



United States Environmental Protection Agency General Permit for New or Modified Minor Sources of Air Pollution in Indian Country

<http://www.epa.gov/air/tribal/tribalnsr.html>

General Air Quality Permit for New or Modified Minor Source Graphic Arts and Printing Operations in Indian Country

Last Modified: July 1, 2016

Version 1.0

Information about this General Permit:

Applicability

Pursuant to the provisions of the Clean Air Act (CAA), Subchapter I, part D and 40 CFR part 49, subpart C, this permit authorizes the construction or modification, and operation of each graphic arts and printing operation for which a reviewing authority issues an Approval of the Request for Coverage (permitted source).

Eligibility

To be eligible for coverage under this General Permit, the permitted source must qualify as a minor source as defined in 40 CFR 49.152.

Request for Coverage

Requirements for submitting a Request for Coverage are contained in Section 7 of this General Permit.

Incorporation of Documents

The information contained in each reviewing authority's Approval of the Request for Coverage is hereby incorporated into this General Permit.

Termination

Section 6 of this General Permit addresses a reviewing authority's ability to revise, revoke and reissue, or terminate this General Permit. It also addresses the reviewing authority's ability to terminate an individual permitted source's Approval of the Request for Coverage under this general permit.

Definitions

The terms used herein shall have the meaning defined in 40 CFR 49.152, unless otherwise defined in Attachment B of this permit. If a term is not defined, it shall be interpreted in accordance with normal business use.

Permit Terms and Conditions

The following applies to each permittee and permitted source with respect to only the affected emissions units and any associated air pollution control equipment listed in that permitted source's Approval of the Request for Coverage.

Section 1 – General Provisions

1. *Construction and Operation*

The permittee shall construct or modify, and operate the affected emission units and any associated air pollution control technologies in compliance with this permit and all other applicable federal air quality regulations; and in a manner consistent with representations made by the permittee in the Request for Coverage, to the extent the reviewing authority relies upon these representations in issuing the Approval of the Request for Coverage.

2. *Location*

This permit only authorizes the permittee to construct or modify, and operate the permitted source in the location listed in the reviewing authority's Approval of the Request for Coverage for that permitted source.

3. *Liability*

This permit does not release the permittee from any liability for compliance with other applicable federal and tribal environmental laws and regulations, including the CAA.

4. *Severability*

The provisions of this permit are severable. If any portion of this permit is held invalid, the remaining terms and conditions of this permit shall remain valid and in force.

5. *Compliance*

The permittee must comply with all provisions of this permit, including those set forth in the attachments and emission limitations that apply to the affected emissions units at the permitted source. Noncompliance with any permit provision is a violation of the permit and may constitute a violation of the CAA; is grounds for an enforcement action; and is grounds for the reviewing authority to revoke the Approval of the Request for Coverage and terminate the permitted source's coverage under this General Permit.

6. *National Ambient Air Quality Standards (NAAQS)/Prevention of Significant Deterioration (PSD) Protection*

The permitted source must not cause or contribute to a NAAQS violation and, in an attainment area, must not cause or contribute to a PSD increment violation.

7. *Unavailable Defense*

It is not a defense for the 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 provisions of this permit.

8. *Property Rights*

The permit does not convey any property rights of any sort or any exclusive privilege.

9. *Information Requests*

You, as the permittee, shall furnish to the reviewing authority, within 30 days, unless another timeframe is specified by the EPA, any information that the reviewing authority may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating coverage under the permit or to determine compliance with the

permit. For any such information claimed to be confidential, the permittee must submit a claim of confidentiality in accordance with 40 CFR part 2, subpart B.

10. *Inspection and Entry*

Upon presentation of proper credentials, the permittee must allow a representative of the reviewing authority to:

- a. Enter upon the premises where a source is located or emissions-related activity is conducted or where records are required to be kept under the conditions of the permit;
- b. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- c. Inspect, during normal business hours or while the source is in operation, any facilities, equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under the permit;
- d. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
- e. Record any inspection by use of written, electronic, magnetic and photographic media.

11. *Posting of Coverage*

The most current Approval of the Request for Coverage for the permitted source must be posted prominently at the facility, and each affected emissions unit and any associated air pollution control technologies must be labeled with the identification number listed in the Approval of the Request for Coverage for that permitted source.

12. *Duty to Obtain Source-Specific Permit*

If the reviewing authority intends to terminate a permitted source's coverage under this General Permit for cause as provided in Section 6 of this General Permit, then the permittee shall apply for and obtain a source-specific permit as required by the reviewing authority.

13. *Credible Evidence*

For the purpose of establishing whether the permittee violated or is in violation of any requirement of this permit, nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a permitted source would have been in compliance with applicable requirements if the permittee had performed the appropriate performance or compliance test or procedure.

