

# County of Forsyth



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

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

September 19, 2018

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:

**Tri-Seal Opco, LLC  
220 East Polo Road  
Winston-Salem, NC 27105  
Permit #00466-TV-28**

This facility had applied for renewal of its Title 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:

<https://www.epa.gov/caa-permitting/north-carolina-proposed-title-v-permits>

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 October 18, 2018, the close of the public comment period.

A handwritten signature in black ink, appearing to read "Peter B. Lloyd".

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

## OFFICE OF ENVIRONMENTAL ASSISTANCE AND PROTECTION

FORSYTH COUNTY GOVERNMENT CENTER  
201 N. CHESTNUT STREET  
WINSTON-SALEM, N. C. 27101-4120

PERMIT TO CONSTRUCT/OPERATE  
AIR QUALITY CONTROL  
CLASS: TITLE V

PERMIT NUMBER	EFFECTIVE DATE	EXPIRATION DATE	RENEWAL DUE
00466-TV-28	<b>DATE</b> , 2018	November 12, 2023	February 12, 2023

**Facility Name:** Tri-Seal Opco, LLC  
**Mailing Address:** 220 East Polo Road  
**City, State, Zip:** 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. Additionally, any emissions activities determined from your air quality permit application as meeting the definition for insignificant activities contained in Sec. 3Q-0503 have been listed for informational purposes as an "ATTACHMENT."

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 Office of Environmental Assistance and Protection 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 Office of Environmental Assistance and Protection.

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

DATE:

**Tri-Seal Opco, LLC**  
**Air Quality Permit # 00466-TV-28**  
**DATE, 2018**

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# PART I: AIR QUALITY OPERATING PERMIT

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

<b>Emission Source ID #</b>	<b>Emission Source Description</b>	<b>Control Device ID #</b>	<b>Control Device Description</b>
ES604-008, 009, and 081	Three ten-station rotogravure printing presses P-15, P-16, and P-19	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
ES604-010	One three-station rotogravure laminator L-9	CD604-004 and CD604-005	Two catalytic oxidizers operating in parallel firing natural gas (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 (each with a maximum heat input rate of 8.0 million Btu per hour) or Atmosphere
ES604-013, 014, and 087	Three two-station rotogravure extruders EX-1, EX-2, and EX-5	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
ES604-084	One AESYS Technologies, LLC low-NO <sub>x</sub> Boiler fired by natural gas with a maximum heat input rate of 28.1 MMBtu/hour <b>(NSPS)</b>	None	None
ES604-088	One three-station Laminator Coating Machine L-15 with two natural gas-fired dryers with a maximum heat input of 1.6 and 1.2 MMBtu/hr	None	None

## SECTION 2 FACILITY GENERAL ADMINISTRATIVE CONDITIONS

### 2.1 General Provisions [Subchapter 3A and Sec. 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 Sec. 3D-0501 and Sec. 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** [Sec. 3Q-0507(k), Sec. 3Q-0508(i)(16), Sec. 3Q-0508(i)(9) and Sec. 3Q-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** [Sec. 3Q-0507(c), Sec. 3Q-0508(i)(16) and Sec. 3Q-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** [Sec. 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** [Sec. 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** [Sec. 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** [Sec. 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 Sec. 3Q-0523.
- D. A permit shield shall not extend to minor permit modifications made under Sec. 3Q-0515.

2.8 **Circumvention** [Sec. 3D-0502 and Sec. 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** [Sec. 3D-0502 and Sec. 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** [Sec. 3D-0535(f) and Sec. 3Q-0508(f)(2), Sec. 3Q-0508(i)(16) and Sec. 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, 3D-0900, 3D-1200 or 3D-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 Sec. 3D .0524, Sec. 3D-1110 or Sec. 3D-1111  
Excess Emissions and Permit Deviations

1. If the source specific NSPS (Sec. 3D-0524) or NESHAP (Sec. 3D-1110 or Sec. 3D-1111) defines “excess emissions”, these shall be reported as prescribed in Sec. 3D-0524, Sec. 3D-1110 or Sec. 3D-1111.
  2. If the source specific NSPS (Sec. 3D-0524) or NESHAP (Sec. 3D-1110 or Sec. 3D-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 Sec. 3D-0524, Sec. 3D-1110 or Sec. 3D-1111
1. Excess Emissions Greater than Four Hours in Duration [Sec. 3D-0535(f)]  
The permittee shall report excess emissions greater than four hours in duration as prescribed in Sec. 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 Sec. 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 Sec. 3D-0535(f)(3).
  2. Excess Emissions Less than Four Hours in Duration and Deviations [Sec. 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 Sec. 3D-0535 (Sec. 3D-0535(g) is **Locally Enforceable Only**.)

