizer and/or the catalytic oxidizers.
- c. Maintain records of the VOC content of all materials used,  $C_{vi}$  (lb/lb).
- d. Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the regenerative thermal oxidizers combustion temperature.
- e. Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the catalytic oxidizer pre-catalyst bed temperature.
- fi. The monthly VOC emissions,  $E_B$  (tons/month), shall be calculated according to:

$$E_B = \frac{(1 - 0.65)}{2000} \sum_{EX1,2,3,P18} \left( \sum_{i=1}^p W_{Ci} C_{vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} +$$

$$\frac{(1 - 0.95)}{2000} \sum_{\substack{P12,15,16,19 \\ L9,12,14}} \left( \sum_{i=1}^p W_{Ci} C_{vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} +$$

$$\frac{1}{2000} \sum_{\substack{EX1,2,3,04 \\ P12,15,16,18,19 \\ L9,12,14}} \left( \sum_{i=1}^p W_{Bi} C_{vi} + \sum_{j=1}^q W_{Bj} \right)_{UC}$$

- gj. The monthly VOC emissions and the monthly-rolling 12-month totals shall be recorded at the end of each month.

### 4. Compliance Assurance Monitoring and Recordkeeping [Rules 3D .0614, 3Q

.0508(f) and 40 CFR Part 64] For emissions units located within a permanent total enclosure and whose emissions are routed through the **catalytic oxidizers operating in parallel** (L-9 and L-14): In order to demonstrate compliance with the CAM plan for these rotogravure laminators, the following monitoring and recordkeeping requirements apply:

- a. The catalytic oxidizers control temperature shall be continuously monitored to ensure the pre-catalyst bed temperature is maintained at a minimum of 500 °F to ensure a minimum destruction efficiency for the unit. The pre-catalyst bed air temperature shall be recorded at least four times equally spaced over an hour.
- b. The permittee shall conduct an annual inspection of the process-catalytic oxidizer interlocks to ensure that the process will not exhaust into the oxidizer until the oxidizer has reached the minimum temperature identified above.
- c. The permittee shall:
  - i. Comply with EPA Method 204 - Criteria for and Verification of a Permanent or

- Temporary Total Enclosure specified in Appendix M to 40 CFR Part 51.
- ii. Maintain a minimum pressure drop of 0.007" w.c. across each of the permanent total enclosures. Pressure drop readings shall be recorded at least four times equally spaced over an hour.
  - d. The temperature recording instrument shall be calibrated annually and preventative maintenance performed annually. Pressure drop monitors shall be inspected at least once monthly, calibrated and tested quarterly in accordance with the manufacturer's recommended procedures, and preventative maintenance performed annually. Bypass damper operation shall be inspected on an annual basis and preventative maintenance shall be performed annually. The permittee shall record the results of all the inspection, calibration and maintenance activities in a log on site and have it available for inspection by this Office. The log shall include the date, inspector's name, and any corrective action taken as a result of the inspection and/or calibration.
5. **Compliance Assurance Monitoring and Recordkeeping** [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64] For emissions units located within a permanent total enclosure and whose emissions are routed through the **regenerative thermal oxidizers** (P-12, P-15, P-16, P-19, and L-12): In order to demonstrate compliance with the CAM plan for these rotogravure presses and laminator, the following monitoring and recordkeeping requirements apply:
- a. The regenerative thermal oxidizers control temperatures shall be continuously monitored to ensure each of the combustion chamber temperatures are maintained at a minimum of 1500 °F to ensure a minimum destruction efficiency for the unit. Each of the combustion chamber temperatures shall be recorded at least four times equally spaced over an hour. The temperature shall be monitored by a device accurate to within  $\pm 1.0\%$  or  $\pm 10$  degrees F, whichever is greater.
  - b. The permittee shall conduct an annual inspection of the process-thermal oxidizer interlocks to ensure that the process will not exhaust into the oxidizers until the oxidizer has reached the minimum temperature identified above.
  - c. The permittee shall:
    - i. Comply with EPA Method 204 - Criteria for and Verification of a Permanent or Temporary Total Enclosure specified in Appendix M to 40 CFR Part 51.
    - ii. Maintain a minimum pressure drop of 0.007" w.c. across each of the permanent total enclosures. Pressure drop readings shall be recorded at least four times equally spaced over an hour.
  - d. The temperature recording instrument shall be calibrated annually and preventative maintenance performed annually. Pressure drop monitors shall be inspected at least once monthly, calibrated and tested quarterly in accordance with the manufacturer's recommended procedures, and preventative maintenance performed annually. Bypass damper operation shall be inspected on an annual basis and preventative maintenance shall be performed annually. The permittee shall record the results of all the inspection, calibration and maintenance activities in a log on site and have it available for inspection by this Office. The log shall include the date, inspector's name, and any corrective action taken as a result of the inspection and/or calibration.
6. **Compliance Assurance Monitoring and Recordkeeping** [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64] For emissions units **not** located within a permanent total enclosure and whose emissions are routed through the **regenerative thermal**

**oxidizers** (EX-1, EX-2, EX-3, and P-18): In order to demonstrate compliance with the CAM plan for these extrusion laminators and rotogravure printing press, the following monitoring and recordkeeping requirements apply:

- a. The regenerative thermal oxidizer control temperatures shall be continuously monitored to ensure each of the combustion chamber temperature are maintained at a minimum of 1500 °F to ensure a minimum destruction efficiency for the unit. Each of the combustion chamber temperatures shall be recorded at least four times equally spaced over an hour. The temperature shall be monitored by a device accurate to within  $\pm 1.0\%$  or  $\pm 10$  degrees F, whichever is greater.
- b. The permittee shall conduct an annual inspection of the process-thermal oxidizer interlocks to ensure that the process will not exhaust into the oxidizers until the oxidizer has reached the minimum temperature identified above.
- c. The permittee shall inspect the operational condition and integrity of the dryer, ductwork, and exhaust system annually to ensure that all normally captured exhaust air will reach the control device.
- d. The permittee shall assure the air flow is into the dryer by using a smoke stick or equivalent approach on a quarterly basis or whenever the dryer system has been adjusted or modified. Observations shall be recorded in a log kept on site and made available for inspection by this Office. The log shall include the date, inspector's name, and any corrective action taken as a result of the observation.
- e. The temperature recording instrument shall be calibrated annually and preventative maintenance performed annually. The permittee shall record the results of all the inspection, calibration and maintenance activities in a log on site and have it available for inspection by this Office. The log shall include the date, inspector's name, and any corrective action taken as a result of the inspection and/or calibration.
- f. The regenerative thermal oxidizers main inlet duct air flow shall be continuously monitored to ensure the air flow shall not exceed 180,000 standard cubic feet per minute (scfm) to ensure the air flow loading capacity of the oxidizers is not exceeded. The main inlet duct air flow shall be recorded at least four times equally spaced over an hour. The air flow shall be monitored by a device accurate to within  $\pm 1.0\%$ .
- g. The air flow recording instrument shall be calibrated annually and preventative maintenance performed annually. The permittee shall record the results of all the inspection, calibration and maintenance activities in a log on site and have it available for inspection by this Office. The log shall include the date, inspector's name, and any corrective action taken as a result of the inspection and/or calibration.

**7. Reporting [Rule 3Q .0508(f)]**

The permittee shall submit the following reports:

- a. VOC emissions from the printing, laminating, and coating operations shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.
- b. A summary report of the compliance assurance monitoring required in permit conditions **3.1(B)(4 through 6)** including, as a minimum:
  - i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

- ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with calibration checks, if applicable); and
- iii. A description of the actions taken to implement a QIP (if required by this Office) during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December.

**C. Prevention of Significant Deterioration (PSD) and Compliance Assurance Monitoring (CAM) - ES604-008, 010, 012**

This emission source has a federally enforceable limit applied to it in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

**1. Standard [Rule 3D .0530]**

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications for rotogravure printing press P-15 (ID No. ES604-008), the following requirements shall apply:

- a. Volatile organic compound emissions from press P-15 (ID No. ES604-008) and laminators L-9 and L-12 (ID Nos. ES604-010 and 012) shall not exceed 966 tons per 12-month period;
- b. Except during periods of malfunction or breakdown as provided under Rule 3D .0535, volatile organic compound emissions from the affected sources shall be vented to the regenerative thermal oxidizers or the catalytic oxidizers as applicable, unless water-based materials are used.

**2. Testing [Rule 3D .0501(b)]**

The permittee shall follow the testing requirements specified in permit condition **3.1(B)(2)** for these sources.

**3. Monitoring/Recordkeeping [Rule 3Q .0508(f)]**

In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:

- a. For each source, determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
- b. For each source, determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Ci}$  (lb), and the weight of all solvent and other diluents,  $W_{Cj}$  (lb), that are applied when emissions are directed to the

- regenerative thermal oxidizers and/or the catalytic oxidizers.
- Maintain records of the VOC content of all materials used,  $C_{vi}$ (lb/lb).
  - Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor each of the regenerative thermal oxidizers combustion temperature.
  - Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the catalytic oxidizer pre-catalyst bed temperature.
  - The monthly VOC emissions from press P-15 (ID No. ES604-008) and laminators L-9 and L-12 (ID Nos. ES604-010 and 012),  $E_C$  (tons/month), shall be calculated according to:

$$E_C = \frac{(1-0.95)}{2000} \sum_{P15,L9,12} \left( \sum_{i=1}^p W_{Ci} C_{vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} + \frac{1}{2000} \sum_{P15,L9,12} \left( \sum_{i=1}^p W_{Bi} C_{vi} + \sum_{j=1}^q W_{Bj} \right)_{UC}$$

- The monthly VOC emissions and the monthly-rolling 12-month totals shall be recorded at the end of each month.
- Compliance Assurance Monitoring and Recordkeeping** [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64]  
The permittee shall comply with the CAM requirements in conditions **3.1(B)(4)** for laminator L-9 and **3.1(B)(5)** for press P-15 and laminator L-12.
  - Reporting** [Rule 3Q .0508(f)]  
The permittee shall submit the following reports:
    - VOC emissions from press P-15 (ID No. ES604-008) and laminators L-9 and L-12 (ID Nos. ES604-010 and 012) shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.
    - A summary report of the compliance assurance monitoring required in permit conditions **3.1(B)(4)** for laminator L-9 and **3.1(B)(5)** for press P-15 and laminator L-12, including, as a minimum the information in condition **3.1(B)(7)(b)(i through iii)**.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December.

#### D. **Prevention of Significant Deterioration (PSD) and Compliance Assurance Monitoring (CAM) - ES604-009**

This emission source has a federally enforceable limit applied to it in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

1. **Standard** [Rule 3D .0530]

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications, for rotogravure printing press P-16 (ID No. (ES604-009), volatile organic compound emissions for the rotogravure printing press P-16 (ID No. ES604-009), shall not exceed 112 tons per 12-month period.

2. **Testing** [Rule 3D .0501(b)]

The permittee shall follow the testing requirements specified in permit condition **3.1(B)(2)** for these sources.

3. **Monitoring/Recordkeeping** [Rule 3Q .0508(f)]

In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:

- Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
- Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Ci}$  (lb), and the weight of all solvent and other diluents,  $W_{Cj}$  (lb), that are applied when emissions are directed to the thermal oxidizer.
- Maintain records of the VOC content of all materials used,  $C_{vi}$ (lb/lb).
- Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the regenerative thermal oxidizer combustion temperature.
- The monthly VOC emissions from press P-16 (ID No. ES604-009),  $E_D$  (tons/month), shall be calculated according to:

$$E_D = \frac{(1-0.95)}{2000} \left( \sum_{i=1}^p W_{Ci} C_{vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} + \frac{1}{2000} \left( \sum_{i=1}^p W_{Bi} C_{vi} + \sum_{j=1}^q W_{Bj} \right)_{UC}$$

- The monthly VOC emissions from press P-16 and the monthly-rolling 12-month totals shall be recorded at the end of each month.

4. **Compliance Assurance Monitoring and Recordkeeping** [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64]

The permittee shall comply with the CAM requirements in conditions **3.1(B)(5)** for press P-16.

5. **Reporting** [Rule 3Q .0508(f)]

The permittee shall submit the following reports:

- VOC emissions from press P-16 (ID No. ES604-009) shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.
- A summary report of the compliance assurance monitoring required in permit conditions **3.1(B)(5)** for press P-16, including, as a minimum the information in condition **3.1(B)(7)(b)(i through iii)**.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such



alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December.

**E. Prevention of Significant Deterioration (PSD) and Compliance Assurance Monitoring (CAM) - ES604-060**

This emission source has a federally enforceable limit applied to it in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

**1. Standard [Rule 3D .0530]**

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications, for the rotogravure printing press P-18 (ID No. ES604-060), the following requirements shall apply:

- a. Volatile organic compound emissions for the rotogravure printing press P-18 (ID No. ES604-060) shall not exceed 39.9 tons per 12-month period;
- b. Except during periods of malfunction or breakdown as provided under Rule 3D .0535, volatile organic compound emissions from the affected source shall be vented to the regenerative thermal oxidizers unless water-based materials are used.

**2. Testing [Rule 3D .0501(b)]**

The permittee shall follow the testing requirements specified in permit condition **3.1(B)(2)** for these sources.

**3. Monitoring/Recordkeeping [Rule 3Q .0508(f)]**

In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:

- a. Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
- b. Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Ci}$  (lb), and the weight of all solvent and other diluents,  $W_{Cj}$  (lb), that are applied when emissions are directed to the thermal oxidizer.
- c. Maintain records of the VOC content of all materials used,  $C_{vi}$ (lb/lb).
- d. Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the regenerative thermal oxidizers combustion temperature.
- e. The monthly VOC emissions from press P-18 (ID No. ES604-060),  $E_E$  (tons/month), shall be calculated according to:

$$E_E = \frac{(1 - 0.65)}{2000} \left( \sum_{i=1}^p W_{Ci} C_{vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} + \frac{1}{2000} \left( \sum_{i=1}^p W_{Bi} C_{vi} + \sum_{j=1}^q W_{Bj} \right)_{UC}$$

- f. The monthly VOC emissions from press P-18 and the monthly-rolling 12-month totals shall be recorded at the end of each month.

4. **Compliance Assurance Monitoring and Recordkeeping** [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64]

The permittee shall comply with the CAM requirements in conditions **3.1(B)(6)** for press P-18.

5. **Reporting** [Rule 3Q .0508(f)]

The permittee shall submit the following reports:

- a. VOC emissions from press P-18 (ID No. ES604-060) shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.
- b. A summary report of the compliance assurance monitoring required in permit conditions **3.1(B)(6)** for press P-18, including, as a minimum the information in condition **3.1(B)(7)(b)(i through iii)**.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December.

**F. Prevention of Significant Deterioration (PSD) and Compliance Assurance Monitoring (CAM) - ES604-010**

This emission source has a federally enforceable limit applied to it in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

1. **Standard** [Rule 3D .0530]

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications, for the rotogravure laminator L-9 (ID No. ES604-010), the following requirements shall apply:

- a. Volatile organic compound emissions for the rotogravure laminator L-9 (ID No. ES604-010) shall not exceed 97.6 tons per 12-month period;
- b. Except during periods of malfunction or breakdown as provided under Rule 3D .0535, volatile organic compound emissions from the affected source shall be vented to the catalytic oxidizers unless water-based materials are used.

2. **Testing** [Rule 3D .0501(b)]

The permittee shall follow the testing requirements specified in permit condition **3.1(B)(2)** for these sources.