Section 2: Emission Limitations and Standards

14. The permittee shall install, maintain and operate each affected emission unit, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions of NSR regulated pollutants and considering the manufacturer's recommended operating procedures at all times, including periods of startup, shutdown, maintenance and malfunction. The reviewing authority will determine whether the permittee is using acceptable operating and maintenance procedures based on information available to the reviewing authority which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the permitted source.
15. The permittee shall not allow volatile organic compound (VOC) emissions from an individual printing press (printing line) to exceed 25 tons per year. Compliance with this condition shall not consider the reduction in emissions from any add-on control technology.

16. The permittee shall not allow VOC emissions from the combination of all graphic arts and printing operations (all printing lines and ancillary equipment, including pre-press operations and other non-press operations) to exceed:
- 75 tons per year based on a 12-month rolling total in ozone attainment, unclassifiable or attainment/unclassifiable areas;
 - 50 tons per year based on a 12-month rolling total in marginal or moderate ozone nonattainment areas;
 - 25 tons per year based on a 12-month rolling total in serious ozone nonattainment areas;
 - 15 tons per year based on a 12-month rolling total in severe ozone nonattainment areas; or
 - 7 tons per year based on a 12-month rolling total in extreme ozone nonattainment areas.

17. *Standards for Flexible Packaging Printing Operations*

Except as allowed by Condition 19, the permittee shall not apply any coating, inks or adhesives in flexible packaging printing operations (including flexographic and rotogravure operations) unless the VOC content is equal to or less than:

- 0.16 pounds (lbs) VOC/lb material (or 16 percent VOC by weight or 160 grams per liter (g/L)), as applied less water; OR
- 0.5 lbs VOC/lb coating solids, as applied less water.

18. *Standards for Offset Lithographic and Letterpress Printing Operations*

Except as allowed by Condition 19, the permittee shall limit VOC emissions from lithographic and letterpress printing as follows:

- On-press, as applied, fountain solution for *heatset web offset lithographic printing* shall not exceed:
 - 16 g/L (or 1.6 percent by weight) of VOC when using alcohol in the fountain; OR
 - 30 g/L (or 3 percent by weight) of VOC when using alcohol in the fountain, if the fountain solution is refrigerated to below 60°F; OR
 - 50 g/L (or 5 percent by weight) of VOC when using no alcohol in the fountain solution.
- On-press, as applied, fountain solution for *sheet-fed offset lithographic printing* shall not exceed:
 - 50 g/L (or 5 percent by weight) of VOC when using alcohol in the fountain; OR
 - 85 g/L (or 8.5 percent by weight) of VOC when using alcohol in the fountain, if the fountain solution is refrigerated to below 60°F; OR
 - 50 g/L (or 5 percent by weight) of VOC when using no alcohol in the fountain solution.
- On-press, as applied, fountain solution for *coldset web offset lithographic printing* shall not exceed:
 - 50 g/L (or 5 percent by weight) of VOC. The use of alcohol containing fountain solutions is prohibited for use in non-heatset web-fed operations.

19. *Add-on Control Option*

In lieu of complying with the VOC content limits in Conditions 17 and/or 18, the permittee may comply by using a VOC emissions collection and control system, provided the emissions control system shall collect at least 85 percent, by weight, of the emissions generated and:

- Have a destruction efficiency of at least 95 percent, by weight; or
- Have an output of less than 50 parts per million (ppm) calculated as carbon with no dilution.

See additional requirements in Attachment C for serious, severe or extreme ozone nonattainment areas.

20. *Standards for Cleaning Operations*

The VOC content of cleaning materials used for cleaning operations shall not exceed 70 percent by weight.

21. *Standards for Combustion Equipment, Except Engines*

- a. The combined maximum heat input rating of all combustion equipment (including ovens, dryers and oxidizers, but excluding engines) shall not exceed 10 million British thermal units (MMBtu)/hour.
- b. Each combustion unit located at a permitted source in a severe or extreme ozone nonattainment area shall meet these additional requirements:
 - i. Combustion equipment shall burn only gaseous fuels; and
 - ii. The NO_x emissions from each combustion unit shall not exceed 30 ppm_{dv} at 3 percent oxygen or 0.036 lbs/MMBtu based on a 15-minute average. If the combustion unit is also used as a control device to oxidize air contaminants, then compliance shall be determined when only burning gaseous fuel and not when other air contaminants are present.

22. *Exemption for Sheet-fed Offset Lithographic Printing*

The requirements of Condition 18.b do not apply to sheet-fed presses with sheet sizes of 11 inches by 17 inches or smaller OR any press with a total fountain solution reservoir of less than 1 gallon (3.785 liters).

23. *Exemption for Flexible Packaging Printing Operations*

For graphic arts and printing operations located in areas designated as ozone attainment, unclassifiable and attainment/unclassifiable, marginal nonattainment, or moderate ozone nonattainment, the permittee may use up to 110 gallons (416 liters) per calendar year of VOC-containing material that does not meet the requirements of Condition 17.