The permittee shall comply with all other requirements contained in Sec. 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** [Sec. 3Q-0206(b), Sec. 3Q-0508(i)(10) and Sec. 3Q-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 Sec. 3Q-0519 of the FCAQTC.

#### 2.13 **Annual Emission Inventory Requirements** [Sec. 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 Sec. 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)> [Sec. 3Q-0508(n) and Sec. 3Q-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** [Sec. 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)> [Sec. 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 [Sec. 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 [Sec. 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 [Sec. 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 [Sec. 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)> [Sec. 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** [Sec. 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** [Sec. 3D-2602 and Sec. 3Q-0508(i)(16)]

Testing shall be conducted in accordance with FCAQTC Section 3D-2600 except as may be otherwise required in FCAQTC Sec. 3D-0524, Sec. 3D-0912, Sec. 3D-1110, Sec. 3D-1111, Sec. 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 fulfill 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** [Sec. 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** [Sec. 3Q-0508(i)(5)]

The Director may reopen, modify, revoke and reissue, or terminate this permit for reasons specified in Sec. 3Q-0517 or 3Q-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** [Sec. 3Q-0508(e) and Sec. 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 Sec. 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** [Sec. 3Q-0517 and Sec. 3Q-0508(g)]

This permit shall be reopened and revised in accordance with Sec. 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 3Q-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 3Q-0300.

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

- A. Permit modifications may be subject to the requirements of Sec. 3Q-0514, Sec. 3Q-0515, Sec. 3Q-0516 and Sec. 3Q-0524.
- B. Changes made pursuant to Sec. 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 Sec. 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 Sec. 3Q-0523(c).

**2.30 Insignificant Activities** [Sec. 3Q-0503 and Sec. 3Q-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** [Sec. 3Q-0505 and Sec. 3Q-0507]

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

**2.32 Property Rights** [Sec. 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)** [Sec. 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)** [Sec. 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** [Sec. 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** [Sec. 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** [Sec. 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 Sec. 3D-0202(b).

**2.38 Ambient Air Quality Standards** [Sec. 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 Sec. 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 [Sec. 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 Sec. 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 [Sec. 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).

**2.41 Air Toxics – General [Sec. 3Q-0712] *Locally Enforceable Only***

Upon the written request of the Director and in accordance with Section 3D-1100 ("Control of Toxic Air Pollutants") of the FCAQTC, the permittee shall demonstrate to the satisfaction of the Director that the facility's emissions of the toxic air pollutants listed in Section 3D-1100 do not cause or contribute to any significant ambient air concentration that may adversely affect human health. This demonstration shall be made in accordance with Sections 3D-1100 and 3Q-0700.

**National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP) General Conditions - [Sec. 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.

**2.42 NESHAP - General Provisions <40 CFR 63 Subpart A> [Sec. 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.

**2.43 NESHAP - Startup Shutdown and Malfunction Plan <40 CFR 63.6(e)(3)> [Sec. 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).

2.44 **NESHAP - Good Air Pollution Control Practice** <40 CFR 63.6(e) and 63.8(c)> [Sec. 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.

2.45 **NESHAP - Circumvention** <40 CFR 63.4(b)> [Sec. 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.

2.46 **NESHAP - Maintain Records** <40 CFR 63.10(b)(2)> [Sec. 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.

2.47 **NESHAP - Files Available for Inspection** <40 CFR 63.10(b)(1)> [Sec. 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.

2.48 **NESHAP - Performance Testing Facilities Provided by Permittee** <40 CFR 63.7(d)> [Sec. 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.

**2.49 CAM - Proper Maintenance** <40 CFR 64.7(b)> [Sec. 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.

**2.50 CAM - Continued Operation** <40 CFR 64.7(c)> [Sec. 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.

**2.51 CAM - Response to Excursions or Exceedances** <40 CFR 64.7(d)> [Sec. 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).

2.52 **CAM - Documentation of Need for Improved Monitoring** <40 CFR 64.7(e)> [Sec. 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 - [Sec. 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.

2.53 **NSPS - General Provisions** <40 CFR 60 Subpart A> [Sec. 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.

2.54 **NSPS - Good Air Pollution Control Practice** <40 CFR 60.11(d)> [Sec. 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.

2.55 **NSPS - Circumvention** <40 CFR 60.12> [Sec. 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.

2.56 **NSPS - Maintain Records - Startup/Shutdown/Malfunction** <40 CFR 60.7(b)> [Sec. 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.