3. **Monitoring/Recordkeeping** [Rule 3Q .0508(f)]

In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:

- a. Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
- b. Determine and maintain records of the sum of the weight of all inks and other



solids containing material,  $W_{Ci}$  (lb), and the weight of all solvent and other diluents,  $W_{Cj}$  (lb), that are applied when emissions are directed to the catalytic oxidizers.

- c. Maintain records of the VOC content of all materials used,  $C_{vi}$ (lb/lb).
- d. Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the catalytic oxidizer pre-catalyst bed temperature.
- e. The monthly VOC emissions from laminator L-9 (ID No. ES604-010),  $E_F$  (tons/month), shall be calculated according to:

$$E_F = \frac{(1-0.95)}{2000} \left( \sum_{i=1}^p W_{Ci} C_{vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} + \frac{1}{2000} \left( \sum_{i=1}^p W_{Bi} C_{vi} + \sum_{j=1}^q W_{Bj} \right)_{UC}$$

- f. The monthly VOC emissions from laminator L-9 and the monthly-rolling 12-month totals shall be recorded at the end of each month.

4. **Compliance Assurance Monitoring and Recordkeeping** [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64]

The permittee shall comply with the CAM requirements in conditions **3.1(B)(4)** for laminator L-9.

5. **Reporting** [Rule 3Q .0508(f)]

The permittee shall submit the following reports:

- a. VOC emissions from laminator L-9 (ID No. ES604-010) shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.
- b. A summary report of the compliance assurance monitoring required in permit conditions **3.1(B)(4)** for laminator L-9, including, as a minimum the information in condition **3.1(B)(7)(b)(i through iii)**.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December.

**G. Prevention of Significant Deterioration (PSD) and Compliance Assurance Monitoring (CAM) - ES604-075**

This emission source has a federally enforceable limit applied to it in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

1. **Standard** [Rule 3D .0530]

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications, for the rotogravure laminator L-14 (ID No. ES604-075), the following requirements shall apply:

- a. Volatile organic compound emissions for the rotogravure laminator L-14 (ID No. ES604-075) shall not exceed 39.9 tons per 12-month period;

- b. Except during periods of malfunction or breakdown as provided under Rule 3D .0535, volatile organic compound emissions from the affected source shall be vented to the catalytic oxidizers unless water-based materials are used.
2. **Testing** [Rule 3D .0501(b)]  
The permittee shall follow the testing requirements specified in permit condition **3.1(B)(2)** for these sources.
3. **Monitoring/Recordkeeping** [Rule 3Q .0508(f)]  
In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:
- Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
  - Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Ci}$  (lb), and the weight of all solvent and other diluents,  $W_{Cj}$  (lb), that are applied when emissions are directed to the catalytic oxidizers.
  - Maintain records of the VOC content of all materials used,  $C_{Vi}$ (lb/lb).
  - Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the catalytic oxidizer pre-catalyst bed temperature.
  - The monthly VOC emissions from laminator L-14 (ID No. ES604-075),  $E_G$  (tons/month), shall be calculated according to:

$$E_G = \frac{(1-0.95)}{2000} \left( \sum_{i=1}^p W_{Ci} C_{Vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} + \frac{1}{2000} \left( \sum_{i=1}^p W_{Bi} C_{Vi} + \sum_{j=1}^q W_{Bj} \right)_{UC}$$

- The monthly VOC emissions from laminator L-14 and the monthly-rolling 12-month totals shall be recorded at the end of each month.
4. **Compliance Assurance Monitoring and Recordkeeping** [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64]  
The permittee shall comply with the CAM requirements in conditions **3.1(B)(4)** for laminator L-14.
5. **Reporting** [Rule 3Q .0508(f)]  
The permittee shall submit the following reports:
- VOC emissions from laminator L-14 (ID No. ES604-075) shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.
  - A summary report of the compliance assurance monitoring required in permit conditions **3.1(B)(4)** for laminator L-14, including, as a minimum the information in condition **3.1(B)(7)(b)(i through iii)**.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of

January through June, and by January 30<sup>th</sup> for the previous months of July through December.

#### H. Prevention of Significant Deterioration (PSD) - ES604-079

This emission source has a federally enforceable limit applied to it in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

##### 1. Standard [Rule 3D .0530]

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications, for the pilot extruder EX-04 (ID No. ES604-079), the following requirements shall apply:

- a. Volatile organic compound emissions for the pilot extruder EX-04 (ID No. ES604-079) shall not exceed 39.9 tons per 12-month period;

##### 2. Testing [Rule 3D .0501(b)]

The permittee shall follow the testing requirements specified in permit condition **3.1(B)(2)** for these sources.

##### 3. Monitoring/Recordkeeping [Rule 3Q .0508(f)]

In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:

- a. Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
- b. Maintain records of the VOC content of all materials used,  $C_{Vi}$ (lb/lb).
- c. The monthly VOC emissions from pilot extruder EX-04 (ID No. ES604-079),  $E_H$  (tons/month), shall be calculated according to:

$$E_H = 0.0005 \left( \sum_{i=1}^p W_{Bi} C_{Vi} + \sum_{j=1}^q W_{Bj} \right)_{UC}$$

- d. The monthly VOC emissions from pilot extruder EX-04 and the monthly-rolling 12-month totals shall be recorded at the end of each month.

##### 4. Reporting [Rule 3Q .0508(f)]

The permittee shall submit the following reports:

- a. VOC emissions from pilot extruder EX-04 (ID No. ES604-079) shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December.

## I. Prevention of Significant Deterioration (PSD) and Compliance Assurance Monitoring (CAM) - ES604-081

This emission source has a federally enforceable limit applied to it in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

### 1. Standard [Rule 3D .0530]

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications, for the rotogravure printing press P-19 (ID No. ES604-081), the following requirements shall apply:

- Volatile organic compound emissions for the rotogravure printing press P-19 (ID No. ES604-081) shall not exceed 124.2 tons per 12-month period;
- Except during periods of malfunction or breakdown as provided under Rule 3D .0535, volatile organic compound emissions from the affected source shall be vented to the regenerative thermal oxidizers unless water-based materials are used.

### 2. Testing [Rule 3D .0501(b)]

The permittee shall follow the testing requirements specified in permit condition **3.1(B)(2)** for these sources.

### 3. Monitoring/Recordkeeping [Rule 3Q .0508(f)]

In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:

- Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
- Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Ci}$  (lb), and the weight of all solvent and other diluents,  $W_{Cj}$  (lb), that are applied when emissions are directed to the thermal oxidizer.
- Maintain records of the VOC content of all materials used,  $C_{Vi}$  (lb/lb).
- Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the regenerative thermal oxidizers combustion temperature.
- The monthly VOC emissions from press P-19 (ID No. ES604-081),  $E_t$  (tons/month), shall be calculated according to:

$$E_t = 0.0005 \left[ (1 - 0.95) \left( \sum_{i=1}^p W_{Ci} C_{Vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} + \left( \sum_{i=1}^p W_{Bi} C_{Vi} + \sum_{j=1}^q W_{Bj} \right)_{UC} \right]$$

- The monthly VOC emissions from press P-19 and the monthly-rolling 12-month totals shall be recorded at the end of each month.

### 4. Compliance Assurance Monitoring and Recordkeeping [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64]

The permittee shall comply with the CAM requirements in conditions **3.1(B)(5)** for press P-19.

### 5. Reporting [Rule 3Q .0508(f)]

The permittee shall submit the following reports:

- a. VOC emissions from press P-19 (ID No. ES604-081) shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.
- b. A summary report of the compliance assurance monitoring required in permit conditions **3.1(B)(5)** for press P-19, including, as a minimum the information in condition **3.1(B)(7)(b)(i through iii)**.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December.

**J. Prevention of Significant Deterioration (PSD) and Compliance Assurance Monitoring (CAM) - ES604-083**

This emission source has a federally enforceable limit applied to it in order to avoid the provisions of Rule 3D .0530. Should any of the following conditions be violated, this facility may become subject to this rule.

**1. Standard [Rule 3D .0530]**

In order to avoid the applicability of 3D .0530(g) for major sources and major modifications, for the rotogravure printing press P-12 (ID No. ES604-083), the following requirements shall apply:

- a. Volatile organic compound emissions for the rotogravure printing press P-12 (ID No. ES604-083) shall not exceed 57.3 tons per 12-month period;
- b. Except during periods of malfunction or breakdown as provided under Rule 3D .0535, volatile organic compound emissions from the affected source shall be vented to the regenerative thermal oxidizers unless water-based materials are used.

**2. Testing [Rule 3D .0501(b)]**

The permittee shall follow the testing requirements specified in permit condition **3.1(B)(2)** for these sources.

**3. Monitoring/Recordkeeping [Rule 3Q .0508(f)]**

In order to demonstrate compliance with the emission limit the following monitoring and recordkeeping requirements apply:

- a. Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Bi}$  (lb), and the weight of all solvent and other diluents,  $W_{Bj}$  (lb), that are applied when emissions are directed to atmosphere.
- b. Determine and maintain records of the sum of the weight of all inks and other solids containing material,  $W_{Ci}$  (lb), and the weight of all solvent and other diluents,  $W_{Cj}$  (lb), that are applied when emissions are directed to the thermal oxidizer.
- c. Maintain records of the VOC content of all materials used,  $C_{Vi}$  (lb/lb).
- d. Install, calibrate, operate, and maintain a continuous temperature monitoring and recording device to monitor the regenerative thermal oxidizers combustion

temperature.

- e. The monthly VOC emissions from press P-12 (ID No. ES604-083),  $E_J$  (tons/month), shall be calculated according to:

$$E_J = 0.0005 \left[ (1 - 0.95) \left( \sum_{i=1}^p W_{Ci} C_{Vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} + \left( \sum_{i=1}^p W_{Bi} C_{Vi} + \sum_{j=1}^q W_{Bj} \right)_{UC} \right]$$

- f. The monthly VOC emissions from press P-12 and the monthly-rolling 12-month totals shall be recorded at the end of each month.

4. **Compliance Assurance Monitoring and Recordkeeping** [Rules 3D .0614, 3Q .0508(f) and 40 CFR Part 64]

The permittee shall comply with the CAM requirements in conditions **3.1(B)(5)** for press P-12.

5. **Reporting** [Rule 3Q .0508(f)]

The permittee shall submit the following reports:

- VOC emissions from press P-12 (ID No. ES604-083) shall be reported semiannually to this Office. The report shall include the total VOC emissions for each month and the monthly-rolling 12-month totals for each month.
- A summary report of the compliance assurance monitoring required in permit conditions **3.1(B)(5)** for press P-12, including, as a minimum the information in condition **3.1(B)(7)(b)(i through iii)**.

The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

These reports shall be received by this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December.

**K. Work Practices for Sources of Volatile Organic Compounds - Printing, Coating, Laminating, and Extruding Equipment** [Rule 3D .0958] **NOTE: These requirements are not applicable to sources inside the permanent total enclosures around presses P-12, P-15, P-16, and P-19 and laminators L-9, L-12, and L-14 because the enclosures provide 100% capture of VOC/HAP emissions and then they are routed to their respective control devices.**

- Work practice standards** [Rules 3D .0958(c) and 3Q .0508(i)(16)] - The owner or operator of any facility subject to this Rule shall:
  - store all material, including waste material, containing volatile organic compounds in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
  - clean up spills as soon as possible following proper safety procedures,
  - store wipe rags in closed containers,
  - not clean sponges, fabric, wood, paper products, and other absorbent materials, unless volatile organic compound emissions are captured and controlled,

- e. drain solvents used to clean supply lines and other coating equipment into containers designed for closure, and close containers immediately after each use, and
  - f. clean mixing, blending, and manufacturing vats and containers by adding cleaning solvent, closing the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be poured into a closed container.
2. **Work practice standards for parts cleaning** [Rules 3D .0958(d) and 3Q .0508(i)(16)] - When cleaning parts, the owner or operator of any facility subject to this Rule shall:
- a. flush parts in the freeboard area,
  - b. take precautions to reduce the pooling of solvent on and in the parts,
  - c. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
  - d. not fill cleaning machines above the fill line, and
  - e. not agitate solvent to the point of causing splashing, unless volatile organic compound emissions are captured and controlled.
3. **Monitoring/Recordkeeping** [Rule 3Q .0508(f)(1)] - To ensure compliance with the work practice standards above, the permittee shall perform weekly inspections at each affected emissions unit to verify compliance with the work practices and identify any deviations. The results of the inspections and any deviations shall be recorded in a log (written or electronic form) on site and be readily available upon request by an authorized representative of this Office or the U.S. EPA. The log shall contain the following records:
- a. the date and time of each inspection,
  - b. the results of each inspection, and
  - c. all deviations from required work practice standards and the corrective actions taken.
4. **Reporting Requirements** [Rule 3D .0508(f)(2)] - The permittee shall submit a summary report of the monitoring requirements specified in permit condition **3.1(K)(3)**, to this Office by July 30<sup>th</sup> for the previous months of January through June, and by January 30<sup>th</sup> for the previous months of July through December. This report shall contain the total number of weeks in which the work practice standards weekly check was not made during the reporting period and shall include a description of any corrective actions taken as a result of the inspections.
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### 3.2 ONE ENCLOSED HARD CHROMIUM ELECTROPLATING TANK (ID No. ES 604-080) EXHAUSTING TO A KCH SERVICES, INC. COMPOSITE MESH-PAD MIST ELIMINATOR (1475 acfm capacity, ID No. CD604-003)

Regulated Pollutant	Applicable Standard	Applicable Regulation
*Particulate Matter	$E = 4.10 \times P^{0.67}$ ; where E = allowable emission rate in lbs per hr P = process weight in tons per hr	Rule 3D .0515
*Visible emissions	20 % opacity	Rule 3D .0521(d)
Chromium Compounds	MAMER = $ETSA \times K \times 0.015$ mg/dscm; where MAMER = the alternative emission rate for the enclosed hard chromium electroplating tank in mg/hr ETSA = the hard chromium electroplating tank surface area in square feet (ft <sup>2</sup> ) K = a conversion factor, 425 dscm/(ft <sup>2</sup> x hr)	Rule 3D .1111 and 40 CFR 63 Subpart N

\*3D .0515 - *Particulates from Miscellaneous Processes*, and 3D .0521 - *Control of Visible Emissions* apply to the chrome plating operation. Operation of the source under the MACT requirements assures compliance with these standards. No monitoring, recordkeeping, or reporting is required to assure compliance.

#### A. National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks [Rule 3D .1111 and 40 CFR 63 Subpart N]

##### 1. Emission Standard [Rule 3D .0524 and 40 CFR 63.342(c)(2)(iv)]

The mass rate of total chromium in the exhaust gas stream discharged to the atmosphere from the enclosed hard chromium electroplating tank (ID No. ES604-080) shall not exceed the maximum allowable mass emission rate determined by using the equation  $MAMER = ETSA \times K \times 0.015$  mg/dscm; where MAMER = the alternative emission rate for the enclosed hard chromium electroplating tank in mg/hr, ETSA = the hard chromium electroplating tank surface area in square feet, and K = a conversion factor (425 dscm/(ft<sup>2</sup> x hr). This emission limitation shall apply during all periods of operation including startup and shutdown. This emission limitation shall not apply during periods of malfunction, but the work practice standards that address operation and maintenance in permit condition 3.2(A)(2) must be followed during malfunctions.