24. *Additional Standards for Nonattainment Areas*

Each permitted source located in a serious, severe or extreme ozone nonattainment area shall also meet the additional requirements in Attachment C.

25. *Labeling and Containers*

All VOC-containing material (e.g., inks, adhesives, coatings, thinners, and clean-up solvents) shall be stored in closed containers with labels that clearly identify the contents of the containers.

26. *Waste Containers*

All waste materials containing VOC (e.g., soiled rags) shall be stored in sealed containers until properly disposed.

27. *Spills*

The permittee shall implement procedures to minimize spills of any VOC-containing material during handling and transfer to and from containers, enclosed systems, waste receptacles and other equipment.

28. *Emergency Generator Engines*

The combined maximum engine power of all emergency generator engines shall be below 1,000 horsepower (hp) in attainment area, 500 hp in ozone nonattainment areas classified as serious or lower, or shall have no emergency generator engines in severe or extreme ozone nonattainment areas. All emergency engines must be emergency generator engines.

Section 3: Monitoring and Testing Requirements

29. The permittee shall monitor usage of all VOC-containing material on at least a weekly basis. For a permitted source located in a serious, severe, or extreme ozone nonattainment area, the permittee shall monitor usage of all VOC-containing material on a daily basis.

30. Initial Performance Test for Add-On Control Equipment

For each add-on control system used pursuant to Condition 19, the permittee shall:

- a. Within 60 days after achieving the maximum production rate at which the permitted source will operate, but not later than 180 days after the first day of operation after issuance of the Approval of the Request for Coverage, conduct a performance test to verify compliance with the applicable standards in Condition 19, as follows:
 - i. According to a test plan submitted to the reviewing authority at least 60 days prior to the scheduled test date;
 - ii. While the permitted source is operating under typical operating conditions;
 - iii. To determine the capture efficiency of the emission control system by verifying the use of a Permanent Total Enclosure and 100 percent capture efficiency as defined by EPA Method 204 (alternatively, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the EPA technical guidance document "Guidelines for Determining Capture Efficiency, January 9, 1995." Individual capture efficiency test runs subject to the EPA technical guidelines shall be determined by the Temporary Total Enclosure approach of EPA Methods 204 through 204F);
 - iv. To determine the control equipment efficiency of the emission control system as specified on a mass emissions basis, and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by EPA Methods 25, 25A, SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon), or SCAQMD Method 25.3 (Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources), as applicable (EPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds); and
 - v. The reviewing authority may approve alternative test methods in writing, in advance.
- b. Conduct subsequent performance tests every five years according to Conditions 30.a.i. through iv.

31. Initial Performance Testing for Combustion Units in Severe and Extreme Ozone Nonattainment Areas

Within 60 days after achieving the maximum production rate at which the permitted source will operate the affected emissions unit(s), but not later than 180 days after the first day of operation after the Approval of the Request for Coverage is issued by the reviewing authority, the permittee shall perform an initial performance test to verify compliance with the applicable emission limitations in Condition 21.b. Performance tests shall be performed:

- a. According to test plan submitted to the reviewing authority at least 60 days prior to the planned test date;
- b. While the permitted source is operating under typical operating conditions; and
- c. Using test methods from 40 CFR part 60, Appendix A. In lieu of the test methods from 40 CFR part 60, Appendix A, measurements for NO_x may be taken using portable analyzers according to ASTM D6522-00, as incorporated by reference in 40 CFR 63.14(b)(27).

Section 4: Recordkeeping Requirements

32. The permittee shall maintain all records required to be kept onsite by this permit for at least five years from the date of origin, unless otherwise stated.
33. The permit application and all documentation supporting that application shall be maintained by the permittee for the duration of time the affected emissions unit(s) is/are covered under this permit.

34. The permittee shall maintain a log of inks, coatings, adhesives, fountain-solution alcohol, thinners, cleaners, and any other VOC-containing materials used at the facility. For each VOC-containing material the list shall identify the type of material (ink, coating, adhesive, cleaning material etc.), the density of the material in lbs/gallon (gal) or g/L, and the VOC content of the material in percent by weight, g/L or lbs/gal. In addition:
- For each fountain solution the log shall identify whether the solution is alcohol-based or non-alcohol-based;
 - For each coating, ink or adhesive used in flexible packaging printing operations the log shall identify the lbs VOC/lb material OR the lbs VOC/lb solids; and
 - For each coating, ink or adhesive for a permitted source located in a serious, severe, or extreme ozone nonattainment area, the log shall identify the VOC content in g/L or lbs/gal.

The log shall be updated at least once each calendar month.