**2.57 NSPS - Files Available for Inspection** <40 CFR 60.7(f)> [Sec. 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.

**2.58 NSPS - Performance Testing Facilities Provided by Permittee** <40 CFR 60.8(e)> [Sec. 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-15, P-16, and P-19 (Ten, Ten, and Ten Stations Respectively, ID Nos. ES604-008, 009, and 081), ROTOGRAVURE LAMINATOR L-12 (Two Station, ID No. ES604-012), ROTOGRAVURE EXTRUDERS EX-1, EX-2, AND EX-3 (Two, Two and Five Stations Respectively, ID Nos. ES604-013, 014 and 015), and Extruder Coating Machine EX-5 (Two Station, ID No. ES604-087) 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;**  
**ROTOGRAVURE EXTRUDER EX-04 (One Station Pilot Extruder, ID No. ES604-079) EXHAUSTING TO:**  
**ATMOSPHERE; and**  
**LAMINATOR COATING MACHINE L-15 (One Three Station Laminator ID No. ES604-088) with Two Natural Gas-fired Dryers (2.8 MMBtu/hr Total Heat Input Rate) 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, 075, 081, 087, and 088	Sec. 3D-1111 (40 CFR 63 Subpart KK)
VOC	249 tons per 12 month period	ES604-008, 009, 010, 012 through 015, 075, 079, 081, 087, and 088	Sec. 3D-0530 and Sec. 3Q-0317(a)(1)
VOC	Work Practice Standards	ES604-008, 009, 010, 012 through 015, 075, 079, 081, 087, and 088	Sec. 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		Sec. 3D-0515
*Sulfur Dioxide	2.3 lb SO <sub>2</sub> /mmBtu		Sec. 3D-0516
*Visible emissions	40 % opacity**	ES604-010, 013, and 014	Sec. 3D-0521(c)
*Visible emissions	20 % opacity	ES604-008, 009, 012, 015, 075, 079, 081, 087, and 088	Sec. 3D-0521(d)

\*Sec. 3D-0516 - *Sulfur Dioxide Emissions from Combustion Sources*, Sec. 3D-0515 - *Particulates from Miscellaneous Processes* and Sec. 3D-0521 - *Control of Visible Emissions* apply to the direct-fired natural gas burners associated with these emission units. Use of only natural gas 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 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 [Sec. 3D-1111, 40 CFR 63 Subpart KK]

1. **Emission Standard** [Sec. 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
    - i. Five percent of the organic HAP applied for the month;
    - ii. Four percent of the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month;
    - iii. 20 percent of the mass of solids applied for the month; **or**
    - iv. 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:
- i. 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:

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

- ii. 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:

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

- iii. 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** [Sec. 3D-1111, 40 CFR 63.7, 63.825(d)(1)(ii) and 63.827(e)]

- a. 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.
- b. 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.
- c. **Testing requirements for EX-5 permanent total enclosure** - The permittee shall conduct the following emissions testing within 180 days after initial operation of the permanent total enclosure while using solvent-based coatings on the rotogravure application station of the extruder coating machine EX-5 (ID No. ES604-087):
- i. The permittee shall verify the permanent total enclosure installed on the rotogravure application station of the extruder coating machine EX-5 (ID No. ES604-087) in accordance with U.S. EPA Method 204 specified in Appendix M to 40 CFR Part 51 unless an alternative method is approved by this Office.

- d. **Emissions testing, protocol, notification, and report for EX-5** - For the emissions testing requirements in paragraph c above, unless otherwise approved by this Office, the permittee shall provide this Office with:
- a written protocol at least 30 days prior to the first day of testing,
  - a notification of the testing date at least 10 days prior to the scheduled date so that this Office may plan to have an observer present, and
  - a written report of the testing results within 30 days after completion of the testing.
3. **Monitoring and Recordkeeping Requirements** [Sec. 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-15, P-16, P-19, L-9, L-12, L-14, EX-1, EX-2, EX-3, or EX-5 (ID Nos. ES604-008, 009, 081, 010, 012, 075, 013, 014, 015, or 087) 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:
- 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).
  - 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:
- Follow the requirements of **3.1(A)(1)(b)(i) and (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-15, P-16, and P-19 (ID Nos. ES604-008, 009, and 081), laminators L-9, L-12, and L-14 (ID Nos. ES604-010, 012, and 075), extruders EX-1, EX-2, and EX-3 (ID Nos. ES604-013, 014, and 015), and extruder coating machine EX-5 (ID No. ES604-087):
    - 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-15, P-16, and P-19 (ID Nos. ES604-008, 009, and 081), laminator L-12 (ID Nos. ES604-012), extruders EX-1, EX-2, and EX-3 (ID Nos. ES604-013, 014, and 015), and extruder coating machine EX-5 (ID No. ES604-087) 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, .SP., 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-15, P-16, P-19, laminator L-12 (ID Nos. ES604-008, 009,