<u>Emission Source ID</u>	<u>Value of (ETSA) in ft<sup>2</sup></u>	<u>Maximum Allowable Mass Emission Rate (mg/hr)</u>
ES604-080	14.316	91.26

**2. Work Practice Standards [Rule 3D .0524 and 40 CFR 63.342(f)]**

- a. In accordance with 40 CFR 63.342 (f)(1) the permittee shall operate and maintain the enclosed hard chromium electroplating tank (ID No. ES604-080), mist eliminator (ID No. CD604-003), and monitoring equipment, in a manner consistent with good air pollution practices, consistent with the operation and maintenance plan required by 40 CFR 63.342(f)(3). This requirement shall apply during all periods of operation including startup, shutdown, and malfunction.
- b. The permittee shall keep on site and implement an operation and maintenance plan required by 40 CFR 63.342(f)(3). This plan shall be incorporated into this permit by reference. The plan shall include the elements prescribed by 40 CFR 63.342(f)(3) including:
  - i. The plan shall specify the operation and maintenance criteria for the enclosed hard chromium electroplating tank (ID No. ES604-080), mist eliminator (ID No. CD604-003), and the process and control system.
  - ii. The plan shall include a standardized checklist to document the operation and maintenance of the equipment.
  - iii. The plan shall incorporate the following work practice standards for the composite mesh pad system and monitoring equipment to be performed and documented at least once per quarter (Jan.-Mar., Apr.-June, July-Sept., Oct.-Dec.).
    - a. Visually inspect the control device to ensure there is proper drainage, no chromic acid buildup on the pads, and no evidence of chemical attack on the structural integrity of the device.
    - b. Visually inspect back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.
    - c. Visually inspect ductwork from tank to the control device to ensure there are no leaks.
    - d. Perform washdown of the composite mesh-pads in accordance with the manufacturer's recommendations.
  - iv. The plan shall specify procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.
  - v. The plan shall include a systematic procedure for identifying malfunctions of process equipment, pollution control devices, and process and control system monitoring equipment and for implementing corrective actions to address such malfunctions.
- c. The Director may require revisions to the operation and maintenance plan in accordance with 40 CFR 63.342(f)(2). In addition the permittee shall revise the plan within 45 days after an event occurs that is not adequately addresses in the plan as required by 40 CFR 63.342(f)(3)(ii).

**3. Monitoring [Rule 3D .0524 and 40 CFR 63.343(c)]**

The composite mesh-pad system shall be operated within  $\pm 2$  inches of water column of the pressure drop value established in accordance with 40 CFR 63.344(d)(5) during the most recent performance test. The permittee shall monitor and record the

pressure drop across the composite mesh-pad system once each day that the chrome plating operation is operating. The monitoring equipment shall be installed such that representative measurements of the differential pressure are obtained. For monitoring equipment obtained from a vendor, verification of the operational status of the monitoring equipment shall include execution of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

**4. Recordkeeping [Rule 3D .0524 and 40 CFR 63.346]**

In addition to applicable recordkeeping requirements under 40 CFR 63 Subpart A, General Provisions, the permittee shall maintain records in accordance with 40 CFR 63.346 including:

- a. Inspection records for the composite mesh-pad system and monitoring equipment, to document that the inspection and maintenance required by the work practice standards of 40 CFR 63.342(f) and Table 1 of 40 CFR 63.342 have taken place. The record can take the form of a checklist and should identify the device inspected, the date of inspection, a brief description of the working condition of the device during the inspection, and any actions taken to correct deficiencies found during the inspection.
- b. Records of all maintenance performed on the chrome plating system, composite mesh-pad system, and monitoring equipment;
- c. Records of the occurrence, duration, and cause (if known) of each malfunction of the chrome plating system, composite mesh-pad system, and monitoring equipment;
- d. Records of actions taken during periods of malfunction when such actions are inconsistent with the operation and maintenance plan;
- e. Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the operation and maintenance plan required by 40 CFR 63.342(f)(3);
- f. Test reports documenting results of all performance tests;
- g. All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance with the special compliance procedures of 40 CFR 63.344(e);
- h. Records of differential pressure monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected;
- i. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs during malfunction of the process, add-on air pollution control, or monitoring equipment;
- j. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs during periods other than malfunction of the chrome plating system, composite mesh-pad system, and monitoring equipment;
- k. The total process operating time of the affected source during the reporting period;
- l. All documentation supporting the notifications and reports required by 40 CFR 63.9, 63.10, and 63.347; and
- m. All records shall be maintained for a period of 5 years in accordance with 40 CFR 63.10(b)(1).

**5. Reporting [Rule 3D .0524 and 40 CFR 63.346]**

In addition to applicable reporting requirements under 40 CFR 63 Subpart A, General Provisions, the permittee shall comply with the following reporting requirements in accordance with 40 CFR 63.346 including:

- a. As required by 40 CFR 63.342(f)(3)(iv), if actions taken by the owner or operator during periods of malfunction are inconsistent with the procedures specified in the operation and maintenance plan required by 40 CFR 63.342(f)(3)(i), the owner or operator shall record the actions taken for that event and shall report by phone such actions within 2 working days after commencing actions inconsistent with the plan. This report shall be followed by a letter within 7 working days after the end of the event.
- b. The permittee shall notify the Director in writing at least 60 calendar days before the test is scheduled to be conducted. In the event the permittee is unable to conduct the performance test as scheduled, the provisions of 40 CFR 63.7(b)(2) apply.
- c. In accordance with 40 CFR 63.347(g), the permittee shall submit an ongoing compliance report by January 31 for the period from July 1 through December 31 of the previous year and by July 31 for the period from January 1 through June 30. Once an owner or operator of an affected source reports an exceedance, ongoing compliance status reports shall be submitted quarterly until a request to reduce reporting frequency is approved. The ongoing compliance status report shall contain, at a minimum:
  - i. The company name and address of the affected source
  - ii. An identification of the operating parameter that is monitored for compliance determination, as required by 40 CFR 63.343(c);
  - iii. The relevant emission limitation for the affected source, and the operating parameter value, or range of values, that correspond to compliance with this emission limitation as specified in the notification of compliance status;
  - iv. The beginning and ending dates of the reporting period;
  - v. A description of the type of process performed in the affected source;
  - iv. The total operating time of the affected source during the reporting period;
  - v. A summary of differential pressure values, including the total duration of excess emissions during the reporting period as indicated by those values, the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to process upsets, control equipment malfunctions, other known causes, and unknown causes;
  - vi. A certification by a responsible official, as defined in 40 CFR 63.2, that the work practice standards in 40 CFR 63.342(f) were followed in accordance with the operation and maintenance plan for the source;
  - vii. If the operation and maintenance plan required by 40 CFR 63.342(f)(3) was not followed, an explanation of the reasons for not following the provisions, an assessment of whether any excess emission and/or parameter monitoring exceedances are believed to have occurred, and a copy of the report(s) required by 40 CFR 63.342(f)(3)(iv) documenting that the operation and maintenance plan was not followed;
  - viii. A description of any changes in monitoring, processes, or controls since the last reporting period;
  - ix. The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

- x. The date of the report.
-

### 3.3 ONE AESYS TECHNOLOGIES, LLC LOW-NO<sub>x</sub> BOILER FIRED BY NATURAL GAS OR PROPANE WITH A MAXIMUM HEAT INPUT RATE OF 28.1 MMBTU/HOUR EXHAUSTING TO ATMOSPHERE (ID No. ES604-084)

Regulated Pollutant	Applicable Standard	Applicable Regulation
*Particulate Matter	0.46 lb/MMBtu	Rule 3D .0503
*Sulfur dioxide	2.3 lb/MMBtu	Rule 3D .0516
*Visible emissions	20 % opacity	Rule 3D .0521(d)

\*3D .0503 - Particulates from Fuel Burning Indirect Heat Exchangers, 3D .0516 - Sulfur Dioxide Emissions from Combustion Sources, and 3D .0521 - Control of Visible Emissions apply to the boiler. Use of only natural gas and propane assures compliance with these standards. No monitoring, recordkeeping, or reporting is required to assure compliance, however, excess visible emissions shall be grounds for this Office to require testing from these sources using appropriate U.S. EPA reference test methods for particulate matter as approved by this Office. The emissions from natural gas and propane combustion shall be included in emission inventories.

#### A. NSPS - Subpart Dc boiler fuel combustion report [Rule 3D .0524]

The permittee shall maintain records of the total annual quantities of all fuel combusted in the AESYS Technologies, LLC. low-INO<sub>x</sub> boiler, in accordance with revised recordkeeping requirements as described in a U.S. EPA, Region IV guidance memorandum dated February 20, 1992 [in lieu of the specific requirements of 40 CFR 60.48 c.(g)] This information shall be reported to this Office by January 31<sup>st</sup> of each year for the previous calendar year.

#### B. National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters [Rule 3D .1111 and 40 CFR 63 Subpart DDDDD]

##### 1. Compliance Date [Rule 3D .1111 and 40 CFR 63.7495]

The permittee must comply with this subpart no later than January 31, 2016.

##### 2. Tune-up of Boiler [Rule 3D .1111 and 40 CFR 63.7515 and 63.7540(a)(10)]

The permittee must conduct an initial tune-up of the boiler no later than January 31, 2016. Subsequent to the initial tune-up, the permittee must conduct an annual tune-up to demonstrate continuous compliance. The annual tune-up must be performed no more than 13 months after the previous tune-up and be performed as specified below:

- a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

- b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
  - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
  - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject;
  - e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
  - f. Maintain on-site and submit, if requested by this Office, an annual report containing the information below:
    - i. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
    - ii. A description of any corrective actions taken as a part of the tune-up; and
    - iii. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.
3. **Energy Assessment** [Rule 3D .1111 and Item 4 of Table 3 to Subpart DDDDD of Part 63]
- The permittee must have a one-time energy assessment performed by a qualified energy assessor no later than January 31, 2016. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in the permit condition, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (a) to (e) appropriate for the on-site technical hours listed in 40 CFR 63.7575:
- a. A visual inspection of the boiler or process heater system;
  - b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints;
  - c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator;
  - d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;
  - e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified;
  - f. A list of cost-effective energy conservation measures that are within the facility's control;



- g. A list of the energy savings potential of the energy conservation measures identified; and
  - h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
4. **Notification of Compliance Status** [Rule 3D .1111 and 40 CFR 63.9(h)(2)(ii) and 63.7530(d), (e), and (f)]
- The permittee shall send an initial Notification of Compliance Status to this Office before the close of business on the 60<sup>th</sup> day following the completion of the initial tune-up of the boiler and the one-time energy assessment. The notification shall include the following information:
- a. A signed certification that you have met all applicable work practice standards;
  - b. A signed statement that indicates that you conducted a tune-up of the unit;
  - c. A signed certification that the energy assessment was completed according to permit condition **3.3(B)(3)** and is an accurate depiction of your facility at the time of the assessment; and
  - d. If you had a deviation from any work practice standard, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken.
5. **Recordkeeping Requirements** [Rule 3D .1111 and 40 CFR 63.7555 and 63.7560]
- The permittee shall maintain files of all information (including all reports and notifications and all documentation supporting initial notifications and notifications of compliance status) required by Subpart DDDDD recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6. **Reporting Requirements** [Rule 3D .1111 and 40 CFR 63.7550]
- The permittee shall submit a compliance report to this Office containing the following information:
- a. Company and Facility name and address;
  - b. Process unit information;
  - c. Date of report and the beginning and ending dates of the reporting period (January 1<sup>st</sup> through December 31<sup>st</sup>);
  - d. The total operating time during the reporting period; and
  - e. The date of the most recent tune-up of the boiler and the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled boiler shutdown.

The first report is due January 31, 2017 and shall cover the period January 1, 2016 through December 31, 2016. Subsequent reports shall be postmarked or submitted no later than January 31<sup>st</sup> of each year.

In addition to submitting the compliance report to this Office, the permittee shall submit the compliance report electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)).



## SECTION 4 CONTROL OF TOXIC AIR POLLUTANTS LOCAL ENFORCEMENT ONLY

The facility is subject to Subchapter **3D .1100** of the Forsyth County Air Quality Technical Code (FCAQTC). This section is locally enforceable only. The emission sources and associated air pollution control device(s) are subject to the following specific terms, conditions, and limitations, including the monitoring recordkeeping, and reporting requirements to which those requirements apply.

- A. Toxic Air Pollutants- General** - Specification of a listed toxic air pollutant (TAP) in this permit does not excuse the permittee from complying with the requirements of Sections 3D .1100 and 3Q .0700 of the FCAQTC with regard to any other listed TAP emitted from the regulated facility, nor does this permit exempt the permittee from compliance with any future air toxics regulations promulgated pursuant to the requirements of the Clean Air Act. [Sections 3D .1100 and 3Q .0700]
- B. De minimis Limits** - Total facility-wide emissions of the following pollutants shall not exceed their respective de minimis emissions limits as shown in Rule 3Q .0711 unless a modeling demonstration is first approved by this Office which shows that the emissions of the subject TAPs from the facility will not adversely affect human health. This demonstration shall be in accordance with the requirements set forth in Sections 3D .1100 and 3Q .0700 of the FCAQTC. This demonstration must be made with an up-to-date version of a U.S. EPA approved computer model or, upon approval by this Office, calculated using the results of a previous modeling analysis showing compliance with the acceptable ambient levels for the pollutants listed below. [Section 3Q .0700]

Pollutant (CAS Number)	De minimis level
benzene (71-43-2)	8.1 lb/year
benzo(a)pyrene (50-32-8)	2.2 lb/year
formaldehyde (50-00-0)	0.04 lb/hour
n-hexane (110-54-3)	23 lb/day
sulfuric acid (7664-93-9)	0.025 lb/hour and 0.25 lb/day
styrene (100-42-5)	2.7 lb/hour
xylene (1330-20-7)	16.4 lb/hour and 57 lb/day

- C. Dispersion Modeling Emission Limits (2005 Model)** - Combined emissions of the following TAPs from all sources not exempted by Rule 3Q .0702(a) and (b) at this facility shall not exceed the emission rates listed below. Dispersion modeling using ISC-PRIME (version no. 01228), performed in May 2005, and approved by this Office in October 2005, demonstrated that the permitted emissions of the TAPs listed in the table below from this facility impacted the surrounding ambient air at levels below the acceptable ambient levels (AALs) specified in Rule 3D .1104 of the FCAQTC. The emission rates listed below shall be used as a basis for certifying that any future modifications or changes in the methods of operation will result in ambient impacts below these AALs. In

no case shall actual emissions resulting from changes or modifications exceed any of the following emission rates without first applying for and receiving a permit: [Section 3D .1100]

Pollutant	Maximum facility-wide emission rate
ammonia (7664-41-7)	21.03 lb/hour
ethyl acetate (141-78-6)	784.2 lb/hour
methyl ethyl ketone (78-93-3)	209.8 lb/hour and 5,035.2 lb/day
methyl isobutyl ketone (108-10-1)	65.4 lb/hour and 1,569.6 lb/day
soluble chromate compounds, as chromium (VI) equivalent	0.456 lb/day
toluene (108-88-3)	124.1 lb/hour and 2,913.6 lb/day
toluene diisocyanate, 2,4- (584-84-9) and 2,6- (91-08-7) isomers	1.152 lb/day

**D. Modifications** - In accordance with Rule 3Q .0701(c), for the 5 year period beginning on October 11, 2005 modifications which increase the facility-wide emissions of, or which relocate an existing emission source of any TAPs listed in the table in permit condition 4(C) are allowed without further modeling analysis by the permittee except that actual emissions may not increase above those emissions rates listed in that table without first applying for and obtaining a permit. This does not prevent this Office from conducting a modeling analysis of the facility and, furthermore, does not affect the ability of the Director to require the permittee to conduct another modeling analysis pursuant to Rule 3Q .0712. This permit condition does not exempt the permittee from the requirement to apply for a permit to comply with any future National Emissions Standards for Hazardous Air Pollutants (40 CFR Part 63). [Rule 3Q .0701(c)]

**E. Toxic Air Pollutant Recordkeeping Requirements** - The permittee shall maintain updated records of production rates, throughputs, material usage, and other process operational information as is necessary to determine compliance with the emission rates specified in permit conditions 4(B) and (C). At a minimum these records shall include data sufficient to calculate monthly averaged emission rates (in pounds per hour of emission source operation) for TAPs with 1-hour or 24-hour AALs and yearly emission rates (in pounds per calendar year) for TAPs with annual AALs.