35. The permittee shall maintain usage records for each calendar month in gallons or liters of graphic arts materials and cleaning solutions showing the type and amount used of each graphic arts ink, coating, adhesive, fountain solution, blanket wash, and all other cleaning solutions or VOC-containing materials.
36. To demonstrate compliance with Condition 15, the permittee shall maintain records of uncontrolled VOC emissions from each printing press and the resulting 12-month rolling total of VOC emissions each calendar month. The 12-month rolling total is defined as the sum of the VOC emissions during the current month and the VOC emissions for the previous eleven months. Emissions shall be determined on a mass basis, except that the following VOC retention factors shall be used:
- Lithographic inks, heat-set – 20 percent;
 - Lithographic inks, nonheat-set – 95 percent; and
 - All other VOC-containing materials – 0 percent

A sample calculation can be found in Attachment D.

37. To demonstrate compliance with Condition 16, the permittee shall maintain monthly records of VOC emissions from the combination of all graphic arts and printing operations and the resulting 12-month rolling total of VOC emissions each calendar month. The 12-month rolling total is defined as the sum of the VOC emissions during the current month and the VOC emissions for the previous eleven months. Emissions from controlled operations shall be calculated based on the emission rates from the most recent test conducted according to Conditions 30 and 31. Emissions from uncontrolled operations shall use the following VOC retentions factors:
- Lithographic inks, heat-set – 20 percent;
 - Lithographic inks, nonheat-set – 95 percent; and
 - All other VOC-containing materials – 0 percent

A sample calculation can be found in Attachment D.

38. The results of each performance test conducted pursuant to Conditions 30 and 31 shall be recorded. At a minimum, the permittee shall maintain records of:
- The date of each test;
 - Each test plan;
 - Any documentation required to approve an alternate test method;
 - Conditions during the test;

- e. The results of each test; and
- f. The name of the company or entity conducting the analysis.

Section 5: Notification and Reporting Requirements

39. *Notification of Construction or Modification, and Operations*

The permittee shall submit a written or electronic notice to the reviewing authority within 30 days from when the permittee begins actual construction or modification, and within 30 days when the permittee begins initial operation or resumes operations after a modification.

40. *Notification of Change in Ownership or Operator*

If the permitted source changes ownership or operator, then the new owner or operator must submit a written or electronic notice to the reviewing authority within 90 days after the change in ownership or operator is effective. In the report, the new permittee must provide the reviewing authority a written agreement containing a specific date for transfer of ownership or operator, and an effective date on which the new owner or operator assumes partial and/ or full coverage and liability under this permit. The submittal must identify the previous owner or operator, and update the name, street address, mailing address, contact information, and any other information about the source if it would change as a result of the change of ownership or operator. The current owner or operator shall ensure that the permitted source remains in compliance with the General Permit until any such transfer of ownership or operator is effective.

41. *Notification of Closure*

The permittee must submit a report of any permanent or indefinite closure to the reviewing authority in writing within 90 days after the cessation of all operations at the permitted source. The notification must identify the owner, the current location, and the last operating location of the permitted source. It is not necessary to submit a report of closure for regular, seasonal closures.

42. *Annual Reports*

The permittee shall submit an annual report on or before March 15 of each year to the reviewing authority. The annual report shall cover the period from January 1 to December 31 of the previous year and shall include:

- a. An evaluation of the permitted source's compliance status with respect to the requirements of Section 2 during the calendar year;
- b. Summaries of the required monitoring, testing and recordkeeping in Sections 3 and 4; and
- c. Summaries of deviation reports submitted pursuant to Condition 43.

43. *Deviation Reports*

The permittee shall promptly report to the reviewing authority any deviations as defined at 40 CFR 71.6(a)(3)(iii)(C) from permit requirements including deviations attributable to upset conditions. Deviation reports shall include:

- a. Identity of the affected emissions unit(s) where the deviation occurred;
- b. Nature of the deviation;
- c. Length of time of the deviation;
- d. Probable cause of the deviation; and
- e. Any corrective actions or preventive measures taken as a result of the deviation to minimize emissions from the deviation and to prevent future deviations.
- f. For the purposes of this permit, *promptly* shall be defined to mean within 30 days after the end of the month in which the permittee discovered the deviation.

44. *Performance Test Reports*

The permittee shall submit a test report to the reviewing authority within 45 days after the completion of any required performance test. At a minimum, the test report shall include:

- a. A description of the affected emissions unit and sampling location(s);
- b. The time and date of each test;
- c. A summary of test results, reported in units consistent with the applicable standard;
- d. A description of the test methods and quality assurance procedures used;
- e. A summary of any deviations from the proposed test plan and justification for why the deviation(s) was necessary;
- f. The amount and type of fuel burned, raw material consumed, and product produced, as applicable, during each test run;
- g. Operating parameters of the affected emissions units and control equipment during each test run;
- h. Sample calculations of equations used to determine test results in the appropriate units; and
- i. The name of the company or entity performing the analysis.

45. *Reporting and Notification Address*

The permittee shall send all required reports to the reviewing authority at the mailing address specified in the Approval of the Request for Coverage.