081, and 012), and extruder coating machine EX-5 (ID No. ES604-087):

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. 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).
  - g. 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).
  - h. Calculate the organic HAP emitted through the regenerative thermal oxidizers,  $H_{ox}$  (kg), from each press, laminator, and extruder during the month according to:

$$H_{OX} = \sum_{P15,16,19,L12,EX1,2,3,5} \left[ \left[ \sum_{i=1}^p M_{Ci} C_{Hi} + \sum_{j=1}^q M_{Cj} C_{Hj} \right] \left[ 1 - \left( \frac{E}{100} \frac{F}{100} \right) \right] \right]$$

- 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, L-14, and L-15 (ID Nos. ES-604-010, 012, 075, and 088), extruders EX-1, EX-2, and EX-3 (ID Nos. ES604-013, 014, and 015), extruder coating machine EX-5 (ID No. ES604-087), and all periods that the workstations for the rotogravure printing presses P-15, P-16, and P-19 (ID Nos. ES604-008, 009, and 081) are operated in bypass mode, the permittee shall:
  - a. 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).
  - b. 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.
  - c. 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:
  - i. 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,
  - ii. each applicability determination performed by the owner or operator in accordance with the requirements of 40 CFR 63.820(a), and
  - iii. 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** [Sec. 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 Sec. 3D-0530. Should any of the following conditions be violated, this facility may become subject to this rule.

1. **Standard** [Sec. 3D-0530 and Sec. 3Q .0317(a)(1)]

In order to avoid the applicability of Sec. 3D-0530(g) 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, 075, 079, 081, 087, and 088) shall not exceed 249 tons per 12-month period.
  - b. Except during periods of malfunction or breakdown as provided under Sec. 3D-0535, volatile organic compound emissions for 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** [Sec. 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 **2.23**.

### 3. Monitoring/Recordkeeping [Sec. 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.
- f. The monthly VOC emissions,  $E_B$  (tons/month), shall be calculated according to:

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

$$\frac{(1-0.95)}{2000} \sum_{\substack{P15,16,19 \\ L9,12,14,EX\ 5}} \left( \sum_{i=1}^p W_{Ci} C_{Vi} + \sum_{j=1}^q W_{Cj} \right)_{OX} +$$

$$\frac{1}{2000} \sum_{\substack{EX\ 1,2,3,4,5 \\ P15,16,19 \\ L9,12,14,15}} \left( \sum_{i=1}^p W_{Bi} C_{Vi} + \sum_{j=1}^q W_{Bj} \right)_{UC}$$

- g. 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 [Sec. 3D-0614, Sec. 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** [Sec. 3D-0614, Sec. 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-15, P-16, P-19, L-12, and EX-5): 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** [Sec. 3D-0614, Sec. 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, and EX-3): 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.

**7. Reporting [Sec. 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. Work Practices for Sources of Volatile Organic Compounds - Printing, Coating, Laminating, and Extruding Equipment [Sec. 3D-0958] NOTE: These requirements are not applicable to sources inside the permanent total enclosures around presses P-15, P-16, and P-19, laminators L-9, L-12, and L-14, and coating extruder machine EX-5 because the enclosures provide 100% capture of VOC/HAP emissions and then they are routed to their respective control devices.**

1. **Work practice standards** [Sec. 3D-0958(c) and Sec. 3Q-0508(i)(16)] - 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.
2. **Work practice standards for parts cleaning** [Sec. 3D-0958(d) and Sec. 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** [Sec. 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** [Sec. 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 AESYS TECHNOLOGIES, LLC LOW-NO<sub>x</sub> BOILER FIRED BY NATURAL GAS 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	Sec. 3D-0503
*Sulfur dioxide	2.3 lb/MMBtu	Sec. 3D-0516
*Visible emissions	20 % opacity	Sec. 3D-0521(d)
HAP	Work Practice: Annual Boiler Tune-up	Sec. 3D-1111 (40 CFR 63 Subpart DDDDD)

\*Sec 3D-0503 - Particulates from Fuel Burning Indirect Heat Exchangers, Sec. 3D-0516 - Sulfur Dioxide Emissions from Combustion Sources, and Sec. 3D-0521 - Control of Visible Emissions apply to the boiler. Use of only natural gas 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 combustion shall be included in emission inventories.