Copies of these records shall be retained by the permittee for a period of two years after the date on which the record was made. If requested by an agent of this Office, the permittee shall readily supply copies of these records at the time of inspection. Likewise, the permittee shall submit copies of the records upon request by this Office. [Rules 3D .0611 and 3D .1105]

**F. Toxic Air Pollutant Reporting Requirements** - No reporting is required to demonstrate compliance with these requirements.

**FORSYTH COUNTY OFFICE OF ENVIRONMENTAL  
ASSISTANCE AND PROTECTION**  
TV RENEWAL - COMPLIANCE CERTIFICATION REVIEW

<b>Applicant:</b> Oracle Flexible Packaging – Liberty Complex	<b>Site Location:</b> 220 East Polo Road	<b>New Permit No.</b> 00466-TV-24	
<b>Technical Contact:</b> Scott Snow	<b>Phone:</b> (336) 777-5878	<b>Responsible Official:</b> Kevin Hughes	<b>Title:</b> Chief Operations Officer
<b>Agency Reviewer:</b> Jeffrey A. Ebbitt	<b>Signature:</b>	<b>Date:</b>	
<b>Agency Q/A Manager:</b>	<b>Signature:</b>	<b>Primary/Secondary SIC Code(s)</b> 2754, 2657, 2671, 3497	
Date Application received: February 11, 2013			

**I. FACILITY DESCRIPTION**

Oracle Flexible Packaging, Inc. produces flexible packaging products for food, pharmaceuticals, photographic and tobacco products. The associated permitted operations that result in air emissions are rotogravure printing presses, laminators, extruders, and a chromium electroplating process. These activities are classified under standard industrial codes (SIC) 2754, commercial printing gravure, 2657, folding paperboard boxes, 2671, paper coated and laminated packaging production, and 3497, metal foil converting. The gravure printing is carried out using rotogravure printing presses that apply inks and/or coatings to continuous web substrate. The rotogravure presses are composed of several stations that apply different coatings (e.g. colors) to the substrate. Each station consists of an application section and drying section heated using natural gas, propane, or steam. The laminators, and extruders are also rotogravure operations involving multiple webs and the application of an extruded polymer respectively. In addition to the actual production of flexible packaging products, gravure cylinders are designed and manufactured for new products. The gravure cylinders are plated with copper metal then coated with a thin layer chromium metal to enhance durability. The chromium is applied using a hard electroplating operation and is a source of chromium emissions.

**Oracle Flexible Packaging, Inc. is a major source with respect to Title V because the potential emissions of volatile organic compounds (VOC) from the facility are greater than 100 tons per year and hazardous air pollutants (HAP) are greater than 25 tons per year for combined HAPs and 10 tons per year for individual HAPs.** Other criteria pollutants including particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), nitrogen

oxides (NO<sub>x</sub>), and carbon monoxide (CO) are emitted from processes such as fuel combustion equipment. Chromium is a hazardous air pollutant and is regulated under Section 112 of the Clean Air Act and 40 CFR Part 63, Subpart N (Chromium Electroplating MACT). HAPs emitted from the printing/coating operations are also regulated under Section 112 of the Clean Air Act and 40 CFR Part 63, Subpart KK (Printing and Publishing MACT). HAPs emitted from the natural gas-fired boiler are also regulated under Section 112 of the Clean Air Act and 40 CFR Part 63, Subpart DDDDDD (Industrial, Commercial, and Institutional Boilers and Process Heaters MACT).

## II. STATEMENT OF COMPLIANCE

The Forsyth County Office of Environmental Assistance and Protection (Office) has reviewed the compliance status of this facility. Based on a review of the application and knowledge of this facility through compliance inspections, the facility was in compliance with all applicable requirements. The applicant has certified that the facility will be in compliance with all applicable requirements at the time of permit issuance and will continue to comply with these requirements. The applicant has also certified that the facility will be in compliance with all subsequent applicable requirements taking effect during the term of this permit and will meet such requirements on a timely basis.

## III. SUMMARY OF EMISSION SOURCES AND CONTROL DEVICES

The following table identifies all emission sources and associated control devices for which the Renewal Title V Operating Permit is issued.

<b>Emission Source ID #</b>	<b>Emission Source Description</b>	<b>Control Device ID #</b>	<b>Control Device Description</b>
ES604-083	One eight-station rotogravure printing press P-12	CD604-006, CD604-007, and CD604-008	Three regenerative thermal oxidizers (each with a maximum heat input rate of 12.383 million Btu per hour) or Atmosphere
ES604-008, 009, and 081	Three ten-station rotogravure printing presses P-15, P-16, and P-19		

<b>Emission Source ID #</b>	<b>Emission Source Description</b>	<b>Control Device ID #</b>	<b>Control Device Description</b>
ES604-060	One eight-station rotogravure printing presses P-18		
ES604-010	One three-station rotogravure laminator L-9	CD604-004 and CD604-005	Two catalytic oxidizers operating in parallel firing natural gas or propane (each with a maximum heat input rate of 8.0 million Btu per hour) or Atmosphere
ES604-012	One two-station rotogravure laminator L-12	CD604-006, CD604-007, and CD604-008	Three regenerative thermal oxidizers (each with a maximum heat input rate of 12.383 million Btu per hour) or Atmosphere
ES604-075	One two-station rotogravure laminator L-14	CD604-004 and CD604-005	Two catalytic oxidizers operating in parallel firing natural gas or propane (each with a maximum heat input rate of 8.0 million Btu per hour) or Atmosphere
ES604-013, 014	Two two-station rotogravure extruders EX-1, EX-2	CD604-006, CD604-007, and CD604-008	Three regenerative thermal oxidizers (each with a maximum heat input rate of 12.383 million Btu per hour) or Atmosphere
ES604-015	One five-station rotogravure extruder EX-3		
ES604-079	One one-station pilot extruder EX-04	None	None



Emission Source ID #	Emission Source Description	Control Device ID #	Control Device Description
ES604-080	One enclosed hard chromium electroplating tank with a maximum rectifier capacity of 5,000 amperes	CD604-003	KCH Services, Inc. composite mesh-pad mist eliminator (1475 acfm)
ES604-084	One AESYS Technologies, LLC low-NO <sub>x</sub> Boiler fired by natural gas or propane with a maximum heat input rate of 28.1 MMBtu/hour <b>(NSPS)</b>	None	None

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#### IV. EMISSION SOURCE-BY-SOURCE EVALUATION

**1.0 ES604-083 008, 009, 060, and 081: Rotogravure Printing Presses P-12, P-15, P-16, P-18, and P-19; ES604-010, 012, 071, and 075: Laminators L-9, L-12, and L-14; and ES604-013, 014, 015, and 079: Extruders EX-1, EX-2, EX-3, and EX-04.**

The rotogravure printing presses apply an ink or other coating to a continuous web substrate. The laminators combine two webs of film, foil, and/or paper into a single substrate by applying coatings or adhesives as well. The extruders combine a web with an extruded polymer film. The laminators and extruders can apply additional coatings to enhance adhesion or to finish the product. The web is dried after each printing coating station in a natural gas, propane, or steam heated dryer and the exhaust is sent to either three regenerative thermal oxidizers, two catalytic oxidizers, or directly to the atmosphere. Presses P-12, P-15, P-16, P-18, and P-19, Laminator L-12, and Extruders EX-1 and EX-2 are controlled using the three regenerative thermal oxidizers. Laminators L-9 and L-14 are controlled using the two catalytic oxidizers. Pilot Extruder EX-04 does not have a control device.

The operation dates of the presses and other equipment are listed in Table IV-1.1.

**Table IV-1.1: Installation Dates of Printing and Other Coating Operations**

P-12	P-15	P-16	P-18	P-19	L-9	L-12	L-14
2007	1991	1995	1996	2006	1965	1985	2003
EX-1	EX-2	EX-3	EX-04				
1967	1969	1978	2005				

These operations are sources of VOC and HAP. The printing operations are subject to the printing and publishing MACT (40 CFR 63 Subpart KK) and the permittee has elected to include the laminators and the extruders within the affected sources under the MACT standard to avoid any future MACT requirements for these sources. Additional emissions including PM, SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC result from the combustion of natural gas and/or propane in the dryers and control devices (oxidizers).

CAM requirements (40 CFR Part 64) apply to pollutant-specific emission units (PSEUs) located at TV facilities. The requirements of this rule apply to all PSEUs that use a control device to achieve compliance with any emission limitation or standard, and that have pre-controlled emissions of the applicable regulated air pollutant that are equal to or greater than 100% of the amount (in tons per year) required for a source to be classified as a major source (in this case, 100 tons/yr of VOC). However, the rule exempts any PSEU from submitting a CAM plan if the emission limitations or standards were proposed by the U.S. EPA after November 15, 1990 (e.g. MACT or NSPS standards).

The emissions from the pilot extruder ES604-EX04 *are not* routed through any control device; therefore a CAM plan is not required for this source. Emissions from presses P-12, P-15, P-16, P-18, and P-19, laminators L-9, L-12, and L-14, and extruders EX-1 through EX-3 *are* reduced by various control devices which they theoretically need in order to comply with the MACT provisions pursuant to 40 CFR Part 63, Subpart KK (Printing & Publishing MACT). This MACT was proposed after the November 15, 1990 date noted above but MACT requirements apply to HAPs and **not** VOCs. However, these emissions units are also subject to PSD avoidance limits for VOC emissions and therefore are subject to the requirements of CAM. The VOC emissions are the regulated air pollutant for which the control devices are needed to comply with the applicable standard. Some of these units are considered **large PSEUs** (actual emissions after control greater than 100 tons) with respect to VOC emissions and are subject to the monitoring criteria specified in 40 CFR Part 64.3(b)(4)(ii), [i.e. four or more data values collected, equally spaced over each hour]. The applicant submitted CAM plans designed for the control devices and since some of the emissions units are large PSEUs and have emissions routed through control devices that

are shared with units that are not large PSEUs, the more strict monitoring frequency will be required.

The applicant previously submitted a CAM plan for each applicable process based on the type of control device and whether or not the process was enclosed in a permanent total enclosure. The plans are based, in part, on the monitoring already in place for meeting the MACT requirements. The plans differ based on the type of control device used by each of the applicable emissions units. Presses P-12, P-15, P-16, and P-19 and laminators L-9, L-12, and L-14 have permanent total enclosures around the printing/coating stations and the CAM plans for these units involve monitoring of the pressure drop across the enclosure as well as monitoring of the control devices. The applicant plans to meet the requirements of 40 CFR Part 64 and ensure compliance with the underlying standard (PSD avoidance limit). Compliance has been demonstrated with these plans since the last permit renewal.

### 1.1 Applicable Regulatory Requirements

Table IV-1.2 provides a summary of the limits and/or standards for the emission source(s) described above. A review of the information in the application was performed to ensure the appropriate limits and associated calculations used to show compliance were correct.

**Table IV-1.2: Summary of Emission Limits, Standards and other Applicable Requirements**

Regulated Pollutant	Applicable Standard		Applicable Regulation
	Specific Unit	Specific Limit	
HAP (VOC)	ES604-008, 009, 010, 012 through 015, 060, 075, 081, and 083	0.05 kg HAP/kg HAP applied, 0.04 kg HAP/kg material applied, or 0.20 kg HAP/kg of solids applied	Rule 3D .1111 (40 CFR 63 Subpart KK)
Particulate Matter	$E = 4.10 \times P^{0.67}$ ; where:  E = allowable emission rate in lbs per hr P = process weight in tons per hr		Rule 3D .0515
	ES604-083 (P-12)	13.49 lbs per hr	
	ES604-008 (P-	13.00 lbs per hr	

Regulated Pollutant	Applicable Standard		Applicable Regulation
	Specific Unit	Specific Limit	
	15)		
	ES604-009 (P-16)	13.00 lbs per hr	
	ES604-060 (P-18)	22.85 lbs per hr	
	ES604-081 (P-19)	13.67 lbs per hr	
	ES604-010 (L-9)	12.34 lbs per hr	
	ES604-012 (L-12)	17.16 lbs per hr	
	ES604-075 (L-14)	15.00 lbs per hr	
	ES604-013 (EX1)	25.78 lbs per hr	
	ES604-014 (EX2)	25.78 lbs per hr	
	ES604-015 (EX3)	11.45 lbs per hr	
	ES604-079 (EX4)	12.01 lbs per hr	
Sulfur Dioxide	2.3 lb SO <sub>2</sub> /mmBtu		Rule 3D .0516
Visible emissions	ES604-010, 013, and 014	40 % opacity	Rule 3D .0521(c)
	ES604-008, 009, 060, 012, 015, 075, 079, 081, and 083	20 % opacity	Rule 3D .0521(d)
VOC	4728 tons per 12-month period		Rule 3D .0530
VOC	ES604-008, 010, and 012	966 tons per 12-month period	Rule 3D .0530
VOC	ES604-009	112 tons per 12-month period	Rule 3D .0530
VOC	ES604-060	39.9 tons per 12-month	Rule 3D .0530

Regulated Pollutant	Applicable Standard		Applicable Regulation
	Specific Unit	Specific Limit	
		period	
VOC	ES604-010	97.6 tons per 12-month period	Rule 3D .0530
VOC	ES604-075	39.9 tons per 12-month period	Rule 3D .0530
VOC	ES604-079	39.9 tons per 12-month period	Rule 3D .0530
VOC	ES604-081	124.2 tons per 12-month period	Rule 3D .0530
VOC	ES604-083	57.3 tons per 12-month period	Rule 3D .0530
VOC	Work Practice Standards		Rule 3D .0958

*1.1.1 3D .1111 aNational Emissions Standard for the Printing and Publishing Industry@ (40 CFR 63, Subpart KK)*

This rule, commonly referred to as a MACT (maximum achievable control technology) standard, limits the emissions of volatile organic HAP by requiring capture and control of VOC emissions, specifying performance standards for ink and coating formulations, and requiring implementation of work practice standards. This rule is applicable to the rotogravure printing presses P-12, P-15, P-16, P-18, and P-19. The permittee has elected to include the laminators L-9, L-12, and L-14, the extruders EX-1, EX-2, and EX-3 under the MACT standard at this time rather than having the equipment be subject to any additional future MACT standards as is allowed in Subpart KK [ref. 40 CFR 63.821(a)(3)]. The pilot extruder (ES604-079) is exempt from Subpart KK because the equipment is used for research and development of new products. 40 CFR 63.820(b) specifically exempts research or laboratory equipment. The definition of research or laboratory equipment is specified in the rule and means any equipment for which the primary purpose is to conduct research and development into new processes and products, where such equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

The rule provides several compliance options, and the permittee has requested that they all be included in their permit to give them the flexibility to show compliance as provided for in the MACT rule. These limits are: 0.05 kilogram HAP per kilogram HAP applied, 0.04 kilogram HAP per kilogram of material applied, or 0.20 kilogram HAP per kilogram of solids applied.