46. *Signature Verifying Truth, Accuracy, and Completeness*

All reports required by this permit shall be signed by a responsible official as to the truth, accuracy, and completeness of the information. The report must state that, based on information and belief formed after reasonable inquiry, the statements and information are true, accurate, and complete. If the permittee discovers that any reports or notification submitted to the reviewing authority contain false, inaccurate, or incomplete information, the permittee shall notify the reviewing authority immediately and correct or amend the report as soon as is practicable.

Section 6: Changes to this General Permit

47. *Revising, Reopening, Revoking and Reissuing, or Terminating for Cause*

The General Permit may be revised, reopened, revoked and reissued or terminated for cause. The filing of a request by you, the permittee, for a permit revision, revocation and re-issuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. This provision also applies to the documents incorporated by reference.

48. *Terminating Coverage Under this Permit*

The reviewing authority may terminate a previously issued Approval of the Request for Coverage, and thereby terminate that permittee's authorization to construct or modify, and that permitted source's authorization to operate under this General Permit for cause as defined in Attachment B. The reviewing authority may provide the permittee with notice of the intent to terminate, and delay the effective date of the termination to allow the permittee to obtain a source-specific permit as required by the reviewing authority.

49. *Change in Ownership or Operator*

If the permitted source changes ownership or operator, the reviewing authority may change the Approval of the Request for Coverage to reflect the new ownership or operator in accordance with the administrative amendment provisions in 40 CFR 49.159(f).

50. *Permit Becomes Invalid*

Authority to construct and operate under this permit becomes invalid if the permittee does not commence construction within 18 months after the effective date of the request for coverage under a general permit, if the permittee discontinues construction for a period of 18 months or more, or if the permittee does not complete construction within a reasonable time. The reviewing authority may extend the 18-month period upon a satisfactory showing that an extension is justified, according to 40 CFR 49.156(e)(8).

Section 7: Obtaining Coverage under this General Permit

51. To obtain coverage under this General Permit, an applicant must submit a Request for Coverage to the appropriate reviewing authority for the area in which the permitted source is or will be located (the Request for Coverage Form can be found at: <http://www.epa.gov/air/tribal/tribalnsr.html>). Attachment E contains a list of reviewing authorities and their areas of coverage.

52. If the plant will locate in area covered by more than one reviewing authority, the applicant need only submit a Request for Coverage to one reviewing authority with regard to all intended locations of operation. The Request for Coverage must contain the information requested in the standard application form for this permit. You must also submit a copy of the Request for Coverage to the Indian Governing Body for any area within Indian country in which the permitted source will locate at the same time you submit your Request for Coverage to the reviewing authority.

Attachment A: Abbreviations and Acronyms

ASTM	American Society for Testing and Materials
CAA	Federal Clean Air Act
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
hp	horsepower
lb	pound
NAAQS	national ambient air quality standards
NSR	new source review
PSD	Prevention of Significant Deterioration
VOC	volatile organic compounds

Attachment B: Definitions

For the purposes of this general permit:

Approval of the Request for Coverage means a reviewing authority's letter granting an applicant's request for construction or modification, and operation of a true minor source under the terms and conditions of this general permit.

Biodiesel means a combustion fuel made from fatty acids or methyl esters that complies with the specifications of ASTM 6751.

Cause means with respect to the reviewing authority's ability to terminate a permitted source's coverage under a permit that:

1. The permittee is not in compliance with the provisions of this General Permit;
2. The reviewing authority determines that the emissions resulting from the construction or modification of the permitted source significantly contribute to NAAQS violations, which are not adequately addressed by the requirements in this General Permit;
3. The reviewing authority has reasonable cause to believe that the permittee obtained Approval of the Request for Coverage by fraud or misrepresentation; or
4. The permittee failed to disclose a material fact required by the Request for Coverage or the regulations applicable to the permitted source of which the applicant had or should have had knowledge at the time the permittee submitted the Request for Coverage.

Cleaning operations include the cleaning of the press, press parts, and removal of dried ink, but does not, generally, include cleaning electronic components, cleaning the pre-press or post-press operations, the use of part washers and cold cleaners, or the use of janitorial supplies to clean areas around the press.

Coldset means a type of offset lithographic and letterpress printing operation where heat is not applied to dry ink. This definition includes presses with infrared and other energy curing devices such as ultraviolet dryers.

Construction means any physical change or change in the method of operation including fabrication, erection, installation, demolition, or modification of an emission unit that would result in a change of emissions.

Distillate fuel means fuel oils, including recycled oils that comply with the specifications for fuel oil numbers 1 and 2, as defined by ASTM 396, or equivalent.

Emergency engine means an engine that is operated to provide electrical power or mechanical work during an emergency situation. Examples include engines used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or an engine used to pump water in the case of fire, flood, or other event.