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

The permittee shall maintain records of the total annual quantities of all fuel combusted in the AESYS Technologies, LLC. low-NO<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 [Sec. 3D-1111 and 40 CFR 63 Subpart DDDDD]

##### 1. Compliance Date [Sec. 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 [Sec. 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. **Recordkeeping Requirements** [Sec. 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.
4. **Reporting Requirements** [Sec. 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)).

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# ATTACHMENT

## Tri-Seal Opco, LLC Insignificant Activities List August 20, 2018

As provided in Sec. 3Q-0503(7) and (8), certain air emission sources are considered insignificant activities and are not listed on the permit. However, insignificant activities because of size or production rate [Sec. 3Q-0503(8)] are required to be listed in the initial permit application and with each request for renewal. The following list summarizes the insignificant activities provided in the title V permit application. Insignificant activities are not exempted from any applicable requirement or from demonstrating compliance with any applicable requirement.

<b>Emission Source I.D.</b>	<b>Emission Source Description</b>	<b>Insignificant Because of: Category or Size/Production Rate</b>
ES604-043	Trim Handling Collection System	Size/Production Rate
ES604-046, -047, -048, -049	Plastic Pellet Storage Tanks (Four tanks for storing resin pellets.)	Size/Production Rate
ES604-074	Color Key Press	Size/Production Rate
ES604-020	Solvent Storage Tank 1: 15,000 Gallon Capacity	Size/Production Rate
ES604-021	Solvent Storage Tank 2: 15,000 Gallon Capacity	Size/Production Rate
ES604-022	Solvent Storage Tank 3: 15,000 Gallon Capacity	Size/Production Rate
ES604-024	Solvent Storage Tank 5: 15,000 Gallon Capacity	Size/Production Rate
ES604-025	Solvent Storage Tank 6: 15,000 Gallon Capacity	Size/Production Rate
ES604-018	Ink Mixing Room	Size/Production Rate
ES604-019A, -019B, -019C	PRI Cleaning Machines (three machines)	Size/Production Rate
N/A	Seventeen Corona Treaters with a range of maximum ratings from 5.0 to 15 kW	Size/Production Rate
ES604-089, -090, -091	Three wax coaters (BW-1, BW-4, and BW-5 with a 10kW Corona Treater	Size/Production Rate

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

<b>Applicant:</b> Tri-Seal Opco, LLC	<b>Site Location:</b> 220 East Polo Road	<b>New Permit No.</b> 00466-TV-28	
<b>Technical Contact:</b> Viktoriya Khvorostovska	<b>Phone:</b> (336) 777-5878	<b>Responsible Official:</b> Benjamin Hutchens	<b>Title:</b> Plant Manager
<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> 2671, 2754, 2657, 3497	

Date Application received: February 5, 2018	
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**I. FACILITY DESCRIPTION**

Tri-Seal Opco, LLC 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 and extruders. 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 or steam. The laminators and extruders are also rotogravure operations involving multiple webs and the application of an extruded polymer respectively.

**Tri-Seal Opco, LLC is a major source with respect to Title V because the actual and uncontrolled potential emissions of volatile organic compounds (VOC) from the facility are greater than 100 tons per year and the uncontrolled potential emissions of 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. 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 appears to be 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>
ES604-008, 009, and 081	Three ten-station rotogravure printing presses P-15, P-16, and P-19	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
ES604-010	One three-station rotogravure laminator L-9	CD604-004 and CD604-005	Two catalytic oxidizers operating in parallel firing natural gas (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

<b>Emission Source ID #</b>	<b>Emission Source Description</b>	<b>Control Device ID #</b>	<b>Control Device Description</b>
ES604-075	One two-station rotogravure laminator L-14	CD604-004 and CD604-005	Two catalytic oxidizers operating in parallel firing natural gas (each with a maximum heat input rate of 8.0 million Btu per hour) or Atmosphere
ES604-013, 014, and 087	Three two-station rotogravure extruders EX-1, EX-2, and EX-5	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
ES604-084	One AESYS Technologies, LLC low-NO <sub>x</sub> Boiler fired by natural gas with a maximum heat input rate of 28.1 MMBtu/hour <b>(NSPS)</b>	None	None
ES604-088	One three-station Laminator Coating Machine L-15 with two natural gas-fired dryers with a maximum heat input of 1.6 and 1.2 MMBtu/hr	None	None

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

- 1.0 ES604-008, 009, and 081: Rotogravure Printing Presses P-15, P-16, and P-19;**  
**ES604-010, 012, 075, and 088: Laminators L-9, L-12, L-14, and L-**