Since the printing presses consist of intermittently controlled workstations (i.e. captured emissions can be vented to a control device or directly to the atmosphere), the permittee

is required to maintain proper procedures and records to comply with the MACT requirements. The facility has consistently shown compliance with these emission standards in their semiannual reports, which have been submitted to this Office since calendar year 2000. Compliance demonstrations have been made by the permittee using material balance calculations without the need to use the control efficiency. Compliance with these standards is expected based on past reports and compliance demonstrations.

1.1.2 3D .0515 - ΔParticulates from Miscellaneous Industrial Processes@

The allowable particulate emission limit is calculated by the following equation:

$$E=4.10P^{0.67}$$

where E = allowable emission rate for particulate matter in pounds per hour, and  
P = process weight in tons per hour

The allowable emission rates for the presses, laminators, and extruders at their maximum process rates are listed in Table IV-1.3. The potential emission rates for the processes were determined using the AP-42 emission factors for natural gas and propane combustion. The emission rates listed for each unit are the highest potential emissions when firing either natural gas or propane, whichever resulted in a higher emissions rate.

It is expected that these units will comply with the allowable emissions rate given that their only source of particulate emissions are from the combustion of fuel. Emissions calculations from the equipment are on pages 19-4 through 19-19 of the application. No additional particulate matter is expected to be generated by these processes; however, a small amount of particulate may be generated at the extruder die. The potential emissions listed for the extruders EX-1 through EX-3 include those attributed to fuel combustion in addition to emissions calculated using the manufacturer=s emission factor for particulate matter from the resins. Compliance with the allowable emission limits for the maximum process rates is demonstrated by the combustion of natural gas or propane.

**Table IV-1.3: Actual and Allowable Emission Rates for Printing/Laminating Operations.**

Source	ID No.	Estimated Potential Emission Rate (lb/hr)	Maximum Process Rate (ton/hr)	Maximum Allowable Emissions Rate (lb/hr)
P-12	ES604-083	0.14	5.91	13.49
P-15	ES604-008	0.10	5.60	13.00
P-16	ES604-009	0.02	5.60	13.00
P-18	ES604-060	0.01	12.99	22.85
P-19	ES604-073	0.02	6.03	13.67

Source	ID No.	Estimated Potential Emission Rate (lb/hr)	Maximum Process Rate (ton/hr)	Maximum Allowable Emissions Rate (lb/hr)
L-9	ES604-010	0.09	5.18	12.34
L-12	ES604-012	0.06	8.48	17.16
L-14	ES604-075	0.001	6.93	15.00
EX-1	ES604-013	0.06	15.56	25.78
EX-2	ES604-014	0.03	15.56	25.78
EX-3	ES604-015	0.10	4.63	11.45
EX-04	ES604-079	0.01	4.10	10.56

*1.1.4 3D .0516 - Sulfur Dioxide Emissions from Combustion Sources@*

The presses and other coating operations have dryers, which are sources of combustion whose emissions are discharged through a stack and therefore are subject to 3D .0516(a). Allowable emissions of sulfur dioxide from these sources while firing natural gas or propane shall not exceed 2.3 pounds per million Btu heat input.

Natural gas and propane are inherently low sulfur emitting fuels. Emissions of sulfur dioxide from the combustion of natural gas and propane will always be less than the emission limit. Therefore, compliance is demonstrated with this regulation since estimated emissions are less than the allowable.

*1.1.5 3D .0521 Control of Visible Emissions@*

See Section V.

*1.1.6 3D .0530 Prevention of Significant Deterioration Avoidance - Printing, Coating, Laminating, and Extruding*

The following provides the history behind establishing the facility-wide PSD avoidance limit. In order to establish VOC RACT as an alternative VOC emission control at the facility under FCAQTC Article IX Section 3-138 (currently Rule 3D .0501), the facility installed a solvent recovery system on the printing operations in January 1982. In addition, the facility established a facility-wide limit (bubble) of 4,689 tons of VOC per year based on the actual emissions during the previous two years (the facility also limited the usage of toluene and propyl acetates under the bubble). However, during the seven year contemporaneous period following the installation of the solvent recovery system the facility made several



modifications that, if considered alone, would have been considered major modifications. These modifications (see Table 1.1.4) avoided major new source review requirements relying on the actual emissions reductions resulting from the installation of the solvent recovery system. Each time a modification was made during the contemporaneous period the facility cap was reevaluated and established at 4,728 (4,689 + 39) tons VOC per year. No modifications commenced after the seven year contemporaneous period following the installation of the solvent recovery system have relied on these reductions although the facility wide limit does include emissions from these sources.

**Table IV-1.4: Modifications Avoiding PSD Review Made during the Seven Year Contemporaneous Period Following the Installation of the Solvent Recovery System.<sup>1</sup>**

Description	Month/Year
Modification of Laminator L-9	August/1982
Installation of Press P-13	March/1983
Installation of Laminator L-12	October/1985
Modification of Press P-6	March/1988

<sup>1</sup> This table only includes modifications involving equipment that is still in operation at the facility.

In order to avoid PSD review for presses P-13 and P-6, and laminators L-9 and L12, facility-wide VOC emissions from the printing and other coating operations must be limited to 4,728 tons per monthly rolling 12-month total. In addition, practically enforceable requirements will be included requiring control (oxidation, solvent recovery, or reformulation). These practically enforceable requirements are necessary to ensure the control device is being used at all times except during malfunction/breakdown. This will ensure that the applicant does not bypass the control device in the event they can meet the MACT standard without controls. Operation of the press without controls could result in an emissions increase above the PSD significance level for VOC.

**1.1.7 3D .0530 Prevention of Significant Deterioration Avoidance - ES604-008, 010, 012**

In order to avoid PSD review for the addition of press P-15 in 1991, a 966 tons of VOC per year limit was established on presses P-7 and P-9 (no longer in operation at the facility), P-15, and laminators L-9 and L-12. The original permit limited the operation of the sources to show a net decrease in emissions, thereby avoiding PSD review. Subsequently (ca.1992), the limit was modified to limit the group of sources to 966 tons of VOC per year. This number was based on the individual source operating restrictions and ensured a no net increase in emissions at the facility. (Note: VOC emissions from this group of sources are

also included in the facility-wide limit discussed in 1.1.6.)

In order to avoid PSD review for press P-15, emissions from the presses P-15 and laminators L9 and L-12 must be limited to 966 tons per monthly rolling 12-month total. In addition, practically enforceable requirements will be included requiring control (oxidation or reformulation). These practically enforceable requirements are necessary to ensure the control device is being used at all times except during malfunction/breakdown. This will ensure that the applicant does not bypass the control device in the event they can meet the MACT standard without controls. Operation of the press without controls could result in an emissions increase above the PSD significance level for VOC.

#### *1.1.8 3D .0530 Prevention of Significant Deterioration Avoidance - ES604-009*

In order to avoid PSD review for the addition of press P-16 to replace press P-8 in 1995 a 112 tons of VOC per year limit on Press P-16 was established. This limit is based on the two year average actual emissions of press P-8 (72.3 tons per year) plus a less than significant (39.9 tons per year) increase in VOC emissions. The PSD significance level for VOC emissions is 40 tons per year.

In order to avoid PSD review for press P-16, emissions from P-16 must be limited to 112 tons per monthly rolling 12-month total. In addition, practically enforceable requirements will be included requiring control (oxidation or reformulation). These practically enforceable requirements are necessary to ensure the control device is being used at all times except during malfunction/breakdown. This will ensure that the applicant does not bypass the control device in the event they can meet the MACT standard without controls. Operation of the press without controls could result in an emissions increase above the PSD significance level for VOC.

#### *1.1.9 3D .0530 Prevention of Significant Deterioration Avoidance - ES604-060*

In order to avoid PSD review for the addition of press P-18 in 1996 a 39.9 tons of VOC per year limit on Press P-18 was established. This limit is based on the emissions from the press remaining below the PSD significance level of 40 tons per year for VOC.

In order to avoid PSD review for press P-18, emissions from P-18 must be limited to 39.9 tons per monthly rolling 12-month total. In addition, practically enforceable requirements will be included requiring control (solvent recovery or reformulation). These practically enforceable requirements are necessary to ensure the control device is being used at all times except during malfunction/breakdown. This will ensure that the applicant does not bypass the control device in the event they can meet the MACT standard without controls. Operation of the press without controls could result in an emissions increase above the PSD significance level for VOC.

#### *1.1.10 3D .0530 Prevention of Significant Deterioration Avoidance - ES604-010*

In order to avoid PSD review for the modification of laminator L-9 in 2003 a 97.6 tons of VOC per year limit on laminator L-9 was established. The modification involved adding a new drying system and a permanent total enclosure to capture 100% of the VOC/HAP emissions and route them to the catalytic oxidizer. This limit is based on the two year average actual average emissions of laminator L-9 for the years 1999 and 2000 (57.7 tons per year) plus a less than significant (39.9 tons per year) increase in VOC emissions. The PSD significance level for VOC emissions is 40 tons per year.

In order to avoid PSD review for laminator L-9, emissions from L-9 must be limited to 97.6 tons per monthly rolling 12-month total. In addition, practically enforceable requirements will be included requiring control (oxidation or reformulation). These practically enforceable requirements are necessary to ensure the control device is being used at all times except during malfunction/breakdown. This will ensure that the applicant does not bypass the control device in the event they can meet the MACT standard without controls. Operation of the laminator without controls could result in an emissions increase above the PSD significance level for VOC.

#### *1.1.11 3D .0530 Prevention of Significant Deterioration Avoidance - ES604-075*

In order to avoid PSD review for the addition of laminator L-14 in 2004, a 39.9 tons of VOC per year limit on laminator L-14 was established. This limit is based on the emissions from the laminator remaining below the PSD significance level of 40 tons per year for VOC.

In order to avoid PSD review for laminator L-14, emissions from L-14 must be limited to 39.9 tons per monthly rolling 12-month total. In addition, practically enforceable requirements will be included requiring control (oxidation or reformulation). These practically enforceable requirements are necessary to ensure the control device is being used at all times except during malfunction/breakdown. This will ensure that the applicant does not bypass the control device in the event they can meet the MACT standard without controls. Operation of the laminator without controls could result in an emissions increase above the PSD significance level for VOC.

#### *1.1.12 3D .0530 Prevention of Significant Deterioration Avoidance - ES604-079*

In order to avoid PSD review for the addition of the pilot extruder EX-04 in 2005, a 39.9 tons of VOC per year limit on pilot extruder EX-04 was established. This limit is based on the emissions from the laminator remaining below the PSD significance level of 40 tons per year for VOC.

In order to avoid PSD review for pilot extruder EX-04, emissions from EX-04 must be limited to 39.9 tons per monthly rolling 12-month total. This emission source is uncontrolled so the practically enforceable requirements included in the permit require recordkeeping of the coatings used to demonstrate compliance with this limit.

*1.1.13 3D .0530 Prevention of Significant Deterioration Avoidance - ES604-081*

In order to avoid PSD review for the addition of press P-19, which was relocated from the permittee's other facility to replace press P-9 in 2006, a 124.2 tons of VOC per year limit on Press P-19 was established. This limit is based on the two year average actual emissions of press P-9 (84.3 tons per year) plus a less than significant (39.9 tons per year) increase in VOC emissions. The PSD significance level for VOC emissions is 40 tons per year.

In order to avoid PSD review for press P-19, emissions from P-19 must be limited to 124.2 tons per monthly rolling 12-month total. In addition, practically enforceable requirements will be included requiring control (oxidation or reformulation). These practically enforceable requirements are necessary to ensure the control device is being used at all times except during malfunction/breakdown. This will ensure that the applicant does not bypass the control device in the event they can meet the MACT standard without controls. Operation of the press without controls could result in an emissions increase above the PSD significance level for VOC.

*1.1.14 3D .0530 Prevention of Significant Deterioration Avoidance - ES604-081*

In order to avoid PSD review for the addition of press P-12, which was relocated from the permittee's other facility to replace press P-20 in 2007, a 57.3 tons of VOC per year limit on Press P-12 was established. This limit is based on the two year average actual emissions of press P-20 (17.4 tons per year) plus a less than significant (39.9 tons per year) increase in VOC emissions. The PSD significance level for VOC emissions is 40 tons per year.

In order to avoid PSD review for press P-12, emissions from P-12 must be limited to 57.3 tons per monthly rolling 12-month total. In addition, practically enforceable requirements will be included requiring control (oxidation or reformulation). These practically enforceable requirements are necessary to ensure the control device is being used at all times except during malfunction/breakdown. This will ensure that the applicant does not bypass the control device in the event they can meet the MACT standard without controls. Operation of the press without controls could result in an emissions increase above the PSD significance level for VOC.

### 1.1.15 3D .0958 Work Practice Standards for Sources of Volatile Organic Compounds

#### 1.1.15.1 General work practice standards

The owner or operator of any facility subject to this Rule shall:

- a. store all material, including waste material, containing volatile organic compounds in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
- b. clean up spills as soon as possible following proper safety procedures,
- c. store wipe rags in closed containers,
- d. not clean sponges, fabric, wood, paper products, and other absorbent materials, unless volatile organic compound emissions are captured and controlled,
- e. drain solvents used to clean supply lines and other coating equipment into containers designed for closure, and close containers immediately after each use, and
- f. clean mixing, blending, and manufacturing vats and containers by adding cleaning solvent, closing the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be poured into a closed container.

#### 1.1.15.2 Parts cleaning work practice standards

When cleaning parts, the owner or operator of any facility subject to this Rule shall:

- a. flush parts in the freeboard area,
- b. take precautions to reduce the pooling of solvent on and in the parts,
- c. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
- d. not fill cleaning machines above the fill line, and
- e. not agitate solvent to the point of causing splashing, unless volatile organic compound emissions are captured and controlled.

These requirements are not applicable to equipment using VOC products inside the permanent total enclosures around presses P-12, P-15, P-16, and P-19 and laminators L-9, L-12, and L-14 because the enclosures provide 100% capture of VOC/HAP emissions and then they are routed to their respective control devices.

## 1.2 **Monitoring and Recordkeeping Requirements**

In addition to monitoring specifically required by certain emission standards, Rule 3Q .0508(f) and 40 CFR 70.6(a)(3) require monitoring be included in Title V

permits. This monitoring is labeled Title V monitoring. Title V monitoring is necessary to provide assurance that emissions from a unit are below the applicable standard in cases where the standard does not specify monitoring. In addition, the permittee is required by General Condition **2.15** of the permit to keep sufficient records to estimate the actual annual emissions for inventory and fee purposes. Also, CAM is required on applicable emission units.

*1.2.1 Monitoring and Recordkeeping Required for compliance with 3D .1111 (40 CFR 63 Subpart KK)*

For purposes of the rule, the printing presses and other coating operations are composed of intermittently controlled workstations. Presses P-12, P-15, P-16, P-18, and P-19, laminator L12, and extruders EX-1, EX-2, and EX-3 are controlled using the three regenerative thermal oxidizers operating in parallel. Laminators L-9 and L-14 are controlled using two catalytic oxidizers operating in parallel. All of the coating equipment is capable of venting directly to atmosphere. The recordkeeping requirements vary depending on whether the emissions are vented to the regenerative thermal oxidizers, catalytic oxidizers, or directly to the atmosphere. Records are also required to document when intermittently controlled work stations are vented to a control device. Presses P-12, P-15, P-16, and P-19 and laminators L-9, L-12, and L-14 have permanent total enclosures around the printing/coating stations. For purposes of complying with the MACT standards, the control device and bypass records are only required if the facility is using the compliance option with controls, which they haven't done since becoming subject to the MACT. The specific recordkeeping requirements are described below.