Emergency generator engine means an emergency engine that is designed solely for the purposes of providing electrical power during power outages.

Flexible packaging means any package or part of a package the shape of which can be readily changed. Flexible packaging includes, but is not limited to, bags, pouches, liners, and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

Fountain solution means the solution used in offset lithographic printing, which is applied to the image plate to maintain the hydrophilic properties of the non-image areas. It is primarily water and contains at least one of the following materials: etchants such as mineral salts; hydrophilic gums; or VOC additives to reduce the surface tension of the solution.

Flexographic printing means a printing process where the image is raised above the printing plate, and the image carrier is made of rubber or other elastomeric material.

Heatset means a type of offset lithographic and letterpress printing operation where heat is applied to dry ink. This definition does not include presses with infrared and other energy curing devices such as ultraviolet dryers.

Individual printing press means a single printing line that can include, but is not limited to, unwind or feed section(s); a series of individual workstations; any dryers associated with the work stations; and a rewind, stack or collection section. Inboard and outboard work stations, including those employing multiple application methods, if they are capable of printing or coating on the same substrate.

Offset lithographic and letterpress printing operation means operations where printing and non-printing areas are in the same plane on the surface of a thin metal lithographic plate – also referred to as planographic printing. To maintain the distinction between the areas on the lithographic plate, the image area is rendered oil receptive, and the non-image area is rendered water receptive. The ink film is transferred from the lithographic plate to an intermediary surface, a rubber covered cylinder called a blanket, which, in turn, transfers the ink to the substrate.

Natural gas means a mixture of hydrocarbons that is a gas at standard conditions and is either composed of at least 70 percent methane by volume or has a gross calorific value of between 950 and 1150 British thermal unit per dry standard cubic foot.

Permittee means the owner or operator of a permitted source.

Permitted source means each graphic arts and printing operation for which a reviewing authority issues an Approval of the Request for Coverage.

Request for Coverage means a permit application that contains all the information required in the standard application form.

Responsible official means one of the following:

1. For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is directly responsible for the overall operation of the permitted source.
2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively.
3. For a public agency: Either a principal executive officer or ranking elected official, such as a chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Rotogravure printing means a printing process in which an image is etched or engraved below the surface of a plate or cylinder.

Volatile organic compounds or *VOC* means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. This does not include the compounds listed in 40 CFR 51.100(s)(1).

Attachment C: Nonattainment Area VOC Limits

The requirements in this attachment apply to each graphic arts and printing operation located in a serious, severe, or extreme ozone nonattainment area.

1. Except as provided in Condition 6 of this Attachment, the permittee shall limit the VOC content of graphic arts and printing materials as indicated in the table below. Limits are on an as applied basis, less water and exempt compounds. See the definition for VOC for exempt compounds. Limits on fountain solutions are in Section 2, Condition 18.

Type of Material	VOC Limit	
Lithographic ink	300 g/L	2.50 lbs/gal
Letterpress ink	300 g/L	2.50 lbs/gal
Rotogravure ink	160 g/L	2.50 lbs/gal
Flexographic ink non-porous substrate	160 g/L	2.50 lbs/gal
Flexographic ink porous substrate	160 g/L	1.88 lbs/gal
Flexographic fluorescent ink	160 g/L	2.50 lbs/gal
Coating	300 g/L	2.50 lbs/gal
Adhesive	150 g/L	1.25 lbs/gal

For compliance purposes, each VOC limit in this table shall be assumed to have three significant figures.

2. Except as provided in Condition 6 of this Attachment, the permittee shall limit the VOC content of solvent cleaning operations to 25 grams per liter (0.21 lbs/gal), except as follows:
 - a. Electrical Apparatus Components & Electronic Components – 100 g/L (0.83 lbs/gal);
 - b. Gravure Printing – Publication: 100 g/L (0.83 lbs/gal);
 - c. Lithographic (Offset) or Letter Press Printing – roller wash, blanket wash, and on-press components: 100 g/L (0.83 lbs/gal);
 - d. Screen Printing: 100 g/L (0.83 lbs/gal);
 - e. Ultraviolet Ink/Electron Beam Ink Application Equipment (except screen printing): 100 g/L (0.83 lbs/gal); and
 - f. Specialty Flexographic Printing: 100 g/L (0.83 lbs/gal).
3. Unless vented to the add-on control equipment allowed by Condition 6 of this Attachment, a person shall not perform solvent cleaning unless one of the following cleaning devices or methods is used:
 - a. Wipe Cleaning;
 - b. Closed containers or hand held spray bottles from which solvent are applied without a propellant-induced force;

- c. Cleaning equipment which has a solvent container that can be, and is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during non-operation with the exception of maintenance and repair to the cleaning equipment itself;
- d. Non-atomized solvent flow method where the cleaning solvent is collected in a container or a collection system which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container;
- e. Solvent flushing method where the cleaning solvent is discharged in to a container, which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container (the discharged solvent from the equipment must be collected into containers without atomizing into the open air and the solvent may be flushed through the system by air or hydraulic pressure, or by pumping); or
- f. Remote reservoir cleaners operated according to Condition 4 of this Attachment.