**15; and  
 ES604-013, 014, 015, 079, and 087: Extruders EX-1, EX-2, EX-3,  
 EX-04, and EX-5.**

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. 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 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-15, P-16, and P-19, Laminator L-12, and Extruders EX-1, EX-2, and EX-5 are controlled using the three regenerative thermal oxidizers. EX-5 has not yet used solvent-based coatings and has requested an extension on the testing of the permanent total enclosure (PTE) until they begin using solvent-based coatings. At this time, the emissions from this unit are exhausted to atmosphere because they are only running water-based coatings. Laminators L-9 and L-14 are controlled using the two catalytic oxidizers. The Pilot Extruder, EX-04, and the Laminator Coating Machine, L-15, exhaust directly to the atmosphere and do not have a control device associated with their operation.

The installation/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-15	P-16	P-19	L-9	L-12	L-14	L-15	EX-1
1991	1995	2006	1965	1985	2003	2016	1967
EX-2	EX-3	EX-04	EX-5				
1969	1978	2005	2015				

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 are also present and are the result of the combustion of natural gas 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 ES604-079 (EX04) and the laminator coating machine ES604-088 (L-15) *are not* routed through any control device; therefore a CAM plan is not required for these sources. Emissions from presses P-15, P-16, and P-19, laminators L-9, L-12, and L-14, and extruders EX-1 through EX-3 and EX-5 *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 Prevention of Significant Deterioration (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 PTE. 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-15, P-16, and P-19 and laminators L-9, L-12, L-14, and extruder EX-5 have PTEs 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. EX-5 does have a PTE but has not yet begun using solvent-based coatings. The permittee has asked for an extension to perform the testing of the PTE until they begin using solvent-based coatings. This request has been approved by this Office. 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	0.05 kg HAP/kg HAP applied,	Sec. 3D-1111 (40 CFR 63 Subpart KK)

Regulated Pollutant	Applicable Standard		Applicable Regulation
	Specific Unit	Specific Limit	
	015, 060, 075, 081, 087, and 088	0.04 kg HAP/kg material applied, or 0.20 kg HAP/kg of solids applied	
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		Sec. 3D-0515
Sulfur Dioxide	2.3 lb SO <sub>2</sub> /mmBtu		Sec. 3D-0516
Visible emissions	ES604-010, 013, and 014	40 % opacity	Sec. 3D-0521(c)
	ES604-008, 009, 060, 012, 015, 075, 079, 081, and 083	20 % opacity	Sec. 3D-0521(d)
VOC	ES604-008, 009, 010, 012 through 015, 075, 079, 081, 087, and 088	249 tons per 12-month period	Sec. 3D-0530 and 3Q.0317(a)(1)
VOC	Work Practice Standards		Sec. 3D-0958

1.1.1 *Sec. 3D-1111 "National 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 all of them be included in their permit to give them the flexibility to show compliance as provided for in the MACT rule. These compliance options are: 0.05 kilogram HAP per kilogram HAP applied/month, or 0.04 kilogram HAP per kilogram of material applied/month, or 0.20 kilogram HAP per kilogram of solids applied/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.

Since the printing presses, laminators, and extruders 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 *Sec. 3D-0515 - "Particulates from Miscellaneous Industrial Processes"*

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

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

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

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 natural gas in their dryers.

#### 1.1.4 *Sec. 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 Sec. 3D-0516(a). Allowable emissions of sulfur dioxide from these sources while firing natural gas shall not exceed 2.3 pounds per million Btu heat input.

Natural gas is an inherently low sulfur emitting fuel. Emissions of sulfur dioxide from the combustion of natural gas 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 *Sec. 3D-0521 Control of Visible Emissions*

See Section V.

1.1.6 *Sec. 3Q-0317 Avoidance Conditions: Sec. 3D-0530 Prevention of Significant Deterioration Avoidance - Printing, Coating, Laminating, and Extruding*

This entire facility has potential VOC emissions greater than 250 tons per year (tpy) and is considered a major facility under the PSD program. Earlier air quality permits included numerous PSD avoidance conditions based on modifications made at the facility over the years. The actual emissions have been significantly decreasing and the applicant previously had requested that a 250 ton per year facility-wide limit on VOC emissions be placed in the permit to make the facility a minor source under PSD and to remove all the other PSD avoidance limits. This Office agreed that a 250 ton per year limit on VOC emissions was warranted and included it in the previous permit (TV-25). This condition replaced all the other PSD avoidance conditions and included them in one 249 ton per year limit.