**1.2.1.1 Bypass Line Valve Requirements**

The permittee will be required to keep adequate records to determine the control condition of intermittently controlled workstations in accordance with 40 CFR 63.828(a)(1). The permittee will also be required to maintain records of the inks and other solids containing materials as well as solvents and other diluents used at each workstation. In addition, the permittee shall secure bypass line valves in the closed position with a lock-and-key type configuration, or continuously monitor bypass line valve positions.

**1.2.1.2 Workstations Vented to the three Regenerative Thermal Oxidizers operating in parallel (EX-1 through EX-3, P-12, P-15, P-16, P-18, P-19, and L-12)**

The permittee will be required to determine and keep records of:

- a. the organic HAP content and volatile matter content of the materials used,
- a. the mass of all materials applied each month, and

- b. the organic HAP emitted during the month.

In addition, the permittee will be required to install, calibrate, maintain, and operate a continuous temperature monitor to ensure the regenerative thermal oxidizers= combustion chamber temperature are maintained at a minimum of 1500 °F.

For EX-2 and EX-3, the permittee shall operate the exhaust system to ensure the negative static pressure at the inlet to the exhaust fan is greater than the value determined during the capture efficiency performance test minus 0.5 inches of water column to ensure the minimum capture efficiency is maintained. For EX-2, the capture efficiency performance test of the static pressure was -2.29 inches of water column for station 1 and -1.80 inches of water column for station 2. For EX-3, the capture efficiency performance test of the static pressure was -2.00 inches of water column for all the stations on the extruder. In addition, the permittee shall install, calibrate, operate and maintain a static pressure monitor at the inlet to the exhaust fan in accordance with 40 CFR 63.8. The static pressure shall be measured and recorded at least once every 15 minutes.

For EX-1, the permittee shall determine HAP emissions using an assumed overall control efficiency of 65%. The negative static pressures shall be maintained such that the magnitudes, are greater than or equal to 0.5" w.c. and 1.0" w.c. respectively. The static pressure shall be measured and recorded at least once every 15 minutes.

Presses P-12, P-15, P-16, P-19 and laminator L-12 shall comply with EPA Method 204 - Criteria for and verification of a permanent or temporary total enclosure specified in Appendix M to 40 CFR Part 51. A minimum pressure drop of 0.007" w.c. across the permanent total enclosure shall be maintained. Pressure drop readings shall be recorded at least four times equally spaced over an hour. Pressure drop monitors shall be inspected at least once monthly and shall be calibrated and tested at least quarterly and the results recorded in a log.

#### 1.2.1.3 Workstations Vented to the Catalytic Oxidizers (L-9 and L-14)

The permittee will be required to determine and keep records of:

- a. the organic HAP content and volatile matter content of the materials used,
- b. the mass of all materials applied each month, and
- b. the organic HAP emitted during the month.

In addition, the permittee will be required to install, calibrate, maintain, and operate a continuous temperature monitoring device to ensure the pre-catalyst bed temperature is maintained at a minimum of 500 °F to ensure a minimum destruction efficiency is maintained.

Laminators L-9 and L-14 shall comply with EPA Method 204 - Criteria for and verification of a permanent or temporary total enclosure specified in Appendix M to 40 CFR Part 51. A minimum pressure drop of 0.007" w.c. across the permanent total enclosure shall be maintained. Pressure drop readings shall be recorded at least four times equally spaced over an hour. Pressure drop monitors shall be inspected at least once monthly and shall be calibrated and tested at least quarterly and the results recorded in a log.

#### 1.2.1.4 Uncontrolled Workstations on Presses, Laminators, and Extruders

The permittee will be required to determine and keep records of:

- a. the organic HAP content and volatile matter content of the materials used,
- b. the mass of all materials applied each month, and
- c. the organic HAP emitted during the month.

#### 1.2.1.5 Monthly Compliance Calculations

The permittee will be required to determine and keep records of:

- a. the HAP content of each ink and other solids-containing material applied during the month following the procedures in 40 CFR 63.827(b)(2), and
- b. determine the sum of the mass of all inks and other solids-containing materials, and the sum of the mass of all solvents and other diluents applied during the month, or
- c. Determine the solids content of each ink, and other solids-containing material applied during the month following the procedures in 40 CFR 63.827(c)(2).

#### 1.2.1.6 Additional Recordkeeping Requirements

The permittee will be required to maintain records of all measurements needed to demonstrate compliance with the standard such as continuous monitor data (40 CFR 63.828(a)), usage data, and calculations.

#### 1.2.2 *Monitoring Required for compliance with 3D .0515*

Particulate emissions from the presses and laminators are due to natural gas and/or propane combustion and are well below the maximum allowable emission rates. Particulate emissions from the extruders are due to natural gas and/or propane combustion and the extrusion process. Estimated particulate emissions are greatly below the maximum allowable emission rates. Since exceedance of the emission standard is not a reasonable possibility, no monitoring, recordkeeping, or reporting is required to demonstrate compliance with the



particulate matter standard. Consequently the applicable requirement will be listed in the permit; however, no specific requirements will be detailed for these sources.

### 1.2.3 *Monitoring Required for Compliance with 3D .0516*

There are no testing, monitoring, recordkeeping, and reporting requirements for the presses, laminators, and extruders because the emissions of sulfur dioxide from the combustion of natural gas or propane will always be less than the emission limit. Consequently the applicable requirement will be listed in the permit; however, no specific requirements will be detailed.

### 1.2.4 *Monitoring Required for Compliance with 3D .0521*

Use of only natural gas and propane assures compliance with these standards. No monitoring, recordkeeping, or reporting is required to assure compliance with the opacity standards. See Section V.1.2 below.

### 1.2.5 *Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 4728 tons per year) - Printing, Coating, Laminating, and Extruding Equipment*

A CAM plan is required for all the equipment at this facility as a result of this PSD avoidance limit. Therefore, all of the CAM requirements will be listed under this section and will be referred to for the monitoring for the other PSD avoidance limits. These plans are based on the control devices used by the various emissions units and whether or not the emissions units are located within a permanent total enclosure.

The permit will require records of the monthly VOC emission calculations from all the coating operations at the facility. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the coating operations. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

#### 1.2.5.1 For emissions units located within an enclosure and whose emissions are routed through the **catalytic oxidizers operating in parallel** (L-9 and L-14): In order to demonstrate compliance with the CAM plan for these rotogravure laminators, the following monitoring and recordkeeping requirements apply:

- a. The catalytic oxidizers control temperature shall be continuously monitored to ensure the pre-catalyst bed temperature is maintained at a minimum of 500 EF to ensure minimum destruction efficiency for the unit. The pre-catalyst bed air temperature shall be recorded

at least four times equally spaced over an hour.

- b. The permittee shall conduct an annual inspection of the process-catalytic oxidizer interlocks to ensure that the process will not exhaust into the oxidizer until the oxidizer has reached the minimum temperature identified above.
- c. The permittee shall:
  - i. Comply with EPA Method 204 - Criteria for and Verification of a Permanent or Temporary Total Enclosure specified in Appendix M to 40 CFR Part 51.
  - ii. Maintain a minimum pressure drop of 0.007" w.c. across each of the permanent total enclosures. Pressure drop readings shall be recorded at least four times equally spaced over an hour. The pressure drop monitors shall be inspected at least once monthly and the results of the inspections maintained in a log. The pressure drop monitors shall be calibrated and tested quarterly and the results maintained in a log.
- d. The temperature recording instrument shall be calibrated annually and the pressure drop monitors shall be calibrated on a quarterly basis in accordance with manufacturer=s recommended procedures. Preventative maintenance on this equipment shall be performed annually. Bypass damper operation shall be inspected on an annual basis and preventative maintenance shall be performed annually. The permittee shall record all these calibrations and inspections in a log on site and have it available for inspection by this Office. The log shall include the date, inspector=s name, and any corrective action taken as a result of the inspection and/or calibration.

1.2.5.2 For emissions units located within an enclosure and whose emissions are routed through the **three regenerative thermal oxidizers operating in parallel** (P-12, P-15, P-16, P-19, and L-12): In order to demonstrate compliance with the CAM plan for these rotogravure presses and laminator, the following monitoring and recordkeeping requirements apply:

- a. The thermal oxidizer control temperatures shall be continuously monitored to ensure the combustion chamber temperatures are maintained at a minimum of 1500 EF to ensure minimum destruction efficiency for the units. The combustion chamber temperatures shall be recorded at least four times equally spaced over an hour. The temperatures shall be monitored by a device accurate to within  $\nabla$  1.0% or  $\nabla$  10 degrees F, whichever is greater.

- b. The permittee shall conduct an annual inspection of the process-thermal oxidizer interlocks to ensure that the process will not exhaust into the oxidizers until the oxidizers have reached the minimum temperature identified above.
- c. The permittee shall:
  - i. Comply with EPA Method 204 - Criteria for and Verification of a Permanent or Temporary Total Enclosure specified in Appendix M to 40 CFR Part 51.
  - ii. Maintain a minimum pressure drop of 0.007" w.c. across each of the permanent total enclosures. Pressure drop readings shall be recorded at least four times equally spaced over an hour. The pressure drop monitors shall be inspected at least once monthly and the results of the inspections maintained in a log. The pressure drop monitors shall be calibrated and tested quarterly and the results maintained in a log.
- d. The temperature recording instruments shall be calibrated annually and the pressure drop monitors shall be calibrated on a quarterly basis in accordance with manufacturer=s recommended procedures. Preventative maintenance on this equipment shall be performed annually. Bypass damper operation shall be inspected on an annual basis and preventative maintenance shall be performed annually. The permittee shall record all these calibrations and inspections in a log on site and have it available for inspection by this Office. The log shall include the date, inspector=s name, and any corrective action taken as a result of the inspection and/or calibration.

1.2.5.3 For emissions units **not** located within an enclosure and whose emissions are routed through the **three regenerative thermal oxidizers operating in parallel** (EX-1, EX-2, EX-3, and P-18): In order to demonstrate compliance with the CAM plan for these extrusion laminators, the following monitoring and recordkeeping requirements apply:

- a. The thermal oxidizer control temperatures shall be continuously monitored to ensure the combustion chamber temperatures are maintained at a minimum of 1500 EF to ensure minimum destruction efficiency for the units. The combustion chamber temperatures shall be recorded at least four times equally spaced over an hour. The temperatures shall be monitored by a device accurate to within  $\nabla$  1.0% or  $\nabla$  10 degrees F, whichever is greater.
- b. The permittee shall conduct an annual inspection of the process-

thermal oxidizer interlocks to ensure that the process will not exhaust into the oxidizers until the oxidizers have reached the minimum temperature identified above.

- c. The permittee shall inspect the operational condition and integrity of the dryer, ductwork, and exhaust system to ensure that all normally captured exhaust air will reach the control device.
- d. The permittee shall assure the air flow is into the dryer by using a smoke stick or equivalent approach on a quarterly basis or whenever the dryer system has been adjusted or modified. Observations shall be recorded in a log kept on site and made available for inspection by this Office. The log shall include the date, inspector's name, and any corrective action taken as a result of the observation.
- e. The temperature recording instruments shall be calibrated annually and the pressure drop monitors shall be calibrated on a quarterly basis in accordance with manufacturer's recommended procedures. The permittee shall record all these calibrations and inspections in a log on site and have it available for inspection by this Office. The log shall include the date, inspector's name, and any corrective action taken as a result of the inspection and/or calibration.
- f. The regenerative thermal oxidizers main inlet duct air flow shall be continuously monitored to ensure the air flow shall not exceed 180,000 standard cubic feet per minute (scfm) to ensure the air flow loading capacity of the oxidizers is not exceeded. The main inlet duct air flow shall be recorded at least four times equally spaced over an hour. The air flow shall be monitored by a device accurate to within  $\pm 1.0\%$ .
- g. The air flow recording instrument shall be calibrated annually and preventative maintenance performed annually. The permittee shall record the results of all the inspection, calibration and maintenance activities in a log on site and have it available for inspection by this Office. The log shall include the date, inspector's name, and any corrective action taken as a result of the inspection and/or calibration.

*1.2.6 Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 966 tons per year) - ES604-008, 010, and 012*

The permit will require records of the monthly VOC emission calculations from P-

15, L-9, and L-12. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the coating operations. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

The CAM requirements for this rotogravure press and laminators are identified in **Section 1.2.5.1** for laminator L-9 and in **Section 1.2.5.2** for presses P-15 and laminator L-12.

*1.2.7 Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 112 tons per year) - ES604-009*

The permit will require records of the monthly VOC emission calculations from P-16. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the press. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

The CAM requirements for this rotogravure press are identified in **Section 1.2.5.2** above.

*1.2.8 Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 39.9 tons per year) - ES604-060*

The permit will require records of the monthly VOC emission calculations from P-18. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the press. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

The CAM requirements for this rotogravure press are identified in **Section 1.2.5.3** above.

*1.2.9 Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 97.6 tons per year) - ES604-010*

The permit will require records of the monthly VOC emission calculations from L-9. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the laminator. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

The CAM requirements for this rotogravure laminator are identified in **Section 1.2.5.1** above.

*1.2.10 Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 39.9 tons per year) - ES604-075*

The permit will require records of the monthly VOC emission calculations from L-14. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the laminator. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

The CAM requirements for this rotogravure laminator are identified in **Section 1.2.5.1** above.

*1.2.11 Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 39.9 tons per year) - ES604-079*

The permit will require records of the monthly VOC emission calculations from EX-04. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the pilot extruder. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

The pilot extruder is not subject to CAM.

*1.2.12 Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 124.2 tons per year) - ES604-081*

The permit will require records of the monthly VOC emission calculations from P-19. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the press. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

The CAM requirements for this rotogravure press are identified in **Section 1.2.5.2** above.

*1.2.13 Compliance Assurance Monitoring and Recordkeeping Required for Compliance with 3D .0530 (PSD Avoidance: 57.3 tons per year) - ES604-083*

The permit will require records of the monthly VOC emission calculations from P-12. Records required demonstrating compliance with the MACT will be sufficient to determine monthly VOC usage from the press. Calculations of the monthly VOC emissions and the total for the previous 12-months will be required each month.

The CAM requirements for this rotogravure press are identified in **Section 1.2.5.2**

above.

#### *1.2.14 Monitoring and Recordkeeping Required for Compliance with 3D .0958 (Work Practice Standards for Sources of VOC)*

To ensure compliance with the work practice standards above, the permittee shall perform weekly inspections at each affected emissions unit to verify compliance with the work practices and identify any deviations. The results of the inspections and any deviations shall be recorded in a log (written or electronic form) on site and be readily available upon request by an authorized representative of this Office or the U.S. EPA. The log shall contain the following records:

- a. the date and time of each inspection,
- b. the results of each inspection, and
- c. all deviations from required work practice standards and the corrective actions taken.

### **1.3 Reporting Requirements**

The permittee is required by General Condition **2.14** of the permit to submit a report by March 1<sup>st</sup> of each year certifying compliance with all terms and conditions in the permit, including emissions limitations, standards, and work practices for the preceding calendar year. This report is known as the annual compliance certification.

The permittee is also required by General Condition **2.10** to report excess emissions and deviations from permit conditions within one business day for requirements covered under 3D .1110 (Part 61 NESHAPs) and .1111 (Part 63 NESHAPs). This report must also be made in writing within two business days. Excess emissions greater than four hours in duration and covered under Rule 3D .0535 are required to be reported by 9:00 a.m. Eastern Time of this Office's next business day. The permittee is required to report excess emissions not covered under Rule 3D .0535 and any permit deviations quarterly unless an alternative reporting schedule is provided in the specific conditions.

In addition, all instances of deviations from the specific monitoring requirement must be reported semi-annually.