4. *Remote Reservoir Cleaners*

For any remote reservoir cleaner the permittee shall comply with all of the following requirements in addition to the applicable VOC limits specified in Condition 2 of this Attachment:

- a. Prevent solvent vapors from escaping from the solvent container by using such devices as a cover or a valve when the remote reservoir is not being used, cleaned, or repaired;
- b. Direct solvent flow in a manner that will prevent liquid solvent from splashing outside of the remote reservoir cleaner;
- c. Do not clean porous or absorbent materials, such as cloth, leather, wood, or rope; and
- d. Use only solvent containers free of all liquid leaks. Auxiliary equipment, such as pumps, pipelines, or flanges, shall not have any liquid leaks, visible tears, or cracks. Any liquid leak, visible tear, or crack detected shall be repaired within one (1) calendar day, or the leaking section of the remote reservoir cold cleaner shall be drained of all solvent and shut down until it is replaced or repaired.

5. *Storage and Disposal*

All VOC-containing solvents used in solvent cleaning operations shall be stored in non-absorbent, non-leaking containers, which shall be kept closed at all times except when filling or emptying. It is recommended that cloth and paper moistened with VOC-containing solvents be stored in closed, non-absorbent, non-leaking containers.

6. *Add-on Control Equipment Option*

In lieu of complying with the requirements in Conditions 1 and/or 2 of this Attachment, the permittee may comply by using a VOC emission collection and control system provided:

- a. The emission control system shall collect at least 90 percent, by weight, of the emissions generated by the operation;
 - i. Have a destruction efficiency of at least 95 percent, by weight; OR
 - ii. Have an output of less than 50 ppm calculated as carbon with no dilution.
- b. If the permitted source uses the add-on control compliance option, then the permitted source shall comply with the initial and subsequent performance test requirements in Section 3 of this permit.

7. *Exemptions for Solvent Cleaning Operations*

The requirements of Condition 3 of this Attachment shall not apply to the following applications:

- a. Cleaning of solar cells, laser hardware, scientific instruments, and high-precision optics;
- b. Cleaning conducted with: performance laboratory tests on coatings, adhesives, or inks; research and development programs; and laboratory tests in quality assurance laboratories;
- c. Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics;
- d. The cleaning of photo-curable resins from stereo lithography equipment and models;

- e. Cleaning of electronic or electrical cables provided the clean-up solvent used contains no more than 400 grams of VOC per liter;
- f. Touch up cleaning performed on printed circuit boards where surface mounted devices have already been attached provided that the solvent used contains no more than 800 grams of VOC per liter;
- g. Permitted sources using less than 1.5 gallons per day of solvents to clean sterilization indicating ink application equipment;
- h. Cleaning operations in printing pre-press or graphic arts pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning;
- i. Janitorial cleaning, including graffiti removal;
- j. Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems; and
- k. Printing operations where the roller or blanket wash is applied automatically.

8. *Recordkeeping*

The operator shall maintain at all times, and make available to the reviewing authority upon request, the correct written dilution instructions for each solvent cleaning material if dilution is necessary to meet the applicable VOC limits in this rule.

Attachment D – Sample Calculation for Monthly VOC Emissions

Below is a sample calculation for determining monthly VOC emissions from a single VOC-containing material. For total monthly emissions, the permittee must conduct this calculation for each VOC-containing material used each month and determine the sum of all VOC emissions.

Sample calculation for a heat-set lithographic ink:

Lithographic ink density – 10 lbs/gal

Monthly usage – 100 gals

VOC content – 4 percent alcohol by weight, less water

VOC retention factor for heatset lithographic ink (see Condition 36) – 20 percent

Calculation:

Monthly VOC Emissions (tons) = Density (lbs/gallon) x VOC content (weight %) x Monthly Usage (gallons) x (100% - VOC Retention Factor (%)) ÷ 2000 (lbs/ton)

Monthly VOC Emissions (tons) = 10 (lbs/gal) x 4% x 100 gal x (100% - 20%) ÷ 2000 (lbs/ton)

Monthly VOC Emissions (tons) = 10 x 4% x 100 x 80% ÷ 2000

Monthly VOC Emissions = 0.016 tons VOC

Grams of VOC per Liter of Coating (or Ink or Adhesives), Less Water

The weight of VOC and coating (or ink or adhesive) solids can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where,

W_s = weight of volatile compounds in grams

W_w = weight of water in grams

W_{es} = weight of exempt compounds in grams (see definition of VOC in Attachment B)

V_m = volume of material in liters

V_w = volume of water in liters

V_{es} = volume of exempt compounds in liters (see definition of VOC in Attachment B)

*Grams per liter can be converted to pounds per gallons using standard conversion factors.