This limit applies to all equipment at the facility except the boiler (ES604-084). The boiler isn't included in the PSD avoidance limit because it is a natural gas boiler and the maximum potential VOC emissions are 0.66 tons per year. Thus, one ton was subtracted from the 250 ton limit to account for the boiler emissions and the PSD avoidance limit is 249 tons per year. The only VOC emissions of concern are those from the printers, laminators, and extruders. Compliance is assured using monthly emissions calculations applied to a 12-month rolling total. A semi-annual report of VOC emission totals is to be submitted to this Office to demonstrate compliance. Past reports demonstrate compliance with this avoidance limit.

1.1.7 *Sec. 3D-0958 Work Practice Standards for Sources of Volatile Organic Compounds*

1.1.7.1 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.

1.1.7.2 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 PTEs 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. The equipment on extruder EX-5 will also be exempt from the VOC work practice standards once the emission source begins using solvent-based coatings and the PTE is brought on line and tested.

## **1.2 Monitoring and Recordkeeping Requirements**

In addition to monitoring specifically required by certain emission standards, Sec. 3Q-0508(f) and 40 CFR 70.6(a)(3) require monitoring be included in Title V permits. This monitoring is labeled as 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 itself 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 Sec. 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, EX-3, and EX-5 (in the future) 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, and extruder EX-5 (in the future) have PTEs 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, EX-5, P-15, P-16, 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, laminator L-12, and extruder EX-5 (after using solvent-based coatings) shall comply with EPA Method 204 - Criteria for and verification of a PTE or temporary total enclosure specified in Appendix M to 40 CFR Part 51. A minimum pressure drop of 0.007" w.c. across the PTE 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.

The requirement to test the PTE on extruder EX-5 had been moved from the Part II (Air Quality Construction Permit) section of the permit to the condition requiring testing for the MACT. EX-5 has requested that the PTE testing be done within 180 days of solvent-based coatings being used on the extruder. This Office has approved this request and since the unit has been constructed and Part II of the permit is no longer necessary; the requirement to test the PTE had been relocated to Part I of the permit.

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 PTE or temporary total enclosure specified in Appendix M to 40 CFR Part 51. A minimum pressure drop of 0.007" w.c. across the PTE 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 Sec. 3D-0515*

Particulate emissions from the presses and laminators are due to natural gas combustion and are well below the maximum allowable emission rates. Particulate emissions from the extruders are due to natural gas 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 Sec. 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 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 Sec. 3D-0521*

Use of only natural gas 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 *Monitoring Required for Compliance with Sec. 3Q-0317 Avoidance Conditions: Sec. 3D-0530 (PSD Avoidance: 249 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 from other sections of the permit. 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 PTE.

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.

A CAM plan is required for all the equipment at this facility as a result of the control equipment used to comply with this PSD avoidance limit. The monitoring and recordkeeping specified by the CAM will be referenced as monitoring for the MACT requirements.

#### 1.2.5.1 Compliance Assurance Monitoring and Recordkeeping Required 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 °F 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 PTE 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 PTEs. 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 Compliance Assurance Monitoring and Recordkeeping Required for emissions units located within an enclosure and whose emissions are routed through the **three regenerative thermal oxidizers operating in parallel** (P-15, P-16, P-19, L-12, and EX-5): 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 °F 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  $\pm 1.0\%$  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 oxidizers have reached the minimum temperature identified above.
- c. The permittee shall:
  - i. Comply with EPA Method 204 - Criteria for and Verification of a PTE 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 PTEs. 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 Compliance Assurance Monitoring and Recordkeeping Required 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, and EX-3): 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 °F 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  $\pm 1.0\%$  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 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 *Monitoring and Recordkeeping Required for Compliance with Sec. 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 Sec. 3D-1110 (Part 61 NESHAPs) and Sec. 3D-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 Sec. 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 Sec. 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 Sec. 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 Sec. 3D-0530 (PSD Avoidance: 249 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 Sec. 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 ES604-084: AESYS Technologies, LLC low-NOx Boiler**

The AESYS Technologies, LLC. Boiler is fired by natural gas 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 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) 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 of the Boiler MACT is described in Section VII below.

## 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	$E = 1.090 \times Q^{-0.2594}$ , Where: E = allowable emission limit for PM in lb/million Btu Q = maximum heat input in million Btu/hr 0.46 lb/million Btu	Sec. 3D-0503
Sulfur Dioxide	2.3 lb/million Btu	Sec. 3D-0516
Visible emissions	20 % opacity	Sec. 3D-0521(d)
HAP	Work Practice: Annual Boiler Tune-up	Sec. 3D-1111 (40 CFR 63 Subpart DDDDD)

### 2.1.1 Sec. 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 inherently meets the allowable emission limit. No monitoring/recordkeeping/reporting is required to demonstrate compliance with this limit.