#### *1.3.1 Reporting Requirements required by 3D .1111 (40 CFR 63 Subpart KK)*

The permittee will be required to submit start-up, shutdown and malfunction reports as specified in 40 CFR 63.10(d) and 63.830(b)(5). Since the individual operation of the presses and other coating operations are analogous to batch operations, reports for startup and shutdown apply to the control devices and not to the individual coating units.

The permittee will be required to submit semiannual summary reports specified in 40 CFR 63.10(e)(3) by January 30<sup>th</sup> and July 30<sup>th</sup> of each year.

*1.3.2 Reporting Requirements required for compliance with 3D .0530 (PSD Avoidance: 4728 tons per year) - Printing, Coating, Laminating, and Extruding*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12- month VOC emissions from all the printing, coating, laminating, and extruding operations at the facility for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year.

In addition, the permittee is required to submit a semi-annual summary report of the compliance assurance monitoring including, as a minimum:

- a. summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
- b. summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with calibration checks, if applicable); and
- c. a description of the actions taken to implement a Quality Improvement Plan (QIP) (if required by this Office) during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

*1.3.3 Reporting Requirements required for compliance with 3D .0530 (PSD Avoidance: 966 tons per year) - ES604-008, 010, and 012*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12-month total VOC emissions from P-15, L-9, and L-12 for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year. In addition, the permittee is required to submit a semiannual summary report of CAM as stated in **Section 1.3.2** above.

*1.3.4 Reporting Requirements required by 3D .0530 (PSD Avoidance: 112 tons per year) - ES604-009*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12-month total VOC emissions from press P-16 for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year. In addition, the permittee is required to submit a semiannual summary report of CAM as stated in **Section 1.3.2** above.



*1.3.5 Reporting Requirements required by 3D .0530 (PSD Avoidance: 39.9 tons per year) - ES604-060*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12-month total VOC emissions from press P-18 for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year. In addition, the permittee is required to submit a semiannual summary report of CAM as stated in **Section 1.3.2** above.

*1.3.6 Reporting Requirements required by 3D .0530 (PSD Avoidance: 97.6 tons per year) - ES604-010*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12-month total VOC emissions from laminator L-9 for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year. In addition, the permittee is required to submit a semiannual summary report of CAM as stated in **Section 1.3.2** above.

*1.3.7 Reporting Requirements required by 3D .0530 (PSD Avoidance: 39.9 tons per year) - ES604-075*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12-month total VOC emissions from laminator L-14 for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year. In addition, the permittee is required to submit a semiannual summary report of CAM as stated in **Section 1.3.2** above.

*1.3.8 Reporting Requirements required by 3D .0530 (PSD Avoidance: 39.9 tons per year) - ES604-079*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12-month total VOC emissions from the pilot extruder EX-04 for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year.

*1.3.9 Reporting Requirements required by 3D .0530 (PSD Avoidance: 124.2 tons per year) - ES604-081*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12-month total VOC emissions from press P-19 for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year. In addition, the permittee is required to submit a semiannual summary report of CAM as stated in **Section 1.3.2** above.

*1.3.10 Reporting Requirements required by 3D .0530 (PSD Avoidance: 57.3 tons per year) - ES604-083*

The permittee will be required to submit semiannual reports of the monthly and monthly rolling 12-month total VOC emissions from press P-12 for each of the previous 12 months by January 30<sup>th</sup> and July 30<sup>th</sup> of each year. In addition, the permittee is required to submit a semiannual summary report of CAM as stated in **Section 1.3.2** above.

*1.3.11 Reporting Requirements required for 3D .0958 (Work Practice Standards for Sources of VOC)*

The permittee shall submit a semiannual summary report of the monitoring requirements specified in **Section 1.2.14** above to this Office by January 30<sup>th</sup> and July 30<sup>th</sup> each year. This report shall identify the total number of weeks in which the work practice standards weekly check was not made during the reporting period and shall include a description of any corrective actions taken as a result of the inspections.

**2.0 ES604-080: Enclosed Hard Chrome Plating Operation**

The enclosed hard chrome plating operation is used to apply a thin film of chrome metal on rotogravure cylinders to extend the life of the cylinders. Rotogravure cylinders are typically first plated with copper metal which is relatively soft and can be easily etched. In order to apply an ink or other coating in a particular pattern to a web in a rotogravure operation, the pattern is etched into a copper plated cylinder. During the rotogravure coating operation, coating is applied to the cylinder and knives remove the coating from the cylinder surface leaving the coating in the etched areas to be applied to the web. Since copper is a relatively soft metal, a thin layer of chromium, a relatively hard metal, is applied to the surface of the cylinder. The thickness of the chrome layer will vary depending on how much the cylinder will be used.

The chrome plating operation is a source of particulate matter including hexavalent chromium and trivalent chromium emissions which are regulated as a hazardous air pollutant (chromium compounds). Chromium compounds are emitted as an acid mist generated by the evolution of hydrogen gas during the electroplating operation.

**2.1 Applicable Regulatory Requirements**

The following provides a summary of the limits and/or standards for the emission source(s) described above. A review of the information in the application was performed to ensure the appropriate limits and associated calculations used to show compliance were correct.

**Table IV-2.1: Summary of Emission Limits, Standards and other Applicable Requirements.**

Regulated Pollutant	Applicable Standard	Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67}$ ; Where:  E = allowable emission rate in lbs per hr P = process weight in tons per hr  10.30 lbs per hr	Rule 3D .0515
Visible emissions	20 % opacity	Rule 3D .0521(d)
Chromium Compounds (HAP)	$MAMER = ETSA \times K \times 0.015$ mg/dscm; where MAMER = the alternative emission rate for the enclosed hard chromium electroplating tank in mg/hr ETSA = the hard chromium electroplating tank surface area in square feet (ft <sup>2</sup> ) K = a conversion factor, 425 dscm/(ft <sup>2</sup> x hr)	Rule 3D .1111 (40 CFR 63 Subpart N)
	Operation and Maintenance Plan	

2.1.1 3D .0515 - *Particulates from Miscellaneous Industrial Processes*@

The allowable particulate emission limit is calculated by the following equation:

$$E=4.10P^{0.67}$$

where E = allowable emission rate for particulate matter in pounds per hour,  
 P = process weight in tons per hour

The allowable emission rate for the hard chromium electroplating operation at the maximum process rate (3.96 ton/hr) is 10.30 lbs/hour. The potential emission

rate for the process was determined to be 0.0000826 lbs/hr based on the MACT allowable limit of 0.015 mg/dscm. Compliance with the allowable emission limits for the maximum process rates is demonstrated.

### 2.1.2 3D .0521 *Control of Visible Emissions*

The enclosed hard chromium electroplating operation is subject to Rule 3D .0521. Emissions from the plating operation are controlled by a composite mesh pad mist eliminator and are expected to comply with the 20% visible emission standard. Previous inspections of the unit have verified compliance with the opacity standard.

### 2.1.3 3D .1111 *National Emissions Standard for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks* (40 CFR 63 Subpart N)

The enclosed hard chromium electroplating tank is an affected source under the MACT standard. The permit to construct this tank was issued on August 8, 2006.

This tank was to replace the existing hard chromium electroplating tank. When the permit was issued, this Office inadvertently listed an incorrect emission limit. The permit limited the emissions of total chromium to no more than 0.03 mg/dscm. This limit is incorrect because it only applies to existing enclosed hard chromium electroplating tanks located at a small hard chromium electroplating facility. Because the tank replaced an existing tank, it should have been considered a new affected source and the permit should have listed the emissions limit of 0.015 mg/dscm or a calculated maximum allowable mass emission rate.

The permittee notified this Office they wanted to change the emission limit to the maximum allowable mass emission rate identified in 40 CFR 63.342(c)(2)(iv) instead of the permitted limit of 0.03 mg/dscm. Upon further investigation, it was discovered that the incorrect emission limit had been included in their previous permits. The facility conducted a stack test to demonstrate compliance with the permitted limit of 0.03 mg/dscm on June 1, 2007. The average measured chromium concentration during the test was 0.024 mg/dscm which demonstrated compliance with the permit limit.

The results of that test can be used to demonstrate compliance with the requested maximum allowable mass emission rate. The rate is determined using the equation found in 40 CFR 63.344(f)(1)(i). The equation is:

$MAMER = ETSA \times K \times 0.015 \text{ mg/dscm}$ , where

MAMER = the alternative emission rate for the enclosed hard chromium electroplating tank in mg/hr,

ETSA = the hard chromium electroplating tank surface area in square feet (ft<sup>2</sup>), and  
K = a conversion factor, 425 dscm/(ft<sup>2</sup> x hr)  
The hard chromium electroplating tank surface area is 14.316 ft<sup>2</sup>.

$$\text{MAMER} = 14.316 \text{ ft}^2 \times 425 \text{ dscm}/(\text{ft}^2 \times \text{hr}) \times 0.015 \text{ mg}/\text{dscm}$$

$$\text{MAMER} = \underline{91.264 \text{ mg/hr or } 2.01 \text{ E}^{-04} \text{ lb/hr}} \quad (91.264 \text{ mg/hr} \times (1 \text{ lb} / 453.592 \text{ E}^3 \text{ mg}))$$

The stack test performed on June 1, 2007 resulted in an average emission rate of 1.26 E-04, which demonstrates compliance with the MAMER. This Office will include this emission limit in the permit as requested by the permittee. This will correct the error of having the wrong emission limit. The facility did demonstrate compliance with the incorrect limit and the test results also demonstrate compliance with the requested new limit.

This standard only applies to the source during tank operation including periods of startup and shutdown as these are routine occurrences for this equipment. This standard does not apply during periods of malfunction in accordance with 40 CFR 63.342(b)(1), but the work practice standards that address operation and maintenance and that are required below must be followed during malfunctions.

In addition to emission limitation specified above, the permittee is subject to work practice standards under the MACT. The permittee is required to operate and maintain the source, including the mist eliminator and any monitoring equipment, consistent with an operation and maintenance plan to ensure good air pollution control practices. The plan will be incorporated by reference into the Title V operating permit. The permittee is required to revise the plan within 45 days of a malfunction that is not adequately addressed in the plan or the Director may require a plan revision if it is determined to be inadequate. The operation and maintenance work practice requirements are enforceable independent of the emissions limitation. The work practice standards must be followed at all times including periods of malfunction.

## **2.2 Monitoring and Recordkeeping Requirements**

In addition to monitoring specifically required by certain emission standards, Rule 3Q .0508(f) and 40 CFR 70.6(a)(3) require monitoring be included in Title V permits. Title V monitoring is necessary to provide assurance that emissions from a unit are below the applicable standard in cases where the standard does not specify monitoring. In addition, the permittee is required by General Condition **2.15** of the permit to keep sufficient records to estimate the actual annual emissions for inventory and fee purposes.

### *2.2.1 Monitoring Required for Compliance with 3D .0515*

Particulate emissions from the enclosed hard chromium electroplating operation are greatly below the maximum allowable emission rates. Since an exceedance of the emission standard is not a reasonable possibility no monitoring, recordkeeping, or reporting is required to demonstrate compliance with the particulate matter standard.

#### 2.2.2 *Monitoring Required for Compliance with 3D .0521*

Visible emissions are not generally expected from the chromium electroplating operation and any visible emissions would be controlled by the mist eliminator required under the MACT. Since an exceedance of the visible emissions standard is not a reasonable possibility, no monitoring, recordkeeping, or reporting is required

#### 2.2.3 *Monitoring and Recordkeeping Required for compliance with 3D .1111 (40 CFR 63 Subpart N)*

##### 2.2.3.1 Monitoring of Pressure Drop Across System

Since the enclosed hard chromium electroplating tank is controlled using a composite mesh pad mist eliminator, the permittee is required to establish an operating range for pressure drop across the control device to be used to demonstrate compliance with the emission standard. In accordance with 40 CFR 63.343(c), the pressure drop operating range may be established using several performance tests to establish a range of compliant pressure drop values or the operating may be established as  $\sqrt{2}$  inches of water column from the average pressure drop measured over three test runs of one compliance test. In order to ensure the permit will reflect the most recent data available for the system, the permit will reference the pressure drop established during the most recent performance test approved by this Office rather than place the current value in the permit. The pressure established in the most recent performance test is  $0.9 \sqrt{2}$  inches of water column. As required by the rule, the permittee will be required to record the pressure once each day during operation.

The monitoring equipment is required to be operated and maintained in accordance with the work practice plan described below. The majority of the monitoring requirements are specified in Subpart N so that the monitoring requirements specified in the General Provisions do not apply in most cases. In particular, the operation and maintenance requirements under 63.6(e) do not apply. The monitoring requirements from the General Provisions, Subpart A that do apply are 63.8(a)(1 and 2), (b)(1), and (f)(1, 3, 4, and 5).

##### 2.2.3.1 Recordkeeping Requirements

In addition to the generally applicable recordkeeping requirements specified in the

General Provisions (40 CFR 63 Subpart Subpart A) the following records specified in 40 CFR 63.346(b) must be maintained:

- a. Inspection records for the composite mesh pad mist eliminator and monitoring equipment to demonstrate the inspection and maintenance plan required under the work practice standard is followed,
- b. Records of maintenance on the control device and monitoring equipment,
- c. Records of the occurrence, duration and cause of each malfunction of the control device or monitoring equipment,
- d. Records of actions taken during malfunctions that are inconsistent with the operation and maintenance plan,
- e. Any other records necessary to demonstrate compliance with the operation and maintenance plan required under the work practice standard,
- f. Test reports,
- g. All measurements taken during performance tests to determine the conditions of the test,
- h. Daily records of the pressure drop across the control device including the date and time the data were recorded,
- i. Records identifying the date, time, and duration of each excess emission as indicated by monitoring data during a malfunction,
- j. Records identifying the date, time, and duration of each excess emission as indicated by monitoring data during a period besides a malfunction,
- k. Records of the total operating time during each reporting period
- l. All additional documentation supporting required notifications and reports.

The applicable recordkeeping requirements from the General Provisions are 63.10(a) and (b)(1).

### **2.3 Reporting Requirements**

The permittee is required by General Condition **2.14** of the permit to submit a report by March 1<sup>st</sup> certifying compliance with all terms and conditions in the permit, including emissions limitations, standards, and work practices for the previous calendar year.

The permittee is also required by General Condition **2.10** to report excess emissions and deviations from permit conditions within one business day for requirements covered under 3D .1110 (Part 61 NESHAPs) and .1111 (Part 63 NESHAPs). This report must also be made in writing within two business days. Excess emissions greater than four hours in duration and covered under Rule 3D .0535 are required to be reported by 9:00 a.m. Eastern Time of this Office's next

business day. The permittee is required to report excess emissions not covered under Rule 3D .0535 and any permit deviations quarterly unless an alternative reporting schedule is provided in the specific conditions.

In addition, all instances of deviations from the specific monitoring requirement must be reported semi-annually.

### *2.3.2 Reporting Requirements required for compliance with 3D .1111 (40 CFR 63 Subpart N)*

In addition to the generally applicable reporting and notification requirements specified in the General Provisions (40 CFR 63 Subpart Subpart A), the permittee is required to submit the following reports specified in 40 CFR 63.347:

- a. Report by phone within 2 days and by letter within 7 days after taking actions that are inconsistent with the operation and maintenance plan,
- b. Notification to the Director at least 60 days before a performance test is scheduled to be conducted,
- c. Ongoing Compliance Report as required in 63.347(g) submitted semi-annually or quarterly as required.

In addition to the reports required above the permittee has already complied with the requirements to submit a notification of the commencement of construction, notification of the actual date of startup and the notification of compliance status. The applicable reporting requirements from the General Provisions are 63.10(d)(1 and 4) and (f).