For coatings that contain *reactive diluents*, the grams of VOC per Liter of Coating, shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating, Less Water} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where,

W_s = weight of volatile compounds evolved during curing and analysis in grams

W_w = weight of water evolved during curing and analysis in grams

W_{es} = weight of exempt compounds evolved during curing and analysis in grams (see definition of VOC in Attachment B)

V_m = volume of material prior to reaction in liters

V_w = volume of water evolved during curing and analysis in liters

V_{es} = volume of exempt compounds evolved during curing and analysis in liters (see definition of VOC in Attachment B)

*Grams per liter can be converted to pounds per gallons using standard conversion factors.

Attachment E – List of the EPA Reviewing Authorities and Areas of Coverage

EPA Region	Address for Request for Coverage	Address for All Other Notifications and Reports	Area Covered	Phone Number
Region I	EPA New England 5 Post Office Square, Suite 100 Mail Code OEP05-2 Boston, MA 02109-3912	EPA New England 5 Post Office Square, Suite 100 Mail Code OES04-2 Boston, MA 02109-3912	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont	888- 372-7341, 617-918-1111
Region II	Chief, Air Programs Branch Clean Air and Sustainability Division EPA Region 2 290 Broadway, 25 th Floor New York, NY 10007-1866	Chief, Air Compliance Branch Division of Enforcement and Compliance Assistance EPA Region 2 290 Broadway, 21 st Floor New York, NY 10007-1866	New Jersey, New York, Puerto Rico, and Virgin Islands	877-251-4575
Region III	Office of Permits and Air Toxics 3AP10 EPA Region 3 1650 Arch Street Philadelphia, PA 19103	Office of Air Enforcement and Compliance Assurance 3AP20 EPA Region 3 1650 Arch Street Philadelphia, PA 19103	Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia	800-438-2474, 215-814-5000
Region IV	Chief, Air Permits Section EPA Region 4 APTMD 61 Forsyth Street Atlanta, GA 30303	Chief, Air & EPCRA Enforcement Branch EPA Region 4 APTMD 61 Forsyth Street, SW Atlanta, GA 30303	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee	800-241-1754, 404-562-9000
Region V	Air Permits Section Air Programs Branch (AR-18J) EPA Region 5 77 West Jackson Blvd Chicago, Illinois 60604	Air Enforcement and Compliance Assurance Branch (AE-17J) Air and Radiation Division EPA Region 5 77 West Jackson Blvd Chicago, Illinois 60604	Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin	800-621-8431, 312-353-2000
Region VI	Multimedia Planning and Permitting Division EPA Region 6 1445 Ross Avenue (6PD-R) Dallas, TX 75202	Compliance and Enforcement Correspondence: Compliance Assurance and Enforcement Division EPA Region 6 1445 Ross Avenue (6EN) Dallas, TX 75202	Arkansas, Louisiana, New Mexico, Oklahoma, and Texas	800-887-6063, 214-665-2760

EPA Region	Address for Request for Coverage	Address for All Other Notifications and Reports	Area Covered	Phone Number
Region VII	Chief, Air Permitting & Compliance Branch EPA Region 7 11201 Renner Blvd Lenexa, KS 66219	Chief, Air Permitting & Compliance Branch EPA Region 7 11201 Renner Blvd Lenexa, KS 66219	Iowa, Kansas, Missouri, and Nebraska	800-223-0425, 913-551-7003
Region VIII	U.S. Environmental Protection Agency, Region 8 Office of Partnerships and Regulatory Assistance Tribal Air Permitting Program, 8P-AR 1595 Wynkoop Street Denver, Colorado 80202	U.S. Environmental Protection Agency, Region 8 Office of Enforcement, Compliance & Environmental Justice Air Toxics and Technical Enforcement Program, 8ENF-AT 1595 Wynkoop Street Denver, Colorado 80202	Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming	800-227-8917, 303-312-6312
Region IX	Chief, Permits Office (Air-3) Air Division EPA Region 9 75 Hawthorne St San Francisco, CA 94105	Enforcement Division Director Attn: Air & TRI Section (ENF-2-1) EPA Region 9 75 Hawthorne St San Francisco, CA 94105	American Samoa, Arizona, California, Guam, Hawaii, Navajo Nation Nevada, and Northern Mariana Islands	866-EPA-9378, 415-947-8000
Region X	Tribal Air Permits Coordinator U.S. EPA, Region 10, AWT-150 1200 Sixth Avenue, Suite 900 Seattle, WA 98101	Tribal Air Permits Coordinator U.S. EPA, Region 10, AWT-150 1200 Sixth Avenue, Suite 900 Seattle, WA 98101	Alaska, Idaho, Oregon, and Washington	800-424-4372, 206-553-1200