2.1.2 *Sec. 3D-0516 Sulfur Dioxide Emissions from Combustion Sources*

Allowable emissions of sulfur dioxide from the boiler while firing natural gas shall not exceed 2.3 pounds per million Btu heat input. Natural gas is an inherently low sulfur emitting fuel. Emissions of sulfur dioxide from the combustion of natural gas 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.

2.1.3 *Sec. 3D-0521 "Control of Visible Emissions"*

Sec. 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 assures compliance with the opacity limit. No monitoring/recordkeeping/reporting is required to demonstrate compliance with this limit.

2.1.4 *Sec. 3D-0524 New Source Performance Standards (NSPS) Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, (40 CFR 60, Subpart Dc)*

Because the boiler 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 includes a requirement for the permittee to report the annual fuel usage (natural gas) to this Office no later than January 31<sup>st</sup> of each year. This requirement has been met by the applicant.

2.1.5 *Sec. 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 combusts only natural gas, the requirements under the MACT are for the facility to conduct an annual boiler tune-up and report this information to this Office on an annual basis.

The permittee keeps records of fuel usage by the boiler and has submitted the notification of the one-time energy assessment. Annual compliance reports identifying the date of the annual tune-up have been received by our Office in compliance with the Boiler MACT. The permittee is in compliance with these regulations and is expected to maintain compliance as they have in the past.

## V. FACILITY-WIDE EMISSION SOURCE CONDITIONS

### 1. *Sec. 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

Sec. 3D-0521(c) states - "For 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."

Sec. 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 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 (EX-1, EX-2, EX-3 and EX-5) and several other sources (P-15, P-16, P-19, and L-12) 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 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 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**

<b>Emission Source</b>	<b>ID No.</b>	<b>Standard</b>	<b>Regulation</b>
Laminator L-9 <sup>1</sup>	ES604-010	40% opacity	Sec. 3D-0521(c)
Extruders EX-1 and EX-2 <sup>1</sup>	ES604-013 and 014		
Presses P-15, P-16, and P-19	ES604-008, 009, and 081	20% opacity	Sec. 3D-0521(d)
Laminators L-12, L-14, and L-15	ES604-012, 075, and 088		
Extruders EX-3, EX-04, and EX-5	ES604-015, 079, and 087		

<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. Sec. 3D-1100 - Control of Toxic Air Pollutants**

This facility underwent a facility-wide TAP demonstration including modeling in May, 2005. The modeling results were approved by this Office in October, 2005 and the resultant emissions were included in Air Quality Permit #00466-TV-15. However, in a modification to Permit #00466-TV-25, the applicant pointed out that all of the equipment at the facility (presses, laminators, extruders, boiler, and new extruder coating machine) are subject to a MACT (Subpart KK - Printing and Publishing, Subpart DDDDD - Boiler) standard and therefore, exempt from complying with TAP rules pursuant to Sec 3Q-0702(a)(27). They requested that the TAP requirements be removed from the permit. This Office concurred with the applicant's request and Section 4 of the permit was removed (TAP requirement section) from the modified permit at that time. The Air Toxics General condition was added to the General Conditions section and is listed as permit condition **2.41**.

### **2. Sec. 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. There haven't been any odor complaints against the facility.

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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 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 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 combust only 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 submission of an annual compliance report. The boiler is not subject to any emissions standards in the MACT. The initial energy assessment was conducted in compliance with the regulations.

The permittee keeps records of fuel usage by the boiler and has submitted the notification of the one-time energy assessment. Annual compliance reports identifying the date of the annual tune-up have been received by our Office in compliance with the Boiler MACT. The permittee is in compliance with these regulations and is expected to maintain compliance as they have in the past.

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

## **REQUIREMENTS)**

In accordance with Sec. 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 General 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, the general conditions for the CAM rule, and the general conditions specific to the New Source Performance Standards (NSPS). These conditions are not necessarily common to all Title V facilities, only those subject to a MACT standard, CAM, and NSPS.

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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**

This Office recommends the permit (#00466-TV-28) be issued as written. A 30-day public notice will be published for this Draft renewal permit and it will undergo a concurrent 45-day review period by the U.S. EPA prior to issuing the permit.

Changes made to the renewal permit include:

1. The permit number was revised as a result of the renewal process. The new permit number is 00466-TV-28.

**Agency Reviewer:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Agency Q/A Manager:** \_\_\_\_\_

**Date:** \_\_\_\_\_