### **3.0 ES604-084: AESYS Technologies, LLC low-NOx Boiler**

The AESYS Technologies, LLC. Boiler is fired by natural gas or propane with a maximum heat input of 28.1 million Btu per hour. This boiler is used to provide steam to the facility. It began operation in January, 2009. The boiler is subject to the New Source Performance Standards (NSPS) Subpart Dc. Because the boiler only fires gaseous fuels, the only NSPS requirement is for the facility to report the total fuel usage to this Office on an annual basis. There are no emissions limits for this boiler in the NSPS. The permit will include a requirement for the permittee to report the annual fuel usage (natural gas and propane) to this Office no later than January 31<sup>st</sup> of each year.

There are no control devices to reduce emissions from the boiler so Compliance Assurance Monitoring does not apply. The current operating permit has numerous Prevention of Significant Deterioration (PSD) avoidance limits for volatile organic compounds. However, the potential emissions of the criteria pollutants from the boiler are well below the PSD significant levels and therefore, PSD did not apply to this modification nor was there a need to include permit



conditions to avoid PSD regulation. The applicability to the Boiler MACT is described in Section VII below.

### 3.1 Applicable Regulatory Requirements

The following provides a summary of the limits and/or standards for the emission source(s) described above. A review of the information in the application was performed to ensure the appropriate limits and associated calculations used to show compliance were correct.

**Table IV-3.1: Summary of Emission Limits, Standards and other Applicable Requirements.**

Regulated Pollutant	Applicable Standard	Applicable Regulation
Particulate Matter	$E = 1.090 \times Q^{-0.2594}$ , Where: E = allowable emission limit for PM in lb/million Btu Q = maximum heat input in million Btu/hr 0.46 lb/million Btu	Rule 3D .0503
Sulfur Dioxide	2.3 lb/million Btu	Rule 3D .0516
Visible emissions	20 % opacity	Rule 3D .0521(d)

#### 3.1.1 3D .0503 - *Particulates from Fuel Burning Indirect Heat Exchangers*

The allowable particulate emission limit is calculated by the following equation:

$$E = 1.090 \times Q^{-0.2594}$$

where E = allowable emission limit for PM in lb/million Btu,  
 Q = maximum heat input in million Btu/hr of all fuel burning indirect heat exchangers at a plant site

The allowable emission rate for the boiler at the maximum heat input rate (28.1 MMBtu/hr) is 0.46 lb/MMBtu (There are no other fuel burning indirect heat exchangers at the plant). The combustion of natural gas or propane inherently meets the allowable emission limit. No monitoring/recordkeeping/reporting is required to demonstrate compliance with this limit.

### 3.1.2 3D .0516 *Sulfur Dioxide Emissions from Combustion Sources*

Allowable emissions of sulfur dioxide from the boiler while firing natural gas or propane shall not exceed 2.3 pounds per million Btu heat input. Natural gas and propane are inherently low sulfur emitting fuels. Emissions of sulfur dioxide from the combustion of natural gas and propane will always be less than the emission limit. Therefore, compliance is demonstrated with this regulation since estimated emissions are less than the allowable. No monitoring/recordkeeping/reporting is required to demonstrate compliance with this limit.

### 3.1.3 3D .0521 *Control of Visible Emissions*

3D .0521(d) states - *For sources established after July 1, 1971, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging no more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24 hour period.* The combustion of natural gas or propane assures compliance with the opacity limit. No monitoring/recordkeeping/reporting is required to demonstrate compliance with this limit.

### 3.1.4 3D .1111 *National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters*, (40 CFR 63, Subpart DDDDD)

Because the boiler only combust natural gas, the requirements under the MACT only include an annual boiler tune-up, a one-time energy assessment, along with the keeping of these records and an annual compliance report. The boiler is not subject to any emissions standards in the MACT. The necessary permit conditions are included in the draft permit.

The permittee has stated that they will request a permit limit to assure HAP emissions remain below 10/25 tons and therefore, they would not be subject to this MACT. That request is expected within the next year so until then, the permit conditions detailing compliance with the Boiler MACT will be included in the draft renewal permit.

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## V. FACILITY-WIDE EMISSION SOURCE CONDITIONS

### 1. 3D .0521 - *Control of Visible Emissions*

This rule was promulgated for the prevention, abatement, and control of emissions generated from fuel burning operations and other industrial processes

where an emissions can be reasonably expected to occur, except during startups, shutdowns or malfunctions made in accordance with other conditions in the Title V permit.

## 1.1 Regulatory Requirements

3D .0521(c) states - ΔFor sources existing as of July 1, 1971, visible emissions shall not be more than 40 percent opacity when averaged over a six-minute period except that six-minute periods averaging no more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24 hour period.@

3D .0521(d) states - ΔFor sources established after July 1, 1971, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging no more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24 hour period.@

The applicable opacity standard for each source is listed in **Table V-1**.

## 1.2 Monitoring and Recordkeeping Requirements

Although all of the sources are subject to the opacity standard, the only emission sources that could reasonably emit visible emissions are the extruders (note: the extruders are not known to have produced observable visible emissions). The extruders and several other sources (P-12, P15, P16, P-18, P-19, and L12) are ducted to the regenerative thermal oxidizers operating in parallel and exhausted to atmosphere through a common stack. Likewise, emissions from laminators L-9 and L-14 are routed through the two catalytic oxidizers operating in parallel and exhausted through a common stack. Since different opacity limits apply to sources exhausting through the common stack, the stack emissions must be limited to 20% opacity to allow for practical enforceability of the opacity standard.

Use of only natural gas and propane assures compliance with these standards. No monitoring, recordkeeping, or reporting is required to assure compliance with the opacity standards. However, excess visible emissions shall be grounds for this Office to require testing from these sources using appropriate U.S. EPA reference test methods for particulate matter as approved by this Office. Also, the emissions from natural gas and propane combustion shall be included in emissions inventories in accordance with General Condition **2.13** of the operating permit.

**Table V-1: Applicable Opacity Limits for Sources at Liberty Complex**

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Emission Source	ID No.	Standard	Regulation
Laminator L-9 <sup>1</sup>	ES604-010	40% opacity	Rule 3D .0521(c)
Extruders EX-1 and EX-2 <sup>1</sup>	ES604-013 and 014		
Presses P-12, P-15, P-16, P-18, and P-19	ES604-083, 008, 009, 060, and 081	20% opacity	Rule 3D .0521(d)
Laminators L-12 and L-14	ES604-012 and 075		
Extruders EX-3 and EX-04	ES604-015 and 079		
Chromium Electroplating Tank	ES694-080		

<sup>1</sup> These sources are required to comply with the more stringent opacity standard when emissions are exhausted to the atmosphere through a stack in common with sources subject to the more stringent limit.

## VI. LOCAL ONLY ENFORCEMENT

The requirements in this section are subject to local enforcement only and are not federally enforceable.

### 1. 3D .1100 - Control of Toxic Air Pollutants

The facility conducted a facility-wide TAP demonstration in May, 2005. The following TAPs were found to be below the de-minimis limits in the rule: benzene, benzo(a)pyrene, formaldehyde, n-hexane, sulfuric acid, styrene, and toluene. Dispersion modeling using ISC-PRIME (version no. 01228), performed in May 2005, and approved by the This Office in October 2005, demonstrated that the permitted emissions of the TAPs listed below from this facility impacted the surrounding ambient air at levels below the acceptable ambient levels (AALs) specified in Rule 3D .1104 of the FCAQTC. The emission rates listed below shall be used as a basis for certifying that any future modifications or changes in the methods of operation will result in ambient impacts below these AALs. In no case shall actual emissions resulting from changes or modifications exceed any of the following emission rates without first applying for and receiving a permit:

Pollutant	Maximum facility-wide emission rate
ammonia (7664-41-7)	21.03 lb/hour

Pollutant	Maximum facility-wide emission rate
ethyl acetate (141-78-6)	784.2 lb/hour
methyl ethyl ketone (78-93-3)	209.8 lb/hour and 5,035.2 lb/day
methyl isobutyl ketone (108-10-1)	65.4 lb/hour and 1,569.6 lb/day
soluble chromate compounds, as chromium (VI) equivalent	0.456 lb/day
toluene (108-88-3)	124.1 lb/hour and 2,913.6 lb/day
toluene diisocyanate, 2,4- (584-84-9) and 2,6- (91-08-7) isomers	1.152 lb/day

Permit condition 4(D) states ... In accordance with Rule 3Q .0701(c), for the 5 year period beginning on October 11, 2005 modifications which increase the facility-wide emissions of, or which relocate an existing emission source of any TAPs already modeled are allowed without further modeling analysis by the applicant except that actual emissions may not increase above those emissions rates without first applying for and obtaining a permit. This does not prevent this Office from conducting a modeling analysis of the facility and, furthermore, does not affect the ability of the Director to require the applicant to conduct another modeling analysis pursuant to Rule 3Q .0712.

This language is no longer in the FCAQTC so this condition has been deleted and replaced with the following language:

**Stack data** - The permittee must obtain approval from this Office prior to the modification of any stack or vent identified in the May, 2005 modeling analysis which was used to calculate the TAP emission rates listed in permit condition **4.C**. The permittee must demonstrate that the modification will not cause or contribute to any significant ambient air concentration that may adversely affect human health as required in Section 3D .1100. Examples of what constitutes a modification in this condition include:

- (1) reduction in stack heights,
- (2) change in stack diameter,
- (3) reduction of the average stack exit velocity,
- (4) reduction in stack flow rate,
- (5) addition of stack obstructions (e.g. rain caps),
- (6) redirection or reorientation of stack emissions, or
- (7) reduction in average stack temperatures.

### **1.1.1 Monitoring/Recordkeeping/Reporting requirements for the Control of Toxic Air Pollutants**

The permittee shall maintain updated records of production rates, throughputs, material usage, and other process operational information as is necessary to determine compliance with the emission rates specified above. At a minimum these records shall include data sufficient to calculate monthly averaged emission rates (in pounds per hour of emission source operation) for TAPs with 1-hour or 24-hour AALs and yearly emission rates (in pounds per calendar year) for TAPs with annual AALs.

Copies of these records shall be retained by the permittee for a period of two years after the date on which the record was made. If requested by an agent of this Office, the permittee shall readily supply copies of these records at the time of inspection. Likewise, the permittee shall submit copies of the records upon request by this Office.

No reporting is required to demonstrate compliance with these requirements.

## **2. 3D .0522 Control and Prohibition of Odorous Emissions**

This regulation applies to all facilities and prohibits the emissions of odors beyond the property lines that are harmful, irritating or which unreasonably interfere with the use and enjoyment of any person=s properties or living conditions, or any public properties or facilities. This requirement is addressed in General Condition **2.39**.

Violation of this regulation is determined by this Office upon investigation of a complaint. There is not currently a requirement for the permittee to perform any monitoring/recordkeeping/ reporting activities for this rule. Any future requirements will only be in response to complaints received by this Office.

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## **VII. MACT APPLICABILITY AND REQUIREMENTS**

### *Printing and Publishing MACT*

The coating operations at this facility are subject to the printing and publishing MACT, 40 CFR 63 Subpart KK. Some of the coating equipment such as the laminators would have been subject to Subpart JJJJ (Paper and other Web Coating MACT) but the permittee had elected to have this equipment comply with the requirements of subpart KK thereby avoiding any other MACT requirements. This was done in accordance with 40 CFR 63.821(a)(3). The exemption of this equipment from Subpart JJJJ is located in 40 CFR 63.3300(a) and (b). The chromium electroplating operation is subject to the chrome plating MACT, 40 CFR 63 Subpart N. The requirements for equipment subject to these MACT standards can be found in Section IV above.

### Chromium Electroplating MACT

The chromium electroplating operation is subject to the chrome plating MACT, 40 CFR 63 Subpart N. The requirements for equipment subject to these MACT standards can be found in Section IV above.

### Boiler MACT

The applicant has submitted notification to this Office that the boiler ES-084 is subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD on October 21, 2008. This MACT was promulgated on September 13, 2004 in the Federal Register.

However, the United States Court of Appeals for the District of Columbia Circuit has vacated the Boiler MACT rule (40 CFR Part 63, Subpart DDDDD) as of July 30, 2007.

In June of 2010, the EPA proposed a new version of the Boiler MACT. This version also went through some challenges and delays. The final rule for the Major Source boilers was published in the Federal Register on January 31, 2013. The compliance date for this boiler is January 31, 2016. The requirements for equipment subject to these MACT standards can be found in Section IV above.

Because the boiler only combust natural gas, the requirements under the MACT only include an annual boiler tune-up, a one-time energy assessment, along with the keeping of these records and an annual compliance report. The boiler is not subject to any emissions standards in the MACT. The necessary permit conditions are included in the draft permit.

The permittee has stated that they will request a permit limit to assure HAP emissions remain below 10/25 tons and therefore, they would not be subject to this MACT. That request is expected within the next year so until then, the permit conditions detailing compliance with the Boiler MACT will be included in the draft renewal permit.

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## **VIII. PERMIT SHIELD (INCLUDING NON-APPLICABLE REQUIREMENTS)**

In accordance with 3Q .0512, general condition **2.7** of the permit will contain a provision stating that compliance with the terms, conditions, and limitations of the Title V permit shall be deemed in compliance with applicable requirements specifically identified in the permit, as of the date of permit issuance. If the permit does not expressly state that a permit shield exists then it shall be presumed not to provide such a shield.

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## **IX. GENERAL CONDITIONS**

The ΔGeneral Conditions@ section of the Title V Operating Permit lists additional applicable rule requirements that the permittee must adhere to, as with any other permit condition. These requirements in general are common to all Title V facilities. The general conditions include provisions such as annual fee payment, permit renewal and expiration, transfer of ownership or operation, submission of documents, inspections and entry procedures, reopen for cause, severability, etc. In addition, conditions in this section of the permit include the general conditions specific to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) program and the general conditions for the CAM rule. These conditions are not necessarily common to all Title V facilities, only those subject to a MACT standard and CAM.

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## **X. INSIGNIFICANT ACTIVITIES**

The insignificant activities listed in the application have been reviewed and verified. Although each activity is not listed in the Title V permit, a general condition is placed in the Title V permit stating that all insignificant activities shall comply with the applicable requirements. The insignificant activities at the facility will be listed in an attachment to the permit.

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## **XI. PUBLIC NOTICE**

This Office will post a notice on our web page concerning the renewal of this permit. The notice will provide for a 30 day comment period, with an opportunity for a public hearing if one is requested. Concurrent with the 30 day public comment period, the draft permit will be emailed to EPA Region IV for their review. The EPA review period is for 45 days. Concurrent review by the public and the EPA is known as parallel processing.

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## **XII. THIS OFFICE'S COMMENTS/RECOMMENDATIONS**

Changes made to the renewal permit include:

The General Conditions were updated to reflect applicable Code citations. Some of the citations have changed since the permit was last issued five years ago.

Permit conditions 2.22 and 2.23 detailing the general emissions testing and reporting requirements were modified to be consistent with Section 3D .2600 of the FCAQtC.

Permit conditions 3.3(B) were added to reflect the applicable requirements of Subpart DDDDD (Boiler MACT). These conditions detail the requirements for the initial and annual boiler tune-up, the one-time energy assessment, and the recordkeeping and reporting associated with this Subpart.

The TAP condition 4(D) has changed by removing the five year period in which modifications can be made without a modeling demonstration and replaced with language requiring a demonstration if the stack data is modified.

This Office recommends the permit (#00466-TV-24) be issued as written.